



HOUSE OF LORDS

Science and Technology Select Committee Behaviour Change

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Cabinet Office, Department of Education and the Government Economic and Social Research Team

Written evidence from the Government (joint departmental submission (BC 114)

Introduction

The Government welcomes this timely exploration by the House of Lords Science and Technology Select Committee into the use of behaviour change interventions to achieve policy goals.

The Coalition's Programme for Government rejects "the assumption that central government can only change people's behaviour through rules and regulations" and promises that "our government will be a much smarter one, shunning the bureaucratic levers of the past and finding intelligent ways to encourage support and enable people to make better choices for themselves".

Asking individuals, communities and institutions to adapt or change their behaviour to help achieve a particular policy goal is not new.

The new feature of the scene is the Government's focus on the fact that changes in behaviour can often be brought about in ways that are much less authoritarian than rules and regulations.

As a recent paper from the Department for Transport puts it:

If you organise the food in a school cafeteria in the right way, children will tend to eat more healthily.

If you redesign a junction correctly, you can reduce the likelihood of collisions between vehicles.¹

Government Activities

Behaviour change theories can help us to understand why individuals behave the way they do. They can also help policy makers frame choices for individuals in order to 'nudge' them into behaving differently and regulating their own activities. For example, there is evidence that interventions that encourage self-regulation and self-monitoring are more effective at promoting healthy eating and physical activity than those which do not.

Even before the Coalition's new emphasis on bringing about behavioural change, some Departments across Whitehall have sought to strengthen their understanding of both the theory and practice of behaviour change, building on existing expertise to promote and foster new ways of thinking among policy makers drawing on a range of academic literature including seminal publications such as Robert Cialdini's *Influence: The Psychology of Persuasion*, Richard Thaler and Cass Sunstein's *Nudge*, and David Halpern's *Social Capital and*

¹ Nine Big Questions about Behaviour Change, Simon Christmas et al, November 2009.

MINDSPACE: a joint collaboration between the Cabinet Office and the Institute for Government.

Departments have also drawn on the expertise of their communications units to help understand how they can affect behaviour, as well as on the work of the Research Councils, e.g. the Economic and Social Research Council (ESRC) and the Medical Research Council (MRC). All Departments recognise the need to balance general principles of behaviour change with specific challenges; approaches to achieving behaviour change in transport, for example, will be different to approaches in health or education.

Successful behaviour change interventions vary from the very small to the very large. We know that some cost virtually nothing to introduce, e.g. amending the way information or correspondence is written. Others may require funding to effect, e.g. building cycle-ways. Still others may form part of a panoply of interventions which include both 'nudges' and subsidies (e.g. grants, fiscal support) as well as regulatory measures, e.g. auto-enrolling employees into pension plans. The more complex the desired change, the greater the need to ensure relevant levers all operate in the same direction. This requires close working both within and across departments. Examples of the work that Departments have undertaken in recent years are attached at Annex A.

Promoting and Co-ordinating Government Activities

Behaviour change interventions have often involved several different Departments. Examples of joint working during the years before the last election include liaison between DfT, Defra and DECC on sustainability, between DfT and DH on active travel, and between the Ministry of Justice and other Departments on youth re-offending.

The new Government wants to increase the amount of joint working between Departments when designing, implementing and evaluating behaviour change interventions. A closely related theme in the Coalition Programme for Government Agreement - that of changing the culture within Whitehall to move away from a reliance on conventional regulatory and legislative approaches - means that we can expect a richer mix of interventions being used to achieve our policy goals. These include, for example, interventions that enable and guide people to make healthier choices such as smoking cessation services, brief interventions for alcohol misuse and the supported self-management of long term conditions. We aim to ensure that we capture the best ideas and spread best practice, informed by robust evidence applicable to the particular policy goal.

Engaging beyond Government: leveraging other sectors sector more effectively

The involvement of private and Voluntary, Community and Social Enterprise sector organisations will be crucial for us as we apply behavioural insights to achieving our policy goals. A core idea of the Big Society is that we encourage 'people to help people' rather than assuming that the state and conventional public services are the answer. Most people want to help others but there are many barriers that inhibit our ability to help and support each other in everyday life, including lack of information, lack of trust and bureaucracy. We want to remove these barriers, so that we can draw on the vast resources of goodwill that exist in our society to provide more personal and more effective help for those members of our society who need that help.

We will be building on efforts to strengthen charitable giving; we hope charitable organisations become an increasingly important partner of Government - helping us develop a mix of conventional approaches and "nudges" that encourage citizens to give more of their resource (time and money) to good causes. We will also be building on work undertaken by departments such as DECC, which successfully engaged with utility companies in the design of its Community Energy Saving Programme (CESP). Utility companies will be central to the roll out of the Green Deal, helping install energy efficient devices in homes

Evaluation

Evaluation is a key component of Government policymaking. Evaluating behaviour change interventions is often difficult, both because of long lags between action and effect, and because it is difficult to be confident of linking cause to effect when non-regulatory behavioural interventions have been introduced alongside more conventional regulatory interventions.

There have also been occasions where evaluation has been distorted by being focused on customer attitudes and programme outputs, rather than outcomes. We will seek to deal with this by specifying the desired behaviour change outcomes (e.g. drug-abstinence or reduced recidivism) at the outset of policy development. Wherever possible, we will also 'pay by results' for the provision of public services, so that the evaluation and the flow of funds in public services are both focussed on obtaining desired behaviour outcomes, leaving providers free to decide how best to achieve the desired results.

HMRC is among those departments whose interventions lend themselves to relatively quick and relatively certain evaluation. Introducing 'prompted choice' to help 'nudge' taxpayers into filling their tax returns on-line, HMRC was able to demonstrate significant financial savings to the Exchequer. Similarly, the Defra, DfT and DECC campaign "Save Money, Save Energy/Save Fuel 'Dad'" (2008-2010) featured a range of actions people could take with a view to encouraging more people to insulate their homes. One of those actions Defra's creation of an ACT on CO₂ carbon calculator - has resulted in 1,788,031 unique visitors to the website since mid-2007, 38% of whom completed their carbon footprint calculations, and many more who said they were likely to take action or are planning to take action as a result of the campaign.

The Cabinet Office's Behaviour Insights Team is, with other departments, looking to champion rigorous approaches to evaluation. They are starting by collecting evidence on the effectiveness of non-regulatory approaches to reducing energy consumption and increasing charitable giving. In the medium term, evaluation will enable us to set out more clearly where and when behavioural-based interventions work best, and - as importantly - how small scale interventions can be scaled up.

The team will also be looking to foster more inter-departmental discussion about the effectiveness of different means of changing behaviour. This is already working well in parts, for example Defra and the Departments for Education, Communities and Health have been contributing to Government's understanding and knowledge of behaviour change through initiatives including research centres, toolkits and guidance. Elsewhere, Departmental Heads

of Analytical Professions regularly meet to discuss issues affecting all departments, e.g. the Social Impacts Task Force, jointly chaired by DWP and Defra.

Ethical Considerations

A key question for us is when it is - and when it is not - appropriate for Government to attempt to influence individuals to behave in certain ways.

One of the Coalition's main aims is to increase the freedom of the citizen. Indeed, this is a large part of the reason why we are so interested in finding non-coercive ways of changing behaviour: quite apart from the fact that such methods can be more effective than coercive methods, they are also much more respectful of the freedom of the individual.

But we are conscious that, even if the methods used to change behaviour are non-coercive, a decision by government to intervene in itself raises the level of intrusion into people's lives. A balanced and proportional approach is required. We will therefore aim to apply behaviour change theory only in ways that minimise intrusion and maximally respect people's privacy and free choice.

Future Developments

The establishment of a new, central team signals a new phase in the application in the UK of behaviour change theory to public policy. The team is and will remain small in number and can only achieve its objectives by working with and through others in Whitehall and beyond - drawing also, where possible, on international experience. The Government's agenda to reduce policymakers' reliance on regulation, led by the Better Regulation Executive, can help provide additional impetus for the work of the central team.

Some Departments have already expressed an interest in seconding staff to the team in order to learn from the approaches it is developing. This will help accelerate understanding and application of behaviour change theories and applications in a range of policy areas. Working together, we expect to introduce more cost-effective and less bureaucratic ways of changing behaviour, which give citizens and communities more control of their own lives, thereby delivering one of the Coalition's key commitments.

Case Studies

A. Defra case study - encouraging energy efficient products

Encouraging people to buy and use more energy efficient appliances IS central to Defra's objective of promoting a low carbon and eco-friendly economy. The department have focused on stimulating the supply and demand for energy efficient products and on raising the salience of a product's energy efficiency when people can make decisions.

Drawing on research into consumer purchasing patterns, Defra put in place a combination of measures to increase uptake of energy efficient products. On the supply side, engagement with manufacturers and retailers has led to more innovative, sustainable products being developed. On the demand side, energy efficiency labelling and communications activity have helped retailers and consumers build their understanding of products' energy performance.

The package of measures has had marked success over a short period of time. In 1996, fewer than 5% of fridges and freezers purchased by consumers were A-rated for energy efficiency. By 2007, over 70% were A-rated or above. These energy savings were delivered at little financial cost, but with large overall savings for consumers' energy bills.

B. HMRC case study - debt collection

HMRC is carrying out a rapid transformation of its entire debt collection approach. As part of this work they have re-written their tax collection letters, to experiment with different messages to see which prove most successful in terms of people. The key changes they have made to the letters are to include a range of triggers designed to influence the behaviour of the recipient and to spell out the choices the taxpayer could make upon receipt of the letter. Early results indicate that these letters have been very successful typically generating a response rate of around 50% and in some instances the response rate has been as high as 85%.

An example used was to state in the first line of a letter is '9 out 10 UK citizens pay their self assessment tax on time funding the public services from which we all benefit' This letter was intended to indicate to those who had not paid that they were in the minority and therefore not displaying normative behaviour. It was used in the first campaign which has been evaluated and which successfully cleared 86% of the debt portfolio compared to 57% cleared in the previous year. However, although HMRC believes the letters have made a material difference to the success of our collection strategies, they are not able to isolate their impact because we have made a number of other changes simultaneously.

C. DWP case study - benefits thieves

Behavioural change is central to DWP's business. Examples of campaigns and interventions that aim to change behaviour include:

The Targeting Benefit Thieves campaign began in 2002 and supported the policy goal of driving down fraud and error in the benefit system. The campaign tracked people's attitudes and self-reported behaviour as a result of seeing the campaign. Tracking research indicated that the proportion of claimants who consider it 'very easy' and 'fairly easy' to get away with benefit fraud declined from 41% (Oct 2006) to 29% (Mar 2010). The proportion of claimants agreeing with the statement, 'the chances of getting caught abusing the benefits system are slim' has declined, falling from 39% (Oct 2006) to 21% (Mar 2010).

D. CLG case study – energy performance and value

Working with the Royal Institution of Chartered Surveyors (RICS), CLG has explored why household investments in energy efficiency are not valued as part of the home buying process, and how to address this. The project focused on existing housing stock and primarily on private properties – excluding the rental sector.

The project found that consumers don't understand energy measurement or the benefits of investing in energy efficiency in the home. Energy Performance Certificates (EPCs) were found not to support rational or informed decisions.

CLG is now working to improve the information provided by EPCs, and to include practical information on what can be done to individual houses to make them more efficient. The intention is that these changes will nudge home-buyer behaviour which, alongside work done by the RICS to develop guidance on the value of energy efficiency measures, should start to establish a link between house-values and energy efficiency.

E. OfT - DVLA case study - increased take-up of DVLA's electronic vehicle licensing service (EVL)

DVLA has sought to raise awareness among drivers of the benefits of going on-line or using an automated phone to tax their vehicles on time.

The V11 tax-reminder pack was changed to incorporate a strong call to action, encouraging customers to purchase their vehicle tax on-line or by phone. The envelope was changed from manila to white and incorporated a new creative design. This action produced an immediate 5 percentage point increase in EVL take-up. A Prize Draw to win a zero vehicle excise duty car (donated by SEAT) was introduced and achieved a further 10 percentage point increase in take-up. Subsequent television and on-line campaigns further improved take-up.

Outcomes and evaluation

EVL take up has reached a perceived saturation point (based on analysis of willingness/ability to use access the internet or automated phone service) and has remained at a stable 49 % each month since the overt marketing activity was stopped in April 2010.

F. BIS case study - Stem

The Roberts Review (2002) found that fewer students in the UK were choosing to study many science and engineering disciplines.

As a result of these trends, and increasingly attractive opportunities for skilled individuals to work outside research, the review concluded that emerging shortages in the supply to R&D employers would act to constrain innovation in the UK, not just in these disciplines, but also more widely, since much cutting edge research is multidisciplinary.

To enhance young people's understanding of and enthusiasm for STEM subjects, STEMNET - a UK-wide organisation - was established to improve both the role models and inspiration for studying STEM subjects. Working with BIS and the Department for Education, STEMNET set up the STEM Ambassador's scheme, and brokered STEM related activities in schools in order to exemplify how STEM subjects can both be exciting and also enhance career opportunities.

To create positive messages and incentives, and exemplify further positive role-models for young people to engage in STEM subjects, a National Science and Engineering Competition was established, in response to Lord Sainsbury's *The Race to the Top*. This culminates in a high profile annual presentation of the UK Young Scientist and UK Engineer of the year

awards. This ceremony takes place within the 'Big Bang' - a national fair celebrating young people's achievements in science and engineering.

Uptake of science, technology, engineering and mathematics subjects at GCSE and A Level have been rising steadily. 2010 saw an increase in the number of entries to Further Mathematics, Mathematics, Physics, Biology and Chemistry Student enrolments for HE science courses were up by 3% at undergraduate level, and 7% at postgraduate level in 2008/09, compared with 2007/08.

G. DH case study - Health Trainers

The Health Trainer Programme was set up to provide one to one support for individuals' wishing to improve their health. A community participation scheme, run by Primary Care Trusts, the Programme aims to help build a workforce with the right skills to tackle health inequalities and deliver sustained health improvements - particularly among less advantaged, 'hard to reach' groups.

The programme is based on behavioural science, drawing on principles of behaviour change developed in social and health psychology, and adopts a personalised care planning approach focused on self-care and empowering clients to make informed decisions about their health and behaviour. The evidence base for this approach was derived from a number of different sources including the literature on chronic illness (where there is evidence that encouraging self-management can produce significant improvements in outcomes and well-being, and reduce use of services and sickness absence) and on cognitive behaviour therapy for common mental disorders.

The Health Trainer programme has been very successful up to this point. By mid-2010 there were more than 2,300 health trainers and health champions either in post or in training within the NHS, and some 90 per cent of Primary Care Trusts were covered by a health trainer service.

Preliminary results from the Health Trainer Data Capture Reporting system (DCRS) demonstrate the ability of Health Trainers to connect with individuals in hard to reach areas and groups, with 67% of clients from the two lowest quintiles (01&02). Over 53% of clients surveyed to date reported they had achieved their chosen goals. A full evaluation of the Health Trainers initiative is expected to report early in 2011.

Effecting behaviour change in foreign publics

H. FCC Consular activities

The main objective of Consular Communications is to help Britons have safer trips abroad. Rather than assuming that the number of UK citizens experiencing problems abroad is fixed, the FCO has a 'Know Before You Go' campaign to reduce the number of preventable Consular cases.

The campaign aims to make British travellers better prepared before they travel and has used research to identify 5 groups that cause disproportionate numbers of Consular cases. The campaign has seen a decrease in preventable cases over a sustained period. Although

other factors will have influenced the numbers of consular cases, the downward trend of preventable cases has occurred despite an overall upward trend in the number of trips abroad.

I. DfID - Health

South Africa - Communications through Mass Media Drama (Soul City)

Soul City is a non-profit making organisation, which was developed to harness the power of mass media for Health and Development Communication. OIIO has provided £13m over 13 years. To date it has produced over 140 hours of prime time TV drama episodes, over 40 million good quality print booklets and 2430 X 15 minutes episodes of Radio dramas in 9 African languages. It addresses 20 different health and development topics ranging from maternal health care, xenophobia to domestic violence, substance abuse as well as having a strong emphasis on HIV and AIDS. Soul City has reached over 70% of the South African population and 26m people in the wider region.

Evaluation and outcomes: Soul City's 2007 regional evaluation found that, in all countries covered, those exposed to Behaviour Change Communication materials were more likely than not to use a condom and that only 17% of the adults exposed to the materials had more than one sexual partner in the last 12 months compared to an average of 26% before the programme got underway. Positive changes in behaviour have also been measured in the 2nd South African National Youth Behaviour Survey. An independent study has been commissioned to study the effect of the Behaviour Change Communication programme in more detail.

October 2010

Written evidence from the Government Economics Service (GES) and the Government Social Research Service (GSR) (BC 24)

Joint response from the Government Economics Service (GES) and the Government Social Research Service (GSR)

GSR and GES

The Government Social Research Service and Government Economic Service provide the government of the day with evidence and evidence-based advice to support the rationale, objectives, appraisal, monitoring, evaluation and feedback to support effective policy-making and delivery. This adds value to strategy, policy and delivery, and decision-making in general, by providing rigorous guidance within a policy context identifying what works, what's worth investing in, potential pitfalls and unintended consequences.

The Government Social Research Unit (GSRU) and Government Economic Service Team (GEST) in HM Treasury (now the combined Government Economic and Social Research Team – GESRT) provide the professional support and leadership for social researchers and economists across all Government Departments.

Professional standards and work on behaviours

There is a lot of scope for work from the behavioural sciences to inform policy. GES and GSR aim to ensure that this is done in an evidence-based way, with high-quality design, evaluation and analysis.

The work of the GES and GSR is underpinned by a comprehensive framework of professional standards. This ensures high quality social research and analysis for government that is rigorous, relevant and valued. The purpose of the GES and GSR is to ensure that policy and delivery are guided by the best available analysis and evidence, in particular ensuring that government and frontline decisions are built on an understanding of and engagement with the people and organisations affected by that decision, as well as an understanding of the wider social consequences. As such, the social and wider behavioural sciences are fundamental to this work.

All aspects of the ROAMEF cycle require input from the social sciences, however, appraisal and evaluation are two key stages of the policy cycle informed by evidence. The ‘Green Book’ is HMT guidance on conducting appraisals. The ‘Magenta Book’ was developed by GSR and provides guidance for policymakers and government analysts carrying out or commissioning policy evaluation. Work is now being undertaken to update the Magenta Book, rebrand it as Treasury guidance and ensure it is endorsed by all the analytical professions.

General view on the use of insights from the Behavioural Sciences in informing policy

There has recently been a move toward discussing behavioural science and insights from behavioural science rather than using the term “behaviour change”. GES and GSR broadly welcome this move as ‘change’ can imply something transformative and extreme, whereas

interventions seeking to influence toward a behavioural goal can equally be about adopting new behaviours, or affirming existing ones as well as ‘changing’ existing habits and practice.

Some risks that we have identified in the area are that work should not be based on anecdote, that context is vital to particular outcomes and that the small scale manipulations used in experimental research need to be checked in terms of scalability when being applied. GES and GSR play a key role here in making sure that policy is firmly rooted in the evidence base, and that the implications of the findings from this area effectively inform the design and delivery of the mix of measures to influence behaviour are well understood. GES and GSR welcome and are keen to support initiatives involving pilot activity in real policy settings (for example, DEFRA’s pilot projects), using what we know about what works and drawing on input from the communities, from business, and civil society as well as government to enable action.

That said, insights from the behavioural sciences, and their rigor can be very powerful, and have, to date, not been used as widely as they could be.

Previous and current GSR and GES work on behaviours across government

Building on existing work across Government, since 2008, the GES and GSR have explicitly worked and reported on the new developments in the application of behavioural science to policy. The GES formed a cross departmental group, led by DCSF, to assess the present position of work on behavioural economics in Government. The group produced a guidance note on behavioural economics and a census of existing applications [see [here](#)]. Behavioural economics has become part of GES professional development, with inputs from Lord Layard, Professor Paul Dolan and other leading academics.

In parallel to this, the GSR commissioned work to provide an overview of social and psychological ‘behaviour change’ models and a summary of the key elements of ‘behaviour change’ theory from this perspective. The work also provided guidance on selecting and using models. The outputs from this project can be found [here](#).

To promote and assist this policy focus, in February 2010 GES and GSR appointed, via the ESRC public sector placement fellowship scheme, an academic fellow (Dr. Rachel McCloy) to help coordinate work on behaviours across government and to build capacity and capability in this area. In consultation with colleagues from across Government, both within and outside the economics and social research professions, the fellow has worked to identify key issues around the use of behavioural insights across government. The key issues identified were for a better understanding of the need for a rigorous approach that takes due regard of the research base; the importance of context in applying behavioural insights to policy; more shared practice in terms of what works and what does not work in influencing behaviour, so that the work of more experienced teams within Government can benefit those who are relatively new to working in this space; and a need to bring people working in this area across government together and to foster and champion good practice as well as what is cost effective. In order to address the issues identified above we are engaged in a number of ongoing pieces of work, currently led by our joint ESRC fellow.

We have been working to set up a network of interested people across Government. This network is being supported by a Civil Pages community (Behavioural Science in Government

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Network), and plans for a number of face-to-face events, the first of which is a joint GES/GSR miniconference to be held at HM Treasury on October 1st. The Civil Pages community will also act as a forum for the sharing of relevant information on work in this area across government. As part of this initiative, we are compiling an inventory of work on behaviours across Government. We also expect the civil pages community to become a resource for anyone searching for extant reports on behaviour change, and information about relevant events, research developments etc.

We are also working to foster and promote good practice in work on behaviours in a number of ways. We have put features spotlighting high quality research within government in our membership communications (e.g., GSR members magazine), and will again be highlighting these as part of our network launch conference. A particular focus here has been on the work of interdisciplinary teams, where social researchers, economists, customer insight, communications, policy and other colleagues have come together to share knowledge and expertise around project.

October 2010

Oral Evidence, 2 November 2010, Q1-50

Evidence Session No. I. *Heard in Public.*

Members present:

Lord Crickhowell
Baroness Hilton of Eggardon
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Baroness Perry of Southwark
Earl of Selborne
Lord Sutherland of Houndwood
Lord Warner

Witnesses: **Dr David Halpern**, [Cabinet Office], **Ms Karen Hancock**, [Chief Economist, Department for Education], **Dr Rachel McCloy**, [Government Economic and Social Research Team], and **Mr Richard Bartholomew**, [Joint Head of the Government Social Research Service, Department for Education].

Q1 The Chairman: Can I start by welcoming our witnesses to the first public hearing of this Inquiry and also welcoming the members of the public—rather a lot of members of the public. We're delighted to see you. We're very pleased to see our four witnesses. Just to make sure everybody knows, the proceedings are being webcast and there is an information note available for the public who are here with some background on the Inquiry. It gives you a list of the Members' interests in so far as they are relevant to the Inquiry. Members will declare their interests orally the first time they speak today. What I would like to do now is to ask our witnesses to introduce themselves for the record. After you've done that, I'll give each of you a chance to make a short opening statement, if you wish to do so. Can we just hear who you are for the record please?

Dr David Halpern: I'm David Halpern. I'm now back in the Cabinet Office.

The Chairman: Thank you.

Karen Hancock: I'm Karen Hancock. I'm the Chief Economist at the Department for Education and I'm here representing the work we did in the Government Economic Service on behaviour change and policy.

The Chairman: Thank you.

Dr Rachel McCloy: I'm Rachel McCloy. I'm an ESRC Public Sector Placement Fellow with the Government Economic and Social Research team.

Richard Bartholomew: I'm Richard Bartholomew. I'm joint Head of the Government Social Research Service and also Chief Research Officer in the Department for Education.

Q2 The Chairman: Thank you very much. Just before I ask you whether you want to make an opening statement, I should just warn you that the acoustics are ghastly in here. Actually, I even found it quite difficult to hear just now—I don't know whether other members of the Committee did—and I suspect members of the public behind you will find it even worse. So if you could speak relatively slowly, though saying that we do want to finish by about 5 pm. The acoustics are awful and you're not the first people to have found that. I don't know whether any of you would like to make an opening statement but if you would, we'd be delighted.

Dr David Halpern: I'll just make a general comment. When I came to talk to your Lordships—goodness, it must have been a number of months ago—I was outside of government. Clearly I've come back into it to do this agenda. I personally welcome that government is using what is a powerful set of tools, albeit cautiously. Certainly I and the Government welcome your interest in this area. It is both very powerful in practical ways for policymakers. In some ways it also illustrates some aspects of the style of the new administration, but there are clearly also risks to using the approach if it's used inappropriately. We share, I think, your interest in keeping it as a very evidence-based approach and that is part of what we're doing, certainly in terms of the unit that I'm heading.

Q3 The Chairman: Thank you very much indeed; does anybody else want to add?

Richard Bartholomew: In Government Social Research, one of our roles is to advise policymakers and Ministers on the evidence. We're experts on research within government and our role is to assess the quality of that evidence and advise our colleagues and Ministers on its reliability. We certainly embrace this interest in behavioural change. A main part of our role as government social researchers is to examine and understand behaviour. The change element is a relatively newer one, but we've certainly been involved—over many, many years—in getting to understand people's motivations, getting good robust evidence for that and we're working very closely with the other professional groups in government, certainly the Government Economic Service, to bring together the synergies of our different skills; we leading perhaps more on evaluation evidence, the Government Economic Service very much on the theories coming out of behavioural economics². We see this as a really important opportunity for the professional groups across government to work together.

Q4 The Chairman: Anyone else? No. Okay, well I will start and then hand over to various colleagues.

Lord May of Oxford: I can't resist saying that, although it's not statistically significant, the two males chose to speak and the two women didn't.

The Chairman: I noticed that too, but I decided that it wasn't statistically significant and I would get reproved by our specialist adviser.

Lord May of Oxford: Well, it's statistically significant at a lower level. Sorry.

² Karen Hancock noted: This characterisation is inaccurate. A group from the Government Economic Service, led by Karen Hancock, carried out a survey of how evidence and ideas from behavioural economics were being used in policy. It then produced general guidance in 2008 on how theory and evidence from behavioural economics could be used to make more effective policy. Government economists are recruited on the basis of being able to apply empirical economic evidence to policy issues.

The Chairman: No, it's fine. I'll start and then I'll hand round to other members of the Committee. The first question, which I think you've had in advance, is what does the Government classify as a behaviour change intervention?

Dr David Halpern: Shall I have this one? Now, Lord May, you've made me self-conscious every time I'm going to speak.

Lord May of Oxford: That may have been my intention.

Dr David Halpern: I do want to emphasise that most of our team are actually women. Yes, actually we tend not to use the words "behaviour change". We did wrestle with this fairly deeply for lots of reasons, but one of which is that almost every area of policy is characterised by, or concerned with, some aspect of human behaviour. Often, actually, as a strategy for most of us, because we're often locked into our behaviours by a number of factors. If you want to effect change, the thing to do is often not to make it feel not like change at all. The behaviour can carry on but the outcome can be different. We go fairly broadly in terms of our remit, I think. We decided not to over-wrestle with what constitutes change or not, but that's why we went with a broader framing in terms of my own team, the Behavioural Insight Team, rather than saying it was all about behavioural change. Because often it's simply understanding the other kinds of behavioural influences that are in play around that individual or a community, and you may be able to attenuate one or the other; then your positive effects occur. I realise that may be too broad an answer, but we have wrestled with it. I just want to acknowledge that issue.

Q5 The Chairman: Our evidence is clearly wrestling with it too. We range from absolutely everything—anything that might change behaviour—being a behavioural change intervention, to something that is much sort of narrower, behavioural components of all policies arguably, or what just simply might be regarded as behaviour change by behavioural economists or psychologists. We feel that there is some confusion here. So is there any more enlightenment from some of the other witnesses?

Karen Hancock: Amongst economics, in government, we've been thinking about this as well, because obviously we tend to think of taxation and regulation as being behaviour change interventions as well, possibly. But I think what people are generally talking about when they talk about behaviour change is details of policy design which are non-regulatory, and non-tax or subsidy, which can be added to the list of policy levers, if you like, to make policy more effective. I know the health literature has been grappling with the issue of the problems of a variety of definitions of what is a behaviour change intervention. They think it is really important that some clear definition is arrived at because it makes it difficult to evaluate and assess different interventions without such standardisation. I think that is what people are generally referring to when they talk about behaviour change interventions. It is somewhere between regulation and tax incentives, but as an addition to the policy library, if you like.

Q6 The Chairman: Are we hearing different views on what behavioural change interventions are from different departments of government? Because it sounds to me as if you're not quite saying the same.

Richard Bartholomew: Because I work actually as Chief Research Officer in DfE on interventions in Children's Services, to me it has a rather more micro-meaning, in terms of

quite intensive interventions with children at risk; for example, foster children, improving their wellbeing, and indeed helping foster carers to improve the way they provide support to these children. So, there are quite a number of quite intensive interventions. I don't know if they're more traditional but they're rather different from the population default type of intervention that you get on, say, taxation, where you're trying to effect a small change but over a very large number of people. With the sort of interventions that we're often involved in evaluating, we're actually trying to produce quite a large change—an improvement in the behaviour and wellbeing of a small group of very disadvantaged children or those who have major behavioural problems, which does have a big benefit both to them and to the tax payer ultimately, in terms of saving on later behaviours, such as criminality, which may be very expensive. So I think they're equally part of the equation, but perhaps not what people would normally think of in terms of the new science of behaviour change.

Q7 The Chairman: Yes, do you want to come back in?

Karen Hancock: Thank you. The work that we did across government, when we were talking to economists in lots of different government departments, suggests that quite a wide range of things are thought of as behaviour change interventions, including things like form design in HMRC, about setting defaults in the Department for Work and Pensions, as well as the more health-promotion type of interventions, maybe one-on-one, to get people to give up smoking and things like that. My perspective is that it is understood to mean quite a broad range of things across government.

Q8 The Chairman: Is there an attempt to reconcile all of that?

Dr David Halpern: If I get behind what I think you're asking by that question, when we look at how governments have tended to look at affecting behaviour, or, indeed, achieving policy, there has been a relatively limited menu. So, you think of regulation, you think of taxes, you think of price signals and so on; also it tends to be premised on quite a cognitive, rational model. If there is a basic insight it is that there is an additional suite of approaches when you get your head inside a more nuanced model of actually what drives behaviour change, what drives decision-making and so on. If you looked at it inductively across the departments, I think our point would be that some departments do indeed have behavioural insight groups of various kinds, but often that might be rooted in social marketing or advertising. Well, that's quite a narrow take. Others will necessarily have a much more almost legislative or legal view on the world. Of course those are all affecting behaviour too aren't they? But our additionality is to bring in some of those less cognitive, less familiar approaches and to round out our policy toolkit.

The Chairman: Thank you, Lord Sutherland, you wanted to come in.

Q9 Lord Sutherland of Houndsditch: Just a point of clarification, Dr Halpern, can you help me? You suggested that there could be examples of where behaviour remains the same but the outcomes are quite different. If you could give me a couple of examples that would help me just to focus my mind. But a broader point, does it matter whether behaviour change is an expansive term as long as we're clear what kind we're talking about in terms of the appropriateness, first, of the questions and, secondly, of the way you evaluate it?

Dr David Halpern: Sorry, it was an opaque comment. Many of us don't eat as healthily as we should and we know that. One way you can take that head on is to say, "Well actually you mustn't eat x, y or z foods". The alternative is that you can change aspects of the food; so you carry on eating—that is my point—and you don't experience it as a great change, but actually something has happened along the way. Of course, similarly in terms of habits, a lot of our behaviour is very habit-based.

Q10 Lord Sutherland of Houndwood: But if you withdraw salt or the volume of salt in any particular food, that is not a change in behaviour by those who eat, but it has consequences for their health.

Dr David Halpern: Absolutely, that's a better example than mine, in that sense.

Q11 Lord Sutherland of Houndwood: But that simply raises the general point. What kinds of change are we talking about? Does it matter as long as we appropriate the questions to the type of change? Because what you'd ask about that is really rather different from trying to cure someone of drug addiction.

Dr David Halpern: Let me give you one more example, a well-known one, often discussed and, indeed, discussed this week, on defaults around pensions. One thing that never changes is that we procrastinate; we always put off our decisions for tomorrow. Actually, if you change the framing of it—the consequences of that change, even though it looks like the behaviour has not—do you see what I mean? So, it's sometimes going with the grain of how desire predicts our behaviour. Of course, often it is actually an overt behaviour change we're interested in.

The Chairman: Having reminded everyone else to declare their interests, I forgot. I chair the Responsible Gambling Strategy Board and the Responsible Gambling Fund, which could, conceivably, be relevant to this inquiry. I think Lord Sutherland, you didn't have any, is that right?

Lord Sutherland of Houndwood: Well, not that I know of, but I'm beginning to wonder now; I filled in a tax form, does that give me an interest?

The Chairman: Exactly, it's everything isn't it? It's life. Lord May.

Q12 Lord May of Oxford: I should begin by declaring some interests, including one that I didn't put on the thing. I'm a member of the Committee on Climate Change, where I think I keep saying that social sciences and behaviour is the most important science, which is odd for a physicist. I'm an adviser to the Tesco Sustainable Consumption Institute and a non-executive director of the Defence Science and Technology Laboratory and I also keep telling them that they ought to draw more inspiration from behaviour and social sciences. Having teased you Professor Halpern, I'm directing my question to you. What is the role and the intended remit of the Cabinet Office's behavioural Insight Team? What's it designed to do? In what ways will it make government make best use of behavioural change theory?

Dr David Halpern: In some sense, it comes from the coalition agreement. It's a way of expressing its objection to assumptions that the Government can only change people's behaviour through rules and regulations and trying to move to: "Our Government will be a smarter one, shunning the bureaucratic levers of the past and finding intelligent ways to

encourage, support, and enable people to make better choices for themselves". In some ways, it's a tool to make that a reality. We're deliberately keeping the team quite small—six to eight people is all that we're talking about—and very much working with departments to catalyse their sophistication about how they think about and use these issues. In practical terms, this boils down to three or four key elements; one is essentially educative, so doing work with senior civil servants across departments, explaining to them these approaches—where they can use them, where they can't, essentially, it's an additional toolkit. In some areas, Ministers or departments come forward and they have a particular issue. Actually, we haven't had gambling yet, but you can imagine someone will come and say, "Is there some new angle we might think about in this area?" And it may just be a conversation, bouncing backwards and forwards. Clearly one of the things to identify is what are the small number of areas where this is actually really a game changer? Public health is an obvious one we might talk about, with the public health White Paper coming shortly. A meta-issue that I suspect, from earlier conversations, you will share our interest in is, driving up the evidence base all the time. It's a very empirical approach. A lot of these effects have been established in north American labs or with 20-year-old college students. Do they work in the field? How do they play out? How do they not? We have to stay pretty empirical on it. One of our roles is very much to stay close to that to drive the evidence base with departments.

Q13 Lord May of Oxford: Given that it is a small number of people, does it have a mainly co-ordinating role, or is it also going to be actively engaged in collecting and analysing evidence? Is it too early to say?

Dr David Halpern: No, it's not too early to say. It is early, but in at least a small number of areas that I've mentioned where this agenda clearly looms large, we are quite actively working with departments to help expose them to some of this thinking. Partly, we're just sometimes bringing in external expertise; people like Richard Thaler and we just had Dan Ariely, in from the US, last week. When we get them in, we invite the relevant people in departments that we think will learn from it³. In terms of driving specific experiments, evidence, one person working with us is Paul Dolan of the LSE; he has a number of PhD students. On the one hand, yes, we want to encourage him to do exemplar projects out there, but actually the bigger play is to not just have a few PhD students. Sally Davies sits on £500 million of research moneys, of which, I think I may have quoted this stat to you before, we believe less than 0.5% of health research goes on behavioural factors, and yet we know that more than half of all years of healthy life lost are to known behavioural factors; that's a pretty big discrepancy. So, yes, we would like to see a shift in the emphasis and we'd like to keep it evidence based. That's been the roots of this tradition and we'd like to see that continue and grow in government too.

Q14 Lord May of Oxford: I've got a couple of follow-up questions. Given that there are only eight or so people in the team, does this enable you, in the insight team, to reflect on all of the diversity of disciplines and sub-disciplines from which behavioural theories are drawn? I would've thought there were more than eight.

³ Karen Hancock noted: Individual departments are also independently bringing in expertise, commissioning research and applying the evidence to policy issues.

Dr David Halpern: Well, it seems to me that you've answered your own question. Clearly, we have tried to be deliberately a bit broad. My own background is that I used to teach, at Cambridge, social psychology and natural sciences; Paul Dolan, very much an economist; we have other people who have a more marketing-type background. We've tried to reflect some of those differences in the group. We're also located, and serve as a sister unit, with both the strategy unit—which means you can get Paul into many major policy areas—and actually increasingly, particularly as of this week, with the Office of Civil Society, given that the big society is one of the areas where there is great interest and focus. I take it you feel that there are some other disciplines, notably perhaps in the harder sciences, which you think we should be engaging with.

Q15 Lord May of Oxford: My own experience as chief scientist is that there is a lot, within government, of uncoordinated things going on in different places that should've been better coordinated. In particular, in this instance, it's been drawn to my attention that there is, and correct me if I'm wrong, the work of the Government Social Research Service, which is oriented to social and psychological behaviour, and on the other hand, there is the Government Economic Service, which is focused on behavioural economics, which are fairly distinct things but with quite a bit of read-across. Why is there that separation? Do you think it is useful or not useful? What are you hoping to do about it?

Dr David Halpern: I hope that we do engage with those groups. Do we engage enough? I don't know. We are very practically focused. We have one foot in the broader external literature and group of experts, which, of course, other groups also have an interest in, but we're also situated very much working in the heart of policy-making on the White Papers and so on. Of course, some of those other groups would also say that they're doing some of it. The alternative charge would be, how can we be pursuing, in central government, major policy initiatives without having incorporated some of this expertise? So, it's just a vehicle to do that, but maybe others would want to—

Richard Bartholomew: You're absolutely right, there are over 1,000 government social researchers, many of them are social psychologists, sociologists like me, as well as some economists, and we have around 1,300 or so, Karen will correct me, economists, many of whom are becoming very knowledgeable about behavioural economics. We have statisticians as well, and there are psychologists in the Psychological Service, so I think we are working with the team. We had a joint conference at the beginning of October, where Paul Dolan spoke. We would wish to work with the team, and there is a lot of expertise in terms of evaluation techniques, and in terms of economics, where clearly it is for the team to provide the strategic direction. It would be more difficult for individual departments to do that without the team in the Cabinet Office, but I think a lot of the implementation of these ideas, and certainly the evaluation and development of them, will be in individual departments. We cover in GSR, 22 other departments, and other agencies; GES covers slightly more, I would imagine. This is why this working together is so important to actually have a practical impact on the development of departmental policies.

Karen Hancock: Thank you, the Cabinet Office behavioural insight team is obviously a fairly recent development, since the coalition Government came in. Behavioural economics has been going on—academic endeavour goes on almost independently of whatever a government is thinking—for quite some time. Economists in government have been pondering for some time about how to use the insights and knowledge from behavioural economics and how it's relevant to policy making. So we started talking amongst ourselves,

quite a while ago, and we were particularly thinking about how one can use it, as I say, in developing good policy. We produced our guidance on how to use behavioural economics in policy-making in 2008; it's been very popular among economists. There has been quite an appetite. People had heard about behavioural economics and didn't quite know what to do with it and how to use it. We found developing this guidance quite useful; it shows—at different stages of the ROAMEF (rationale, objectives, appraisal, monitoring, evaluation and feedback) policy cycle—that insights from behavioural economics can be used to develop better policy. So, we've been doing this for quite a while among economists and working with social researchers as well and with our different economists who are based in the different departments, who have been working with their own policy people in the departments. So work on behaviour change has been going on even before the insight team was set up; it will continue to go on, and be given extra momentum by it, but it's not the only source of knowledge and expertise.

Q16 Lord May of Oxford: If I could give you one final comment that might be helpful to you. There are very interesting groups, bigger than yours definitely; the Defence Science and Technology Laboratory has some very bright young people, and to the best of my knowledge, they don't know you exist. But, even more, I've been trying to get them to talk to 5 and 6, and each of those groups has really interesting things going on and only recently have they become aware of each other. I imagine that is a generic problem. It's a challenge for you.

Dr David Halpern: One of the aspects of our role is to help make those connections in areas that you expressed an interest in, in relation to climate, and of course, we think about transport and so on; Stanford and MIT both have pretty interesting groups on it. There are commercial groups doing pretty interesting things on it. Fiat and Microsoft just did a pretty interesting piece of work on behaviour and driving. So there are many angles into it. So if we can even make a few of those connections that would be great.

Q17 The Chairman: You've raised the issue about Sally Davies sitting on a rather large sum of research moneys. On your team, do you have any health specialists? In particular, do you have health psychologists or do you have public health experts?

Dr David Halpern: The answer is probably half. We're working with some. For example, we see a fair amount of Theresa Marteau, who, indeed, is being supported by the department, as you probably know. What we try to do is work with the department, so we have done a half-day away day looking at public health issues, bringing in a number of academics and people from the department, who often, you have to remember, have lots of their own silos to bridge across. I have done some work on it. As it happens, Paul Dolan has done quite a lot of work, particularly around the use of QALYs, and he advises NICE. I don't think we'd want to claim deep expertise in every policy area, but we have certainly engaged with quite a few. I've just been reminded that we went to see UCLH about what it was doing in terms of behaviour change of clinicians. We couldn't claim to have expertise with such a small group. We would then be subject to the critique that we were literally replicating what was happening in departments, so I think we have to be careful about what our value added is and what it is not.

The Chairman: Lord Warner, I think you wanted to come in on that.

Q18 Lord Warner: I just wanted to get a feel from all four of you. Do you see your role as reactive—you wait for the departments to come to you—or do you busy yourself, poking your noses into the departments, if I may put it that way, when you know there is a topic that is floating around there that you think it ought to be involved with?

Dr David Halpern: Maybe I should have said that the team has a steering group. Obviously, it expresses some views about topics we should go into. That steering group includes Sir Gus O'Donnell, the Cabinet Secretary, Steve Hilton from Number 10, Polly Mackenzie from the Lib Dem side, and Robert Devereux, who is head of profession for policy-making. So it is a very strong group. The steering group has views on this. Essentially, we do a mix of what you describe. Partly, I'm sure we're using the behavioural economic technique of being a scarce good, so we cannot respond to all the requests that we get. Sometimes we get approaches from departments. That happens on pretty much a daily basis, with a steady stream of, "Can you help us with x, y, z?" Additionally, we have some areas where we feel, "This is really interesting; we want to engage with it". An example of the latter might be that we think the tax gap is incredibly interesting. We think HMRC has been quite sophisticated in these areas. It did not approach us; we approached it, first, because we wanted to see what it was doing and it's absolutely fascinating and, secondly, because we just think that there is a big opportunity. In other areas, if we don't get a strong push from departments—on some aspects of climate change, the department would feel that it has been doing that for quite a long time—and if they're not pushing for further help, then great, so be it, if that makes some sense. It is a combination.

Karen Hancock: Externally, I tend to wait until I'm invited. I've given quite a few talks now to other departments about behavioural economics and policy-making and at the professional conferences that we hold for government economists across government. For example, I've been to the Department for Energy and Climate Change and I spoke at the Cabinet Office for the launch of the MINDSPACE report. I've presented, by invitation, to the Better Regulation Executive and the Government Equalities Office and I'm about to present to the Law Commission. I wait until I'm invited to go and talk to other departments. It's usually because someone in the department has heard me speak at a government economics event or a government economics and social research event and wants to find out a bit more about it, so asks us to come in and talk to them. Raising awareness through giving presentations through your professional network is another route and then waiting to be invited to go in and build links that way.

Richard Bartholomew: The essence of my job as chief research officer in the Department for Education, if I may speak about that, is embedded. I lead a research and analysis division, which is part of a policy directorate. We have analysts and there is a degree of separation to retain integrity and objectivity, but my job is to help my policy colleagues and Ministers to develop policies that actually work. Part of that role is to use all the insights from science, including behavioural change, to try to achieve the results that they want to achieve using a range of methods. For example, why don't poorer families take up sufficient childcare? Maybe we should think of something so that we can use the insights of behavioural change to give them the motivation and information to make sure that they're making full use of what is now free childcare—15 hours for all 3 and 4 year olds. This is one of the policy challenges for us all. I see it as my day job to make sure that there are these insights and that we're using the most up-to-date science to make those policies effective. As I say, there are other techniques as well; one can advise Ministers on what might work. You need a range of different approaches, I think. It's my job to keep up to speed on that and to know what others are doing in the scientific field.

Dr Rachel McCloy: Because my role has been looking out across the Government Economic Service and the Government Social Research service, seeing what people are doing on behavioural change and behavioural economics, a lot of the time it has been me pitching up at a department and asking them what they're doing, what they need and what would be useful to them in this area. Sometimes that has led on to doing things like Karen, presenting in departments or helping people on specific projects, but that has been very broad, depending on what people have needed. There is also a certain central role, because I'm based between GES and GSR, co-ordinating from the bottom up, looking at the evidence base and making sure that that is well embedded.

Q19 Baroness O'Neill of Bengarve: I have to begin by declaring my interests. I'm on the advisory group of the Centre for the Study of Incentives in Health, I'm a trustee of Sense about Science, I'm on the council of the Foundation for Science and Technology and I'm a fellow of the Academy of Medical Sciences, none of which, I may say, eats a great part of my life. I'm trying to get my mind around the space in which you all operate. It seems to me that most people, behaving as we all do, are in fact constrained by very many existing laws, regulations and institutional structures. The school system would be an excellent case for thinking about this. Do you address the question of removing the compulsory, highly incentivised and costly structures, some of them creating perverse incentives, before you start discussing behavioural change, or do you just take that background as something fixed?

Dr David Halpern: I think the current Administration definitely do not take it as fixed. You may know that part of the origins of what is now Behavioural Insight Team was deeply rooted in a deregulatory thrust; its parentage partly goes back to the Better Regulation Executive. You may wish to move to this question yourself but behind what you're pressing is a deep one about the instincts of the Administration. Some of you may know that I served for six years in government before 2007 before coming back. Of course we knew about these issues back then and we did in fact do a paper on behaviour change in 2003-2004. It was pursued a bit but it was not heavily pursued by the Administration. One of the reasons why there is so much more enthusiasm is that it is precisely rooted in some of the instincts that you just expressed. In many areas, you may be able to dismantle, ease off or certainly use an alternative to a conventional regulatory framework by having something that is a softer approach. One thing that has bounced around for a number of years—it's a micro-example—is organ donation. Some countries have gone essentially for a more assertive, presumed-consent, regulatory approach, which of course has been debated in the UK. An alternative seen in some countries, certainly in some of the US states, is that, long before you do that, you see whether you can change some of the default framing of a question, which has much the same effect. At the moment, if you go and have your driving licence done, you can click on the screen and say, "Yes, I will be a donor". I think that we got 28%. What would happen if that was a required field, so you actually had to answer, "Yes" or "No, not for now"? The evidence from elsewhere is that probably 60% to 70% would say yes under such a circumstance. That is clearly not a regulatory move, but it may mean that you can back off or avoid that alternative regulatory solution. That is something that is writ large in many areas. In the regulation of certain kinds of markets, you might ask, "Is there an alternative? Are you sure that there is not an alternative where we could dismantle some of this?"

Q20 Baroness O'Neill of Bengarve: Those are good examples, but I think that my question is more about addressing regulatory overdrive—the sort of thing that the Better Regulation Taskforce and so on did not resolve. Do you have to assume that a great deal of regulation is done away with before these questions can be addressed? Does one have to assume that Ofqual has gone or the like?

Dr David Halpern: It varies area by area. Clearly the instinct of the Administration is to reduce regulation where possible. The Government have introduced the “one in, one out” rule, from which you have already seen quite a dramatic effect in terms of what is coming through Ministers’ Boxes and Committees. It is often harder to actively remove large swathes of regulations, as many Governments have found. One of the arguments you might make about why it’s difficult is that the questions arise, “What are you putting in its place?” and, “Is there some alternative?” Certainly some Ministers think of this area a bit in this way. If we offer a coherent alternative that will work in some areas, it becomes possible to do some dismantling. I know that your question is, “Could we do it a priori?” Well, maybe. The Better Regulation Executive continues to exist in BIS. Its job of course is to carry on driving that. I hope that in some areas we’ll see that happening. Whether it will satisfy you or not, I don’t know. Ministers would always like to go more rather than less in that direction.

The Chairman: I’m just going to move, if I may, to Lady Perry’s question, because it follows straight on, and then move back to Lord Sutherland’s.

Q21 Baroness Perry of Southwark: I should start by declaring what is only a tangential interest as chair of the Research Governance Committee for the Clinical School at Cambridge and Addenbrooke’s. I think that the only behavioural change we would like is from the regulators from the Department of Health. We’re very conscious that the Government’s Behavioural Insight Team is evaluating only non-regulatory intervention, whereas NICE, for example, said in its written evidence that sometimes legislation, regulation or some other change to the social economic environment that people inhabit is needed to produce or support behavioural change. Does the evidence show this to be the case? If so, why is the Behavioural Insight Team looking only at non-regulatory issues?

Dr David Halpern: Partly, the argument is that, because every other bit of government is busy, has a habit of and is quite good at producing more regulation, that is seen as a counterweight. It’s interesting to look at how our counterparts in the US, Cass Sunstein and others, have addressed this. They have been in the bit of government that was essentially responsible for assessing cost-benefit analysis of regulation in a conventional sense. Actually, as you press it, the lines become quite blurry. One thing that’s just going through at the moment, and has been much debated, is the regulations on tobacco and whether you should cover up cigarettes in stores. That’s obviously a regulatory tool; in fact, you can make a pretty good case about why it will affect behaviour. It’s just that the current Administration’s instincts are to explore the non-regulatory initially. Of course, often a regulation has at its heart something that is affecting some other aspect of behaviour, so the line, when you push it, is pretty blurry, at least in terms of the instincts of the Administration. Another thing that I would add into the mix is that behavioural economic-type approaches are only one of a number of tools that can also do that. You’ve mentioned regulation, but transparency is a very big tool that can be used, which again the Administration are very keen on. It can often serve, to answer Baroness O’Neill’s question, as a very promising tool. In many areas, it looks like greater transparency might enable

you—quite rapidly in some areas—to dismantle alternative regulatory approaches. So it's one of a number of tools and I think it's more a question of emphasis than an absolute hard line, if that is an answer to your question.

Q22 Baroness Perry of Southwark: Don't you think that regulation should at the very least be based on evidence? You mentioned, for example, the tobacco regulation of putting the cigarettes down under the counter or whatever. The evidence where this has been tried is that it makes absolutely no difference at all. Why regulate something that all the evidence shows isn't going to make any difference whatsoever in people's behaviour? The amount of educational initiatives on sex education for teenagers has not reduced the number of teenage pregnancies and so on. Shouldn't regulation, regulatory intervention, at least be based on the evidence of its effectiveness?

Dr David Halpern: Well, absolutely. I'm afraid I'm going to agree with you all the way on this in as far as all policy, frankly, should be based on evidence—if possible—and especially these kinds of issues. On the very specific examples you've mentioned, my own reading of that literature would be the former on cigarettes; you can make a reasonable case that reducing the prominence of cigarettes is likely to have some, albeit very modest, effects, on the basis of at least some meta-analytic studies. It wasn't a regulation which was introduced by this Government, as you know. In an ideal world what you would do? My view is you wouldn't do it nationally; you'd try it; you'd have some trialling, and then actually we'd be able to answer your question. On the second one, on sex education, actually I think my own reading would probably be more negative in terms of the effects and, in fact, in some areas, it's counterproductive.

The Chairman: Indeed?

Dr David Halpern: So teenage pregnancy: you can make a pretty strong case that introducing a highly articulate 21-year old who was a teen mum to a school to say "Don't do it" actually has the reverse effect. But on all on these things, I've emphasised that we are very evidence-based and we'd like this area to be an exemplar for others in that practice.

Q23 Lord May of Oxford: But surely the incidence of smoking has been reduced by draconian things like forbidding it?

The Chairman: Yes, I don't think there's doubt about that; it was a specific thing about where you put the cigarettes when you're selling them. Sorry, you wanted to come in?

Karen Hancock: Yes, sorry, I just wanted to add to that. The question and answer bit has jumped, sort of, straight into evaluation, but I think it's really important to consider this type of non-regulatory changes alongside all of the other possible ways of affecting behaviour, and, as I said before, to subject them to the test of good policy making at the appraisal stage, so that, when the Government's considering how best to meet its policy objectives, the widest possible range of options for how to do that—including taxing, spending and regulation and things in-between and combinations of those things—is given adequate consideration. Now, obviously the option that you choose will be influenced by the evidence you've got available and whether it's been tried before or if you've done a pilot or something like that, but the appraisal stage of policy development is where you might consider the benefits of deregulating alongside the costs of—I don't know—doing something else. So, I think the appraisal stage in policy development is really important here

for considering these non-regulatory approaches alongside everything else, all at the same time.

Q24 Baroness Perry of Southwark: The point I was trying to make was, whether regulatory or non-regulatory, there should be an evidence base for any kind of action you take. Just rushing in because it seems like a good idea is probably counterproductive in itself.

Richard Bartholomew: Absolutely.

Dr Rachel McCloy: We can't disagree I think, at any rate, on that. And I think it would be against everything that the professions stand for to say that it shouldn't be evidence based.

Q25 Lord Sutherland of Houndswood: Can I come in on a moment of happy unity. Hurrah for evidence.

The Chairman: To ask about evidence, exactly.

Lord Sutherland of Houndswood: You have all stressed the importance of this and of course, that's our business and what we focus on very significantly in this Committee. But I wanted to probe a bit more on evidence and the extent to which the Government assess evidence basis for effectiveness of behaviour. Now, what's come out in the last set of answers is that there are two aspects to this. One is: have you got enough evidence to suggest this is an appropriate intervention or regulation or what have you? But there's also the second question of: will there be enough evidence to know whether it's worked and is there adequate probing of that at government level? If so, have the Government come up with any interesting conclusions?

Richard Bartholomew: In terms of evaluations there is a range across departments to look at particular interventions. But also, Government Social Research commissioned a review of the evidence about behavioural change and the science behind it, from Andrew Darnton at the University of Westminster, looking at both the aspects of theories of behaviour and whether there was enough underpinning from the science, particularly in social psychology, about what motivates people and what doesn't, but also in terms of theories of change about how you translate those theories about how people work—how their minds work or how their motivations work—into actually practical options for programmes. And that was the area perhaps where he felt it was somewhat weaker in terms of theory development. You've got the theory of what motivates people and why they behave like that, but how do you translate that into change? And he came up with, I think it's nine principles, I won't read them out to you all, but actually a review of that literature to say what the weak points were and where the strengths were. As I say the models of behaviour is an area where there seemed to be good science, less so in terms of how do you actually translate those into practice. And I think his phrase was "It's better thought of as a craft than purely a science", in terms of developing empirically those practical methods where you do need very good evaluation on a range of examples that Rachel McCloy has collected together across departments, using random control trials and other experimental methods to test out whether that particular model, where you think you're going with the grain of a particular behaviour, actually does work, because there are obviously lots of pitfalls on the way, on climate change, and so forth.

Q26 Lord Sutherland of Houndwood: Can I just push a little bit on that? In your own area, in education, there's a discussion beginning to take place—and I dare say it will be fairly high-profile shortly—about the effectiveness of Sure Start in changing behaviour. Now, I'm not asking what did happen, that was a while ago, and I'm not asking what should finally decide it now, but what kind of material would you expect a Government to have probed before they introduce a policy like Sure Start? What kind of evidence now is appropriate to evaluating whether we continue to spend the money in that? Now just a little bit more complexity. I would assume the point of Sure Start—and in areas it's worked very well—has been to change the behaviour of children coming into reception classes. And within certain contexts that has worked very well, but not in others. One of the questions that then follows is: was the intention of Sure Start also to change the behaviour of families from whom the most problematic behaviour-problem children have come? And how can you evaluate that? Sorry, it's getting a bit complicated, but unless you get down into examples —

Richard Bartholomew: No, I could speak at great length, because I'm responsible for the Sure Start evaluation.

Lord Sutherland of Houndwood: Ah, good.

Richard Bartholomew: But you don't want me to spend hours on it. We're coming to the end of the major evaluation of the initial national Sure Start programme which started 10 years ago—and I was involved in setting it up—and it has been a very major evaluation, looking at both the impacts on the children and the impacts on the families, particularly the parenting skills of those families. The children now are just coming up to seven. We're collecting data at age seven. We tracked a cohort through and their parents, of course, and we do find positive results at age three and results at age five are just about to be published, looking at parenting behaviours and parental warmth and other, seemingly quite soft measures, but actually significant measures—

Lord Sutherland of Houndwood: Sorry, did you say parental warmth?

Richard Bartholomew: Yes, warmth or the way they interact; do they talk to their children and do they encourage positive behaviours? And we do find, certainly in the results so far, positive changes amongst the poorer parents who do access Sure Start and who live in the Sure Start areas. And we'll be following that through to see if that effect persists. So there are positive effects for the children, in terms of learning and broader social development, but also in terms of parenting styles. And in the end, although it's quite difficult to measure these things, they are absolutely crucial because they are a foundation for everything else. We're following up now a new evaluation of Sure Start children's centres, because the programme is now national and rolled out, so there are difficulties in evaluating the, sort of, counterfactual for that. But the essence of the new evaluation is looking at the relative merits of different approaches in different areas and different Sure Starts. So it's more a comparative analysis, because you can't do a sort of policy analysis anymore. And we'll be tracking through cohorts of centres themselves to see what they're doing, parents and children. And we've got things like the early years foundation stage which is a common assessment of children at the end of their first year of compulsory schooling which covers a range of not just cognitive development, but a range of social measures as well, to look at the effects, particularly on the poorest children, to look at the gains they get from that. So one can, even with a relative assessment, get an idea of what works compared with alternatives and part of that is a cost-benefit analysis as well, which will be tracking some of

the broader social benefits, both to the parents and to the children. So it's a very ambitious and extensive process of evaluation that we've built on gradually over the last decade.

Lord Sutherland of Houndwood: That's very helpful. I want a separate supplementary, but it may be there are other comments on this type of area.

Dr Rachel McCloy: I wouldn't mind just adding to what Richard Bartholomew said, not on Sure Start, because it's not my area by any means, but going back to the evidence base and making sure we have evidence and to the evaluation. A lot of the work that we've been doing centrally in the Government Economic and Social Research team has been inventory work that's going on across government in this area and to look at examples of where projects have been well evaluated and to look at examples of what's been going on, what is the evidence for using different techniques, for the behavioural techniques people have used, be they from the very nudgey end of things all the way through to the very intensive end of things that Richard Bartholomew highlighted before, where you're working with individuals or with groups. One of the things we've also been very keen to promote—and we've been keen to highlight examples of good practice in this—is where people have been building in evaluation from much earlier on in the process. So thinking about it at the design stage of an intervention, so you've very well identified exactly what the behaviour is you want to change. It can often be a problem if you get to the end and think "What was it we were meaning to change?" So it's a good idea to have properly set that out first, and understand that behaviour in the context around it and put in place the evaluation at that point. Then, when it comes to the end, you know what data you are looking for and the data have been collected online. So it's something, across the professions, that we've been very much involved in pushing and trying to make sure that's very much part of the process in considering any kind of intervention in this field.

Q27 Lord Sutherland of Houndwood: Clearly one of the issues—because this is a question about government—is whether government do this without a lot of prompting and pushing and cajoling. You have to go and knock on your colleagues' doors very regularly and say, "Well, you're thinking of a policy here; you'd better put in place the following", which they clearly have for Sure Start or you wouldn't be able to make the judgments that you are clearly about to make.

Dr Rachel McCloy: I think it's very much built into things like the professional code and the practice of the professions that this is the case. So having quite well organised professional groups and the GES really helps that way, because it's something that does filter round and there is quite a bit of cross-talk within the two professions, between the professions as well and to professions outside too. So we discuss these issues quite a lot and there is the Cross Government Evaluation Group and things for example that drive this kind of work forward. It is not, therefore, just siloed in good groups or bad groups, there is a good bit of cross-government link up on it.

Richard Bartholomew: Could I just add something to that? Interestingly with the recent Spending Review settlements, you've seen there tremendous interest, for quite obvious reasons, in the quality of the evidence. Because remember we have to prove to the Treasury the case for our expenditure on things like Early Years and many others. I've been in the Government Social Research Service for over 30 years and I would say that in the last two decades or so there's a tremendous increase in the quality of evidence that policymakers demand, that Ministers demand, to make those expenditure cases. It's light years away from what it was many years ago, and there are very high expectations about the

quality of proof needed, hence these large evaluations. And that focus on the spending cycle is a huge incentive to policymakers to look at the evidence and trust us to come up with effective evaluation designs.

Karen Hancock: Can I just add to that, if I may? I'd echo Richard's thoughts about the current Spending Review process, which has been much more evidence based than previous ones I've been involved in over my nine or 10 years in a London department. When money's tight, value for money is paramount. And looking for value for money has been a key part of the discussions in the Spending Review. But in order to be able to demonstrate value for money you've got to have good evidence about costs and benefits. So we don't have to go knocking on people's doors anymore; they come to us. In the current climate, it's really raised the profile of evidence more than ever before and making the case for spending on particular areas.

Q28 Lord Sutherland of Houndwood: But this takes me into a very sneaky supplementary which I think we thought we should ask and now is the moment to ask it. You've been talking about how your colleagues' attitudes have been changing a bit. And the big talk of every Government is, "We're going to, change the culture of Whitehall and the behaviour patterns in there really need to change, and unless that happens we won't drive forward as we should". Will they use your expertise and skills and the skills of your scientists to do that: change the culture of Whitehall? That's behaviour change with a big B.

Karen Hancock: Early days?

Richard Bartholomew: I think that's an interesting question. I hope so. There are things about behaviours of organisations and people in organisations that I think science can speak to, both within government and, indeed, through local authorities. The Government's moving to a system of not having lots of performance indicators for local authorities so a big issue is there in terms of self-improvement and the motivation to do that; moving away from a culture where local authorities have perhaps been used to central government telling them what to do and what standards to reach. And now it's very much for local government and others, and citizens locally, to determine what sort of services they want, so there's a behaviour change there. I think, as a sociologist, that there is quite an issue about behaviour of organisations as well as of individuals and there is a literature on that.

Q29 Lord Sutherland of Houndwood: Will the Cabinet Office play a part in this?

Dr David Halpern: Well we have already been doing some of these actually. As you'll gather, we're quite evidence based. An early one was the 10% government target to reduce emissions from government buildings—you will have seen these, and some of you may be involved—but led of course by DECC and others. We wanted to actually ask, "Well, what would we do differently?". So, for example, in most government buildings, when you go in now, you may have noticed that you can see the relative rankings of the 18 major flagship buildings, partly to drive comparison, to make people increase the salience of it, and so on. Ideally it's linked to specific actions that individuals can take. As I walked from the Treasury, I noticed this morning outside the lift there's some stuff about "turn off your appliances" or whatever it might be. So that's a little micro example. Of course we had our eye on the fact that at the same time you're increasing people's awareness of a certain approach. Take another one: it might be, in relation to big society, which is not something just out there: what can you do to increase payroll giving in the Civil Service, for example; or what can you

do to increase levels of volunteering or action? You don't have to start with a message of, "You all do it out there". Actually there is no reason why we can't start in our own backyard; so there certainly are some concrete examples.

Q30 The Chairman: I just want to follow up because you've talked a lot about evaluation. Presumably evaluation will then inform what else you recommend. But what are the primary models or the mechanisms of behavioural regulation that government draws on when it's designing behaviour change interventions, because that's relevant and you won't always have the evaluation of the previous model to draw on. How does that work?

Dr David Halpern: You —

The Chairman: Maybe you always do?

Dr David Halpern: I was going to—I don't think this is oblique but one of the questions that hangs over this is, of course we should do certain kinds of classic evaluation. So you should build in from the policy design deliberate variation. You could argue on the Sure Start stuff about whether that was done explicitly enough versus just using the natural variation in the population. So, you do have to put it ideally into policy design. One area which I think it's very intriguing to reflect on is: if you move to a world of payment by results, what does that do and to what extent does that get you off the hook of classic conventional evaluation? Because you could say, "Well, we don't care what's in the black box. We'll pay you according to how good your child outcomes are", or whatever it might be. And that's pretty intriguing actually. I think it doesn't let you off the hook completely for several reasons. One is because actually you still need some kind of theory of service, right? Or something like it. There is one other very intriguing one, which I think we're only just starting to think about. Imagine you're a third-sector or even a private provider and you say, "We've got this great programme which we think will change people's behaviour to get them into work faster". And actually, even in a world of social impact bonds—where a state just puts it out there and says, "We'll pay you by results"—actually it still matters. So if you're a private provider and you want your private sector investors to come in, you still have to make the case that actually your programme and intervention will be effective, albeit for slightly different motivations. I was going to raise to you earlier on that there partly remains a puzzle that you may indeed have views on yourselves. There is a long history of everybody saying you need a certain kind of evaluation. We can be straightforward, and the incentives on the various players are complicated in terms of Ministers; after you've been in power a long time often the particular officials, the various other players, the people who do the evaluations, want to get further work, if you're a PwC or whatever. Do we have in place a strong enough set of institutions that are held in the crucible of this evaluative world, whatever it is? Similarly, I know many of you have strong academic backgrounds, in terms of the institutions we have and the professions we have, we often generate certain kinds of things about what may be the causes; there's actually not much good evidence often on what you do about them. Public health, as we've touched on, is a good example. We know a lot about the underlying drivers. Then you want to get into the concrete questions that policymakers want to ask: "What does work? What does not?". You run out of empirical road pretty fast. And so it's a challenge. We spend a lot of money in our universities and through many other channels in our policies. But do we have a set of institutions that look fit for purpose, with enough independence and strength to generate this kind of material for tomorrow, so in five years' time we're not having the same conversation about smoking or sex education? We should be able to answer those questions much more confidently than

we can today. And I hope one of the things that you do get with a change of Government is that kind of moment when you look back and you are able to say, “Oh my god, how comes our evidence cupboard is so bare in many areas?”, even in a Spending Review process, and you lash yourselves to the mast of saying, “Well, never again. We’ll build sets of institutions and processes, which will build that kind of evidence”. Now, that is true for behaviour change and behavioural economics, but it’s true for many other areas too.

The Chairman: Okay. Lord Selborne.

Q31 Earl of Selborne: I should first declare an interest as chair of the Partners’ Board of the Living with Environmental Change programme. When in the call for written evidence we asked whether we could answer the question as to whether there was adequate structures and expertise across government to support the translation of research developments and behaviour change into policy interventions, almost universally, from any number of people, we got a plea that there should be better mechanisms for translating research from academia to policy and for sharing research findings more widely across government. So for that reason, clearly, we must welcome Dr McCloy’s appointment. Are you now satisfied that you have the appropriate structures to enable this sharing of expertise? How’s it going?

Dr Rachel McCloy: I think we’re getting there. I think there is still work to do. What we’ve tried to do over the last nine months, and it’s ongoing—and I have three more months of my time here to put into it—is to make sure that we do bring people and networks together much better across government to share both the practice that we’ve got going on in departments and the evidence base we’re aware of outside, and take advantage of some of the opportunities there are to bring academics and people into the discussion, so that when it comes to these future institutions that David’s talked about academics are better prepared for this as well, so that we know what the questions are that people want answered. Things like the fellowship I’m on, which is the Public Sector Placement Fellowship are very, very useful in that; very useful in bringing academics in so that we can see what it’s like on the other side of the table. I think at this point the network that we’ve set up has been very successful in bringing people together. We ran the joint conference that Richard mentioned, which was hideously oversubscribed and we’d people sitting on the floor all over the Treasury and a waiting list that went on for weeks, to launch this and to highlight some of the examples of good practice and things. Karen was one of our speakers in that from a department where we think the practice in this is quite good, along with others—Gemma Harper and Samantha Palladino—that you’ll probably hear from later. I think we still need to work out how to keep the network going. It’s always the thing with networks that you can get a good bit of impetus; it’s keeping the impetus up. But I think when we’re talking about a situation where people are having to provide this kind of evidence and these kind of alternatives, there’s very strong evidence coming down from above. From having the Behavioural Insight Team there, people are much more aware that this is something we should be talking about across government. So I think that’s really helping give the networking side of things a push across government and we’re getting there.

Q32 Earl of Selborne: So if we look at the structural changes which are advancing the cause, we’ve got the network you referred to and you’ve got, of course, your own team, the Behavioural Insight Team. But isn’t there needed a sort of a step change in the sense

that you really require people coming into policy, as part of their training, to take this on board. What progress, if any is being made on this? I know the National School of Government are taking this on board, but is it enough?

Dr Rachel McCloy: I think it's a very good start. I think having this becoming more commonly part of the language of policy is a good start and I know that David and his team have been doing workshops, or will be doing workshops, with policy officials who are already in place as well, so there is a lot more education going on at this level. I think if you can start when people come in it's got to be a good beginning on this, and it will build up over time.

Q33 Earl of Selborne: And what happens in three months when you go back to your university?

Dr Rachel McCloy: I'm working on that; fun and games. I teach and there's an awful lot of marking waiting for me, I think.

Richard Bartholomew: We've certainly been looking at other options for fellowships. We've done a number of fellowship exchange schemes, particularly with the Economic and Social Research Council and, no doubt, other departments with other research councils. So we see that as an ongoing role to actually bring academic expertise into the department, particularly, as Rachel said, so academic researchers do understand what actually has an impact on policy and what doesn't. I suppose there's a frustration on policymakers' parts that there is very good academic research but academic researchers sometimes find it difficult to actually do the next step from research to "What would you do about it?" That is the question I'm asked by Ministers: "So Richard, that's very interesting, but what do you suggest we do?" And I think that's the step that's quite difficult: for people not working within a policy environment to understand the importance of translating more theoretical research or empirical research that doesn't actually quite have that payoff, always, in terms of "So what would you do differently?" or "What would you change?" That's the key part of our role: having an impact and being prepared to commit to trying things. There are a number of academics who are very successful at doing that, in terms of running experimental trials, practical interventions and so forth, but we could do with more of that really, I think. A number of academics I know are very interested in it. In education there are a number. The Institute for Effective Education at York is very interested in this and there are others in other fields. So it's that next step I think that will really have an impact in integrating the evidence better.

Q34 Baroness Perry of Southwark: Isn't that also part of the problem for politicians themselves? They ask a question, "Please tell us what to do", without sometimes understanding that social science isn't exact in that way; it doesn't give a simple answer that if you do X, Y will inevitably follow.

Richard Bartholomew: Yes, I think it's true of most science—natural sciences as well sometimes—that you can't simply read off what you might do directly from a piece of evidence. There is an exercise there for people like me to actually think, "Well, how does that apply to that situation", because there are a lot of different factors that need to be taken into account, as well as the research evidence. I think many Ministers do understand that. But it's not just a mechanical process, no.

Karen Hancock: Can I just add to that?

The Chairman: Yes.

Karen Hancock: Working with policy colleagues I detect, as well as from the external presentations I've given, certainly in my own department a huge appetite. They're heard about behaviour change; they want to know more about it. I've put on talks which have been standing room only. I've had Paul Dolan come into the department and give talks. I and a couple of my staff have given advice to various people with various policy problems. So there is a huge appetite. I think policymakers are willing, because they've heard about it—they know that it's in the zeitgeist—but they want to know more about it and how they should use it appropriately. So I think the mood has changed from, say, five years ago; it's much more in their consciousness because it's talked about in the media and they've heard about it and they want to hear much more about it, so it's not quite such a difficult job.

Q35 The Chairman: So are you saying between you that this will be easy to take forward or continue to be taken forward when the Behavioural Insight Team has gone? In a sense they will have embedded it into government?

Dr Rachel McCloy: Well, this is slightly different from the Behavioural Insight Team.

The Chairman: Yes. Sure. Sure.

Dr Rachel McCloy: I think the Behavioural Insight Team gives this a great impetus. I think once you get a network going it's dependent upon the people who are involved and the enthusiasm there. In my time here I've been incredibly impressed by the enthusiasm of some people in government for this. It's incredibly refreshing to come in and be asked "How do I use this?" when you tell people about an evidence base rather than "Will it be on the exam?" But I think there's enough of a groundswell that this will go on. There will be challenges to it, but I don't think it's either wholly dependent on myself being here or the Behavioural Insight Team being here. I think it's becoming more of the language of government or part of that.

The Chairman: I'm going to move us on because we are running out of time. Lady Hilton.

Q36 Baroness Hilton of Eggardon: Thank you. You're painting a very glowing picture of policy all being based on evidence and being properly evaluated, which has not been my experience, either here or in a previous incarnation, about how government works. Ministers tend to come in—politicians tend to come in—with bees in their bonnet about what they want to do. I wondered to what extent you can influence that and actually embed behavioural science into what they're trying to do. Can you restrain them, pull them back, tell them that they need evidence before they do things and it has to be properly evaluated, or not?

Karen Hancock: Well, our professional job is to advise and warn Ministers, isn't it? That's what civil servants are for.

Q37 Baroness Hilton of Eggardon: Yes, but to what extent are you influential is what I'm asking?

Karen Hancock: Well, it varies.

Dr David Halpern: I recognise what you're saying; I think it's no great secret. We'd all aspire to a more evidence-based policy world. I do think in this particular area it's easier than in some because it's a toolkit in a slightly different way. So it's of course for Ministers and the Government to say this is their objective. They wish to prioritise big society in a particular kind of way to increase philanthropy or giving and so on. And then the challenge becomes, "Well, if that is the objective, what do we think would be the most effective way of doing it?" And you can marshal evidence to that particular objective. So it's maybe more comfortable than in some areas where what you're doing is challenging a fundamental presumption of an incoming Minister or Administration, where you're saying, "Actually, no, you're doing this completely wrong". It doesn't seem to me that's the character in this particular area. We'll see, of course; maybe that will change.

Richard Bartholomew: I don't think things in my experience things are always as clear cut as you might imagine between what is clearly wrong and what is clearly right. And there are a range of things one can do around any broad policy objective. I don't think it's a sort of easy answer, "Oh, yes that's completely against the evidence". The evidence, if it's good evidence, suggests that this is more likely to work than that, but I've never found that it's that clear cut—"Oh, this is clearly a wrong thing to do"—because there is always a mixture of evidence. Ultimately, it is for Ministers; they're elected, I'm not. I'm there to advise them what the right approach is to different objectives and, as Karen said, that's my role. The science often isn't good enough to make all decisions purely on the basis of science. That is taking the political process out of the whole exercise. There are questions of values in here and what Ministers are elected to do. I don't think one can ignore those.

Q38 Lord Sutherland of Houndwood: We sit in receipt of legislation that comes in presumably with all these objectives and plans and so on. Is this the dream of the Romantic, or is there any way in which we could persuade departments and Ministers to attach objectives and means to legislation? Then the evaluation would be clearer and the accountability of the Ministers would be frightening, but it would be much better for the process, would it not? Has such a question ever been put to you: how do I state the objectives on the evidence base that would show us whether these objectives had or had not been achieved? Oh, your silence is eloquent.

Karen Hancock: There is the impact assessment process.

Lord Sutherland of Houndwood: Sure.

Karen Hancock: It has boxes on the form where they're supposed to set out all these things.

Q39 Lord Sutherland of Houndwood: And in your opinion is that sharp enough for the transparency that I'm hinting at?

Karen Hancock: I suppose it would depend on whether Ministers thought that other people would take the impact assessment seriously.

Lord Sutherland of Houndwood: Well, I don't want to pursue this too far, but you can see why I'm asking it.

The Chairman: Lord Crickhowell you wanted to come in.

Q40 Lord Crickhowell: I'm sorry I wasn't at the start; I was at a funeral. I'm just slightly amused by the most recent exchange. Pardon me for coming in. I'm reading Jonathan Powell's book on Machiavellian government, which I suggest you all go away and read quickly. He has a passionate piece about how you're all absolutely marvellous at stopping things happening or saying why they shouldn't happen, but extremely poor about using creative ideas and getting things to happen. He has a very interesting section on it. Do you think that's unfair?

Dr David Halpern: Jonathan launched his book at the institute, where I still retain a senior fellowship. A lot of government is often about stopping things and asking questions and probing and so on. As for his point about being creative, there's no reason why you can't have that, but you can still expect and hope to see an evidence base following in its wake. You can have creativity. When benzine was identified, it came from someone having a dream—I think it was a snake biting them. That's fine, but you still have to go and test that, whether it would actually work or not. So I do obviously recognise aspects of Jonathan's —

Lord Crickhowell: I should have prefaced my remarks, as it's my first intervention, by saying I don't think I have any interests except I have a daughter who has submitted evidence among the 115 or 120 pieces of evidence that have been submitted.

Richard Bartholomew: It's certainly not my experience that civil servants are primarily motivated to stop things happening. I think there's tremendous energy and passion amongst my younger colleagues, and hopefully me too, in terms of new initiatives and different ways of doing things. I think that's quite an old-fashioned view, if I may say so, of what the Civil Service is about: stopping things happening. As a researcher sometimes I have to advise caution about something if I think the evidence is not particularly sound. That may seem like a reluctance, but actually I think the reality is a much more candid culture in the Civil Service than perhaps was the traditional stereotype, if you like, of the civil servant who would think of lots of reasons for not doing something. That's certainly not the case.

The Chairman: Lady O'Neill, and then we're going to move to Lord Warner.

Q41 Baroness O'Neill of Bengarve: It's delightful but, as Lord Sullivan said, very hard to reconcile with the legislation that comes from many departments to Parliament, which you can see, when you first look at it, is hypercomplex and will prevent people in the institutions from doing their jobs.

The Chairman: It is risk averse too, to an extent that is often beyond belief. But, anyway, I call Lord Warner.

Q42 Lord Warner: Can I bring us on to capacity? We've got all these zinging Ministers; we've got these standing room only seminars that you're conducting; but we've still got Sally Davies with her £500 million and not very much spent on evaluating the translation of all this wonderful science into practical applications. Is there sufficient expertise across government, including local government, to ensure that behaviour change interventions are properly designed, executed and evaluated and to identify where there could be room for improvements? You are winding people up to use this new approach?

Dr David Halpern: Definitely.

Q43 Lord Warner: How are you going to respond if they all take you at your word?

Dr David Halpern: It's of course a very salient question, not least, as you'll appreciate, in relation to the public health White Paper and, indeed, other health reforms. Actually it applies to most areas. So if you're pursuing a devolutionary approach, actually when you look at the micro aspects of many of these approaches, is it really for central government to do them? Often not; it's other players who are out there who are going to do this. So health is probably a good example. And then it raises interesting questions about what is the role of central government, which clearly will be rehearsed in such documents going forward. But clearly, to follow your line of reasoning, one of the points would be: what do you have in place to support the evaluation of what 150 different local areas, or whatever, might be trying out in public health and then to accrue that learning? It seems, I think, a pretty straightforward argument to say that central government does have an important role to make sure that that is happening—not necessarily to micro direct; and indeed one of the questions is still about what are the outcomes that you're supporting and promoting with the incentives. I would personally be very disappointed if there were not a good story coming through in many policy areas which are handling that problem of, "Yes, let's have a diversity of different approaches out there, hopefully evidence-inspired if not evidence-based in the first step", but you build behind it all the time this evaluative element. In some areas—we touched on this professional question—within mainstream medicine, in order to become a consultant you probably will have done actual experiments and trials and so on. That's not true for most professions. Even in public health it's generally not true, and it is certainly not true in the criminal justice system and elsewhere. It will be nice to move us into that world and I'm sure that both central government but also many other intermediate institutions have a big role to play in ensuring that transition.

Q44 Lord Warner: You're in the centre, but others are in different departments. How are you going to ensure that there's enough expertise within each government department? You're quite thin on the ground in the centre. Much of this action that you're trying to promote, and the approach that you're trying to promote, requires a level of expertise in the departments, doesn't it?

Dr David Halpern: Well, there are two levels. As you may know, we set up the behavioural insight team with a two-year sunset clause deliberately. To me, what will count as success is not in five years' time to have 50 people in the centre who are good at this, but to have that expertise widespread through the system, the 70,000—whatever it is we'll have by then—Whitehall civil servants, let alone the 6 million public servants. That is, I think, our aspiration, and that's why we're working—it was mentioned as an aside—with the head of profession for policy-making, Robert Devereux, to do essentially a programme to try and cover most of the SCS to start off, getting them familiar with these approaches, but at the same time to keep pushing on, structurally, with how one builds the evidence base for tomorrow.

Richard Bartholomew: We certainly see that as a key role for the four main analytical professional groups. We have a very strong identity. We have training—induction training as well as a very rigorous recruitment process—to make sure people have got these skills and part of that will be the skills in understanding behavioural change. We've got a number of promotional activities in terms of a guide called *The Magenta Book*—that refers to the colour of the cover, alongside *The Green Book*—to look at how you would evaluate programmes. Again, behavioural change-type evaluations will be part of that, upskilling our

own professional groups. As I said, we have over 1,000 researchers and there's a large number of economists, so it's quite an influential body, setting norms and expectations about the quality of social science one should have across departments as well as working, as David said, with the policy professions to make sure they understand how to use us and how to use the evidence.

Q45 The Chairman: But the government chief social scientist has just stepped down and we don't know when or whether there is going to be someone new. So does that suggest that this is at the top of the government agenda?

Richard Bartholomew: The new heads of the Government Social Research Service are myself and Jenny Dibden from DWP, who has taken over that role.

The Chairman: Right.

Richard Bartholomew: But we do need strong representation of the professional groups across government, and part of our role is to be advocates for social science both inside and outside government. That's quite a lot of my work as well.

Q46 Lord Warner: You've asked for a lot of training of the SCS through Robert Devereux. In a sense you have got this very honourable idea of working yourself out of a job, so to speak, after a period of time. Probably the Government thinks it would like a few more people adopting that particular approach. But how are you going to ensure that the capacity of these departments to learn has actually taken place? At the end, when you reach your sunset time, how will we know?

Dr David Halpern: Right. I hope that we will have two or three areas where you will be able to say "God, actually, I can see it in practice. I can see, essentially, emblematic examples, where this is being played out". Public health certainly would be one of them. I think there are aspects of big society where it might be nice to see the same. Other areas: I mentioned HMRC; they are already pretty sophisticated in how they do this. You can try a letter; you can try a variant—quite small changes of conditions for 10,000 people—and you can see what the difference was. So I think one of the best ways of doing this is to show people "actually this is what it looks like in action and this is why it drives better outcomes and better value for money". I may be naïve in my optimism about that, but I think if we get those exemplars in place, that is probably more important than a formal standardised programme, with the National School, whoever it might be, to make sure our fast streamers have got those tools. Of course they should have those tools, but actually it'll be the big exemplars that really drive it.

The Chairman: We're running out of time so what I want to do is to move, if I may, to Lady O'Neill's question, which is probably going to be the last one.

Q47 Baroness O'Neill of Bengarve: The question is what's the Government's role in changing the environment in which people make decisions in order to enable them make better choices? Most of what you've said to us has been about, as it were, enabling people to make better choices or encouraging them to make better choices or changing the default so that they actually make better choices. Public health is of course a crucial area there. Behind choices there is an environment, in the widest sense of the term; there are a lot of social norms; there is a great deal that is, as it were, the fixed background. How do you

think about that? Do you think about that as, so to speak, “that’s the given; that’s the context” and we have to see against that background how people can be brought to choose better, or do you say “choice isn’t everything; there are other things that have to be changed, which are not going to be a matter of altering people’s choices”?

Dr David Halpern: Well, there is a lot in that. There are clearly several levels to the issue, aren’t there? One is about individual moment by moment choices where you can frame it in different ways and you can of course construct the environment in different ways to effect that. An everyday example of it is driving—well-rehearsed, the lines on the road, do they affect you?—where in some sense you’re making a choice; you’re free to do it, but there are aspects of the environment which are cueing that. The next level of course is the social context. You’re essentially locked into a behavioural equilibrium, often with other people. Indeed, in my view, often the most powerful behavioural influence is just what other people are doing. So, littering is the everyday example. If there is litter on the ground you’re much more likely to drop litter yourself. So you’re kind of locked in it together. Sometimes there’s a route through that, where essentially what you want to do is make more explicit a certain behavioural norm. An example is alcohol consumption in students, where most students appear to overestimate, how much other students drink—I don’t know if you find this in your own experience in Cambridge, and they also tend to overestimate how much sex other students have and so on, and actually just simply providing that information in fact is an interesting corrective.

Baroness O'Neill of Bengarve: A sobering corrective.

Dr David Halpern: There was behind your question something else too, which goes to your earlier point. I was thinking about it—several of you asked this question about regulation and the difference, and I think I probably wasn’t as good at answering it as I should have been. I think one of the key differences is a story about choice and agency, and therefore it’s not really about regulation or non-regulation *per se*, but it’s about when you do construct those choices, be it through a regulatory mechanism or some other way, the individual agency is enhanced, if possible, rather than removed. So we tend to, possibly wrongly, put regulation in the box of “we’ve taken away a choice; we’ve given you one choice only”. Of course, you can construct regulation to enable choices, but in the minds of the administration it’s clearly there. But there was one last thing—sorry, it’s partly a closing comment I suppose—which you haven’t asked us about today, which is the legitimacy of who is making those choices about choices. That’s actually a pretty big deal and a profound one, not least since many of the choices we make in the moment actually aren’t the ones that we would make on reflection. I guess it’s an argument that applies in many areas of science, but, boy, it applies in this one. You can’t stray too far from the legitimacy and the public permission of what you are doing. You already see, actually, some of the reaction against this early work, that people feel worried about it, and “is it illiberal” and “is this Orwellian?” Well, at local or national level, if you want to take these kind of approaches, particularly some of the more controversial ones like priming, you actually just have to have that public permission. You are going to have to have the discussion, the debate, where the public give you permission to do the framing around the choices. And if you don’t do that I think you can get in deep trouble. So you have to answer this agency point both at the individual level but also at a more collective, reflective level.

Karen Hancock: Can I just add an economist’s perspective to that? Once you’ve considered the social permissions and so on, changing the environment in order to help people make better decisions involves costs and benefits. So if, for example, the Government’s concerned about obesity and it responds to this idea that we live in an

obesogenic environment, where there are many factors which help the rising tide of obesity, one of the factors might be in building design, where lifts are prominently displayed and stairs are hard to find, therefore discouraging people from taking the stairs. Changing the design of a building obviously has costs and benefits, so if you want to change the environment, obviously that has more costs than making some small changes to help people make smaller decisions, but it might have bigger benefits. So the consideration of costs and benefits needs to weigh here I think as well.

The Chairman: Sorry, come in.

Richard Bartholomew: No, I think interestingly behind the questions is a slight assumption that the environment is static anyway and, of course, we know as social scientists it's constantly changing. A lot of that change is way ahead of government or social scientists. I was thinking of the change in the acceptability of lone parenthood, for example, over the last 30 years: radically different attitudes. That wasn't a change driven by government I don't think. So in a sense government has to recognise that and have the good evidence and research to tell it what is happening and to actually make sure that it's addressing those changes, rather than doing something that is completely against the grain of social attitudes and mores. We have a number of studies, as you know, that pick that up. So I think government is one player in this, but society actually is moving all the time and changing what is a reasonable expectation and what they will and won't approve of, as David has said.

The Chairman: Right. Last question from Lord May.

Q48 Lord May of Oxford: It's not a question, I must admit it's two gratuitous comments, one of which, at least, I think is helpful. That excellent exposition that you just gave about how you go about forming an agreement about things you want to do, I thought was not merely excellent but it is enshrined in the—by this time 15-year-old—protocols for science advice and policy making. And I thought that was excellent. On a more bleak note, I just offer the gratuitous comment that the Civil Service really have a lot of good people, conscientious people, but they're vastly better in process than product. And my fear is that for all we may be likely to say about "evidence-based" and "better coordination amongst groups", some of that is mechanical and can be done—particularly the better coordination across—but I worry that, with the best of intentions, it will devolve into a lot of process without anything substantial really happening and most people involved in it won't notice that that's what's happening. And that's a rather bleak view.

Q49 The Chairman: It's a very bleak view. Do you guys want to have a final comment on that?

Richard Bartholomew: Yes, sure.

The Chairman: I think you should after that.

Richard Bartholomew: Under the new Government each department will have a business plan with a very clear set of objectives. And they're not process objectives, they're outcome and key-performance-indicator based.

Q50 Lord May of Oxford: Too often people don't even understand the difference.

Richard Bartholomew: Well, yes, and so having an excellent process but no result will not be a good performance by a department, so there's a strong incentive there to focus on what we are trying to achieve, rather than just how we think we're going to achieve it. That's the key aim of that, to actually focus on what we actually change and do.

Lord Sutherland of Houndwood: So one of the key objectives of behaviour change for you is to get your Ministers to say “well, this has actually got a 70% probability of succeeding”. They never say that. Never.

The Chairman: It's virtually politically unacceptable, isn't it? Can I just say thank you to the four of you very, very much indeed for coming. Copies of the transcript will be sent to you for correction and if you've got any points that you wish you'd made but haven't or anything that you want to, if you like, add to what you've already said for clarification or whatever, please do write to Daisy and we will publish it alongside the transcript in due course. It's really been a very, very good session. Thank you so much to all four of you.

Department of Health, Department for Environment, Food and Rural Affairs and Central Office of Information

Written evidence from the Central Office of Information (COI) (BC 76)

Research and development

I. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?

1. A great deal is known about what influences behaviour. Identifying the best ways to influence behaviour, however, is an area in which COI is constantly evolving its thinking. Applying behavioural economics and social psychology principles to behavioural challenges is a relatively recent practice and COI is gathering evidence from these disciplines in order to increase our understanding of the most effective ways to influence behaviour.
2. We know that the standard economic theory of 'rational man' rarely applies to the behaviours (and particularly the most intractable behaviours) that government is trying to change – in other words, people do not always act in ways that appear to be based on a rational cost/benefit analysis.
3. From a communications perspective, this means that simply providing information is often not enough to change behaviour. While it is an essential first step if an 'information deficit' has been identified that is a barrier to behaviour change, it is likely that other interventions (either communications or something else) will be required to stimulate both widespread and long-term behaviour change.
4. The disciplines that have generated the most interest in behavioural thinking across government in recent years are behavioural economics and social psychology. These two disciplines are incredibly useful in helping to understand why 'rational man' theory does not always apply and what other factors may be influencing behaviour.
5. It is vital that we understand the environmental influences on behaviour at both a micro level (e.g. where we live) and a macro level (e.g. the economy, demography etc.) alongside personal (e.g. attitudes and habits) and social (e.g. norms) influences.
6. While substantial evaluation has been carried out on more 'traditional' approaches to changing behaviour (for example, changes to legislation or advertising campaigns), some of the more innovative approaches have not yet been tested over a sufficiently long period of time to assess their long-term impact in influencing behaviour.
7. Effective behaviour change strategies obviously vary by audience, issue and context. It is therefore impossible to make a general statement about the most effective methods. It is essential to gain deep insight into each behaviour in context to understand how we might go about changing it. Moreover, theory can tell us only a certain amount about which interventions will be effective. Inevitably, the only dependable way forward is to test out approaches in the field and share learning on what has (and, critically, what hasn't) been successful.
8. With regard to addictive behaviours, in COI's experience a wide range of sustained interventions over time are required to bring about change. From our experience of working on the stop smoking campaign over a number of decades, for example, we have found that while marketing and communications can play a leading or a supporting role in

the interventions mix (for instance, making people aware of a change in legislation regarding smoke-free environments), a range of interventions is often required.

9. The diagram on page 2 shows an interventions framework used by the Department of Health as part of its stop smoking campaign. Frameworks like these can be extremely useful in identifying the role for each individual intervention.

2. What are the policy implications of recent developments in research on behaviour change?

10. In developing policy, it is essential that the key factors that affect people's behaviour and the factors influencing behaviour at each 'level of influence' (personal, social and environmental) are taken into account. For instance, psychological factors often strongly influence how people react to policies. A good example of this is that if people are offered an incentive, such as the chance to save £400 over five years by spending £100 on insulating their loft, they may reject it in favour of more instant reward, in other words having the £100 in the here and now. Behavioural economics describes this phenomenon as 'hyperbolic discounting'

Behavioural goals:

1. To decrease smoking prevalence among routine and manual workers to 26 per cent by 2010 by:

2. Increasing the number of quit attempts

3. Increasing the success of quit attempts.

Conditions for change	Positive environment for quitting	Confidence in ability to quit	Dissatisfaction with present	Positive vision of future	Triggers for action	Knowledge of how to quit
Primary change agent	Legislation	NHS services/medication	Marketing and communications	Marketing and communications	'Natural' triggers, e.g. life stage, illness	NHS services/medication
Secondary change agent	Price		Legislation	Legislation	Marketing and communications	Marketing and communications

11. Theory tells us that a 'whole systems' approach should be taken when seeking to influence behaviour. This suggests that there should be much more collaborative working within and across departments. For example, in the case of obesity, the Foresight Obesity System Map highlights a vast number of factors influencing behaviour. It also shows how many of these factors are interrelated, suggesting that tackling just a few factors on the map may have consequences on many others, and that the 'system' may 'spring back' to compensate for a single intervention, meaning that little overall behavioural impact will be achieved.

12. The obesity map was a starting point for tackling obesity. What it clearly identifies is that a wide-ranging programme of interventions will be needed to achieve behaviour change in this area and that these must be coordinated in order to predict the consequences of a single intervention on the whole system. This approach is only possible if everyone working on the interventions mix is clear on the areas they are tackling, the intended impact of their interventions and, crucially, the links to other interventions.

13. This finding highlights the fact that all those working on interventions for a particular behaviour (including policy, communications and delivery teams across all government departments, together with the wider public sector and any third parties who are responsible for delivering interventions) need to work together to ensure that the approaches developed take a whole systems approach and that robust evaluation plans are put in place from the outset.

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

14. There are a number of experts within academia, industry and government who understand behavioural theory. **It is our understanding** that not all of these experts have experience in translating their expertise into practical advice for behaviour change interventions. We suggest that more opportunities need to be created to test intervention approaches at smaller, local levels, so that we can learn more about what does and doesn't work and share learning on effective approaches. This is vital to ensure that we do not duplicate effort in testing out approaches and that best practice becomes more widely applied.

15. COI has set up an Approved Supplier List of experts in behavioural theory to ensure that we and our clients have access to experts in this area. Currently, we have two universities (Cardiff and Plymouth) on this list and we are in the process of reviewing a number of further applications with a view to having experts from a range of disciplines whose knowledge we can draw on in developing behaviour change interventions.

16. Dr Rachel McCloy was awarded an ESRC Fellowship to work at the Treasury at the beginning of 2010. Rachel's work involves exploring how research into behaviour change can be used in developing policies. We have worked with Rachel on a number of projects, including developing a training programme for the Government Communication Network (GCN), which has so far delivered introductory behaviour change training to around 300 government communicators. We have found Rachel an invaluable resource. Her work on setting up a network across government to share best practice is critically important.

17. The extent to which behaviour change programmes are evaluated varies enormously. As part of COI's behaviour change project, we are constantly seeking out strong examples of behaviour change interventions, and, while many such examples exist, it is much more difficult to find evidence on their effectiveness.

18. It is vital for practitioners to share full details of both the approach and evaluation, as small nuances between similar interventions can make the difference between success and failure. With many of the examples that are widely considered to represent innovative approaches to behaviour change (e.g. the arrangement of fruit and vegetables in school canteens), we have struggled to find full evaluation data that proves this point. This is not to say that evaluation data does not exist in every instance, but full evaluation results and detailed information on approaches used should be made much more readily available.

19. The cost of evaluation can be a barrier; this is becoming increasingly problematic as budgets are reduced further. At COI, we are sometimes asked for our view on how to evaluate behaviour change programmes which have little or no budget. Our view is that a percentage of the overall budget should be assigned for evaluation when the project is first scoped and that evaluation should be seen as an integral part of any behaviour change intervention.

20. This is difficult to implement in practice in cases where the interventions themselves are very low cost; however, it is our belief that an evaluation plan is an integral part of every type of intervention, and at COI we are establishing protocols to try to ensure that this is the case.

21. In the long run, investing in robust evaluation and sharing full details of the approach and results, whether successful or not, will pay off as it will enable behaviour change practitioners to learn from their own and each other's experiences and refine their approaches.

Translation

4. Are there adequate structures and expertise across government and the public service more generally to support the translation of research developments in behaviour change into policy interventions?

22. There are many such structures, and there is substantial expertise across government and the public sector, including:

- the Cabinet Office Behavioural Insights Team
- Treasury Behaviour Change Fellow Dr Rachel McCloy
- COI's Behaviour Change Leadership Team and Approved Supplier List
- CUBeC – the Centre for Understanding Behaviour Change within the Department of Education
- Defra's Centre of Expertise on Influencing Behaviours, especially for expertise on sustainable behaviours
- Communities and Local Government's behaviour change toolkit, launched in September 2010.

23. While the expertise is available, in our opinion the structures to join up these pockets of expertise are not yet in place. Moreover, most of the areas of expertise within government are focused on a particular discipline. There needs to be a structure which joins up experts from every background to ensure that interventions are strategically planned and targeted. One mechanism for this could be a cross-government network (see paragraph 16). This is because COI believes that you cannot approach behaviour change purely from a policy or communications perspective – it is essential to consider both policy and communications issues together.

Policy design and evaluation

General

5. What should be classified as a behaviour change intervention?

24. Anything designed to influence behaviour can be considered a behaviour change intervention, whether that behaviour is giving up smoking, turning appliances off standby or paying your car tax online rather than at the post office. Behaviour change interventions include legislation, marketing and advertising, but also smaller 'hedges' such as the flashing road sign telling you to slow down, or the energy bill highlighting your energy usage compared with that of your neighbours. All are designed to influence behaviour and all should be classified as behaviour change interventions.

6. How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal and educative) interact in order to achieve policy goals more effectively?

25. It is critically important that behaviour change interventions are developed in the round, taking into account influences at the personal, social, local environment and wider environment levels. Interventions need to address barriers to behaviour change at each of these levels and cross-disciplinary teams need to work together on developing these.

7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

26. Generally, a mix of interventions will be required to bring about long-term behaviour change. We do not view ‘policy interventions’ as different from ‘behaviour change interventions’, as most government interventions are designed to influence behaviour in some way.

27. As highlighted in paragraph 9, we believe that an interventions framework which shows the full interventions approach – identifying all the factors or barriers to behaviour change and the types of interventions required to address them – can be very useful.

Practical application

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

28. This depends on the intervention – some have been founded on very robust evidence and thoroughly evaluated; others have not.

29. Good holistic evaluation of behaviour change programmes should calculate the financial benefit and value for money. In order to promote best practice in financially evaluating government marketing and advertising, COI and GCN have produced a guidance document that sets out a recommended process for calculating Payback, Return on Marketing Investment (ROMI) and Cost per Result (attached).⁴

30. There are several examples of programmes where such evaluation has been completed, demonstrating that considerable financial payback was delivered. These include smoking cessation (figures available from the Department of Health). In addition:

1. Home Office campaigns on acquisitive crime from 2005 to 2007 were shown to have paid back £189 million in reductions in the cost of crime on an investment of £13.5 million, a net ROMI of £13:1;
2. HMRC campaigns to drive online and on-time submission of tax returns in 2008/09 paid back £18.5 million in administrative savings on an investment of £6.1 million, a net ROMI of £2.04; and
3. TDA teacher recruitment campaigns from 2007 to 2009 persuaded some 7,500 additional graduates to enter training, above the economic trend. Over the average careers of those who become new teachers, it is estimated that the government will save £665 million. With £6.5 million spent on the campaigns, this represents a net ROMI of £101.

⁴ Evaluating the financial impact of public sector marketing communication.

9. Within government, how are the lessons learned from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

31. Without question, we need to get better at this. There is often unwillingness to share information on approaches that have not worked. This is driven by a culture that does not tolerate failure (and often by interest from the media, which has a similarly harsh view). However, we learn as much if not more from what has not worked as from what has worked well. One way of addressing this would be to invest more in smaller-scale pilots and field experiments, set up specifically to find out what works. Financial outlay tends to be much lower for such trial approaches and there is often greater openness to learning from what does not work.

32. Ensuring that learning is better shared across government will be essential in the future and a cultural shift will be required to ensure that this happens.

10. What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

33. At COI, we primarily work with clients in communication roles in national government. To help them, we have developed a five-step process for identifying, translating and applying behavioural theory to behavioural challenges:

1. Identifying behaviours
2. Understanding the influences by audience
3. Developing a practical model of influences on behaviour
4. Building a interventions framework
5. Developing a communications model.

34. While Step 5 is specifically about developing a communications model, Steps 1–4 are relevant to anyone working on developing interventions. See COI's attached *Communications and Behaviour Change* document for further information.

Cross-government coordination

12. What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?

35. At COI, we have begun to produce a monthly digest to capture recent thinking and news relevant to behavioural theory. We capture articles and case studies and provide summaries and links to the full articles. Topics are arranged by theme, e.g. international development or home affairs, and category, e.g. 'Applying behavioural theory'. These digests are circulated across COI and will soon be available to our clients.

36. Rachel McCloy, the Treasury Behaviour Change ESRC Fellow, is currently collating information about projects across government that include elements of behaviour change or behavioural economics. The intention is for this inventory to be updated regularly, to provide a shared resource on behavioural interventions across government.

37. Rachel is setting up a cross-government network for those working on behaviour change interventions. A resource sharing outputs from this will be set up on Civil Pages.

Ethical considerations

14. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how?

38. In short: yes, absolutely. Designing and implementing behaviour change interventions usually involves drawing on a range of sources, including the views and experiences of the public (especially the segment that will be targeted by the intervention) and of front-line workers in the relevant area.

39. In terms of how to approach involving the public, COI can point to numerous examples that show how asking the public to take part in the design and implementation of behaviour change interventions has contributed to the interventions' success. A few instances are listed below:

- **Information gathering** – research such as focus groups and ethnography carried out among the general public informs the design of later behaviour change strategy (as used by Change4Life and other interventions).
- **Consultation** – the public consider and give specific and detailed feedback on evidence and policy or service options. This was carried out during the 2007 National Pensions Debate, when 74% of participants supported changing the default to automatic enrolment.
- **Involvement where the public have some influence over the final outcome** – the public are involved in the analytical process and development of options. In 2008, the Organ Donation Taskforce's deliberative events explored the merits of opt-in and opt-out systems. The call for more information on the need for organ donors and how to register led to greater investment in communications.
- **Partnership and empowerment** – the public are partly or wholly responsible for decision making and control.

40. The different types of involvement depend on where you are in the design cycle and how people can or want to be involved in the implementation.

Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation?

41. Public engagement exercises tend to be more relevant at the stage of designing policy and services than at the stage of designing interventions. However, where behaviour change measures will have an impact on large numbers of people – for example, changing defaults such as automatic enrolment to pensions or presumed consent for organ donation – public engagement is vital. It enables the Government to share and debate information with the public, take their views into consideration and be seen to be doing so. Not engaging the public in a transparent way risks the intervention being perceived as an imposition, or, even worse, as a secretive attempt to influence behaviour without people being aware of it.

42. For interventions that are smaller scale or more subtle, such as positioning salads and stir-fries before chips and burgers in a canteen, the case for public engagement is less obvious.

43. There are also cases where attitudes change following behaviour change interventions. For example, feeling was strongly against the London Congestion Charge before its

introduction, but after it came into force, the majority of the public were in favour of it – they had had a chance to see the benefits of this policy in action.

Should they be piloted?

44. Where there is little existing evidence from similar behaviour change interventions, piloting new interventions is essential. It encourages beneficial experimentation, which aids learning and should ultimately ensure that the intervention achieves better value for money.

8 October 2010

Oral Evidence, 9 November 2010, Q51-85

Evidence Session No.2. Heard in Public.

Members present:

Lord Alderdice
Baroness Hilton of Eggardon
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Baroness Perry of Southwark
Lord Sutherland of Houndwood

Examination of Witnesses

Witnesses: **Dr Sunjai Gupta**, [Head of Public Health Strategy and Social Marketing, Department of Health], **Ms Sian Jarvis**, [Director-General, Communications, Department of Health], **Dr Gemma Harper**, [Chief Social Scientist, Department for Environment, Food and Rural Affairs], and **Ms Fiona Wood**, [Head of Research, Insight and Engagement, Central Office of Information].

Q51 The Chairman: Welcome. Thank you very much indeed for coming. What I'm going to ask you to do is to give a brief introduction, each of you, if you want to, and introduce yourselves for the record. You just need to know that the meeting is webcast. This applies to members of the committee and to the witnesses: if you make sotto voce asides, they will probably be picked up, so it's not a great idea. Can I also tell you that there's an information note for the public, for those who want it, which gives a list of members' interests? Members of the committee who spoke last week will already have registered their interests publicly, so that probably will not happen today. The only other thing to say to you is it's quite difficult to hear in here, you can probably tell, so it would be enormously helpful, particularly for the people behind you but also for all of us, if you speak up somewhat and relatively slowly. With that, would you like to just introduce yourselves for the record and then maybe take it in turns to make a short statement, if you would like to do so?

Dr Gemma Harper: Good afternoon. I'm Gemma Harper; I'm the chief social researcher from Defra.

Fiona Wood: My name is Fiona Wood. I'm Head of Research and Insight at the Central Office of Information.

Sian Jarvis: I'm Sian Jarvis, director-general for communications at the Department of Health.

Dr Sunjai Gupta: Sunjai Gupta, I'm a deputy director in the Department of Health, and my responsibilities include co-ordination of our policies on behaviour change.

Q52 The Chairman: Lovely. Would anybody like to make a brief opening statement?

Dr Gemma Harper: Thank you. Defra has a long history of expertise and experience in the field of behaviour change, and the evidence suggests to us that the key things to focus on are multiple interventions at multiple levels, supported by an interdisciplinary evidence base, working in partnerships, with both other government departments but also civil society, businesses and the public to generate that evidence base and come up with innovative solutions to questions on behaviour change.

Sian Jarvis: I very much welcome the committee's investigation into behaviour change; I think it's very timely. Behaviour change has become a central theme in government most recently, and the coalition Government too has underlined its commitment to applying the learnings from behavioural science more systematically across society. Just three quick points: it's very difficult territory from where I sit in the marketing world; it's difficult for people to change their behaviour, even when they want to; and in presentation terms, it's also difficult territory. It's very hard for government, I think, to achieve the right balance between protecting individual freedoms but also encouraging personal responsibility. When we get that wrong, there are accusations of "nanny state" and if we don't go far enough then we're accused of being too soft. However, I do think we have made progress. We've become, certainly in the Department of Health and working with Defra, much more sophisticated in our approach. We have begun to build the evidence base, and we have evaluation that our interventions work, but we know that one size doesn't fit all. We know that even when you develop a successful model for change, and you apply it to a particular target group around a particular issue, you can't simply transfer it across to a different challenge. I think also we know that we are at our best when we are working closely together, both across government and also with our partners outside government, too. We have made progress, but there is more progress to be made.

Dr Sunjai Gupta: I very much welcome this inquiry. I think behaviour change is relevant to all aspects of public health policy. The real challenge will be in the future to ensure that the current focus and interest in this area, both within government and elsewhere, is maintained and sustained in the long term. I think this inquiry is very helpful in that respect, and I hope one of the effects will be that the interest will be maintained.

Fiona Wood: As many of you will know, the Central Office of Information is the Government's centre for excellence in marketing and advertising, and we work with government departments and agencies to drive best practice and deliver cost-effectiveness, in the way that citizens are informed and engaged about policy issues that affect them. Our interest in this particular inquiry, at which we were very pleased to be invited to give evidence, is in the work that we've done around behaviour change. We have a leadership team, who were established to build and disseminate our knowledge of how advertising and marketing can help deliver behaviour change. Our aim is to ensure that behavioural theory is demonstrably embedded in everything we do. We've published guidance on how to embed behaviour change theory into advertising and marketing, and we've also devised and delivered training on communications and behaviour change to over 250 government communicators outside COI. We also publish a monthly digest of articles, and we've recently established a small approved suppliers list of academic experts.

Q53 The Chairman: Thank you. The first question we really want to ask you is what should be classified as a behaviour change intervention. This is not as neutral a question as it sounds, because last week we heard that there are discrepancies across government in the way that the terminology is used. Just to hand it straight back to you, the COI stated in its written evidence that behaviour change interventions include legislation, marketing and advertising alongside smaller nudges, and that didn't seem to be what other government departments necessarily thought. I think we'd quite like to hear from you how you classify a behaviour change intervention—each of you in turn really.

Dr Gemma Harper: We in Defra take a very broad approach to this question, but there are some key components that are really important. From a government perspective, once we've made a case for intervention, and usually that case is centred on market failure or equity issues, then the issue is what we are trying to change. We also take a slightly different view to that; we talk about influencing behaviour, because it's not just necessarily changing behaviour. We might want to maintain behaviour—strengthen it. We might want people to adopt different behaviours or adapt their own behaviour, so we have a broader view of influencing behaviour, not just change. Then we have at our disposal in government a number of policy instruments, which do cover everything from the regulation end to the fiscal and economic end to spend—because we still have money to spend—and also to what are known as the alternatives to regulation and fiscal measures, so those that cover communication activity, co-design, co-production and that broad category of interventions. Once we've established that we do actually have a wide range of mechanisms to change behaviour or influence behaviour, then we really need to take an evidence-based approach to what's going to work and be most cost-effective. Our evidence suggests that it's a combination of those interventions that's going to be most effective. We've developed and will talk a bit later about the four Es. We talk about enabling, encouraging, exemplifying and engaging. Each of those has an evidence base to support a package of interventions. It's those elements that are important in classifying behaviour change interventions.

Fiona Wood: I would absolutely concur with Gemma. We really define behaviour change intervention as anything that is designed to have some kind of influence on behaviour change. In our written submission, I think the point that we were trying to make was that we do see the need for a very holistic approach to behaviour change. Communications and marketing may be a useful lever; in some instances it may not. There may be stronger arguments for other interventions. We recommend a broad framework of interventions, understanding each of the policy tools or levers at our disposal and understanding exactly what each of those things is designed to achieve. That also then facilitates very effective evaluation, so that you can measure the effect of each of the interventions against very specific objectives. Of course, that feeds into future learning about what is successful.

Sian Jarvis: I think I would probably echo those comments. A broad framework is needed. I don't think there are any silver bullets. Nudge and the MINDSPACE Summary are very useful, but there are a whole range of interventions that are necessary to create behaviour change. I find it rather helpful in my mind to try to keep things simple. I tend to think about behaviour change being about making it easier for people to make choices, and I think marketing is a central part of that. When I think about smoking, where we have applied a very broad framework to behaviour change, you can see the evidence of each component part of that working. For example in smoking, we needed to create the environment through legislation, through the ban, and then you get right down to marketing where people have information. We need to give information to people about the health harms connected to smoking, but we also need marketing to help drive people to make quit

attempts and drive people to actually use the services that will help them quit as well, so using marketing to drive them directly to NHS services. I think very much a broad framework is the right approach.

Dr Sunjai Gupta: Can I just build on what my colleagues have said and what I said earlier? There is no aspect of public health that I can think of that does not require somebody to change their behaviour to be effective. That's the first thing I'd like to say and, secondly, could I refer to a report the Nuffield Council produced some time ago, which I know some members of this sub-committee were very closely involved in, which referred to a "ladder of intervention", ranging from doing nothing or simply providing information at one end to restricting or eliminating choice at the other, with an intermediate category of enabling or guiding choice? I think that's a very helpful way of thinking about different types of interventions, and the degree of intensity, invasiveness and coerciveness associated with those. That is one example of the broad framework that my colleagues have talked about, which I think is helpful in answering your question.

Q54 Baroness O'Neill of Bengarve: I fear we might have misphrased this question. Perhaps it should have been the question: what do you not count as a behavioural change? If I hear you correctly, you're counting anything that alters behaviour as a behavioural change intervention. Therefore, you include legislation. You include the criminal law and all those interventions which, as I take it reading the theoretical literature on behavioural change, are what people have wished to get away from. They have not counted criminalising certain behaviour as a behavioural change intervention. They have not thought of eliminating choice as a behavioural change intervention. My question is: I can see the temptation to go the way you have all gone, but doesn't it rob the category of behavioural change of its use?

Dr Gemma Harper: Each of the types of policy instrument has its pros and cons in any particular situation. For regulation, we know that there are implementation issues around compliance. For fiscal measures, we know that there might be distributional problems; there might be administrative problems. Obviously we all know the problems around the available budget for spending programmes. Yes, certainly my experience in the last few months of going around Whitehall is that behaviour change is very much used as a shorthand for alternatives to regulation and fiscal measures, because the hypothesis is that it's more cost-effective. We can make those changes without having to go to the more coercive end of the policy instrument range. There is an issue to consider about the different responsibilities for different departments. For Defra, we are engaged in generating, maintaining and protecting a public good like the environment, and there is a scale-of-the-challenge issue and a timescale issue—where are people currently now and where do we want them to get to? All of those different criteria will affect whether we go to pure alternatives to regulation and fiscal measures, or whether we think we need a combination and a range of measures. Hopefully, we'll get on a bit later to the segmentation work we have done that shows that, for the public, farmers and for other groups, you need different combinations of different types of intervention to be effective.

Q55 Baroness O'Neill of Bengarve: Just to pinpoint the question, are you saying that criminalising a certain sort of behaviour would not be a behavioural change intervention? It's your definition we're looking for.

Dr Gemma Harper: From Defra's point of view, we include all policy instruments including criminalisation through legislation, regulation and fiscal measures that aim to influence behaviour in some way.

Q56 The Chairman: In fact, all the measures that are in your armoury are subsumed into behavioural change.

Baroness O'Neill of Bengarve: It's the new label for the whole lot.

Dr Gemma Harper: In some ways we are talking again about the case for government intervention, and the policy instruments that are available to us. It's not just change; it's the influencing. We want to maintain behaviours, strengthen them, change them, and adopt and adapt them. The evidence from psychology is some decades old. The evidence from economics is now merging with psychology under behavioural economics so, to some degree, the new focus on interdisciplinary working, which is very much welcome, is highlighting an issue that's been around for quite a long time, but it's also combined with wanting to make sure we're doing things most cost-effectively, where we have much more restrained budgets—what are the alternatives to the more intensive forms of intervention?

Q57 Baroness Hilton of Eggardon: What I find fascinating about what you're saying is that it assumes a totally rational framework for what's going on, whereas politicians notoriously have bees in their bonnets—ideas that they want to implement. They're not necessarily evidence-based, or particularly subject to evaluation. I don't know how you all cope with that. It all sounds as though you're all terribly rational and doing things for the public good, which you know you want to achieve. That's not what politics is like, and all of you are in departments, with politicians with their ideas about what should be done. In the field of health, it may be clearer what needs to be done, but it's not at all clear for instance in the field of education, where people have doctrinaire reasons for wanting particular types of education, not based on evidence. I'd like to hear what your feeling is about politicians who come in with bees in their bonnets.

Dr Sunjai Gupta: I can't really respond to that. What I will say is certainly there is scientific evidence and research, and there is policy. Policy must be informed by scientific research, but naturally there will be other considerations that come into the development of policy.

Q58 Baroness Hilton of Eggardon: It might be totally contrary to research.

Dr Sunjai Gupta: I hope there would not always be direct conflict with one another. Can I just return to the issue earlier? I realise it is a slightly semantic issue as to whether you classify coercive measure like legislating as behaviour change interventions or not. Certainly, traditionally that would not be classified as a behaviour change intervention, and it is also fair to say that the current Government wishes wherever possible to avoid those types of interventions and to go for this middle ground that I was talking about earlier, enabling choice, guiding choice. It just so happens that there is a group of interventions that fall within that middle territory, which also happen to be very evidence-based, highly effective and cost-effective. I hope we'll come on to some of those later on.

Q59 The Chairman: I would actually just like to get Ms Wood, because you come from the Central Office of Information, so therefore in a sense you cover the whole of government. I think that what we were hearing—and this was the point that Lady O'Neill was making—is that everything, every possible thing, is now taken up into the armoury of what was being described as behaviour change, which is not wholly what we heard last week. Is that what you increasingly feel is true across government?

Fiona Wood: I wonder if it's a slightly different nuance; it's not about reclassifying as behavioural change many of the traditional intervention tools available, but making sure that they are informed by an understanding of behavioural theory. It doesn't mean relabelling them; it just means making sure that that particular part of evidence is taken into account when the intervention framework is being put together.

Q60 Lord Alderdice: I suppose I probably should declare an interest as a psychiatrist. I'm interested in this question of evidence base. Coming from a political background—Lady Hilton was expressing some scepticism about politicians—I remember having a number of conversations with colleagues who were in campaign departments. I said, "Well, look, we've got a limited amount of money. A certain amount goes on posters; a certain amount goes on targeted leaflets; a certain amount goes on targeted letters. Some goes on advertising; some goes on party political broadcasts and so on. How do we know which of these we should actually spend our limited resources on?" The answer was: all we know is the package works and the more money we have, the better it works. Despite a huge amount of money being spent internationally on all of these different elements, I don't think we're terribly much further on in terms of party-political campaigning. I suppose, when Dr Harper talks about this complex mix but with evaluation and evidence base, I'm wondering whether things are terribly different in government generally and in these areas. All we know is that there are lots of things and, when we do them all, it produces a better result than not doing any of them, which of course is not quite the same thing as having an evidence base for all the different components and knowing which of them are worth doing, which of them are not worth doing and which of them may even be counterproductive for all that we know. Can you help me a little bit on this?

Dr Gemma Harper: I'll try to. Defra's four Es are based on best evidence that was available around about five years ago, when Defra was developing the Securing the Future strategy, and they were very much based on what we know about the importance of different factors that affect people's behaviour—so what enables it and what causes a barrier to it. In terms of enabling, it's also about infrastructure, for example, and service delivery and what's available to people. In terms of encouraging, that covers the whole breadth of possible types of policy instrument. That's the point where evidence from segmentation can be very helpful. This is large-scale, nationally representative, quantitative evidence about, in our case, the public's views, attitudes, beliefs and feelings about the environment, so that you can segment the public. When you understand their motivations and their barriers to change, you can target and tailor interventions to meet that. There is still the issue of course that you can't necessarily test every single set of interventions with every single set of segments. The point you raise is absolutely right. We try to draw down on the quantitative evidence we have. We have a whole programme of action-based research to generate what we know about the factors that enable and prevent certain types of behaviour. We know, for example, that exemplification is really important, that businesses and the public say, "We want to see government take a leadership role in the kind of behaviours they want us to adopt," as is engaging the people and understanding

where they're coming from, working with them in identifying the problem and the solution. There are lots of pockets of good-quality, quantitative and qualitative evidence that feeds into Defra's four-E approach to designing, developing and implementing behaviour change interventions. I think the point about evaluation is a really critical one though, and it refers back to a previous comment about the difficulty of establishing evidence-based policy. To evaluate that package of interventions and the components of it requires a significant research strategy from the beginning of the design of the intervention and the policy, all the way through its implementation, and then you evaluate actually what happened here, compared to the counterfactual, where you didn't deliver all these things. Your point is the second level down: which component of that set of interventions was effective? The short answer is we do have a strong evidence base but, in terms of the evaluation point, there is more to be done across government in establishing what works and what's worth investing in, in terms of specific components of packages.

Q61 Lord Alderdice: Maybe I'll ask a brief follow-up on that. Is there a difference in your view between informed design and evidence base? I may be missing it, but it sounds to me as though what you were saying was, "We know a whole series of things about how people function, and we design things on that basis." That's informed design; that's not evidence base. Evidence base is, it seems to me, only when you come out the other end and can evaluate it, and decide whether or not the various things that you thought were going to work and you designed with the intent of working actually did produce the result that you wanted. I suppose I'd be interested in what your definition of "evidence base" is.

Dr Gemma Harper: I think it depends on the question you're asking. You're absolutely right that impact evaluation of whether something worked and whether it was cost-effective is a critical part of the evidence, but it's not the only part of the evidence base, certainly not in social research. We will start with action research, which will help identify the barriers, qualitatively perhaps, to effective engagement. We'll conduct process evaluations that answer the question: did we implement this policy the way we intended before we actually assessed whether it worked or not? There are different questions with different types of research design to answer that question, and I completely see a difference between taking a robust view of evidence-based policy, which I would always advocate—so when we're talking about qualitative evidence, there are clear standards that Government Social Research establishes, maintains and quality-assures, which are different to just going and talking to somebody and getting anecdotal evidence. I would put anecdotal evidence over there, and robust qualitative, quantitative, quasi-experimental and experimental evidence in a group that belongs to social research.

Dr Sunjai Gupta: May I give you one example from your own field, if I may, which is psychiatry? Cognitive behavioural therapy is an intervention which is a form of behavioural intervention and is highly evidence-based. It originated as you know from the United States and Aaron Beck's work in Chicago on common mental disorders. It's now widely used in this country; it's been evaluated in many, many trials and has been found to be effective, not only in psychiatric conditions but in many other conditions as well. To me, that is an example of a behavioural intervention that is truly evidence-based and that has been evaluated.

Q62 Lord Alderdice: If I could just respond in regard to that, yes, if you apply it in precisely the circumstances in which Aaron Beck and his subsequent colleagues did it, but

that's not what actually happens. What happens is you get the evidence base on research for these particular areas, and then you say, "And now, we're going to apply it to a whole range of other groups and people, on whom we haven't done the research at all." That's where I have the problem about what evidence base actually means, as distinct from informed design. Actually, in respect of cognitive behavioural therapy, it's precisely the problem: a lot of work has been done with adults, many of them not actually suffering from mental illnesses, most with anxiety and depression, and then it is applied to a whole range of other fields, and that's why I pick up the question of what evidence base actually means.

Dr Sunjai Gupta: I totally agree with you that it is an extremely dangerous assumption that what has worked in one setting or for one audience will automatically work in another. I would totally accept the argument that, if you are going to take an intervention applied in one area to a different area, you then need to properly evaluate it again. I 100% accept that.

Q63 The Chairman: I'm going to move on, because otherwise we are not going to get beyond even the first couple of questions. Lady Perry.

Baroness Perry of Southwark: I'm very interested to hear the range of interventions you've already mentioned in our earlier discussion. It's quite apparent that different government departments do have very different ways of intervening or attempting to intervene for behaviour change. My question really is: first of all, do you think that one methodology is transferable to another government department? For example, are the interventions that are effective in health also effective in climate change, changing people's behaviour in the climate? Attached to that question, is there any evidence that government departments have been sharing experience, sharing methodologies, sharing the evidence of effectiveness of different kinds of intervention?

Dr Sunjai Gupta: Following on from my last point and the caveat that we just discussed, you have to be very, very careful about transferring evidence from one area to another. Bearing that caution in mind, I still think there are commonalities between what different government departments do. To give you an example, we in the department have sponsored, through COI as it happens, a piece of segmentation research called the healthy foundations model. That has shown that there are a group of people, often from deprived parts of the country, who have high-risk behaviours, poor health and outcomes, a high use of services but low satisfaction with those services. We have been in discussion with DWP colleagues about whether you would be able to design an intervention that would actually reduce their very fatalistic attitude toward their health, and improve their health outcomes. That could have spin-offs in other areas, for example to reduce their dependence on incapacity benefits. I think there are common aspects to this area, which may cut across the work of different government departments, where they can genuinely learn from each other. My team certainly has started a process of meetings with colleagues in other government departments in order to facilitate just that.

Q64 Baroness Perry of Southwark: Do you not feel that the interventions that you do in health are very much directed at individuals—"I'm very unhealthy; I'm overweight; I don't exercise and all the rest of it so I listen to the inspirational things of ideal health and I change my behaviour, in order to benefit myself"? On the other hand, turning to Defra, somebody says, "If I use my electricity a little bit less or don't throw my paper away in the general rubbish bin and so on, I will be benefiting society. I won't get any personal benefit from it at

all.” How much really is transferable from one kind of intervention to another? It seems to me that trying to change my behaviour in one category would be a very different kind of intervention from trying to get my behaviour to change in another.

Dr Gemma Harper: I think that's right. I want to build on the segmentation point, because I think that is an example of a methodological approach that splits up your target group, your audience, if you're interested in their behaviour, into understanding their groups of motivations—what they believe and why they behave the way they do. You've heard an example from health. We have our own example from our framework for pro-environmental behaviours, so we're then able to say we have seven segments within the UK. There are people who are more willing and able to act, and you would want to do a different set of things with those people than with people who are willing but less able, or able and less willing, and so on. I think segmentation and that approach is a really important example that cuts across government, using that to target interventions. There are other examples of the four Es. For example, the role of trust and trusted intermediaries is something that we are working on very heavily, in terms of water efficiency. We've got a pilot project looking at the role, and again this is working with partnerships—working with plumbers, DIY retailers and the customers themselves—to find out the most effective and cost-effective way of encouraging people to use less water and actually to benefit, both for themselves in terms of their bills and also for society. The point about multiple interventions at multiple levels is exactly that one: we're interested in individual behaviour and community behaviour and business behaviour. The point we haven't yet mentioned for Defra particularly is the EU. About 80% of our business is related to what happens in the EU, much of which is going to be around regulation. There is a lot in terms of sharing. I think there are specific issues around what type of behaviour you're trying to change, what the scale of the behaviour is, what the proportion of the population is you're trying to change, the timescale and where people are, as I've mentioned, which will be different in terms of people's individual health benefits, related to social and societal benefits, which is why the lessons from behavioural economics and social psychology about what people value—in terms of responding more to losses than to gains, more to what they're going to get today rather than the future—those lessons and principles from those disciplines can be applied across the piece.

Q65 Baroness Perry of Southwark: Perhaps Ms Wood would be best placed to answer the other half of my question, which is: are there any examples of government departments sharing experience in all of this?

Fiona Wood: I think there are lots of examples actually. I think we're on a journey together at the moment, regarding knowledge-sharing on how to embed behavioural theory across different issues. There is actually a lot going on across government. The Cabinet Office Behavioural Insight Team was established in July, and that has really acted as a focus to pull together a lot of different activities. There is the behaviour change network set up by Rachel McCloy, who you also saw last week, and the work she's doing to collate case studies that will provide a knowledge bank across government. You've heard Gemma and Sunjai talk about the work that they're doing. There's also work going on in DfE. Karen Hancock, who spoke to this committee last week, is very available to speak at conferences and so on. As far as the COI's contribution goes: we've published a guide; we are delivering training to government communicators; and we are also working on a shared evaluation service, which will take the form of an online portal and which will hold data about advertising and marketing, and how effective that's been. We are on a journey. We are

moving into an area of consolidation, in terms of sharing and building on our expertise, and there are many examples that go a long way back, a long way before this initial interest in behavioural theory, where we could talk about government departments working together. One thing that springs to mind for me is the FRANK campaign, which was run by the Home Office, Education and Health. That particular campaign work I think originated in 2005, and was a really good example of government departments with shared responsibilities on the drugs issue working together to address that. That was also an example that explicitly referenced a behavioural model to underpin the campaign strategy.

Q66 Lord Sutherland of Houndwood: My apologies for being delayed and late. I clearly missed a fascinating part of the discussion. Following on from this, are there examples where one government department is charged with a piece of work, perhaps to introduce something that will change behaviour, and there's a realisation that you need the co-operation of another department and perhaps work there, because it's not a single problem? You find this in areas of deprivation, where the indices cover virtually everything in the community. Are there examples of this, where the initiative is taken?

Dr Sunjai Gupta: I can give you one such example and that is teenage conception, which has been a serious problem in this country in the past. As you say, it's concentrated in the more deprived areas of the country. That is very much the lead for what is now the Department for Education, which was DCSF previously but, for many years, the Department of Health has worked in extremely close partnership with the DfE, and I think it's fair to say we've achieved quite a lot of success: rates have been coming down; I think they're at their historically lowest levels, although they could be lower. We'd like to drive them down even further. That's an example of a very good piece of joint collaboration between two government departments, where the lead was in one place but it was realised that, actually, you needed the co-operation of another government department to be effective.

Sian Jarvis: I could probably give you another example, which is tackling obesity, which required joint-working right across government. Actually the way that we designed the marketing component of that programme was in such a way that it would enable other government departments to both play a part in it, but also to feel that they had their own identity within it. We were able to create a series of sub-brands. Defra took part as Muck In4Life; we had Walk4Life, which was run by DCMS; and the Department for Education took part in Play4Life. That required quite a bit of cross-government working and the building of a coalition that actually went way beyond government and into the commercial and voluntary sectors, and local communities as well. I could give you more on that later.

Dr Gemma Harper: There are examples around Defra's work on pro-environmental behaviours and working towards a low-carbon economy, many of which relate to health—for example, our work on access to green spaces and the public health benefits. In children walking to schools, there's obviously a Department for Education interest, as well as a health interest. There are examples from air pollution, where there would be health benefits. Often it's slightly the other way round for Defra—that we're trying to achieve a set of policy priorities, working through and with other government departments.

Q67 The Chairman: Could I just pick this up slightly and tease it out? I think what you've been saying, and we'll come back to some of the more complex stuff and particularly

the obesity stuff, is that actually there's a lot of sharing across departments and that that's working quite well. But in the COI's evidence, you said that the structures joining up expertise across government aren't in place yet, although obviously there's quite a lot of working like that; and that the cultural shift—the behaviour change, one might say—would be needed if the learning is going to be better shared. I'm just wondering how the COI in particular and different departments in general are thinking about how to embed in some way this change, so that there's more sharing.

Fiona Wood: I would agree that some more formal structures would be useful. What I don't want to do is suggest that sharing hasn't taken place prior to the current interest we see. I think my colleagues probably also have something to say about what kind of structures would enable them to work together more easily⁵.

Dr Gemma Harper: You heard last week from Government Economic Service and Government Social Research. Both those organisations, and I belong as a head of profession to Government Social Research, have done extensive work on marshalling the evidence on behaviour change. You heard from Karen Hancock and Richard Bartholomew. We work with the Government Statistical Service and government operational research. There are structures in place. I'd say that we could do more to work with the natural sciences. In Defra, it's really important, and our evidence investment strategy demonstrated, that we are interested not just in the natural sciences, but also the economics and social research evidence in trying to deliver our policy outcomes. I think there is more for us to do there, but we have other structures that are already in place looking at related issues. The social impact task force, which is chaired by Defra and DWP, is a cross-government initiative to improve the way that government identifies, defines and assesses the social impacts of its policies. That's outside of the usual economic and environmental impacts, and clearly that has a relationship to the work you're talking about in terms of behaviour change, because that's going to improve how we define behaviour change and the interventions that can lead to behaviour change, related to how we assess the social impacts of government policy. There are models there that might be worth looking at, in terms of adopting, to strengthen what's already happening in government, but I would also agree that more can be done to strengthen systematically the way in which we share evidence, agree the evidence base and generate new evidence.

Dr Sunjai Gupta: I should mention that there is now a new Cabinet sub-committee on public health working across government. As I said earlier, if behaviour change is integral to public health, which I believe it is, having such a sub-committee I think will be very helpful in the future.

Q68 The Chairman: That is a structural change

Dr Sunjai Gupta: It is.

Q69 Baroness Hilton of Eggardon: I was going to ask about successful and unsuccessful interventions, but it sounds as though we've already had an example of the reduction in teenage pregnancies. On the obesity front, I'm afraid levels of obesity are continuing to go up, and I wonder to what extent the lessons are drawn from the successful intervention and

⁵ When asked to comment on the transcript Ms Wood added: "it's important to recognise that structures need to be in place to embed behavioural theory and its application both horizontally across government and vertically through the delivery chain".

the less successful intervention for other departments and whether there's a formal system for providing advice to policymakers. Regarding the whole cost of evaluation, having longitudinal randomised studies is extremely expensive and, yet, essential in the long-term fields that you are both dealing with. Is government willing to pay the costs of having things properly evaluated, I wondered.

Dr Sunjai Gupta: Just on your last point, I do understand the importance of long-term studies. In fact, I would say one of the main challenges we face in the field of behavioural health is that very often you can demonstrate, even through randomised trials, good outcomes in the short term. What you do not know is whether those are going to be sustained in the long run. To do so using the sort of methodology you've described is very difficult, because of not only the cost but the problems of attrition of samples over time and so on. I don't have a simple, easy answer to that one, and certainly in the current straitened circumstances we are in it's going to be an even bigger challenge. As far as the issue of sharing across government departments and our experiences, I think we've already said that sharing is taking place, and there are new structures in place that will facilitate that further, but I would not say that we've reached the point where we don't need to do any more. There's always scope for further improvement.

Dr Gemma Harper: There are two really important guidance pieces: the Green Book, the Treasury guidance on appraisals, so assessing the cost and benefits and what you expect from what a policy will deliver; and the Magenta Book, which is the equivalent policy evaluation book that is being currently revised. That is about trying to align evaluation with appraisal. The principles underlying it are about being proportionate to the scale of the risk and the investment, in terms of the policy we're trying to evaluate, but also ensuring we're being as robust as possible and being transparent, in terms of publishing the evidence. It is a perennial problem about the cost of evaluation, but it has to be weighed against the cost of not knowing. This is all about risk management; first of all the risk of doing harm by delivering interventions where you don't know what the evidence is at all, and the risk of wasting resources and the risk of not achieving your outcomes. When we consider the impact assessment for a new policy, and I refer back to how we're developing the social impacts, that should be a new refreshed mechanism for harnessing the evidence base about costs and benefits, the wide range of impacts, and taking a risk-based approach to the level of evaluation that should be afforded for different policies across the piece. I think it has to be that trade-off between the risk of investment to know and the risk of not knowing.

Q70 Baroness Hilton of Eggardon: Quite often before you embark on a policy, you need to establish a baseline in the first place, and that entails quite often a substantial amount of research to establish what the actual current situation is. I do wonder whether, in this brave new world of evidence-based policy and evaluation, people actually understand the costs of establishing those baselines in the first place. Is that understood widely in government?

Dr Gemma Harper: The policy cycle that Defra uses basically starts from the rationale for why we need to intervene and the objectives, and how you monitor—that point is really important, because in order to manage performance, we need to know what's happening. It matters whether that evidence, that data, is already available. For example, our farm business survey is a cohort study, a really helpful data set in terms of farmer segmentation and changes over time about how farmers are likely to react to different new interventions. Where there is ongoing management information, and that is built into the design of a policy

and its implementation, that evidence should be used as part of the assessment of whether it's working. You're right that, in some cases, that isn't always happening and, therefore, there's a gap in the evidence base, but it ought to be built into the policy cycle of how you deliver effective interventions.

Q71 Baroness Hilton of Eggardon: And you're conveying that information, are you, to policymakers?

Sian Jarvis: Just to add a bit to that, if our chief medical officer was here, who is also head of research and development, what she would say is that we are spending increasing amounts on evaluation, and that going forward that will increase yet further. I would point you to the publication of the White Paper on public health, when it comes at the end of this month or the beginning of next month, in terms of that around public health.

Q72 The Chairman: Could I just tease out the specific bit of the question about the interventions, the examples you could provide of interventions that were absolutely evidence-based and effectively evaluated, and then interventions that either were based on less robust evidence or where the evaluations didn't work out so well? Are there some examples that you could give us, because that would be quite useful to us in working out what we want to say?

Dr Gemma Harper: One of the best examples that Defra has of what was evidence-based and what worked very well is the uptake of energy-efficient products. This is part of Defra's policy goal to have a low-carbon economy and more energy-efficient products. This is a really good example of behavioural economists working with social researchers and communications colleagues, so there is an interdisciplinary aspect, too. In 1996, less than 5% of fridges and freezers would have been rated A-rating. By 2006, it was more than 70%. Although that's pretty much a decade or a bit longer, and it feels like a long time, actually it's quite short when you're changing behaviour and we're talking about people's habits. The underlying assumption there and the assumption from classical economics is that people are rational. It comes back to that point that, if you give people information, they'll make a rational choice in favour of the benefits that accrue to them, i.e. savings on their bills. I don't particularly favour the rational/irrational categorisation, but we know that people don't necessarily behave in that way. This was a very good piece of work, where we looked at both the supply side and the demand side. On the supply side, we worked with the manufacturers and retailers to develop and be innovative about energy-efficient products. On the demand side, we were working with communications experts and activities, providing information and labelling to engage consumers and retailers in selling those products. All of that change—that shift in behaviour in terms of actually having energy-efficient products in the first place, engaging with consumers so that they understood what these energy-efficient products were through the labelling and communications activities—worked very well, over a relatively short time period, when you're trying to change large-scale behaviour like that to have a positive environmental benefit.

Q73 The Chairman: That's a really good one. Can you give us one where it didn't work so well?

Baroness Hilton of Eggardon: What about obesity?

Sian Jarvis: Can I challenge you on that as being not an example of where it hasn't worked? I think the issue with obesity is that, to date, our programme has been focused on tackling families with young children aged two to 11. Actually, the latest evidence suggests that the trend is flattening out in obesity among children. There is a wider point there as well. When it comes to public health, it will take 30 to 40 years to evaluate the success and find out whether or not the interventions have finally worked, in terms of improved health outcomes, which is obviously the goal, and reducing obesity overall. I would also say that, from the marketing component aspect of Change4Life, we have evidence that it is actually beginning to work. If I can give you one example from that, we have a huge evaluation programme in place, which is 10% of the actual budget, which is in line with the best experience in the private sector. We've been going about 18 months now, and we asked dunnhumby to look at some data that was drawn from Tesco. We asked them to analyse some basket analysis of people who had gone through our Change4Life programme and compare that to people who hadn't been engaged with the Change4Life programme. Actually what it showed was that people had begun to change their buying habits, so they were buying more fruit and vegetables, and less cake and high-fat foods. I think there is evidence that the intervention is working in that case, but it is limited at this stage, I accept.

Q74 The Chairman: And less successful interventions? I keep trying to tease this one out, not very successfully.

Dr Sunjai Gupta: I'm struggling to think of an intervention that you could say was poorly evidence-based. Can I make a more general point in relation to that though? That is that there is something of a trade-off, I think, between being strongly and powerfully evidence-based, and sometimes being innovative. Government would wish us to be evidence-based, but you also need to be innovative wherever possible. Inevitably, sometimes being creative and showing leadership does involve, to some degree, a journey into the unknown. Getting that balance right is quite difficult at times.

Q75 Baroness O'Neill of Bengarve: As the question I was going to ask has, I think, been asked and answered, I'll just pursue this issue, if I may, of evidence a little further. If we take something that people would often cite as an example of a long-term successful campaign to change behaviour, anti-smoking, we would also note that it was buttressed by some very complex legal arrangements, which made many sorts of activities into offences—where you smoked and so on; there were fiscal arrangements, high tax and so on—and of course there was a bit of health promotion and public education as well, or not, making it extremely difficult to tell what was effective to which degree. How do you separate out the problem of confounding programmes' variables, things that you can't really separate in here, or are you trying pure behavioural interventions without the backing of coercive and fiscal measures? Are you, as you suggested at the start, classifying the coercive and fiscal measures as behavioural interventions?

Dr Sunjai Gupta: First, I think it is absolutely true that the success we've had in smoking has not been due to any one single intervention. It's been due to a range of things that have happened over a period of decades, including changes in social norms and social attitudes and so on. I don't know all the details of the evaluations that have been carried out, but some components of that overall programme, like one I don't think that you mentioned, which was the NHS Stop Smoking services, have been separately evaluated and have been estimated to have saved literally tens of thousands of lives over a period of a decade. It is

very difficult to separate out the different components of a complex programme, but I think it can be done. In the area of smoking, it has been done and the individual areas like smoking cessation services have been shown to stand in their own right, and to have been very effective.

Dr Gemma Harper: I think it can be done if you pilot and you pilot well, and you have a thorough research strategy to test the different components of a package of interventions. Other departments have done that very well, like DWP. Again, when you're generating public goods and you're subject to EU regulation, the opportunities for piloting are perhaps fewer for Defra, certainly at that scale. We do have what I think is a good example, which might illustrate the point about the different policy instruments, which is the Campaign for the Farmed Environment, which is very much about trying to change farmers' behaviour to protect the environment and biodiversity. We, in that case, drew on evidence about farmer segmentation and how they're likely to respond to that, but there was also an important regulation piece around the Wildlife and Countryside Act. There was the role of the common agricultural policy, in terms of cross-compliance. There was the issue to do with environmental stewardship and incentives, as well as understanding what constitutes social norms for certain types of farmer, so actually having a shift in what's acceptable as a social norm regarding how you treat your hedges and whether it looks like you're maintaining your hedges well or not, and then looking at indicators of biodiversity, in terms of bird life for example. It's a package of different types of policy instruments all combined, with a good understanding through farmer segmentation of how they're likely to respond to that. Can you pilot that in a large scale with a counterfactual that tests every single element of it? I think it's a question worth us considering and thinking about but, again, in the context of the EU, in the context of a public good like the environment and in the context of resources, which have already been raised.

Q76 Baroness Perry of Southwark: In both those examples, isn't timing a very important part of the failure or success? I understand, for example, at the time when the anti-smoking legislation for public places was brought in the number of smokers in the population was down to about 20%. If you had tried to do it when perhaps 60% of the adult population was smoking, I don't think you would have had public opinion with you and probably the effect would have been very different. There has to be a change in the public climate before an intervention has a chance of success. Similarly, I think with changing the farmers' behaviour, there were a lot of environmental and nature groups that had been campaigning that we were losing our countryside, our wild flowers and so on, which made the overall social climate much more amenable to farmers saying, "Yes, Defra's got it right. We'd better do something about this." Those are interventions that come from a multiplicity of sources. They come from pressure groups, environmental groups and changes in people's concern about the benefits and disadvantages of smoking. Aren't you really waiting for a moment of timing before you can do an intervention successfully?

Sian Jarvis: There is an element of that but also, when you look at the smoking ban, marketing and communications played a big part in that, too. In terms of beginning to shift the social norms around smoking, we used advertising to good effect. Sometimes it takes a great deal of time, but there are things that you can do to actually shift the climate so that the intervention becomes timely. You are right that it's difficult to separate out the different interventions, because quite often they are tied together, as a mix, for very good effect. Having said that, at each point of the journey, when you break down a behaviour change journey, you are able to then put tracking research in place to understand the

impact that a particular intervention at that time had on, for example, quit attempts. I think we've become much more sophisticated in terms of understanding the impact of different interventions, but I agree with you that it is always going to be quite difficult, because you need to approach the interventions as part of a mix, as well.

Fiona Wood: Again from an advertising and marketing perspective, I would say that it's important to understand the influences on behaviour from the personal, the societal and the environmental space. Your intervention tools might be designed to work across those three areas, rather than just aiming at the individual.

Q77 Baroness Perry of Southwark: My point is that your intervention will only be successful if there is a societal climate which already is ready to accept it and to bring pressure to bear perhaps on their neighbours and friends, who are being influenced.

Dr Gemma Harper: The public engagement angle is extremely important. We have a natural environment White Paper out to consultation at the moment, and engaging the public and understanding their views on what they think the environment means to them is extremely important. There is a wider point about understanding society and where we are right now, understanding the range of issues that people are concerned about. Clearly they've been concerned about the economy for quite a little while and the environment doesn't figure so highly, but Defra's position is actually that we have something important to contribute to reducing the deficit and green growth, as part of being the greenest government ever and as part of developing a green economy that's resilient to climate change. There are relationships between what we're trying to achieve and the economy. There are relationships between what we're trying to achieve and health benefits, which we've already talked about. Understanding the wider social norms and social capital is extremely important as well for what work, and how coercive you may or may not need to be. Where social capital is strong in communities, you can use that and capitalise on it, so to speak, to make interventions that are less coercive, perhaps, than regulation or economic instruments. I think that's a really important point and, as a social researcher, we are looking to engage with the widest academic and research community to understand what's happening in society generally, and what the context of our interventions are.

Q78 The Chairman: I'm going to have to move it on but, Lord Sutherland, you wanted to come in quickly.

Lord Sutherland of Houndwood: I'll be quick. You'll persuade me I'm being cynical, but I find the picture of farmers in Wordsworthian mode just a bit rose-tinted. I live in farming communities and, by and large, the changes that happen are driven by financial incentives. They are rational economic creatures, writ large, no doubt. Tell me I'm all wrong about that, but that's what seems to shift—money for set-aside; money for looking after borderlines; recognisable, measurable achievements and you get money for it. Is that too cynical?

Dr Gemma Harper: I don't know if it's too cynical. It's part of the package and that's right. In the case of the Campaign for the Farmed Environment, the role of incentives is clearly very important. In the case of thinking about animal disease and biosecurity, in thinking about cost-sharing and where the incentive structure is, of course all of this is extremely important. A point I didn't make earlier and meant to make is that not only can social research and behavioural economics help with what is a more contained or restricted view

of what behavioural interventions are—so non-regulation and non-fiscal measures—they can also help understand how to make regulation and fiscal measures work better and more efficiently. It's about the package. It's about drawing the evidence for all of those. In the case of farmer behaviour where you're talking about industry, it's still very much worth engaging early with that industry, engaging with the different segments within that industry, to understand their motivations and barriers, so that you can use behavioural interventions but also make incentive structures more efficient.

The Chairman: Lord Alderdice, you had two questions. I think the first one's largely been answered, but do you think you might tackle translation of research developments? There's quite a lot we might want to get from our witnesses on that.

Q79 Lord Alderdice: There is indeed. There are two components to this. One is how you access research because there are some kinds of research for which it's not that difficult to get funding. For example, pharmaceutical companies are always looking for good researchers and for patients upon whom they can do the research. It's much more difficult to find someone who will do research, particularly long-term research, on psychological interventions, because there's not a really obvious economic body with large amounts of funds. How do you as government assess the value of the research you're getting? How much do you fund research in areas where there's not going to be a private sector funder, and then, once you've got it, how do you translate that into policy? Of course, that's a whole other thing. Are there the structures to enable you to access research, or is it very heavily influenced on what simply is made available? My second point is about the structures for the translation of research into policy.

Dr Sunjai Gupta: In terms of how we access research and how we access research evidence in this area, could I give you just one example? The department and my team have had an arrangement for some years in the past, with the British Psychological Society, for example, which actually provided the services of health psychologists and made the latest evidence about what works in behaviour change available to us. I have a health psychologist who works part-time in my team currently. There are various ways in which we can actually access the evidence. As far as translating academic evidence first into policy and then, from policy, into practice and workable interventions, that is an extremely important point. All I can say to you is that this is a territory that I believe will be explored, at least in part, by the public health White Paper. I can't therefore say too much more about it, at present. I can only give you another example, if I may, of an area where it has worked very well in practice. Would that be helpful to you? I alluded, earlier on, to the work with people who have chronic illnesses. The expert patient programme that the department sponsored some years ago was based on very good research, including social science research in the United States, originating out of Stanford University. It then came to this country and the voluntary sector, where it was applied and taken on by government, sponsored and piloted. It's been very effectively and rigorously evaluated, and is now showing to be an extremely effective approach to encouraging good self-management of long-term conditions. It was a paradigm case where you can start off with academic research rooted in behavioural insights, and move from there to actual piloting and practical interventions, with government then taking it on from a policy perspective, and then spreading that out and scaling that up, across the country. I think it can be done, but again I'm not saying that it's perfect. I think we just have to watch this space for the time being.

Q80 Lord Alderdice: Could we just press a little bit further on two of those issues? You've mentioned the specific expert input from the British Psychological Society, which of course is very important, but that does not incorporate the breadth of different psychological approaches, because it has quite a specific set of orientations for the majority of its professionals. There are others with other approaches to behavioural change and psychological interventions. I guess I'd be interested to know how widely you cast your net in that regard. The second thing is, on the health side, the likelihood that you'll get psychological advice in interventions is high, and therefore you'll probably try to access that. What about the structures to enable that kind of broad psychological understanding to be available to other government departments, and how much do they seek it out and search it out? For example, how much does the Ministry of Defence decide to seek these kinds of pieces of information out, particularly if some of the evidence might be contrary to what might be the desired answer?

Dr Sunjai Gupta: Since you mention the Ministry of Defence, I could give you another instance, which is actually a case study mentioned in the submission to this inquiry, and that is the health trainers example. It was something that we sponsored in the Department of Health, but there are government departments across Whitehall that have shown an interest in that, including the Ministry of Defence, because it is a model for how you can actually improve not only health but also people's functioning, their confidence and their sense of self-efficacy, and that can actually generalise into many other areas of their lives. I would suggest to you that we're not really working in as compartmentalised and siloed a fashion as you might think. We actually are doing things that have relevance and generalisability across several different government departments.

Dr Gemma Harper: We're making savings at the moment across programmes, and the savings to evidence are proportionate to those savings to the programmes. That's good news for us in Defra, because it means that our investment is targeted where it's most needed. That came out of the Evidence Investment Strategy. How we harness other resources is a really important question for us as well. We work very closely with the research councils, particularly the ESRC, NERC and others, and we've very recently established with the ESRC and the Scottish Executive two new research centres on sustainable living and sustainable practices at Manchester University and Surrey University. That's a very important collaboration with academia and the research councils for us. We also participate with Living With Environmental Change, LWEC, which has 20 or so organisations, academics, universities, research councils and government departments all working on generating the evidence, both the natural science evidence and social science evidence, on environmental sustainability. Harnessing that evidence from partners such as research councils and universities is really important. We also work closely with our scientific advisory council as well as expert committees. We have two economics expert committees. We are working with DECC on proposals for more social science expert-type committees to make sure that we have the best advice, external to government, on behaviour change issues.

Q81 The Chairman: I think you've made quite a strong case that there is quite a lot of cross-government working. We'll tease some more of that out, but there is a very specific area. We heard last week, as you know, from Dr Rachel McCloy. What we'd like to know a little bit more about is, as the time-limited resources for some of the work expire, both in the Cabinet Office and Government Social Research, what you think is going to happen. Let me just give you one example, because we're running out of time. Are the behaviour

change interventions inventory and the behavioural sciences government network adequately resourced at the moment, will they continue to be and can you assure us that they're leading to changes in practice? You have about two minutes.

Dr Sunjai Gupta: I will ask my colleagues to talk about the network, but can I say it's a legitimate concern to worry about what will happen in the future and when the Insight Team is disbanded. A very quick response: one of the things that Geoff Mulgan said in a report we commissioned is it's very important to have a focus. I think each government department needs a specific focus on behaviour change, which will then co-ordinate within that government department and liaise formally or informally with similar foci in other government departments. I turn to my colleagues to talk about the network that already exists.

Dr Gemma Harper: Dr Rachel McCloy has done an excellent job in bringing together government departments, and across disciplines, in identifying what each government department is doing in this field, sharing best practice and using Civil Pages to share information across the community. Her fellowship will run out in the next few months, unfortunately for us, and so GSR and GES will need to find a way of taking forward that work, so that it's not lost. We will be taking it to our respective heads of profession meetings to look, for example, at the social impact task force model or elements of that, and look at the evaluation and appraisal group model to ensure the work that she's initiated and that individual departments are also initiating. Health has a very good centre, in relation to this, as does Education. We have our own centre of expertise on influencing behaviour. There is lots of activity in individual departments. I think the professional organisations across government, whether it's economic, social research, communications and so on, have a pivotal role, so does DDAN, the Departmental Directors of Analysis, as do the chief scientific advisers. The behaviour change agenda and profile, and the importance of this inquiry in promoting it, as it escalates through senior civil servants, will be one possible route of working out how best to take this forward. As Sunjai said, it's a legitimate concern for the inquiry and a challenge to Government Social Research and the Government Economic Service.

Fiona Wood: One thing I would like to say is that not all of the initiatives are time-limited. Actually, there is quite an impetus that has built up across government and within specific government departments. New contacts have been made. I mentioned the training that we're running earlier; that's likely to become part of the core induction for all government communicators. We're not planning to stop doing that. I actually think energy, interest and links have already been built and there will always be an emphasis on effectiveness and efficiency. The understanding so far is that the application of behavioural theory increases your likelihood of being effective and efficient. That's clearly not going to go away.

Q82 Lord Sutherland of Houndwood: I want to read to you a very short quotation from the government evidence to us, and ask for your comment: "The involvement of private and voluntary community and social enterprise sector organisations will be crucial"—"crucial", they say—"for us, as we apply behavioural insights to achieving our policy goals." How will that best work? Just to give a very specific element of it—not the only element—one of the great worries many of us have is that, as local authority expenditure is reduced, as will happen, one of the easy targets are voluntary and community groups. Can you imagine, for example, the initiatives on reducing teenage pregnancies or dealing with addictions to alcohol, drugs or what have you succeeding where there are no

mechanisms for the Government to say, “You must sustain those organisations, or our front line,” because very often these are the front line, “will not be available to us.” Is there a route for doing this?

Dr Gemma Harper: Under the discussion around big society, one of the important issues not to forget is that government does have a leadership role. In Defra, when we talk about green economy, the way we conceptualise it is that it's very clear that government has a leadership role. In fact, businesses expect us to have. We have a role as intervener, and that's a point about which policy instruments we select for what behavioural change effect. It's important that we work with businesses and citizens. As the green economy programme and road map is being developed with DECC and with BIS, there will be an avenue for that engagement with civil society, business and the public more generally, but that's quite a specific issue for Defra's agenda.

Dr Sunjai Gupta: There is the government plan for a responsibility deal, and there are several networks, five I believe, that are being set up in different areas of health policy, which are intended to bring a coalition of different parties—government, business, the independent sector and so on—together, in order to try to achieve the sort of partnership working that I think all of us want, which I think was behind your question, if I'm correct.

Q83 Lord Sutherland of Houndwood: It is in part, but it's the very specific point that some of those partners depend on local authority support, in part financially. The risk is that will disappear. Is there any way of trying to influence local authority decisions or replace that stream of funding? Is that included in the partnership approach?

Sian Jarvis: This is quite a specific issue, and again I would probably point you towards the public health White Paper and its publication in a few weeks' time. I can't go into too much of it, because obviously we'll bring it here to announce it first, but local authorities will have a much greater role in public health, for example. There will be ring-fenced public health budgets. That doesn't help you with the issue about less money across the piece and across society, but what we are beginning to see is that there are ways of government playing that leadership role, where they're able to leverage spend from other places. If I can give you an example of Change4Life, which is the obesity campaign, we have actually over the last couple of years built up a very strong coalition of partners. We now have 200 signed partners drawn from the voluntary sector, from big business, some of the big consumer brands—Tesco, Asda, Co-op, PepsiCo—and from local government. We have 50,000 signed local community groups and we've also been working systematically across government. With a new initiative that is launching in January, this year we probably will have managed to leverage spending of around £250 million. It is possible to find creative and innovative ways of using that leadership role that we have across government to leverage spend from other places, but this is a concern. The question you raise is a concern at our DGs' meeting this morning; we were asking just that question. I don't think anybody does yet have the answers, but we are in this financial climate and we do need to find innovative ways of getting through it. Working in coalition, we have evidence that that begins to work, and I think that is something we need to take forward with initiatives around the big society.

Lord Sutherland of Houndwood: I am delighted to hear the question is being asked at that level. I think that's very important. There is the word “crucial” here. If the Government really does think these organisations are crucial, what form of reassurance can they give us? They will go out of business, in many cases, very quickly.

Q84 The Chairman: I'm sorry I'm going to ask you not to answer that one, because we are running out of time, and there is one last question that we really do want to ask you, which is germane, which is: how, when and whether the Government should include the public in the design and implementation of these interventions? Equally, if many of these local voluntary organisations go out of business, by what methodology would it be possible to do that? Very quickly, if you don't mind, your thoughts on the government involving the public, would be very helpful to us.

Fiona Wood: Generally, I think that we agree that it's good practice—and it's very often done, whether it's from research, either social or market research—to gather people's thoughts and ideas about a particular issue, right through to larger scale consultation and engagement. For instance, in the pension debate in 2007, the issue of changing the defaults was discussed in a large engagement programme of the general public. The need for this approach is clearly going to increase in the climate that you describe, where government is working more and more with partners. In that sense, you have the idea of co-creation, i.e. government working with the people delivering services and users of services in some cases, actually creating what is going to be delivered and then going on to deliver it.

Q85 The Chairman: You would all say that this was important, but you're saying that, thus far, the evidence is not great, right?

Fiona Wood: In what respect?

The Chairman: There's no a huge amount of involvement of the public at the moment in these interventions. Is that right?

Fiona Wood: I think there is a fair amount.

The Chairman: You think there is a fair amount.

Fiona Wood: I think it's across the spectrum. For instance, in research and information-gathering, I think there's a great deal that goes on. In consultation and engagement, there's also a fair amount going on.

Sian Jarvis: In health, certainly in the last decade, consultation with the public has been the mark of the way that we've done policy. It's a journey that we've been on in the last decade, which has moved from recognising that consultation is important to acknowledging that actually what we need to do more of is to coproduce things with the public or with local organisations that represent the public. We have some very good examples of where we've done that, where decisions are taken much more locally, within local communities, which understand the priorities of those communities far better than anybody might do at national level.

Dr Gemma Harper: In Defra, we've talked about the consultation on the natural environment White Paper. We also conduct pilots with local communities. There's a point about co-production, co-creation and co-design, identifying with local communities what their problems are, in our case on recycling or waste disposal, and coming up with solutions together that will be more effective than simply being imposed on them, and a wide range of other research projects that engage civil society. For example, Defra has a very good relationship with civil society organisations—for example, the RSPB—and relies on them to collect data for us. Again, that's an important aspect of our work with the public.

The Chairman: There's quite an issue about future funding. We are going to have to stop. We have hit 5 pm. Can I first say it would be enormously helpful if there were some examples of public involvement, particularly in this kind of co-production model, which you could send us? I think we would find that very valuable. Secondly, can I thank you enormously for all your help and everything that you've said? Thirdly, can I tell you that there will be copies of the transcript, which you will be sent for any corrections? If there's anything else that you wish to add, apart from what I've just asked for, please do send it in. That will be enormously valuable, and we will publish that alongside the transcript in due course. Thank you very much indeed. It was really a very good session.

Professor Susan Michie, Professor Elizabeth Shove, Professor Imran Rasul, Medical Research Council and Economic and Social Research Council

Professor Susan Michie, Professor Elizabeth Shove, Professor Imran Rasul, Medical Research Council and Economic and Social Research Council

Written evidence from Dr Benjamin Gardner, Professor Susan Michie, University College London and Professor Nichola Rumsey, University of the West of England (BC 43)

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NHS Health Trainers: an example of an evidence based behaviour change intervention aimed at reducing health inequalities

Summary and main messages

1. A national NHS programme, the Health Trainer Programme, aimed at changing behaviour in hard to reach groups has been successfully implemented and sustained.
2. The programme was based on evidence of effective behaviour change techniques, and its implementation and evaluation were informed by health psychologists.
3. The initiative succeeded in engaging the target group (low SES and ethnic minority groups).
4. There were significant changes over time in self-reported behaviours of physical activity, healthy eating and smoking and one physiological indicator of behaviour change (BMI).
5. Because the service was not piloted and evaluated before national implementation nor implemented within a research design, the extent to which these changes are due to the HT service cannot be rigorously tested.

Background

6. Socially disadvantaged groups experience considerable greater morbidity and mortality than other groups⁶. This may be attributable in part to lower levels of engagement in health-promoting behaviours (e.g. physical activity, healthy dietary intake), and greater engagement in health-compromising behaviours (e.g. smoking, alcohol consumption) among disadvantaged groups.
7. The NHS Health Trainer (HT) programme, first set out in the White Paper '*Choosing Health: Making healthier choices easier*' in 2004, seeks to increase engagement in positive health behaviours among members of 'hard to reach' and disadvantaged communities in England, so as to reduce inequalities. Health Trainers (HTs) are a

⁶ White, C., Edgar, G., & Siegler, V. (2008) Social inequalities in male mortality for selected causes of death by the National Statistics Socioeconomic Classification, England and Wales, 2001-03. *Health Statistics Quarterly*, 38, 19-32.

new workforce, often recruited from local disadvantaged communities so as to build on understanding of local day-to-day concerns and experiences. HTs work collaboratively with clients to assist in setting and achieving specific and tailored behaviour change plans. The programme is based on behavioural science, drawing on principles of behaviour change developed in social and health psychology, and adopts a personalised care planning approach focused on self-care and empowering clients to make informed decisions about their health and behaviour. The trainer-client relationship is characterised by collaboration and cooperation, rather than paternalism.

Aims

8. There are four targeted ‘Minimum Data Set’ outcomes for the HT programme. These are:
 - i. *Building the workforce with the right skills to tackle health inequalities*
 - ii. *Reaching the ‘hard to reach’*
 - iii. *Delivering sustained health improvements through behavioural change using evidence based techniques*
 - iv. *Providing access to, and encouraging the appropriate use and uptake of, NHS and other local services.*
9. The service thus aims to change behaviour by increasing client engagement in health-promoting actions, and promoting uptake of local health services. The HT programme also offers a Skills Escalator to HTs, so as to build capacity within the NHS while offering health education and training to the local community, thus developing localised partnerships between NHS and community members.

Development

10. Health psychologist consultants have been involved at every stage of development, implementation and evaluation of the HT programme. The programme was developed from a British Psychological Society (BPS) Division of Health Psychology consultancy to the DH. Led by Professor Susan Michie, the consultancy team reviewed scientific evidence around principles of behaviour change that could be feasibly applied in local community settings. A pilot of the scheme was developed and conducted in Camden PCT, beginning in 2003, in collaboration with Dr Fiona Adshead, Camden PCT Director of Public Health^{7,8,9,10}. This demonstrated the feasibility of the scheme, and its potential to engage clients and change behaviour.
11. The model of implementation of the programme was to combine top-down support and guidance, in conjunction with bottom up adaptation to local circumstances and

⁷ Michie, S., & Wilkinson, D. (2006) Changing behaviour to improve health amongst disadvantaged groups: A self-regulation intervention. *Psychology and Health*, 21, Supplement 1, 103.

⁸ Wilkinson, D., & Michie, S. (2006) *Changing behaviour in “hard to reach” groups: A theory-based intervention*. Paper presented to the British Psychological Society Division of Health Psychology Annual Conference, University of Essex, September 2006.

⁹ Wilkinson, D., & Michie S. (2007) *One public health intervention, two risky health behaviours*. Paper presented to the British Psychological Society Division of Health Psychology Annual Conference, University of Nottingham, September 2007.

¹⁰ Wilkinson, D., & Michie, S. (2007) *Individual behaviour change to reduce population health inequalities*. Paper presented to the UK Society of Behavioural Medicine 3rd Scientific Meeting, University of Warwick, December 2007.

needs. There was a variety of models on the ground but application of core, evidence-based principles of behaviour change. This was helped by the publication and wide distribution of the 'Behaviour Change Handbook' which was written by a team of six BPS health psychologists to underpin the programme and support Health Trainers in undertaking their role¹¹. It has also been used to inform the development of the National Health Trainer Qualification (City and Guilds Health Trainer Certificate), and the Health Trainer National Data Collection and Reporting System (DCRS), which systematically accumulates evidence relating to trainer and client activity within the HT service. The Handbook has also recently been developed into an e-learning tool¹².

12. A DH Health Trainer central team, supported by the BPS consultants, Profs Susan Michie and Nicky Rumsey, has guided the implementation of the programme. This has been executed regionally via a 'hub and spoke' model. Regional hubs manage and coordinate HT services operating within the locality, supporting services from initial planning to delivery and evaluation. This organisational structure has worked well in supporting the scheme, and providing a mechanism for reporting of regional developments in the programme.

Activity

13. The development of the Health Trainer Service began in 2004 and its rollout across PCTs in 2005. Evaluations of national data relating to Health Trainer and client activity have been undertaken annually within the Centre for Outcomes Research and Effectiveness at UCL^{13,14,15,16,17}.
14. The most recent audit of the HT workforce took place in 2009 and showed 820 Health Trainers and 437 Trainee Health Trainers to be in service in England¹⁸. An additional 28 'Health Trainer Champions' provide information to promote Health Trainer services among potential clients¹⁸, in a role that has been in operation since 2007.

Evaluation

Method

¹¹ Michie, S., Rumsey, N., Fussell, S., Hardeman, W., Johnston, M., Newman, S. and Yardley, L. (2006) *Improving Health - Changing Behaviour: NHS Health Trainer Handbook*. London: Department of Health and British Psychological Society. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_085779.

¹² Bell, L., Bessell, A., Wise, J., Fahy, F., Yardley, L., Rumsey, N. and Michie, S. (2009) Report on a qualitative review of an e-learning tool for Health Trainers.

¹³ Wilkinson, D., Jain, P., Hyland, L. & Michie, S. (2008) *National Health Trainer Outcome and Evaluation Synopsis*. Commissioned by the Health Inequalities Unit, Department of Health.

¹⁴ Wilkinson, D., Jain, P., Hyland, L. & Michie, S. (2007) *National Health Trainer Activity Report*. Commissioned by the Health Inequalities Unit, Department of Health.

¹⁵ Smith, D., Gardner, B., & Michie, S. (2009) *National NHS Health Trainers Report 2007/2008*. Commissioned by the Health Inequalities Unit, Department of Health.

¹⁶ Smith J, Gardner B, & Michie S (2010) *Health Trainers: National End of Year Report (2008-2009)*. Commissioned by the Health Inequalities Unit, Department of Health.

¹⁷ Smith J, Gardner, Michie S (2010) *Health Trainers: National Data Collection Reporting System (DCRS) report*. Commissioned by the Health Inequalities Unit, Department of Health.

¹⁸ Murfin, M., & Mitchell, J. (2009) *Health Trainer: National Workforce Audit review 2009*. Department of Health.

15. The BPS health psychology team originally advised that the HT scheme be rolled out in stages, following a ‘stepped wedge design’, whereby the programme would be implemented in different regions in random order¹⁹. However, financial cuts at the DH meant that there were no longer the resources for such an evaluation. Consequently, evaluation was conducted with a pre- post-design, whereby outcome values are observed and compared before and after service use.
16. A national Health Trainer minimum data set was developed to monitor behavioural change and also to measure theoretically predicted determinants of change targeted by the programme, such as increasing self-efficacy. A standardised National Health Trainer Data Collection and Reporting System (DCRS) is used to collect this information²⁰. System usage at August 2010 indicates 109 organisations actively using the system, with over 165,000+ client records²¹.

Results

17. A recent report was undertaken to document behaviour change among users of the service, using DCRS data relating to the period from April 2008 to March 2009²². Findings indicated that 27,762 clients used the service in 2008-09, though this is likely to underestimate true client numbers due to underuse of the DCRS during the 2008-09 period. 51% and 24% of clients were derived from the most deprived, and the second most deprived, quintiles of the UK population respectively. 17% of clients were from Black and Minority Ethnic groups.
18. Of 18,891 clients for whom relevant data were available, 17,469 (92%) set Personal Health Plans (PHPs); clients not setting PHPs were mostly judged unready for change, or were directed to specialised behaviour change services. The PHPs set by clients mostly focused on healthy eating (63% of PHPs) or physical activity (28%), with 7% and 2% respectively focusing on smoking or alcohol consumption. Over 80% of clients who set PHPs at least partly achieved their plans. Among these clients, considerable improvements in health behaviour were observed: clients with dietary PHPs increased their fruit consumption from 3.09 baseline portions to 5.34 at post-intervention, and reduced daily fried snack consumption from 1.76 to 0.66. Decreases in BMI were found among clients with physical activity (baseline 31.88 vs post-intervention 31.04) or healthy eating goals (33.87 vs 31.74). The most deprived clients drew equal behavioural benefits from the service to those of other clients.

Lessons learned

19. Several lessons have been learned from the HT service. Successes in implementing and sustaining the service, engaging the target group, and promoting changes in health behaviour among service users demonstrate that it is possible to deliver

¹⁹ Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). *Developing and evaluating complex interventions*. London: Medical Research Council.

²⁰ Smith, D., Rumsey, N., Michie, S. (2009) *The standardised DCRS report framework – a nationally developed tool for local and regional use*. Commissioned by the Health Inequalities Unit, Department of Health.

²¹ Birmingham Primary Care Shared Services Agency (2010) *Health Trainers DCRS National HUB report, September 2010 Version 10*.

²² Smith, J., Gardner, B., Rumsey, N., & Michie, S. (2010) *Health behaviour change among users of the NHS Health Trainer Services*. Paper presented to the British Psychological Society Division of Health Psychology Annual Conference, Queen's University, Belfast, September 2010.

effective behaviour change programmes to ‘hard to reach’ communities. Additionally, although HTs are not trained health professionals, they are nonetheless willing and able to collect routine data suitable for evaluation.

20. The grounding of the initiative in health psychology and insights from behavioural science was essential to ensure that the intervention drew on evidence-based principles of behaviour change. Central support from the DH, with input from health psychologists, was necessary to ensure that local programmes adhered to these principles and so continued to deliver support to clients which was grounded in the evidence base for behaviour change. A shared national forum, comprised of members of the DH team and representatives of each of the HT ‘hubs’, enabled the exchange of examples of good practice and the discussion of problems encountered by HTs.

Recommendations for the future

21. Due to budgetary constraints, these data were based on a pre-post study design. In the absence of experimental evaluations, firm conclusions about the reasons for change and the effectiveness of the intervention are limited. Experimental designs are feasible for public health interventions²³. For example, a ‘stepped wedge’ design involves implementing an intervention in different regions in random order, thus allowing inference about cause and effect. This design avoids ethical objections surrounding purposefully withholding potentially effective interventions from some clients, while allowing for a rigorous test of effectiveness attributable to treatment. Using a stepped wedge design requires prior consideration and planning of the evaluation when developing the strategy for implementing interventions. We recommend that evaluation be integrated into the roll-out of national behaviour change interventions in this way.
22. With the current Government cuts, all central support for the HT programme has ceased. This means an end to the ongoing training and implementation support that was provided and an end to the audit and evaluation. The programme has shown that a behaviour change programme targeting “hard to reach” groups is successful in engaging those groups and its evaluation has suggested their success in bringing about behaviour change in ways that will improve public health and reduce inequalities. It would be regrettable, to say the least, if the considerable investment that has been put into developing this exemplary service is wasted and this national initiative, that has attracted international attention, is allowed to wither on the vine for want of relatively small amounts of financial support.

7 October 2010

²³ Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). *Developing and evaluating complex interventions*. London: Medical Research Council.

**Written evidence from Professor Robert West and Professor Susan Michie,
University College London (BC 72)**

**Behaviour change: the importance of seeing the whole picture and a critique of
'Nudge'**

Summary

This submission addresses the question '*What is known about how behaviour can be influenced?*'. It argues that, when designing or evaluating behaviour change interventions, it is essential to begin with a *comprehensive* analysis of what is driving the current behaviour pattern and the available intervention and policy options.

This requires 1) an *overarching model of behaviour* and within that of human motivation, 2) a way of linking this to making a selection from among the *full panoply of intervention options*, and 3) a way of linking this to the policies that will be needed to implement the selected interventions.

Until now, none of these requirements has been met. What we have instead is a series of 'perspectives' which take an idea, such as 'Nudge' [1], and attempt to apply it across the board thus neglecting all those intervention strategies that come from a different perspective.

This submission describes current research on what we believe to be the first attempt at a comprehensive analysis of the kind required. It contains the following elements:

1. A description of the CMOB system: a comprehensive, systems approach to understanding behaviour in context.
2. A brief summary of the PRIME Theory of motivation which draws together reflective and non-reflective mental processes into a single coherent model.
3. A description of the Behaviour Change Wheel which includes a comprehensive listing of categories of intervention and policy from which to choose.
4. A brief summary of taxonomies of behaviour change techniques (BCTs) which form the components of behaviour change interventions.

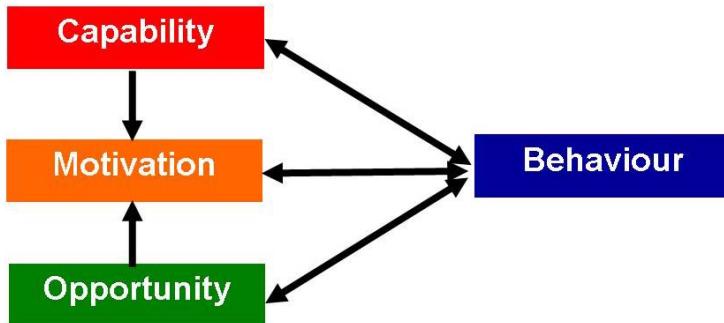
This approach should provide a more effective starting point for developing the science base in this area and a behaviour change technology than what has gone before.

The CMOB System

1. It is recognised in criminal law that for an act to occur three conditions must be present: means/capability, motive and opportunity [2]. Logic dictates that this can be extended to any action. This provides the starting point for a possible comprehensive framework for understanding behaviour: as a system of interacting elements as shown in Figure 1.²⁴ The arrows represent potential for causal inference. Thus, capability, motivation and opportunity are all necessary conditions for a given behaviour, the behaviour can influence all three of these and capability and opportunity can both influence motivation.

Figure 1: The CMOB system – a framework for understanding behaviour

²⁴ While writing this submission we discovered a document in the 'grey-literature' that also uses the means, motive, opportunity framework to help understand behaviour [3]. However, it does not construe this as a system, and it mixes together interventions with processes and, coming from a social marketing approach, only covers a small subset of intervention categories.



2. Analysis and an extensive evidence base allow us to divide each of the sources of behaviour into two types:

- Capability can be either physical (in the case of physical skills, physical strength etc.) or psychological (in the case of psychological resources and skills, knowledge, capacity for understanding etc.).
- In motivation, reflective (involving self-conscious planning, analysis and decision-making) and non-reflective processes (involving emotional reactions, drives and habits) play a role.
- In the case of opportunity it is possible to distinguish between what is afforded by the physical environment (resources, locations, physical barriers etc) and the social environment (concepts available in language, exposure to ideas etc.).

3. This model provides a basis for specifying what is currently driving and enabling current behaviour patterns or indeed individual behaviours. It is thus a model of behaviour *per se*. However, it also provides the basis for a model of behaviour change. It puts the nature of the behaviour to be changed at its core: a CMOB analysis of the behaviour has direct implications for the types of intervention likely to be effective. One has to identify the nature of the desired change and then systematically consider each of the components that would be necessary, practicable and acceptable to achieve that change.

The PRIME Theory of motivation

4. Motivation is central to the generation of behaviour. Given all the things that we are capable of doing and have the opportunity to do, it determines what we actually do and how we do it. It goes beyond reason and choice to all the psychological and physiological processes that energise and direct our behaviour, including biological drives, emotions and habits.

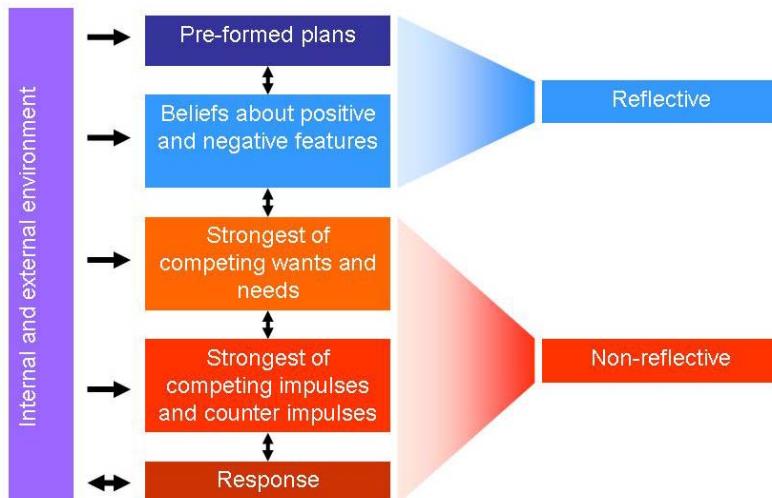
5. There has been a tendency in recent years to focus on reflective aspects of motivation at the expense of non-reflective aspects that have long been known to be important. Moreover, those that have focused on non-reflective processes have often not recognised important distinctions within these processes. For example, within what is known as 'operant conditioning' there is evidence of a very important distinction between the learning of stimulus-impulse associations (habit) and associations between stimuli and anticipation of

pleasure or avoidance of discomfort (goal directed behaviour). Drugs such as nicotine seem to affect both types of associations in different ways to control behaviour. Thus nicotine's action in stimulating dopamine release in the 'shell' of the nucleus accumbens appears to lead to expectation of feelings of pleasure from smoking, and enjoyment of smoking acts as a deterrent to making a quit attempt [4]. Nicotine's action in releasing dopamine in the 'core' of the nucleus accumbens leads to impulses to smoke in the presence of smoking cues which are experienced as 'urges'. These have nothing to do with enjoyment but are an important trigger for relapse once a quit attempt has been initiated [4].

6. PRIME Theory represents the structure of human motivation as a number of levels, with higher levels having evolved later but crucially only able to influence behaviour by acting as stimuli to lower levels [5]. This is shown in Figure 2.

7. Thus what we believe to be good or bad can only influence our actions if they make us want or need things at the relevant moment. Similarly what we intended to do at one time can only direct what we actually do if the intention is remembered and generates sufficiently strong wants or needs in the moment to overcome competing wants and needs from the immediate environment. Wants and needs compete at each moment for control over our actions and these are under strong stimulus control as a result of past associative learning, and current drives and emotional states.

Figure 2: The structure of human motivation in PRIME Theory



8. Models of motivation have considered only a limited number of ways in which change occurs. A great deal of attention is focused on communication and inferential reasoning but associative learning is also crucial, as are many other processes (see Table I).

Table I: Elementary processes of change in human motivation; items 1-12 are non-rational (not related to reason) while items 13-15 form part of rational information processing

1. **Maturation:** changes associated with growing older
2. **Habituation:** decrease in response with exposure
3. **Sensitisation:** increase in response with exposure
4. **Chemical 'Insult':** pharmacological responses
5. **Physical 'Insult':** brain lesions
6. **Associative learning:** operant and classical conditioning
7. **Imitation:** direct copying
8. **Perception:** acquiring information from the senses
9. **Identification:** forming one's own identity from perceptions of others
10. **Consistency disposition:** generation of motives, ideas from similar ones
11. **Dissonance avoidance:** negating or blocking uncomfortable thoughts
12. **Objectification:** generating evaluations from likes and dislikes

13. **Assimilation:** acquiring information via communication
14. **Inference:** Induction and deduction
15. **Analysis:** formal and informal calculation

9. It is important to appreciate that the motivational system is fundamentally 'chaotic' which means that small triggers can have large effects, and change can be sudden or gradual or involve a long period of apparently random switching between states. Approaches such as the 'stages of change' model, that propose an orderly transition in behaviour change, only account for a small proportion of instances of behaviour change and can lead to inappropriate interventions. In the field of smoking, for example, many smokers who appear not to be ready to stop will respond favourably to an offer of help, contra-indicated for such people by the stage model, and will go on to become ex-smokers [6].

10. PRIME theory further notes that, as a result of self-awareness, humans develop mental representations of ourselves about which we have strong feelings. These 'identities' are a very important source of wants and needs which give stability to behaviour patterns, and in many cases a change in identity is a fundamental driver of behaviour change. Nowhere is this more apparent than in recovery from drug addiction [7]. It is cited as a major factor underlying spontaneous recovery and forms part of the treatment approach offered by organisations such as Alcoholics Anonymous which is widely used in many countries [8].

11. Self-control involves a domination of reflective over non-reflective processes and this requires psychological skills, mental energy (a finite resource) and efficient downward connections between parts of the brain involved in reflective processes and the non-reflective channels through which they must operate.

12. Thus fundamental tenets of PRIME Theory are that at every moment we act in pursuit of what we most 'want' (anticipating pleasure or satisfaction) or 'need' (anticipating relief from mental or physical discomfort) at that moment; that these are feelings and we do not have to verbalise them (even internally) for them to influence our actions; that beliefs about what is good or bad and preformed plans (reflective processes) can only influence our actions if they generate sufficiently strong wants or needs at the relevant moment to overcome competing wants or needs arising from more direct sources such as past associations and drive states. Our identities are a very important source of wants and needs and can often be key to achieving lasting behaviour change. Self-control is fundamental to much behaviour change and to facilitate this it is necessary to develop psychological capabilities as well as motivation to change, and to provide an environment in which the limited resource of

mental energy is available for this. Stress and other psychological demands deplete reserves of mental energy and make it harder for individuals to exercise self-control.

The Behaviour Change Wheel (BCW)

13. The BCW takes the concepts developed above and applies them to choice of intervention category and from there to categories of policy needed to enact those interventions. Thus the BCW is marked out from other attempts at classifying interventions by its explicit linkage to a comprehensive understanding of behaviour and motivation.

14. It is also marked out as unique by the fact that the identification of intervention and policy categories was arrived at by a systematic literature search for pre-existing classification systems. It is based on evidence provided by the 18 frameworks of behaviour change that resulted from this search [9]. This allowed us to generate a fully comprehensive list – something which none of the other systems was able to do. This is crucial because unless intervention designers and policy makers can see the full set of options available for achieving behaviour change they are likely to overlook some that could be particularly effective.

15. Figure 3 shows the BCW. Readers will find the labels mostly self-explanatory but in some cases they require explanation to be convincing regarding their comprehensive coverage of interventions. Brief definitions are shown in Table 2 [9].

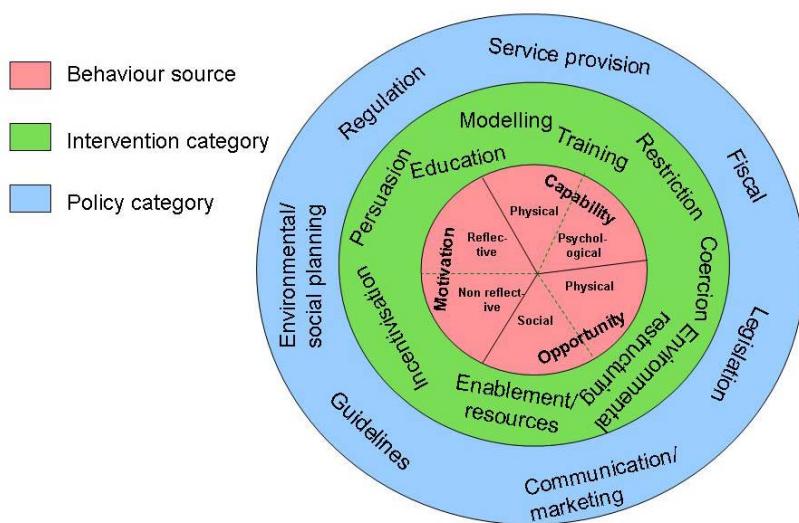
Table 2: Comprehensive list of intervention and policy categories and their definitions

Interventions	
Education	Imparting knowledge e.g. on health risks
Persuasion	Using communication to induce belief or knowledge
Incentivisation	Creating expectation of reward
Coercion	Creating expectation of punishment or cost
Training	Imparting skills
Restriction	Reducing availability
Environmental restructuring	Changing the physical or social context
Modelling	Providing an example for people to aspire to or imitate
Enablement/ resources	Increasing means/reducing barriers
Policies	
Communication/ marketing	Using print, electronic, telephonic or broadcast media
Guidelines	Creating documents that recommend or mandate practice
Fiscal	Using the tax system
Regulation	Establishing rules or principles of behaviour or practice
Legislation	Making or changing laws
Environmental/ social planning	Designing and/or controlling the physical or social environment
Service provision	Delivering a service

16. Merely listing the intervention and policy options can be useful as a reminder of ones that would otherwise be missed. However, the BCW goes beyond that. It forms the basis for a scientific analysis of how to make the selection. This has to be based on key principles: *likely effectiveness, affordability, ethical acceptability, public acceptability (in a democracy), and capacity to be implemented within the current context.*

17. A major limitation of approaches such as that offered by 'Nudge' is that they do not canvass the full range of intervention types, do not engage in a systematic analysis to determine likely intervention effectiveness, and allow political values to influence judgements about other criteria such as effectiveness and public acceptability. For example, the Nudge approach forswears 'banning' activities and yet no rational thinker could imagine that were cigarettes to be invented today they should be permitted for sale. The fact that the harms they cause were only discovered recently has led to an anomalous situation in which governments concerned about public health have been forced to use other interventions such as education and persuasion to limit that harm, and every attempt to go further has been vigorously opposed by a hugely influential and wealthy industry that uses the fact that its products are legal as a key defence.

Figure 3: The Behaviour Change Wheel – a system for selecting interventions and policies from an analysis of behaviour



Behaviour Change Techniques

18. Choice of intervention strategy only takes one so far in attempting to change behaviour. Even the appropriate mix of intervention types is no guarantee of success. It is necessary to go to a more fine grained analysis of the specific behaviour change techniques that make up the interventions. Work to document and classify these BCTs has only recently begun but already it is bearing fruit [10-15]. Interventions and policies comprise many individual BCTs and the same BCT may be evident across several interventions and policies.

19. The NHS Centre for Smoking Cessation and Training (NCSCT: www.ncsct.co.uk – see submission to House of Lords enquiry) has used this approach to find out what specific activities of service provision in the Stop Smoking Services are associated with better success rates in their clients [15]. Out of 43 BCTs identified some core ones were found to differentiate more successful from less successful services (see Table 3).

20. The BCTs listed in Table 3 covered the range of processes described in PRIME Theory. For example, advising smokers on changing their routines helps to avoid impulses to smoke in the presence of smoking cues. Measuring expired-air carbon monoxide concentrations provides a strong image to smokers of the harm from smoking and the immediate gains from stopping that makes smokers feel positive about abstinence. Advising on stop smoking medications allows smokers to make best use of those medications and so reduce the acquired drive to smoke when nicotine concentrations in the brain are depleted and they experience learned impulses to smoke. Helping smokers achieve an ex-smoker identity enables them to put firm barriers around their behaviour so that smoking is 'not an option' at any time just as it would be if they were in a supermarket. There is much more work to be done on BCTs and their links with interventions and the nature of the target behaviour, but a start has been made.

Table 3: Behaviour change techniques found to be associated with higher carbon-monoxide²⁵ verified success rates in the NHS Stop Smoking Services

Addressing capability
Facilitate relapse prevention and coping
Advise on stop-smoking medication
Ask about experiences of stop smoking medication that the client is using
Advise on conserving mental resources
Addressing motivation
Strengthen ex-smoker identity
Measure expired-air CO (and use as a motivational tool)
Provide reward (e.g. praise) contingent on abstinence
Boost motivation and self-efficacy
Provide reassurance
Addressing opportunity
Advise on changing routine
Advise on/facilitate use of social support
Supporting other behaviour change techniques
Elicit client views
Give options for additional or later support
Summarise information/confirm client decisions
Use reflective listening

21. Over the coming year, the Behaviour Change Wheel will be developed into a theory-and evidence-based tool allowing a range of users to design and select interventions and policies according to an analysis of the nature of the behaviour, the mechanisms that need to be changed in order to bring about behaviour change and the interventions and policies required to change those mechanisms.

Critique of Nudge

²⁵ Carbon-monoxide testing is used to check smokers' reports of abstinence. The concentration in expired air, as with a breathalyser, give an accurate indication of the concentration in the blood which in turn gives a good index of cigarette smoke intake over preceding hours.

22. In the light of the above, we can consider how Nudge can help or hinder progress towards interventions and behaviour change techniques that will be both effective and meet the other criteria of ethicality, public acceptability etc.

23. The definition of Nudge put forward is “any aspect of the ‘choice architecture’ that alters people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentives”. This is put forward as the “third way” between libertarianism and paternalism. Libertarian paternalists “want to make it easy for people to go their own way; they do not want to burden those who want to exercise their freedom” p.5. “Libertarian paternalism is a relatively weak, soft, and nonintrusive type of paternalism because choices are not blocked, fenced off, or significantly burdened. If people want to smoke cigarettes, to eat a lot of candy, to choose an unsuitable health care plan, or to fail to save for retirement, libertarian paternalists will not force them to do otherwise – or even make things hard for them” (p.6).

24. This approach, originating as it does from a political ideology, focuses on environmental restructuring, some incentivisation and forms of subtle persuasion to influence behaviour rather than coercion, overt persuasion or any of the other intervention categories that one might use. Offering choices in particular ways and making subtle changes to the environment are seen as the way forward.

25. From a values perspective, eschewing other potentially more powerful interventions ignores the conflicting interests in society: one person’s “freedom” is another person’s burden e.g. to smoke, thus extending the years of illness and disability for which the smoker requires others to care for them; to make potentially harmful food attractive to maximise profit. It also ignores the fact that many large corporations have no qualms about using more directive, coercive and powerful methods of shaping our behaviours and that, in a democracy, the state must act responsibly to protect its citizens from the harmful effects of this manipulation – this may involve regulation, service provision, legislation and fiscal measures which the public are happy to accept [16].

26. Although Nudge advocates argue for a collaboration of government and the market “to steer people’s choices in directions that will improve their lives”, the use of word “steer” is there to steer people away from considering effective policies such as regulation, legislation and fiscal measures. Instead, they focus on providing simple and transparent information and default provisions (p.259-260), both useful but not sufficient to tackle the big public health problems in the market-driven society we live in. Their “new path” of libertarian paternalism is described as “a promising foundation for bipartisanship [across the political divide] ... better governance requires less in the way of government coercion and constraint, and more in the way of freedom to choose. If incentives and nudges replace requirement and bans, government will be both smaller and more modest.” (p.15)

27. Of note is reference to choice rather than behaviour. This is based on the mistaken assumption that the behaviours that harm people’s health are the result of reflective, self-conscious choice, rather than impulses driven by past associations that are not amenable to reflective analysis. This is despite the fact that the book does include discussion of such non-reflective processes. The lack of attention to the role of context and impulse-driven motivation in shaping behaviour runs throughout the book, illustrated by “in many cases,

people make pretty bad decisions – decisions they would not have made if they had paid full attention and possessed complete information, unlimited cognitive abilities, and complete self-control” (p.6). Even if people had all these resources and had made a decision to behave in healthy fashion, influences such as associative learning, widely used by the advertising industry, will serve to push people off their chosen path.

28. The emphasis is on light-touch influences on behaviour rather than regulation, although the authors state that “a nudge-like regulatory intervention is worth considering as well, perhaps in the establishment of default terms and in provisions governing opt-out. Such an intervention would be far better than stronger mandates and bans.” (p.160). The context of the harm posed by the behaviour, as considered by the Nuffield Council on Bioethics in its Ladder of Interventions and stewardship model, is absent [17]. Also missing is an analysis of the behaviour itself in relation to the potential interventions and policies for change, as discussed, for example, in the Behaviour Change Wheel.

29. It will be apparent from the above that the Nudge perspective is very limited. It is an advance on what can be characterised as ‘naive/self-serving rationalism’ but it is inadequate to deal with the behaviour change challenges facing society. Government should consider more systematically and comprehensively the range of interventions that may be applicable and use a more systematic and comprehensive analysis of the options as described above to determine its behaviour change strategies.

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8 October 2010

Written evidence from Professor Elizabeth Shove, Lancaster University (BC 45)

This evidence is submitted in a personal capacity.

My submission concentrates on question 2. “What are the policy implications of recent developments in research on behaviour change”, and does so with reference to cases and examples relating to climate change.

Recent developments in research on behaviour change

In the last few years, substantially and significantly new ways of conceptualising and framing behaviour change have come to the fore across the social sciences. The ideas on which such approaches are based are not, in themselves novel: they have their roots in very well established theoretical ground (Bourdieu 1984; Giddens 1984; Latour 1992; Rip and Kemp 1998). The key development is that increasing numbers of social scientists – including psychologists, sociologists, historians, scholars working in technology and innovation studies, geographers and anthropologists – are using these tools and applying them to contemporary problems of climate change (Southerton, Chappells et al. 2004; Warde 2005; Uzzell 2008; Wilhite 2008; Røpke 2009; Trentmann 2009). Elizabeth Shove’s ESRC fellowship on “Transitions in practice: climate change and everyday life” and the recently funded ESRC/DEFRA/Scottish government “Sustainable Practices Research Group”, directed by Dale Southerton at Manchester University, are taking the lead in moving such research forward within the UK.

I’ll begin by briefly describing core features of what is, in effect, a distinctive paradigm of research and enquiry and then elaborate on what this means for policy.

Rather than focusing on individuals – and on views, beliefs and actions as if these were matters of personal choice – recent research analyses and seeks to understand the changing characteristics of the shared social practices these individuals reproduce. In other words it concentrates on the ‘doing’ itself, be that eating, cycling, heating or cooling, and considers people as the ‘carriers’ of such practices (Reckwitz 2002). This is more than a semantic switch in that an emphasis on practice, rather than behaviour, has a number of related implications.

First, what people do, the practices they enact and reproduce, depend on the active integration of historically and culturally specific elements including forms of competence, materials, meanings and conventions. For example, the relatively recent habit of taking a daily shower supposes ready supplies of running hot water, culturally specific meanings and interpretations of personal hygiene, body and freshness, and a daily rhythm into which this practice fits.

Second, the dynamics of practices – how and when they change – consequently vary: though all might count as energy or water consuming ‘behaviour’, showering and laundering have quite distinct trajectories.

Third, a more subtle point underlined in the literature on transitions, is that change in practices is typically endogenous. In other words, past and present practices, and relations between them (including competition for time, or for other resources) are themselves sources of innovation. For instance, if people spend time on one practice they have less to

devote to others. Likewise, forms of competence and the meaning of participation evolve as practices like showering or using convenience foods are reproduced time and again, and as they are adopted by new or different ‘carriers’. In the longer run these allocations of attention matter, collectively, for which practices survive and which disappear.

Much of the conventional literature supposes that behaviours are subject to external drivers like price and persuasion, or that they are obstructed by ‘barriers’. This implies a linear relation between factors and effects and supposes that ‘outside’ forces bear down on behaviour. Although very familiar, interpretations of this kind are incapable of capturing or describing the forms of mutual adjustment, adaptation and accumulation involved in shaping and changing the repertoires of ‘doings’ that, in combination, constitute contemporary ways of life.

Fourth, and as mentioned already, research inspired by theories of practice and by social studies of technology emphasises the close-coupled relation between objects, infrastructures and ‘behaviour’, again a link that is rarely made in the classic behaviour change literature most of which overlooks the material basis of what people do. Put simply, roads, railways, freezers, heating systems, etc. are not innocent features of the background. Rather, they have an active part to play in defining, reproducing and transforming what people take to be normal ways of life. The key insight here is that the material world and related systems of production and provision are important in organising, structuring and sometimes preventing certain practices (van Vliet, Chappells et al. 2005). In sum, ways of life of the kind that matter for patterns of sustainable consumption are situated, materially embedded and social: on all counts it makes little sense to view such behaviours and actions as outcomes of individual choice.

There is a growing body of evidence informed by these ideas. This includes but is certainly not limited to published studies of changing practices relating to cooling (Strengers 2008; Strengers 2010); laundering (Shove 2003) patterns of food provisioning (Hand and Shove 2007; Warde, Cheng et al. 2007); water consumption (Sofoulis 2005; Chappells and Medd 2008; Taylor, Chappells et al. 2009); and everyday mobility (Larsen, Urry et al. 2006), to name but a few.

Policy implications

The policy implications of this work are far reaching and important for other questions listed in the call for evidence.

Behaviour change interventions usually target individuals and their purchasing decisions, not the practices they carry. This is a costly and risky approach in that it requires engaging with each and every person and with individual behaviours, one at a time. Second, because behaviour is consequently addressed ‘out of context’ only some such interventions have any chance of taking effect. A third related point is that because ‘behaviour’ is treated as a singular concept, subject to more or less universal ‘laws’, standard methods are developed and applied across different domains (driving, eating, etc.) with scant regard to potentially significant differences in how these practices are configured and organised, or to how and why they vary.

Policies that target practices involve a wider range of actors including producers, providers, and the state itself on the grounds that all are implicated in developing and circulating the

elements of which social practices are made. From this point of view, policy is understood not as an external influence but as integral to the systems and patterns of practice it seeks to change (Rip 2006; Voss, Kemp et al. 2006).

One conclusion, significant for questions 5-7, is that policy should re-frame the central problem as one of practice change, not behaviour change. This would entail redefining the meaning of relevant evidence such that it is about how practices develop, and not primarily about individuals' values, beliefs and choices. It would also involve reviewing policy makers' capacity to actively configure the 'landscapes' in which practices do and do not take hold (Shove and Walker 2010). From this point of view there is little merit in separating behaviour change from any other policy intervention – all are of consequence for the ordering of daily life. It is, in addition, equally obvious that government is not the only actor involved: in many cases transitions in practice, for instance in expectations of indoor comfort or in diet, unfold without regard for national borders, being shaped by businesses as well as governments, and by cultural and social trends the influence of which is not confined to the UK.

This does not mean governments have no role. For example, with respect to energy use and comfort the Japanese government has been instrumental in engendering reductions in energy demand and CO₂ emissions by means of policies designed to transform conventions of clothing and related practices of cooling. The 'Cool biz' programme launched in 2005 has had a significant impact on collective behaviour in less than five years but not through any of the usual mechanisms. In this case the government mobilised its own role as an employer (government buildings were not heated or cooled between 20 and 28 degrees C); exploited its capacity to enrol diverse organisations (using business leaders, department stores and clothing manufacturers to design and promote light-weight summer clothing); and capitalised on the media profile of ministers and ambassadors (who were used as fashion models). In combination these moves have helped in redefining normal practice such that it no longer involves a distinctly inefficient combination of suits, ties, jackets and extensive air-conditioning.

Although policy strategies are sure to vary from case to case, the method of framing the problem as one of collective convention and of intervening at the level of shared practice is itself transferable.

Research and policy: capacity and translation

Research and theory of the kind outlined above has yet to be appropriated by UK policy on any scale. This is in part because it is not obviously relevant to problems of 'behaviour change' as these are currently and narrowly defined (Shove 2010).

This suggests that challenge is in essence one of developing the capacity to reconceptualise behaviour change *within* policy. If government is to design forms of intervention capable of fostering transitions in practice on the scale required it will be necessary to expand interpretations of relevant theory and evidence. This is not a matter of translating methods, concepts and agendas from a practice-oriented approach into a form that can be digested by 'behavioural' initiatives: rather, it is one of radically extending the meaning of intervention and the conceptualisation of social action. If this is the ambition, the answer to Question 4: "are there adequate structures and expertise across government and the public services

more generally to support the translation of research development in behaviour change into policy intervention" is clearly no.

Finally, much of the literature referred to in this submission is useful in addressing question 6: "how should different levels and types of intervention interact in order to achieve policy goals more effectively?" In relation to this question, research that demonstrates the material dimension of practice and that details links between consumption and production is important in showing that policy areas like those of urban planning, business development and technology are inextricably part of behaviour change, broadly defined.

Although not mentioned in the call for evidence, there is one further aspect of 'behaviour change' that deserves attention. On a global scale, many forms of unsustainable consumption are occasioned by the 'need' to reproduce conditions that characterise a western/northern European way of life, and to do so without regard to local climates or traditions. In the case discussed above the global energy costs associated with year round adoption of the standard business suit are considerable. In Australia and the USA significant resources are invested in maintaining what look like European lawns, and across the world we have seen the diffusion of a wheat and meat diet. There are two points to emphasise here. Discussions of trans-national behaviour change have yet to get underway – this is a field in which more research is required. Second, such research would do well to pay specific attention the part that the UK plays, perhaps unwittingly, in producing and circulating unsustainable interpretations of well being and normal behaviour, and in exporting the technologies and infrastructures that allow people in other parts of the world to live beyond their environmental means.

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7 October 2010

Written evidence from Professor Imran Rasul and Myra Mohnen, University College London (BC 96)

I. Overview

Understanding the causes and consequences of human behavior is at the heart of all social science disciplines. In this review, our analysis brings together economic frameworks for understand behavioral change, psychology based models, and insights from public health, neuroscience and sociology. Many of these disciplines provide overlapping or complementary insights on the drivers of behavior and potential policy instruments to change behavior.

For example behavioral economics uses insights from psychology as basis for its modeling assumptions, and then the standard tools of economic analysis to make predictions on behavior. Given this overlap, we will emphasize the common drivers of behavioral change that these disciplines suggest, rather than suggesting that one approach is inherently preferable to another²⁶. We will also review the evidence from these research fields. Throughout we emphasize that data generated by field experiments provide a gold standard for evidence based policy, ensuring policies are both effective and cost-efficient.

Individual behaviour can be understood as deriving from two factors. First there are factors that are **internal** to the individual. Examples include the individual's preferences, beliefs, expectations, personality, and so forth. Second, there are factors **external** to the individual but that shape the environment in which individual decision making takes place. Examples include social norms and economic conditions they face.

Understanding whether and how individual behaviors can be affected essentially boils down to appreciating **whether and how** these internal and external factors can first be altered by policy, and second, how they impact on decision making in the short run and in the long run. Academic disciplines differ in the extent to which they recognize and emphasize different types of internal and external factor.

In Section 2, we begin by highlighting the different theoretical and evidence based insights of different disciplines. We provide a brief review of alternative approaches across the disciplines of economics, psychology, neuroscience and sociology. Here we begin to address **Question I** in the call for evidence.

In Section 3 we describe in more detail the range of **internal** factors for which robust evidence has been found suggesting they influence individual decision making. Policies can shape individual behaviors through the following types of internal factor: self-efficacy; emotion; ego; altruism, fairness and equity; probabilistic judgments; salience and framing; time preferences; reference points; loss-aversion; bounded rationality; mental accounts; choice from lists; information; scarcity. Each of these is thought to be an internal driver of behavior. For each we describe the evidence related to interventions that attempt to manipulate these factors to change behavior.

²⁶ This multi-disciplinary view of research that brings together academics from different fields is a core principle behind the ELSE Research center at UCL. We return to this in our discussion of research capacity in the UK in Section 7.

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Later in Section 3 we focus on specific internal drivers of **addictive behaviors**, as requested in the call for evidence. More precisely, we review the evidence related to addiction and self-control; habits; temptation and willpower. In summary, in Section 3 we further address **Questions 1 and 2** in the call for evidence. Given the focus on addictive behaviors, the literature across academic disciplines on drivers of addictive behavior is summarized in the Appendix.

In Section 4 we review various forms of **external** factor driving behavior change, as emphasized in the social psychology, public health and sociology literatures. Through such factors, policies can try and shape community wide behaviors. The external factors we discuss are: norms; public commitments; reciprocity; regulations; persuasion; and contextual factors. This section completes our discussion of **Questions 1 and 2** in the call for evidence²⁷.

In Section 5 we cover issues related to **policy design**. We reiterate that behaviour change **interventions** attempt to shift individual behaviour through changes in the internal and external factors that drive decision making. We then discuss how different interventions can be layered on top of each other if they are complementary. We provide real world examples of such layered behavioral change policies. In doing so we address **Questions 5, 6 and 7** in the call for evidence.

In Section 6 we discuss further issues relating to **ethical** concerns of behavioral change policies, **equity** concerns, **policy evaluation** and **public engagement**. We again re-iterate the need for credible evidence based policy, where the gold standard is provided by carefully crafted field experiments. Hence in this section we address **Questions 13 and 14** in the call for evidence.

In Section 7 we complete our discussion of some practical considerations related to behavioral change policies. This focuses on whether the UK has the **research capability** to support the levels of interventions being considered and implemented, and existing mechanisms linking local and national government to academics and others that can offer advice on how to design, implement and evaluate behavioral change. We also discuss the ability of government and academic to engage the public in discussion of behavioral change policies. In doing so we address **Questions 3, 4, 10, 11 and 12** in the call for evidence.

In Section 8 we review the findings of some **well known behavioral change interventions** from a number of countries. These interventions cover a variety of policy spheres such social behavior, community participation, the environment and health. Some of these interventions have been conducted by policy makers, and others have been instigated by the voluntary sector. Here we address **Questions 8, 9 and 15** in the call for evidence.

In the final section, Section 9, we address questions regarding the case study of **tackling obesity**. We discuss the evidence that attempts to identify the contributing factors of obesity in order to find potential points of interventions. We focus on those interventions that have been evaluated through controlled experiments. In the Appendix, we provide a

²⁷ Although the call for evidence explicitly suggests consideration of measures apart from regulation and prohibition of choice, we find it useful to compare the evidence in support of such policies with that for other external factors driving behavior.

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detailed table highlighting all the studies on behavioral change in obesity. Here we address **Question 16** in the call for evidence.

From the outset it is worth highlighting the common themes throughout all the sections. First, it is our aim to highlight that the insights on the determinants of behavioral change from different academic disciplines of economics, psychology, neuroscience and sociology are **complementary** to each other, not competing ideas. All of them can be framed within the structure of there being internal and external drivers of behavior. All of these are potential levers through which policy instruments can operate.

The second common theme is that there is a strong need to build a credible evidence base for behavioral change interventions. The most credible evidence relies on **randomized experimental variation** being induced so that some subjects are randomly assigned to receive some policy treatment, and others are randomly assigned to a control group without any treatment. The comparison of these otherwise similar subjects can be credibly argued to measure the **causal impact** of the policy intervention. The experimental variation induced can be either in a laboratory environment, as is often the case with research in psychology and neuroscience, or from **field experiments**, that is increasingly being used in economics and public health.

The essence of the field experiment research method involves researchers engineering carefully crafted exogenous variation into real world economic environments, with the ultimate aim of identifying causal relationships and mechanisms underlying them. A detailed discussion of the methodology of field experiments can be found in List and Rasul [2010]. Field experiments based on real world data differ from laboratory experiments in that provide data from an environment in which subjects naturally undertake behaviors and where the subjects do not know that they are participants in an experiment. Therefore, they neither know that they are being randomized into treatment nor that their behavior is subsequently scrutinized. Such an exercise is important in that it represents an approach that combines the most attractive elements of the laboratory and naturally-occurring data: randomization and realism. In addition, it is difficult for people to respond to treatments they do not necessarily know are unusual, and of course they cannot excuse themselves from being treated. Hence, many of the limitations cited in laboratory studies - such as the ability of subjects to choose not to participate - are not an issue when making inference from data generated by natural field experiments.

A third theme is that the **voluntary and private sectors** have long established methods of inducing behavioral change among consumers. For example, there is a vast economics and psychology literature on how charitable organizations try to induce individuals to donate to their cause. Often they exploit various internal and external factors that we discuss, such as making social comparisons, or appealing to an individual's ego or sense of fairness. Private sector firms have long used various marketing ploys to exploit salience, inconsistent time preferences, default choices and so forth. There is potentially much policy makers can learn about inducing behavioral change, especially of individuals rather than communities, from this literature.

Finally, as noted in the original call for evidence, we have explicitly avoided replicating the discussion in previously commissioned government reports on behavioral change, such as MINDSPACE and other reports from the Cabinet Office. We have instead focused on our

comparative advantage which is to give a sense of the existing credible evidence from a range of disciplines of whether and how policy interventions can leverage against internal and external factors to induce behavioral change. Section 3 focuses on factors that induce change among individuals, Section 4 focuses on community wide behavioral changes.

Throughout we try to make clear the implications from evidence for being able to induce changes only in the short run, or whether long run and sustained change can be achieved.

While we mostly provide a brief summary of research findings in the main text, the footnotes provide more detail on each study. The appendices also provide more detailed overviews of the evidence related to addictive behaviors and obesity. We hope the committee finds our review of the evidence of use, and would be happy to provide further detail as required.

2. Understanding Behaviour

1. What is known about how behaviour can be influenced?

Economic Approaches to Behavioral Change

The **neoclassical** economic model of individual decision making emphasizes individual choices are rational in that they are: (i) always made in the individual's self-interest; (ii) based on an assessment of the expected personal costs and benefits of any action over other possible actions²⁸. In short, individuals seek to maximize their utility subject to the constraints they face. Such constraints might include budget constraints embodying information on the prices an individual faces and the income they have, as well as regulatory constraints arising from policy interventions.

In the neoclassical framework, markets will exist, or firms will have incentives to establish them, that allow individuals to make rational choices and maximize their utility. Government intervention is then justifiable wherever an individual's rational choice might be hindered by some market that fails to form, or some kind of market failure, such as imperfect or asymmetric information, externalities, or imperfect public goods provision.

The neoclassical model generates a rich set of insights and policy implications on how individual decision making is affected by changes in the constraints they face, and there are many decades of microeconomic research that support the basic predictions of this framework. For example a vast body of evidence confirms the predictions of neoclassical economic models in terms of how individuals respond to changes in price and income, the information they have, and the uncertainty they face.

While the original formulation of the model emphasized behavior being driven by both internal factors – as embodied in the individual's utility function – the model also allows for external factors such as prices. A recent wave of literature has also extended the neoclassical model to incorporate further external factors driving decision making such as

²⁸ Utility theory is derived from axioms of preference that provide criteria for the rationality of choice. As discussed in Rabin (2002), in the neoclassical model individuals are assumed to be rational in that their preferences are ordered, known, invariant and consistent. Individuals maximize their expected utility, are Bayesian information processors, have well-defined and stable preferences, exponentially discount future well-being, are self-interested, have preferences over final outcomes not changes or process, and have only instrumental tastes for beliefs and information.

concerns for fairness, altruism, group norms and peer influences. Many of these factors are discussed in more detail in Sections 3 and 4 below.

However, the framework has been criticized both by economists and psychologists. These concerns stem from the neoclassical model failing to take full account of internal factors determining decisions that often relate to individual psychologies. This has led to a burgeoning literature on **behavioral economics** that has integrated psychological understanding of decision-making into an economic framework. Hence internal factors such as habits or addictions, emotional responses and rules of thumb can be incorporated in research on individual decision-making²⁹. These factors are each discussed in turn in the next section along with the associated evidence that such internal factors do seem to be important drivers of behavior.

A key implication of behavioral economics is that traditional policies that assume rational behaviour and therefore emphasize the importance of financial incentives or the provision of information, may be less effective. Instead, behavioral economics emphasizes policy-makers should also use tools that influence the internal factors relating to psychology, that drive decision making. These include changing the salience of different elements of choices, the importance of framing choices in one way or another, setting default options and emotive associations. Many of these are often referred to in policy debates as ‘nudges’.

A third relevant strand of the economics literature is based on **neuro-economics**. This integrates methods from **neuroscience**, psychology and economics to study individual decision making. This reinforces and builds on the behavioral economics approach to add observations of the nervous system to the set of internal factors that drive decision making. For example, by examining the brain, processes associated with the perception of actions and choices can be analyzed. This helps provide a neurological foundation for some internal factors driving behavior, such as framing effects, that are emphasized in behavioral economics.

An important policy insight generated by this branch of research is to better understand the effects of rewards and punishments on behavior³⁰. Related to this, is conditionality, where a reward or punishment is contingent on behaviour change, can be another tool for policy makers. Conditionality has been discussed in UK policy circles in terms of a contract – an agreement on fixed terms. The individual receives a benefit, for example in the form of a right of access to a public service. In return, some kind of responsibility may apply³¹.

Psychological Approaches to Behavioral Change

Psychologists explore the basic drives and motives of behaviour, social influences and emotions. **Cognitive psychology** in particular examines how people reason, formulate

²⁹ M. Rabin. (2002).

³⁰ D.J.F.de Quervain, U. Fischbacher, V. Treyer, M. Schellhammer, U. Schnyder, A. Buck and E. Feh. (2004) explore activations when agents decide to punish. In their experiment, players A and B are each endowed with ten “money units.” Player A can either keep his endowment of ten or send it to player B; money sent to player B is quadrupled by the experimenter, if A sends ten, then B has fifty. Next, B has the choice of sending back either nothing or half of the fifty. Finally, A has the option of “punishing” B by assigning up to twenty “punishment points”; the cost to A and B of this punishment varies over treatments. In condition IC, punishment is costly to player A and costly to player B; in condition IF, punishment is free for player A and costly to B. There were eleven subjects who punished maximally in IF. For these subjects, differences in activation levels cannot be due to the chosen punishment, so it is natural to interpret them as a sign of the “reward” to punishing.

³¹ D. Halpern, C. Bates, G. Beales, and A. Heathfield. (2004).

judgments and make decisions. The main basis of behavioral psychology is that all behaviors are learned. Learning can occur through associations (**conditioning**) or through rewards and punishments (**operant conditioning**). This approach emphasizes that factors such as timing, context, cues, internal states and recent events impact how quickly a behaviour is acquired, the strength of the response, the probability of relapse and the maintenance of a newly acquired behaviour³².

This literature has wide implications in terms of how behavioral change might diffuse through a population. It also sheds light on how longer run changes in behavior can be induced and made self-reinforcing.

Social psychology places more emphasis on external factors driving decision making such as how individuals think about and relate to one another. Social psychologists typically explain behaviors as a result of the interaction of individual and **interpersonal factors**, where the latter consist of cultural norms, social influence, and group dynamics³³. A key policy implication is that the behavior of many individuals can be altered by manipulating these interpersonal factors, or perhaps targeting change first among focal individuals within a community. The latter strategy is well recognized among marketers.

Sociological Approaches to Behavioral Change

Sociology is a community level approach to understanding behaviour. It highlights the importance of an individual's wider social context by examining interactions and exchanges at the micro-level and group dynamics, group development and crowds at a macro level. The role for government is to promote and ensure equal access to facilitating conditions.

3. Points of Intervention at an Individual Level

1. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?
2. What are the policy implications of recent developments in research on behaviour change?

We now describe in more detail the range of **internal factors** for which robust evidence has been found suggesting they influence individual decision making. We focus on evidence provided by the broad economics and psychology literatures described above. Later in this section we focus on issues specifically related to addictive behaviors, habits, temptation and willpower. In the next section we turn to review the evidence on external factors driving decision making.

Self-Efficacy and Agency

Self-efficacy is a person's perception of his or her own ability to succeed in reaching a goal. It determines the initial choices made, and how much effort is exerted to make and implement these choices over time.

There are several ways to increase self-efficacy. First, setting **small incremental goals** can give the impression of success and help persistence. Second, self-monitoring, feedback and

³² M. Bouton (2000).

³³ E. Smith and D.M. Mackie (2000).

motivating rewards can reduce anxiety about one's ability to achieve a behavior change, thus increasing self-efficacy. **Feedback** can also help individuals learn about the returns to their effort, and which types of effort to exert to achieve any given goal. For example, cholesterol monitoring gives at-risk patients several useful forms of feedback: they can determine a target, measure process and seek advice³⁴. Third, interventions through access to skills, resources and training can enhance individuals' perceptions of self-efficacy³⁵.

Finally simply dictating the appropriate conduct reduces self-efficacy and is likely to encounter resistance. As discussed below in relation to informational policy interventions, in many circumstances the barrier to change is not that individuals lack information or are unaware of the consequences of their actions.

Agency is a person's belief that they can "make a difference" with their action. In the past, unsuccessful climate change interventions have been blamed on their lack of agency. From an individual's point of view, the problem of climate change might be perceived to be too large for a single individual's action to have a lasting impact.

Like self-efficacy, agency is not something policy makers need to view as unchangeable. For example, agency might be accumulated through personal experience or through working in groups of like-minded individuals. Hence promoting agency might be important for policy intervention related to climate change, for example.

For use both of these internal factors to change behavior, it is therefore important to encourage the active participation of the public. This can bring individuals in contact with others of similar beliefs, and help individuals to feel engaged with the policy and that they can make a difference. This helps change behavior and ensure behaviors remain changed in the longer term. On this point, research on Swiss cantons has measured the impact of referenda for making major decisions. It was found that this participatory approach not only improved policies but increased the well-being of citizens³⁶.

Emotion

Emotions can directly influence our judgment³⁷. Fear is an obvious example of an emotion that can take control of our action. People in a good mood tend to make unrealistically optimistic judgments, while people in a bad mood tend to be pessimistic. Playing with the emotions of the public is controversial as there can be unintended negative effects. Creating fear without a clear connection to a change in behaviour can lead to people continuing with their same actions but with increased anxiety.

Many social marketing campaigns have used the power of emotion. Emphasizing one particularly salient or emotional attribute may influence a decision more than providing information on all attributes. Selling comfort and fulfilled desires can motivate homeowners to renovate their home better than the prospect of energy efficiency³⁸. Drink- driving and seatbelt awareness have been successful interventions appealing to our emotions. When dealing with emotions, choosing the appropriate person can be crucial. Bringing offenders

³⁴ D. Halpern, C. Bates, G. Beales, and A. Heathfield. (2004).

³⁵ C. Wilson and H. Dowlatabadi (2007).

³⁶ B. Frey and A. Stutzer (2002).

³⁷ M.L. Finucane, A. Alhakami, P. Slovic, S.M. Johnson. (2000).

³⁸ R.L. Knight, L. Lutzenhiser, S. Lutzenhiser. (2006).

and victims face-to-face can produce strong emotional reactions such as guilt or anger. Some claim this system empowers victims and can reduce crime.

Ego

We tend to act in a way that makes us feel better about ourselves. Violent crimes are often related to low self-esteem and struggle for respect³⁹. Self-image campaigns can be a powerful tools. Anti-smoking campaigns have used this technique by showing how our physical appearance can deteriorate with smoking.

Altruism, Fairness and Equity

Altruism is a positive concern for others as well as yourself. Altruism can be either “general” (caring about everyone) or “targeted” (caring family and friends). Most often, the more a sacrifice helps somebody the more likely you are to be willing to make this sacrifice⁴⁰. Recent evidence from psychology and economics suggests individuals care, or derive utility from, fairness and equity concerns on how resources are distributed, not only their own personal well-being⁴¹. Evidence also suggests individuals care about intentions and motives and often **reciprocate** the good or bad behaviour of others. The use of reciprocity in policy interventions to induce behavioral change is discussed further in the next Section on external factors.

Charitable giving towards the voluntary sector has been much analyzed in order to determine the underlying motivation. Two types of motivation can be distinguished: individuals like to give, for example because they have altruistic preferences or because of the warm glow they receive from giving, but that individuals would rather not give but dislike saying no, e.g., due to social pressure. These findings suggest that social pressure is an important determinant of door-to-door giving. Charities understand that these internal drivers of behavior can be manipulated, and many fundraising campaigns attempt to use these to increase giving behavior.

A study of particular note is S. DellaVigna, J.A. List and U. Malmendier (2009). They present evidence from a **field experiment** in which they design a door-to-door fund-raising drive. In the experimental design some households are informed about the exact time of solicitation with a flyer on their door-knobs. Hence they can seek or avoid the fund-raiser. Findings suggest that the flyer reduces the share of households opening the door by 10 to 25 percent and, if the flyer allows checking a 'Do Not Disturb' box, reduces giving by 30 percent. The latter decrease is concentrated among donations smaller than \$10.

This field experiment highlights a common theme underlying the evidence for behavioral change – if given the option to **self-select** out of policy interventions, many individuals will choose to do so. Moreover, those that opt-out of policies might in many cases be precisely those that the policy is targeted towards.

³⁹ J.S. Walker and J.A. Bright (2009) review studies from the last 20 years evaluating the relationship between self-esteem and violence. A theoretical model is subsequently presented in an attempt to integrate ideas about self-esteem, 'machismo', and violence. It is proposed that important cognitions relating to violence also relate to self-esteem and the (arrogant or aggressive) protection of low self-esteem in the face of humiliation.

⁴⁰ M. Rabin. (2002) develops a framework in which this is predicted by simple altruistic preferences that assume people weight others' utility positively in their own utility function. In this sense, assuming simple altruism provides insight into departures from self-interest.

⁴¹ B.S. Frey, M. Benz and A. Stutzer (2004).

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Neuro-economics has further provided foundations for altruistic behavior. There has been evidence supporting the view that people derive non-pecuniary utility from mutual cooperation in social dilemma and from punishing unfair behaviour⁴².

Probabilistic Judgments

We tend to overestimate the likelihood of something very frightening (plane crash) or exciting (winning the lottery). We also overestimate the probability of a recent experience and underestimate the probability of things that happen relatively often.

Policies that could use these internal biases might include careers guidance for disadvantaged young people that highlight examples of educational success, or advertising campaigns that make the consequences of drink-driving more memorable and familiar⁴³. When individuals base their decisions on anecdotes rather than reasoning probabilistically, they can become victims of shams. One study explored the market for quacks in which patients were modeled as relying on random, causal stories regarding the quality of a treatment to make a decision. As a result, patients were exposed to exploitation by healers. Even with governmental intervention, as long as the patients' reasoning is not lifted above the anecdotal level, ordinary competition policies may be ineffective⁴⁴.

Salience and Framing

Salience is a technique based on the observation that individuals pay particular attention to what appears **novel** (messages in flashing lights), **accessible** (items on sale next to checkouts) and **simple** (snappy slogan). For example, to reduce driving speed, the government painted a series of white stripes onto the road that are initially evenly spaced but get closer together as drivers reach a dangerous curve. This environmental design gives the sensation that driving speed is increasing (even when the speed does not really change), which in turn triggers the driver's natural instinct to slow down. The cost of sending such a visual signal is close to zero, but the effectiveness is very significant⁴⁵. The Royal Mail used salience to discourage employees from taking sick leave by entering all staff who had not taken sick leave from a six-month period into a lottery to win a prize. This approach effectively reduced the number of sick leaves⁴⁶.

Individual preferences are not fixed. A decision often depends on how the available choices are presented or 'framed'. Framing a decision as a choice between losses (glass half-empty) or gains (glass half-full) can lead to reversal in preferences even though the outcomes or expected values are identical⁴⁷. Experimental evidence shows that presenting a medical operation to a patient by saying "10% of those who underwent this procedure are dead after five years" or "90% were alive after five years" has a direct impact on the willingness of the patient to agree to such an operation⁴⁸. Similarly, it has been tested that the way ads for bank loans are framed can have a substantial impact on market demand.

⁴² E. Fehr, U. Fischbacher, and M. Kosfeld (2005) discuss recent neuro-economic evidence related to other- regarding (non-selfish) behaviors and the decision to trust in other people's non-selfish behavior. Mutual cooperation that takes place despite strong free-riding incentives, and the punishment of free riders in games is not irrational, but better understood as rational behavior of people with corresponding social preferences.

⁴³ D. Halpern, C. Bates, G. Beales, and A. Heathfield. (2004).

⁴⁴ R. Spiegler (2006).

⁴⁵ C.R. Sunstein and R. H. Thaler (2003).

⁴⁶ Y.P. Kwan (2005).

⁴⁷ D. Kahneman and A. Tversky (1979).

⁴⁸ D.A. Redelmeier, P. Rozin and D. Kahneman (1993) argue that individuals sometimes treat safety and danger categorically, undervalue the importance of a partial risk reduction, are influenced by the way in which a problem is framed,

M. Bertrand, D.S. Karlan, S. Mullainathan, E. Shafir, and J. Zinman (2005) report on a **field experiment** designed to analyze framing. A South African lender sent letters offering incumbent clients large, short-term loans at randomly chosen interest rates. The letters also contained independently randomized psychological "features" that were motivated by specific types of frames and cues shown to be powerful in the lab, but which, from a normative perspective, ought to have no impact. Consistent with standard economics, the interest rate significantly affected loan take-up. Inconsistent with standard neoclassical economics, some of the psychological features also significantly affected take-up. The average effect of a psychological manipulation was equivalent to a one half percentage point change in the monthly interest rate. The psychological features appear to have greater impact in the context of less advantageous offers and persist across different income and education level.

This field experiment highlights another important element underlying the evidence for behavioral change: policies might have heterogeneous effects across individuals. As such policies might have adverse effects on equity. We return to this issue in Section 6 where we discuss the broader issues related to the ethical and equity concerns of policies designed to induce behavioral change.

Time Preferences

In contemplating a prospective decision, people judge the **long-term** benefit against short-term rewards which results in them having some implicit discount rate through which they weight future costs and benefits relative to current costs and benefits. Discount rates are found to vary from person to person⁴⁹ and across settings⁵⁰. Empirical and experimental evidence reveals that individuals do not make decisions in a time-consistent manner using a constant discount rate⁵¹. We tend to value today over tomorrow⁵². As a result, immediate losses can be stronger incentives than long-term rewards. Thus, not only the amount but the **timing** of financial incentives should be taken into consideration when deciding on an intervention. For example, to encourage Canadians to install ultra-low-flow toilets and showers, customers were offered purchasers an interest-free loan to be paid off as part of the water bill. Not only was the equipment practically free, but water bills would be cheaper in the future⁵³.

These issues are key to ensuring long term behavioral change is induced.

Reference Points

Individuals often value items depending on the **relative change** in value from a reference point. Therefore utility is dependent on a reference point and is determined by gains and

and inappropriately evaluate an action by its subsequent outcome. In the domain of emotions, people tend to consider losses as more significant than the corresponding gains, are imperfect at predicting future preferences, distort their memories of past personal experiences, have difficulty resolving inconsistencies between emotions and rationality, and worry with an intensity disproportionate to the actual danger.

⁴⁹ D. Halpern, C. Bates, G. Beales, and A. Heathfield. (2004).

⁵⁰ S. Frederick , G. Loewenstein, T. O'Donoghue (2002).

⁵¹ S. DellaVigna and U. Malmendier. (2004) analyse the sale of goods with delayed benefits (or delayed costs) to time-inconsistent consumers. Their motivating example is pricing at health clubs: they think of consumers as incurring a short-run disutility when visiting a club, and enjoying a delayed reward in the form of better health.

⁵² T. O'Donoghue and M. Rabin (1999).

⁵³ E. Dawnay and H. Shah (2005).

losses relative to this reference point, not final outcomes⁵⁴. An implication of this type of internal factor is that a small financial incentive could lead to large behavioral change if judged relative to an even smaller reference point. On the other hand, if expectations set a high reference point, certain outcomes may be perceived as losses or as unfair, reducing the utility associated with consumption or changes in behavior⁵⁵. Policy makers can better determine an appropriate amount of financial incentive by correctly evaluating the reference point, or manipulating the reference point say through changing **default** options.

Loss-Aversion

It has been shown that people put more effort into preventing a loss than securing a gain. For instance, people are ready to pay (willingness-to-pay) only a little to get something while they will demand more to give up something they already have (willingness-to-accept)⁵⁶. Of relevance to policy, willingness-to-pay must be carefully compared with willingness-to-accept. Indeed a fine can be a much stronger disincentive than a reward is an incentive even if they are of comparable amount. David Pearce suggested that willingness-to-accept (i.e. a reward) should be used by policy makers when people have the right to something and willingness-to-pay (i.e. a fine) should be used when people only have the right to the status quo⁵⁷. For example, for preventive health care use, messages stressing the potentially negative consequences of ill health tend to be more effective than those that phrase the benefits in terms of potential gains^{58,59}.

People tend to over-react to changes, especially losses. People exaggerate how long sensations of gains and losses will last. By exaggerating the persistence of the sensation of loss and gain, we tend to **over-react** to changes. We also isolate particular experiences and decisions from each other. Losing \$20 in a bet makes individuals feel bad, but tend to feel worse because individuals rarely think in broader, long-term perspective, where these losses will almost surely be overwhelmed in the longer term by other gains⁶⁰.

Bounded Rationality

People are more likely to defer **complex** decisions and thus require significant mental effort. In other words, individuals' rationality is bounded by psychological and environmental constraints⁶¹. Similarly, as the number of choices for a decision increases, so can sensitivity to regret, unrealistic expectations, and the opportunity costs of choosing one alternative⁶². Consumers can prefer not to choose at all. This has been demonstrated for households'

⁵⁴ D. Kahneman and A. Tversky (1979).

⁵⁵ B. Schwartz (2004).

⁵⁶ P. Heidhues and B. Koszegi (2004) explore many aspects of pricing to consumers who experience loss aversion. consider a world in which demand and cost are both random and time-varying.

⁵⁷ D. Kahneman, L. Knetsch, and R.H Thaler, (1990).

⁵⁸ J.B. Detweiler, B.T. Bedell, P. Salovey, E. Pronin, and A.J. Rothman (1999) present evidence from an experiment comparing the effectiveness of four differently framed messages (2 highlighting losses and 2 highlighting gains) to persuade 217 beach-goers to obtain and use sunscreen. Attitudes and intentions were measured before and after the delivery of the framed information. People who read either of the 2 gain-framed brochures, compared with those who read either of the 2 loss-framed brochures, were significantly more likely to request sunscreen, intend to repeatedly apply sunscreen and intend to use sunscreen with a SPF 15 or higher.

⁵⁹ D. Kahneman, L. Knetsch and R.H. Thaler (1990) describe a field experiment in which coffee mugs are randomly given to half the subjects in an experiment. Markets for the mugs are then conducted. Half of the mugs should be traded according to the Coase theorem but observe volume is always less.

⁶⁰ M. Rabin (2002).

⁶¹ J. Conlisk (1996).

⁶² B. Schwartz (2004).

choice of electricity supplier in deregulated retail markets⁶³. In fact, people tend to choose "the path of least resistance" when faced with a difficult decision.

New formal approaches have been found to model differences in agents' cognitive abilities. One way is to allow some agents to implement very simple strategies (buying if price is above a threshold), whereas others can implement non-monotone strategies involving two or more cutoffs⁶⁴. Another way is to assume agents differ in the length of time of the history of prices they can recall⁶⁵. We are unaware of any evidence testing whether such new models of behavior are validated by behavior in the real world.

There is a wide range of possible intervention designs to reduce the burden of gathering and processing information. For instance, selecting a pension scheme can be difficult, especially because it deals with a far-off future. Information provision alone has not been successful because people may not act on it. To remedy this situation, the Pensions Commission changed pension defaults. Employees are automatically joined to a pension plan, but still have the option of opting out. In the same manner, setting a default option on organ donation greatly increases organ donation rates. Data suggest that changing the default position in the UK law could increase donation rates by 50%⁶⁶. In a recent US experiment, putting the tax on the label, rather than adding it at the till, led to a decrease of 8% in sales. This has been used to reduce alcohol consumption⁶⁷.

Mental Accounts

People tend to categorize money into different budgets or mental accounts, such as salary, savings or expenses⁶⁸. Consumption that is apparently suboptimal according to standard economic theory can be explained by differences in the decision criteria used in different mental accounts⁶⁹. Identical incentives can thus have a very different impact depending on the context. A practical implication is that policies may encourage people to save or spend money by explicitly **labeling** accounts.

Choice from Lists

The standard economic choice model assumes that the decision maker chooses from sets of alternatives. However, in many cases, we can be faced with a choice from among a **list**. For example, job offers and online purchases are presented in the form of a physical list. Lists can also be virtual in the sense that the individual thinks of a set of alternatives in some sequential manner. It appears that the **order** in which we encounter the alternatives may affect our choice.

This can give rise to a primacy effect and a recency effect. The former gives advantage to the first few alternatives in a list since people examine them more attentively and the latter gives advantage to the last few alternatives as people recall more vividly what they have just seen. Special attention can be paid to alternatives that stand out relative to their neighbors

⁶³ T.J. Brennan (2007).

⁶⁴ A. Rubinstein (1998).

⁶⁵ M. Piccione and A. Rubinstein (2003).

⁶⁶ R.W. Gimbel, M.A. Strosberg, S.E. Lehrman, E. Gefen and F. Taft. (2003).

⁶⁷ R. Chetty, A. Looney and K. Kroft (2009) show that consumers under-react to taxes that are not salient. First, using a field experiment in a grocery store, we find that posting tax-inclusive price tags reduces demand by 8%. Second, increases in taxes included in posted prices reduce alcohol consumption more than increases in taxes applied at the register.

⁶⁸ H.M. Shefrin, R. Thaler (2004).

⁶⁹ R. Thaler (1999).

in the list. For instance, a low-priced item will draw special attention if it is surrounded by high-priced items. In addition, the first element in a list may serve as a reference point to which subsequent alternatives are compared⁷⁰ and thus choice may depend on the element that appears first. For example, if the items in a list differ in quality, then that first item may serve as a benchmark to which the quality of subsequent items is compared.

Several empirical papers have reported on order effects in panel decisions in contests such as the World Figure Skating Competition⁷¹, the Eurovision Song Contest⁷², the International Synchronized Swimming Competition⁷³ and the Queen Elisabeth Contest for violin and piano⁷⁴. In these contests, the contestants appear sequentially and each judge awards each of them a numerical evaluation. The winner is the participant who receives the largest total number of points. It was found that the last few participants in the contest have an advantage since judges tend to increase the points they award over the course of the sequence.

Other experiments have detected that people tend to favour middle positions over endpoints. Indeed, this was observed in a two-person game where one player “hides” a treasure in one of four places laid out in a row and the other player “seeks” it⁷⁵. Both “hiders” and “seekers” favored middle positions. Similarly, in multiple choice questions in test, both test takers and test makers have the tendency to hide and look for the correct answer in middle positions⁷⁶. Finally, it was found that people tend to make a selection from the middle when choosing a product from a grocery shelf, deciding which bathroom stall to use or marking a box in a questionnaire⁷⁷.

Information

Information has an important role in decision making as recognized in economics, psychology and public health literatures. **Learning** and **awareness** have been widely used in behaviour change interventions to bring about long run behavioral change. However, real world information campaigns have had very different outcomes for different people. Better educated individuals with higher income tend to be more affected by informational campaigns. Hence such policy interventions can widen inequalities, an issue we return to in Section 6.

In relation to some of the internal factors discussed above, information *per se* can have counter-productive results. Having too much information or more choice can be confusing and reduce the feeling of self-efficacy. Because of the amount of recycling option available, some people can be confused and decide not to recycle. One experimental study suggested that using salience through color coded containers increased the recycling rate by 34%⁷⁸.

⁷⁰ A. Tversky and D. Kahneman (1991).

⁷¹ B.W. de Bruin (2005).

⁷² Idem.

⁷³ V.E. Wilson. (1977).

⁷⁴ H. Glejser and B. Heyndels (2001).

⁷⁵ A. Rubinstein, A. Tversky, and D. Heller (1996).

⁷⁶ Y. Attali and M. Bar-Hillel (2003).

⁷⁷ N. Christenfeld (1995).

⁷⁸ S. Duffy and M. Verges (2009) present evidence from a field experiment in which thirty waste receptacles were assigned to a *lids-present* and *lids-absent* condition, and the number of recyclable items found in recycling and waste bins served as the dependent measure. Results indicated the presence of specialized recycling container lids increased the beverage-recycling rate by 34%.

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A key set of findings was that the most effective information in promoting residential energy efficiency was simple, salient, personally relevant, and easily comparable rather than technical, detailed, factual, and comprehensive. The perceived trustworthiness and credibility of the information and/or service provider was also important⁷⁹.

Building on this, there is evidence showing that people tend to **trust** information given by an expert. It was noticed that health interventions were more effective when delivered by trained facilitator or teachers than by research assistant⁸⁰. Therefore, when designing an educational programme, the person communicating should be targeted to his audience and preferable be an 'expert' in the field.

Other studies show that demographic and behavioral similarities between the messenger and the audience can improve the effectiveness of the intervention. Moreover, people from a lower socioeconomic group are more sensitive to the characteristics of the messenger⁸¹.

The London borough of Brent choose youth officers who were previously in street gangs to talk to young about the risks of becoming involved in gun crime. **Personal affiliation** and authority figures are important factors in behavioral influence⁸².

Support groups among people with existing illness have similarly been found to significantly improve outcomes. The efficacy of self-management for chronic illness has been found to be most effective when combined with a support group⁸³. Even 'virtual' mutual support seems to help. For example, an e-mail discussion group for back pain was found to lead to significant improvements in pain, disability and distress, as well as a 46% reduction in visits to the doctor⁸⁴. Lay-led interventions often appear to work as well as professionally led support, suggesting the high value of tacit knowledge and emotional sympathy of fellow sufferers⁸⁵.

Three types of individual have been identified as driving social change: mavens, connectors and salesmen. "Mavens" freely share their expertise, "connectors" play the role of transmitting information their interactions and finally "salesmen" persuade the adoption⁸⁶. This suggests that it might be useful for policy makers to focus their attention on them since they will promote wider change. The 'Health Buddy' scheme for instance used social networks. Older students received health advice from their teachers and they themselves acted as mentors to younger students by giving them health lessons. Compared with control students, both older and younger buddies participating in this programme showed an increase in health knowledge and behavior which had a positive impact on weight loss⁸⁷.

⁷⁹ C. Wilson and H. Dowlatabadi, (2007).

⁸⁰ L.T. Webb and P. Sheeran, (2006) review 47 experimental tests of intention-behavior relations that satisfied these criteria. Meta-analysis showed that a medium-to-large change in intention ($d = 0.66$) leads to a small-to-medium change in behavior ($d = 0.36$).

⁸¹ M.R. Durantini, D. Albarracin, A.L. Mitchell, A.N. Earl, and J.C. Gillette (2006).

⁸² D. Halpern, C. Bates, G. Beales, and A. Heathfield (2004).

⁸³ E. Grossel and T Cronan (2000).

⁸⁴ K. Lorig, D. Laurent, R. Deyo, M. Marnell, M. Minor, and P. Ritter (2002).

⁸⁵ J.L. Cohen, S.V. Sauter, R.F. de Vellis, B.M. deVellis. (1986) M. von Kroff , J.E. Moore, K. Lorig, D.C. Cherkin, K. Saunders, V.M González, D. Laurent, C. Rutter, F. Comite. J.L. Gilden, M.S. Hendryx, S. Clar, C. Casia and S.P. Singh (1992).

⁸⁶ E. Dawnay and H. Shah (2005).

⁸⁷ S. Stock, C. Miranda, S. Evans, S. Plessis, J. Ridley, S. Yeh, and J.P. Chanoine (2007).

The use of change agents in disseminating information and experience about technologies is widely employed in agriculture and public health⁸⁸ and also helps promote social learning on residential energy efficiency⁸⁹. Providing opportunities for homeowners or utility managers to learn from early adopters' experience of solar photovoltaics supported diffusion more effectively than detailed technical information⁹⁰. There has also been evidence that word-to-mouth communication may be effective in changing behaviors⁹¹.

Scarcity

Scarcity refers to how people tend to value things that are likely to run out. In the standard neoclassical economics framework, price is a proxy for scarcity. Higher prices cause greater product use either through a **sunk-cost**⁹² or **screening** effect⁹³. The former refers to the use of a product just because an individual has paid for it. The screening effect refers to the fact that higher prices skew the composition of buys towards household with a greater propensity to use the product.

The debate on whether and how much should be charged for public health provision revolves around this tendency for individual to undervalue gifts. Higher prices can increase use, either by targeting distribution to high-use households (a screening effect), or by stimulating use psychologically through a sunk-cost effect. An experiment in the domain of health product use designed to separate these two effects provided strong support for the screening effect hypothesis rather than the sunk-cost effect⁹⁴. This implies that households have private information about their behaviour (using the product or not) that is reflected in the willingness-to-pay. For policy-makers, this cast doubt on justification for health product pricing based on sunk cost effects, while suggesting a possible role for prices as an allocative tool.

In the remainder of this section we focus attention on internal factors driving addictive behaviors. In the Appendix we provide a more complete overview of theories of addiction from alternative disciplines.

Addiction and Self-Control

Addictive behaviors do not meet the standard rationality definition. Addicts are typically characterized by preference for immediate reward and time inconsistency. Moreover, people do not have a perfect foresight and are not always aware of the future consequences of their addictive behaviour.⁹⁵.

Addictive behaviour requires special attention as it affects not only our choices but also our needs and desires. It involves non-conscious impulses as well as conscious urges. The role of

⁸⁸ E.M. Rogers (2003).

⁸⁹ S. Darby (2006).

⁹⁰ W. Jager (2006).

⁹¹ G. Ellison and D. Fudenberg (1995) present a theoretical analysis showing word-to-mouth communication may lead to all players adopting the action that is on average superior. The structure of the communication process determines whether all agents end up making the same choices, with less communication making this conformity more likely.

⁹² E. Eyster (2002).

⁹³ S. M. Oster (1995).

⁹⁴ N. Ashraf, J. Berry and J. M. Shapiro. (2007) develop a methodology for separating these two effects in a field experiment in Zambia using door-to-door marketing of a home water purification solution. They find that higher willingness-to-pay for a product is associated with a greater propensity to use (screening effect). They do not find evidence that paying a higher transaction price are more likely to use the product (sunk-cost effect).

⁹⁵ F. Gul and W. Pesendorfer (2001).

habit and emotional attachment to the object of the addiction is crucial in addictive behaviors. Finally, the sense of identity can be altered. Hence, understanding addiction requires an understanding of various motivational elements.

Different activities or objects of desire and individuals have different probability of becoming addictive. There is some evidence indicating the strong impact of environmental factors in determining addiction. Adolescent initiation of substance use, a powerful predictor of adult substance use diagnosis, is influenced primarily by environmental rather than genetic factors⁹⁶. However, there is also evidence indicating the role of genetics in addictive behaviour such as gambling⁹⁷ and smoking⁹⁸. Different environmental conditions, like opportunity, boredom and stressors, can be conducive to the development of an addiction. Social and cultural norms can play a role⁹⁹. It is common for initiation of one pattern of addictive behaviour to be associated with later development of another one that involves greater costs and more extreme rewarding effects (such as the hypothesized transitions across drug usage, or from petty to serious crime). This is called the **gateway** phenomenon¹⁰⁰.

Behavioral economists view addictive behaviors as “the pursuit of immediate gratification in a way that we ourselves do not appreciate in the long run”¹⁰¹. The economic model of rational addiction shows that through time inconsistency, addictive behaviors result in negative externalities: current consumption negatively affects future well-being. Negative externalities combined with habit formation form the trap of addiction. As a person consumes more and more of the addictive product, the pleasure diminishes, yet the harmful behaviour continues because it is more and more difficult to stop. **Timing** of the rewards and costs of the activity, as well as the person’s awareness of future self-control problems are important factors.

Some pharmacological interventions can help addicts to maintain control over the behaviour. Nicotine for smokers, acamprosate for alcoholics or methadone for drug users are examples of such medical interventions¹⁰². Psychological interventions such as group therapy can also be used. However the effects do not seem to outlast the duration of the treatment. Community-wide measures through prices can be used to reduce the opportunity to engage in risky and addictive behaviors or increase their costs¹⁰³.

⁹⁶ C. Han, M.K. McGue et W. Iacono, (1999) present evidence based on 327 monozygotic and 174 like-sex dizygotic twin pairs born in Minnesota and aged 17-18 years at time of assessment. Biometrical methods were used to estimate the contribution of additive genetic, shared and non-shared environmental factors to adolescent substance use. The heritability for the liabilities to tobacco, alcohol and other drug use was estimated to be 59%, 60% and 33% among males, and 11%, 10% and 11% among females. However, the gender difference was not statistically significant. Estimates of shared environmental effect were substantial and insignificantly higher among females (71%, 68% and 36%, respectively) than among males (18%, 23% and 23%, respectively). The covariation among the three substance use phenotypes could be accounted for by a common underlying substance use factor.

⁹⁷ A. Blaszczynski, Z. Steel and N. McConaghay (1997) examined the potential role of impulsivity using the Eysenck Impulsivity Scale among 115 pathological gamblers. Results indicate that heightened impulsivity is associated with the degree of severity of psychological and behavioural change in pathological gamblers.

⁹⁸ V. Batra, A.A. Patkar, W.H. Berrettini, S.P. Weinstein and F.T. Leone (2003) review the literature, showing that heritability estimates for smoking in twin studies have ranged from 46 to 84%, indicating a substantial genetic component to smoking. However, environmental factors have also been found to contribute to the risk of initiation and persistence of smoking.

⁹⁹ R.E. Vuchinich and N. Heather (2003).

¹⁰⁰ D.B. Kandel, K. Yamaguchi and K. Chen (1992).

¹⁰¹ T.O'Donoghue and M. Rabin (2000).

¹⁰² A.R. Lingford-Hughes, S. Welch, and D.J. Nutt (2004).

¹⁰³ K. Jamrozik (2004).

Interventions which aim at increasing self-efficacy have been evaluated. These interventions range from computer-generated tailored letters to intensive group-based discussion. However, there has been little evidence to determine whether increases in self-efficacy change behaviour¹⁰⁴.

Habits

Habits are behaviour sequences that are or have become automatic and thus require little or no cognitive effort. Addictive behaviors, like smoking, are closely related to habits and can be extremely difficult to change. Financial incentives have been used to break old habits. This instrument has been successful in discouraging the use of plastic bags in Ireland. The introduction of small charges for plastic bags was enough of an incentive to make people bring their own grocery bags. Similarly, the congestion charge may have acted as a signal not to use cars in the centre of London. A negative side-effect of a financial reward can be that once an activity is associated with it, individuals are less inclined to participate with the activity in the future without further incentive¹⁰⁵. For instance, providing an incentive for people to quit smoking may lead them to be reluctant to quit other harmful activities (like alcohol misuse) without similar rewards.

Habitual behaviors are activated by **situational cues** like sights, words or sensations. Therefore, detecting and altering these cues, a technique called **priming**, might be helpful in changing the habit. For instance, having visible recycling facilities, a visual cue, can help remind us to recycle¹⁰⁶. An experiment revealed that asking people to make a sentence out of words such as fit, lean, active or athletic made them significantly more likely to use the stairs rather than the lifts. Similarly, deliberately placing walking shoes or fitness magazines may prime a healthy lifestyle in people¹⁰⁷. The scent of all-purpose cleaner made significantly more people keep a cleaner table¹⁰⁸. It is still not well understood whether priming effects are long lasting or what determines why some primes are more effective than others.

While most policies attack existing habits, preventing bad habits to appear in the first place should also be considered. Media and informational campaigns can be useful, as discussed above. The FRANK drug campaign used a 'risk image' campaign to prevent drug use. It

¹⁰⁴ J. Hyde, M. Hankins, A. Deale and T. M. Marteau. (2008) review ten studies targeting tobacco smoking, alcohol and illicit drug use were evaluated. Seven of the ten studies reported positive effects of interventions upon self-efficacy. The two that assessed behaviour change reported a significant effect but behaviour change could not reliably be attributed to self-efficacy.

¹⁰⁵ E.L. Deci, R. Kroestner and R.M. Ryan. (1999) present a meta-analysis of 128 studies examined the effects of extrinsic rewards on intrinsic motivation. As predicted, engagement-contingent, completion-contingent, and performance-contingent rewards significantly undermined free-choice intrinsic motivation ($d = -0.40, -0.36$, and -0.28 , respectively), as did all rewards, all tangible rewards, and all expected rewards. Engagement-contingent and completion-contingent rewards also significantly undermined self-reported interest ($d = -0.15$, and -0.17), as did all tangible rewards and all expected rewards. Positive feedback enhanced both free-choice behavior ($d = 0.33$) and self-reported interest ($d = 0.31$). Tangible rewards tended to be more detrimental for children than college students, and verbal rewards tended to be less enhancing for children than college students.

¹⁰⁶ T. Jackson (2005).

¹⁰⁷ J. Wryobock and Y. Chen (2003) present experimental data on 48 young adults who completed a "language proficiency task" which would either activate a healthy lifestyle schema in the experimental condition or a neutral schema in the control condition. Participants in the experimental condition were more likely than the control group to use stairs, instead of elevators, to move up one floor to attend another unrelated study.

¹⁰⁸ R. W. Holland, M. Hendriks, and H. Aarts (2005) present evidence that when participants were unobtrusively exposed to citrus-scented all-purpose cleaner, the mental accessibility of the behavior concept of cleaning was enhanced, as was indicated by faster identification of cleaning-related words in a lexical decision task and higher frequency of listing cleaning-related activities when describing expected behavior during the day. Another study established that the mere exposure to the scent of all-purpose cleaner caused participants to keep their direct environment more clean during an eating task. Awareness checks showed that participants were unaware of this influence.

presented the image of a drug addict. The campaign was evaluated by comparing how the perception of a drug addict had changed after the campaign.

Temptation and Willpower

Many people are aware of their tendency to overspend or overeat. Hence many individuals choose **commitment devices** to achieve long-term goals. Commitment has been used to fight against drunk driving has been used in certain American states. Those convicted of drunk driving have to install breath-monitoring gadgets in their car, which prevents engines from starting until drivers blow into alcohol detectors. In order to quit smoking, a new product combining commitment and financial tactics has been found. Individuals are offered a saving account in which they deposit funds for six months, after which they take a nicotine test. Only if they pass is the money returned to them. Surprise tests after a year proved possible lasting effects. Commitment is also used to help addictive behaviors such as pathological gambling. Gamblers can sign a self-exclusion contract offered by some casinos to limit gaming opportunities. An evaluation of people who had signed contracts in Quebec showed that the urge to gamble was reduced while the perception of control increased significantly for participants.

R. Ladouceur, C. Sylvain, and P. Gosselin (2007) show that individuals who excluded themselves ($N = 161$ at the initial stage) participated in telephone interviews after signing the self-exclusion agreement and were followed at 6, 12, 18 and 24-months. Results show that 73.1% of the participants were pathological gamblers. During the follow-ups, the urge to gamble was significantly reduced while the perception of control increased significantly for all participants. This highlights the general point that policy interventions with voluntary compliance, might lead some individuals to **self-select** out of the intervention. This might be especially the case for interventions designed to target addictive behaviors.

4. Points of Intervention as a Community Level

1. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?
2. What are the policy implications of recent developments in research on behaviour change?

In this section we review various forms of **external factor** driving behavior change at a community wide level, as emphasized in the social psychology and sociology literatures. We also provide evidence on these external factors driving individual decision-making.

Norms

Norms provide implicit guidelines on acceptable behaviour. Social norms can be subdivided into 'descriptive norms' and 'injunctive norms'¹⁰⁹. **Descriptive norms** are based on the observation of how the majority act, while **injunctive norms** specify what ought to be done. These types of norm often operate in the same direction, but not always. Speeding on a motorway for instance can be socially acceptable in descriptive norms but not in injunctive norms.

¹⁰⁹ R.B. Cialdini (1993).

It has been observed that we are strongly influenced by the behaviors of others, particularly by those who are similar to ourselves. If a practice is seen as widespread we tend to conform to it and reproduce it. For instance, the inclination to cheat depends on how common it is around us¹¹⁰. In addition, the perception others have of us matters. Peer pressure, for instance, has been largely blamed for smoking among teenagers¹¹¹. There is also evidence showing that we are more likely to gain weight if our friends are more obese¹¹².

The disrespect of social norms has traditionally been sanctioned by fines or threats of punishment.

Personal norms on the other hand reflect a feeling of moral obligation to act. In contrast to social norms, using financial sanctions when dealing with personal norms can lead to counter-productive outcomes. After receiving a punishment, people tend to feel exonerated since they have paid for their misdeed. They accept the punishment and continue with bad behaviour. An experiment in Israel showed that the introduction of small fines for parents who arrived late to collect their children from school resulted in parents arriving even later than before. Parents no longer felt guilty for arriving late since they were now paying for what they considered a service. Similarly to punishment, financial rewards can also be counter-productive. This is illustrated by the comparison between voluntary and paid blood donation. It was noticed that blood donated by volunteers was of a higher quality as they had to incentive to lie about diseases which could affect the admissibility of their blood¹¹³. Another example can be taken from a Swiss study that shows that the average volunteering time is higher if the work is unpaid¹¹⁴. The feeling of guilt can already be a strong internal sanction when we disrespect personal norms.

Media campaigns advertising social norms have changed behaviour in the past. An initial survey showed that individuals underestimated the extent to which other citizens used seatbelts. After the campaign ‘Most of Us Wear Seatbelts’, informing the true proportion of people who used seatbelts, the self-reported seatbelt used increased¹¹⁵. Another example is the large-scale programme for energy conservation. This programme sent letters that provided social comparison between a household’s energy use and that of its neighbors. This reduced consumption by 2% relative to the baseline. By continuing to send letters over the months, the positive effect reinforced itself¹¹⁶. However, for households who were

¹¹⁰ D. Ariely (2008).

¹¹¹ O.D. Duncan, A.O. Haller and A. Portes (1968).

¹¹² N.A. Christakis and J.H. Fowler (2007) present evidence from a study in which an interconnected social network of 12,067 people was assessed repeatedly from 1971 to 2003 as part of the Framingham Heart Study. The body-mass index was available for all subjects. Longitudinal statistical models were used to examine whether weight gain in one person was associated with weight gain in his or her friends, siblings, spouse, and neighbor. A person’s chances of becoming obese increased by 57 if he or she had a friend who became obese in a given interval. Among pairs of adult siblings, if one sibling became obese, the chance that the other would become obese increased by 40%. If one spouse became obese, the likelihood that the other spouse would become obese increased by 37%. These effects were not seen among neighbors in the immediate geographic location. Persons of the same sex had relatively greater influence on each other than those of the opposite sex.

¹¹³ R.M. Titmuss, A. Oakley and J. Ashton (1970).

¹¹⁴ B.S. Frey and L. Goette (1999).

¹¹⁵ Linkenbach and Perkins (2003).

¹¹⁶ H. Allcott (2009) uses data from randomized natural field experiment at 80,000 treatment and control households in Minnesota, it is estimated that the monthly program reduces energy consumption by 1.9 to 2.0 percent relative to baseline.

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consuming less than the average, their consumption increased¹¹⁷. Therefore, policy-makers may actually worsen situation by making a bad behaviour appear like a norm.

Public Commitments

Commitment, especially publicly and in writing, monitored by the participating community can be an important instrument for policy-makers¹¹⁸. When someone has promised to do something, they are likely to stick to it without reward or punishment. Staged crime scenes show that individuals who promise to watch over a stranger's belongings become more than 400% more likely to attempt to prevent a theft than those who are aware that something is being stolen but have no such prior commitment to protecting it¹¹⁹. Public commitment and visible signals was been used by a Canadian policy intervention to change behaviour towards composting. Some websites like Pledgebank.com help people commit to something if other people do it too. Pledges like "I will start recycling if 100 people in my town do the same" use reciprocity to encourage positive behaviour. However, public commitment and the threat of shame are not always a good solution. Indeed, people might resort to even worse behaviour in order to avoid being discovered. For instance, to avoid being caught with banned chemical, people might pour it down the drain rather than admitting of possessing it.

Reciprocity

A person is more likely to act if they have been placed in a position of debt, even if unwillingly. Wine tasting at vineyards works on this principle. The first glass might be given for free but people feel obliged to buy in return. There may be ways in which similar effects can be achieved through 'social gifts' such as educational bursaries rather than couching such public expenditure in terms of 'rights' to services.

Regulations

The smoking ban in public areas is an example of a successful policy which has changed the social norm. The social acceptance of smoking has been reduced thereby reducing the amount people smoke in private too¹²⁰. Compulsory seatbelt use has also been a successful intervention. Although received with much opposition, this policy is now considered socially acceptable and has permanently altered the social norm.

Persuasion

Some beliefs are shaped by direct observation, but other beliefs are influenced by individuals or groups who themselves have an interest in the outcome. Information about products is delivered through advertising by the sellers, political information comes from candidates interested in winning elections, and financial data are released strategically to shape the perceptions of investors¹²¹.

¹¹⁷ P. Schultz, J.M. Nolan, R.B. Cialdini, N.J. Goldstein and V. Griskevicius (2007).

¹¹⁸ D. McKenzie-Mohr, W. Smith and W.A. Smith (1999).

¹¹⁹ D. Halpern, C. Bates, G. Beales, and A. Heathfield (2004).

¹²⁰ L. Trotter, M. Wakefield and R. Borland (2002) conducted telephone surveys of a random sample of smokers in Australia. Of all adult smokers, 69% attended bars, nightclubs or gaming venues at least monthly. Of these smokers, 70% reported smoking more in these settings (socially cued smokers) and 25% indicated they would be likely to quit if smoking were banned in social venues. Compared to smokers not likely to quit if there were bans, smokers likely to quit were more likely to be socially cued, to be contemplating or preparing to quit, to approve of bans in social venues and to be aged under 30 years. Compared with smokers not socially cued, socially cued smokers were more likely to be under the age of 30 years, more likely to believe that there is a safe level of cigarette consumption, and more likely to have previously made a quit attempt.

¹²¹ S. DellaVigna and M. Gentzkow (2009).

Several recent papers by economists use field experiments to estimate the effect of persuasive communication on sales. The results are mixed. Examining the number of catalogs received by mail on sales reveal that increasing the number of catalogs in an 8-month period from 12 to 17 increases the number of purchases during the test period by 5% for customers who had purchased frequently in the past and by 14% for those who had purchased relatively infrequently. The effect on the extensive margin (the share of customers who purchase at least one item) implies a higher persuasion rate for the frequent buyers than for the less frequent buyers¹²². Online advertising experiment concerning purchases through Yahoo!. Of the subjects in the treatment group, 64% were shown ads. The purchases of the treatment group were 3% greater than the purchases of the control group, but this difference is not statistically significant¹²³. Finally, an experiment varied the interest rates offered in direct mail solicitations sent to customers as well as the persuasive features of the mailer, such as the picture displayed or the number of examples loans presented. Some features of the mailers—the picture displayed, for example—do have large effects on loan take-up, whereas others do not—comparisons with competitors, for example¹²⁴.

Another form of persuasion is communications from nonprofits or charities to solicit contributions. List and Lucking-Reiley (2002)¹²⁵ send letters to raise funds for the purchase of computers for a center and randomize the amount of seed money (the amount already raised) stated in the different letters. In the low-seed treatment, 3.7% of recipients donate a positive amount, compared with 8.2% in the high-seed treatment. One interpretation is that seed money serves as a signal of charity quality. S. DellaVigna, J.A. List and U. Malmendier (2009)¹²⁶ also conduct a door-to-door field experiment and find a sizeable persuasion rate, even for a relatively unknown out-of-state charity. Falk (2007)¹²⁷ shows that small gifts can significantly increase donations. Solicitation letters for schools in Bangladesh induced substantially higher giving if they were accompanied by postcards designed by students of the school (20.6% giving) than if they were accompanied by no postcard (12.2% giving).

Contextual Factors

Contextual factors directly affect decisions and can reinforce habits. For example, having a recycling collection point near one's home, a good public transport system or access to a support group for alcohol abuse are all facilitating conditions. The absence of these conditions can lead to damaging or harmful behaviour. It has been noticed that if a few windows of a factory are broken, the tendency is for vandals to break a few more. Likewise, graffiti or littering can encourage another¹²⁸. The sight of guns can induce violent ideas which can then be a trigger to aggressive behavior. Hence, external conditions appear to be a prerequisite for behaviour change and sufficient resources should be given to remove external barriers preventing behaviour change¹²⁹. The presence or absence of these conditions is only relevant if the individual knows or can perceive them.

5. Policy Design

¹²² D.I. Simester, P. Sun and J.N. Tsitsiklis (2007).

¹²³ M. Lewis and D. Reiley (2010).

¹²⁴ M. Bertrand, D.S. Karlan, S. Mullainathan, E. Shafir, and J. Zinman (2010).

¹²⁵ J.A. List and D. Lucking-Reiley (2002).

¹²⁶ S. DellaVigna, J.A. List and U. Malmendier (2009).

¹²⁷ A. Falk (2007).

¹²⁸ K. Keizer, S. Lindenberg, and L. Steg (2008).

¹²⁹ D. McKenzie-Mohr, W. Smith and W.A. Smith (1999).

5. What should be classified as a behaviour change intervention?

6. How should different levels of interventions (individual, organizational, community and national) and different types of intervention (legislative, fiscal, education) interact in order to achieve policy goals more effectively?

7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

Defining Behavior Change Interventions

A behaviour change **intervention** attempts to shift individual behaviour through changes in the internal and external factors that drive decision making. In relation to some internal factors, these interventions can draw upon our underlying unconscious conditioned responses, or rely on our capacity of reasoning and reflection. They are especially appropriate when individuals make choices that they would change if they had complete information, unlimited cognitive abilities and no lack of willpower, as assumed in the neoclassical economics model¹³⁰.

Multiple Interventions

Policies should **combine different points of intervention** since behaviors are affected by numerous internal and external factors. A study of measures (energy tax, investment subsidies, gas use regulation) promoting residential energy efficiency in the Netherlands found that their combined effect on energy use was up to 30% less than the sum of their individual effects¹³¹. Drunk driving demonstrates show how the combination of stiff penalties, good advertising and shifting social norms can change behavior quite significantly over a few decades.

Policies can be combined to target behavioral change over different time frames. For example, interventions designed to address contextual variables (e.g. price incentives) or personal variables (e.g. information to reinforce favorable attitudes) may aim for short-term change. When behavior is strongly affected by external factors, it will be important to in the longer term to build political support for policy change and social support for norm change. The ultimate goal should be a long term behaviour change. Therefore, **interventions should be sustained over time and continually reassessed** to effectively change behavior. A one-time intervention has much less chance of being successful. Moreover, if the policy is not **rigorously evaluated** using credible methods, policy makers have little chance of receiving the feedback that help them to understand which policies are effective and why. We return to this issue in Section 7 where we discuss UK research capacity to design and evaluate policy interventions.

However, by using different points of interventions, policy-makers run the risk of unintended negative side-effects and “policy cacophony”¹³². Therefore, a **policy consistency** criterion should be established when assessing a prospective policy to avoid potential clashes in interventions. The collaboration of all levels of governance in formulating

¹³⁰ C.R. Sunstein and R.H. Thaler (2003).

¹³¹ P.G.M. Boonekamp (2006)

¹³² T. Lang and G. Rayner (2007).

a common public policy might avoid such difficulties. However, we are not best placed to judge whether such coordinating systems are in place across tiers of government in the UK.

6. Issues around Behavior Change Interventions

13. When is it appropriate for the state to intervene to influence the behavior of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behavior change? Are some methods of producing behavior change unacceptable? Which and why?

14. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

Ethical Issues

An objection to behavioral change type interventions is that, in a liberal society, policy makers should not interfere in individuals' behaviors. Measures which act outside our conscious control such as priming are likely to be controversial. Therefore, policy-makers need to **involve and engage with target audiences** from as early a point as possible in the change process. Public debates can help understand and appreciate the behaviour change encouraged and help find an appropriate measure. Without public support, interventions may appear illegitimate and therefore be less effective.

The concept of **personal responsibility** can also help solve this tension. However, encouraging people to take responsibility without telling them what do is not an easy task. Obesity prevention makes this evident. On the one hand, the government cannot forbid individuals to make unhealthy decision but, on the other hand, these same individuals cannot expect others to pay the cost of their medical care. These issues might be especially problematic in the case of addictive behaviors, where individuals find themselves in a situation in which they are unwilling or unable to take personal responsibility.

Those in favor of behavioral change interventions advocate that state intervention to influence public behaviour is appropriate precisely when individuals make choices that are not in their best interest, choices that they would change if they had complete information, unlimited cognitive abilities, and no lack of willpower, as is assumed in the neoclassical economics model¹³³.

Clearly, some forms of behavioral change occur all the time in the context of free markets where **firms** exploit the internal factors driving decision making. We have referred to such examples in earlier sections. In terms of the **voluntary sector**, we have also provided examples where charitable fundraising drives for example also seek to exploit internal and external factors to induce individuals to contribute more to good causes.

Equity Issues

¹³³ C.R. Sunstein and R.H. Thaler (2003).

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For a policy to be acceptable, it should aim to be equitable both in its **procedure** and often in its **outcome**¹³⁴.

For a measure to be procedurally equitable, it should typically be consistent across people and time, based on ethical code and involve citizens in the decision making process. If the intervention is perceived as fairly implemented, individuals will more readily accept negative outcomes for themselves. This will in turn help lead to acceptance and cooperation by the public¹³⁵.

Interventions aimed at a particular group of people may create greater inequity of outcomes. For example it has been estimated that if carbon taxes were universally implemented, poorer groups would be worse off¹³⁶. Therefore other instruments targeted to these groups should be **simultaneously** used to compensate these inequities. The ban on public smoking and the provision of education and healthcare to all social groups¹³⁷ are interventions which increased equity.

Policy Evaluation and Public Engagement

It is important to be able to learn from and provide credible evidence to policy makers and the public on behavioral change interventions. This requires interventions to be designed that have in-built methods of evaluation. The **gold standard** would be to design and implement policies using **field experiments** in which slightly different policies are randomly assigned to otherwise similar groups of individuals. Such an approach can identify the causal impact of the policy and potentially the underlying mechanisms behind why it did or did not succeed. The establishment of such a credible evidence base is essential to ensuring the public understand the consequences of behavioral change interventions, and that policy makers learn from interventions. Throughout the earlier sections, we have highlighted a number of such field experiments that have provided credible evidence on drivers of behavioral change.

In some cases, this evidence base from a field experiment might best be implemented through a **pilot study**. The results of the intervention can then be used to predict what would occur if the policy were to be **scaled-up**. The empirical methods needed to accurately predict what would occur if the policy were to be scaled-up need to be able to take account of two important differences between pilot studies and nationwide or larger scale interventions.

The first is that the policy will then be intervening to a far wider audience. This might allow for greater degree of opt-out, or simultaneously change external factors that were not part of any pilot study. Second, the scaling-up method should also account for the fact that different non-governmental providers – such as the private and voluntary sectors - might also be involved in behavioral change interventions at a national level. This is important to recognize as the skills of the voluntary, private and public sectors differ and so similarly designed behavioral change interventions might have very different outcomes depending on who they are delivered by and how.

¹³⁴ B.S. Frey, M. Benz, and A. Stutzer (2004).

¹³⁵ I. Ajzen, L.H. Rosenthal, and T.C. Brown (2000).

¹³⁶ M. Lewis (2007).

¹³⁷ D. Knott, S. Muers and S. Aldridge (2008).

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A key element of being able to justify, explain and promote behavioral change comes through the establishment and presentation of this credible evidence base. In turn, this can help shape norms and some external factors that themselves help promote future behavioral changes.

7. Practical Considerations

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?
4. Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?
10. What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?
11. What mechanisms exist within government to coordinate and implement cross-departmental behaviour change policy interventions?
12. What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?

The foundations for effective policy will always lie in a high-quality evidence base. High-quality evidence allows policymakers to choose the most effective policy instruments and also ensures value-for-money for taxpayers. We believe there is **research capacity** within the UK to provide this evidence base. We provide three examples that the authors are well familiar with. These differ slightly in their organizational design and degree of linkage with government departments.

The ESRC Centre for Economic Learning and Social Evolution (**ELSE**) based at University College London, is an inter-disciplinary research group bringing together economists and psychologists in recognition of the fact that psychologists and economists are concerned with substantially the same questions about behaviour. Two research themes at ELSE are of direct relevance to behavioral change policy interventions. The first theme relates to individual decision making. Combining the theoretical and empirical resources of economics, cognitive psychology and evolutionary psychology, researchers at ELSE investigate whether recent research on bounded rationality has underestimated the degree to which agents can achieve optimality in decision-making. The second broad research theme is on interactive decision making, in which we investigate how people deal with strategic situations, both by conducting laboratory and field experiments, and by mathematical modelling. We aim to advance our understanding of learning behaviour by eschewing common simplifying assumptions, and to study how people may employ simple "heuristics" in interactive decision problems.

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A second example is the Institute of Fiscal Studies (**IFS**). The IFS has much experience in the evaluation of microeconomic policy and the generation of empirical evidence. The goal of the IFS is to promote effective economic and social policies by understanding better their impact on individuals, families, businesses and the government's finances. Research findings are based on rigorous analysis, detailed empirical evidence and in-depth institutional knowledge. The IFS seeks to communicate them effectively, to a wide range of audiences, thereby maximising their impact on policy both directly and by informing public debate. The IFS is now established as Britain's leading independent microeconomic research institute, and as authoritative commentators on the public finances, tax and welfare policy, tax law, education, inequality and poverty, pensions, productivity and innovation, consumer behaviour and the evaluation of policies designed to promote development in poorer countries.

A third example is a model based on close **collaboration** between researchers and government departments. One example is the recently established Centre for Understanding Behavioral Change (**CUBEC**). This is a collaboration between the Department for Education and academic researchers from economics, psychology and neuroscience at the IFS and University of Bristol (DCSF). At the core of CUBEC's objectives are to develop new policy ideas based on recent advances in our understanding of human behaviour and decision making as discussed in this review. CUBECs work involves both short term rapid responses to the needs of the DFE, as well as longer term research on drivers of behavioral change in education policy. Of course, established policy advice units within the Cabinet Office also follow a similar model.

All these models allow research findings to be presented to policy makers as well as engaging the public. The Festival of Science is one mechanism through which the public can be engaged in academic research related to behavioral change policy interventions. The ELSE and IFS research groups also have close ties with voluntary sector organizations that might commission research or provide steers on the research agenda.

Irrespective of the precise model followed, policy needs to be based in part on the available evidence, and policies need to be continually and accurately evaluated. Policy evaluations allow policymakers to know the likely effectiveness of policy interventions, to judge whether they represent value for money and whether important lessons can be learned from any difficulties in implementation. The key ingredients to a successful and informative evaluation are the creation of a suitable control group, the availability of high-quality data and a sufficiently large sample size. The ideal way to create a suitable control group is through randomized control trials. They are the standard benchmark for evaluations and trials in other disciplines, e.g. the trial of pharmaceutical products and medical interventions, and produce robust, high-quality evidence.

There are of course good reasons why true **randomisation can be difficult** in certain contexts. However, there are fairly simple ways to deal with such concerns, e.g. one can randomise within a group of already willing participants or target within tightly defined groups. One can also roll out a policy at different times across the country as was done with the evaluation of the Education Maintenance Allowance. A recurring problem in recent years in the UK has been that policies were often rolled out well before evaluations have been completed, or even first reported. Such early roll-outs can prevent one from knowing the full impact of a policy and from learning all the lessons from implementation.

The quality of an evaluation is only as good as the data available. As such, it is always important to **collect data** prior to the start of any policy initiative or pilot. This has not always been done in the past, with evaluations sometimes requested after a policy initiative has begun, which invariably lowers the reliability of the evidence produced.

An important innovation over recent years has been the use of **administrative data**, with the Department for Education and its predecessors at the forefront of the development and analysis of such datasets. This has helped increase the sample sizes of evaluations and allowed researchers to look in more detail at specific groups over time.

Academics are continually becoming more aware and better at promoting their work through the media and working in collaboration with local and national governments. This should be encouraged and funding offered explicitly for such purposes.

8. Past Interventions

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?
9. Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?
15. What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioral change interventions generally transferable between different societies?

In this section we review the findings of some well known behavioral change interventions from a number of countries, and relate these to the questions above. These interventions cover a variety of policy spheres such social behavior, community participation, the environment and health.

Some of these interventions have been conducted by policy makers, and others have been instigated by the voluntary sector. Moreover the examples we highlight come from a wide range of countries. With the correct evaluation methods, such as those from randomized field experiments, true causal policy impacts can be measured. As these relate to innate internal and external factors we expect the results from one setting to be insightful for policy design in other countries wherever external factors driving decision making are also similar.

Social Behaviour

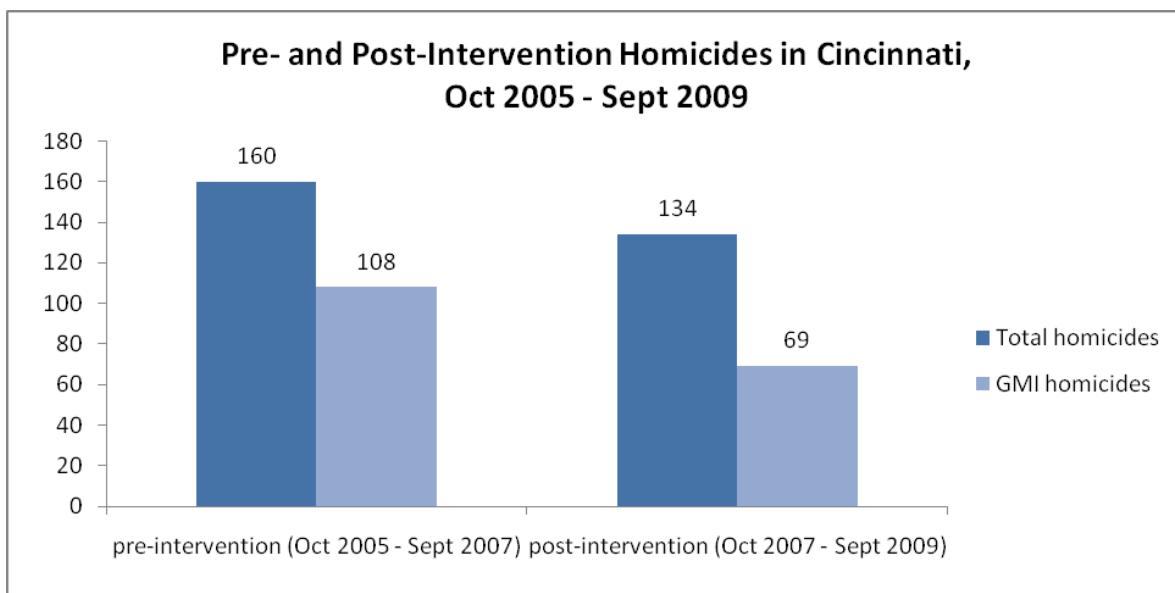
Cincinnati Initiative to Reduce Violence

The 'Cincinnati Initiative to Reduce Violence' (CIRV) programme draws on social norms and appropriate messengers to change behaviour. Gang members, responsible for much of the street violence, are strongly influenced by their peers. If criminal activities are seen as normal practice inside a gang, this creates incentives to reproduce these acts. This

programme turned **social norms** inside a gang against it. If a gang member committed a crime, the entire gang was targeted for any type of offense. The CIRV programme was combined with compulsory meetings with members of local communities, victims' relatives and ex-offenders as a condition of their parole. The purpose of these discussions was to expose gang members to wider social norms. Similar programmes have been launched across the United States. In Chicago, shootings and killings dropped between 41 and 73%. In Cincinnati, gang-related homicides fell by 50% in the first nine months¹³⁸.

The figure below provides a basic assessment of the policy effectiveness. Post-intervention total interventions were lower than pre-intervention. However, this research design is unable establish whether this decline is causally related to the programme, or this reduction might have occurred over time in any case (perhaps due to other policies put into place at the same time in Cincinnati). Had the policy been evaluated using a field experimental design where, say, some neighborhoods had been exposed to the policy initiative and others left as control neighborhoods, it would have been possible to measure the causal impact of the policy on crime. This is a pre-requisite to conducting a full cost-benefit analysis of whether the policy generates a return or whether the same budget could be used in more cost-effective ways to reduce crime.

Notwithstanding these evaluation concerns, there have been lessons learned in the UK from this policy. The strategy was also used in 2008 by Scotland's Violence Reduction Unit.



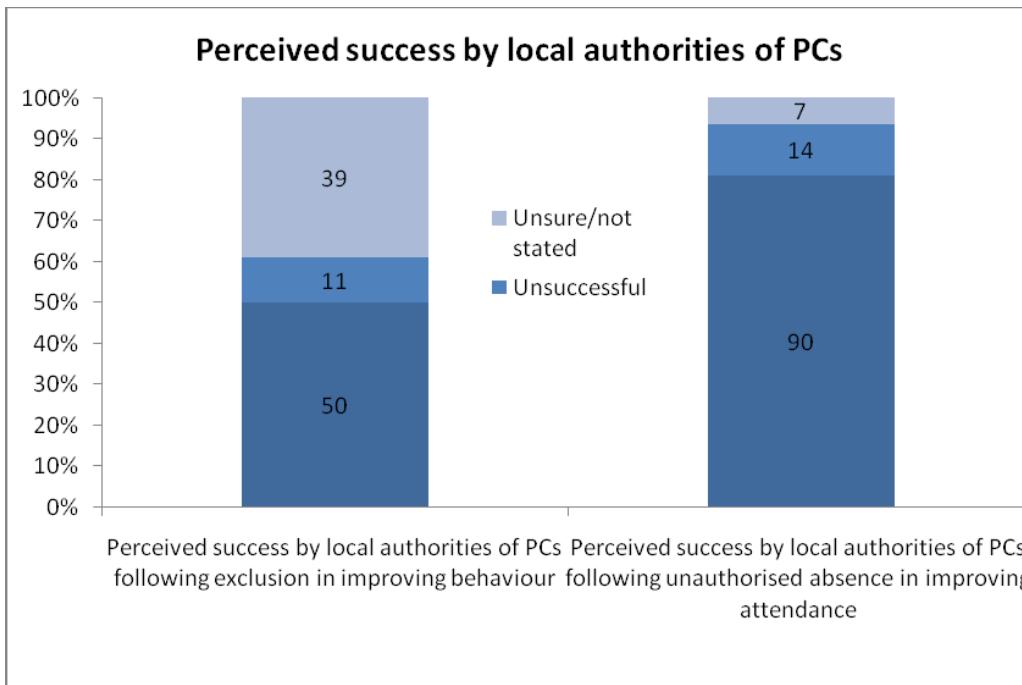
Education-Related Parenting Contract and Parenting Order

The 'Education-related Parenting Contract' was adopted by local English authorities in 2004. Parents and either school or local authority get together and agree on ways in which parents can reinforce parental responsibility for school attendance and general behavior.

At first, there is no sanction if attendance does not improve. However, school or local authority can apply for a 'Parenting Order' (a civil order) if behaviour does not improve

¹³⁸ W.G. Skogan, S.M Hartnett, N. Bump and J. Dubois (2009).

within a certain period of time. Courts can then take non-compliance with the Contract into account when considering whether to grant an Order and contemplate prosecution. An evaluation in 2008 showed the majority of schools saw attendances improve as a result of using these voluntary agreements. As shown in the figure below, schools, local authorities and parents were generally positive about the role of Parental Contracts in reducing non-attendance and improving behaviour¹³⁹.



Anti-social Behaviour Orders (ASBOs) and Acceptable Behaviour Contracts (ABCs)

Anti-social Behaviour Orders (ASBOs) were introduced by the Crime and Disorder Act 1998. ASBOs enabled the police, local authorities, social landlords and the transport police to obtain an order to prohibit a person aged 10 or above from engaging in behaviors specified by the order. Violation of the order can result in criminal prosecutions and a custodial sentence of up to five years. Hence ASBOs make explicit that a behaviour is **not socially acceptable**, and impose a clear condition or punishment for those who breach the order. A review of the use of ASBOs concluded that they could reduce anti-social behaviour in individuals given the order and in the wider group, and increased public confidence in the partner agencies¹⁴⁰.

Acceptable Behaviour Contracts (ABCs) are another policy intervention aiming to shift external factors such as individual written **commitments and social norms** in driving behavioral change. In this policy, written agreements between a young person, the local housing office or Registered Social Landlord and the local police in which the person agrees not to carry out a series of identifiable anti-social behaviors. The key differences are that ABCs do not require either party to sign the agreement and they are not legally binding. However, the breach of a contract could trigger the start of eviction proceedings or

¹³⁹ L. Evans, L. Hall and S. Wreford (2008).

¹⁴⁰ S. Campbell (2002).

proceedings to issue an ASBO. Data for the 95 children placed on ABCs between 1999 to 2001 in Islington found that for the first six months of the contract, significantly fewer of came to attention for anti-social behaviour than in the previous six months (43% compared with 63% prior to contract). The overall number of antisocial acts committed more than halved (from 164 to 80)¹⁴¹.

Community Participation

Postal Voting

The British Election Survey found that if a person believes that his or her **peers** think that voting is a waste of time, that person is less likely to vote. Authorities initially thought that postal votes would act as a facilitating condition to promote voting. However, when optional postal voting was introduced in Switzerland, the number of voter did not increase. Interestingly, voter turnout actually decreased in smaller communities. A possible explanation is that the social norm of being seen voting was lost.

Voter Choice and Turnout

A randomized field experiment¹⁴² with 30,000 voters in the USA was conducted to see how voter turnout might be increased. The effectiveness of leaflets, telephone campaigns and face-to-face reminders of a forthcoming election, all using a non-party political message highlighting the importance of voting, were compared. Leaflets were found to have a modest effect (increase turnout by around 2.5%), telephone calls were found to have a slight negative effect and the face-to-face contact was found to have a highly significant effect (increasing turnout by around 10 to 15%). This meant that despite its relatively high cost, face-to-face contact was ultimately highly cost-effective relative to other means of boosting turnout. The evaluation design by this study is credible, using randomized intervention on a large sample.

Environment

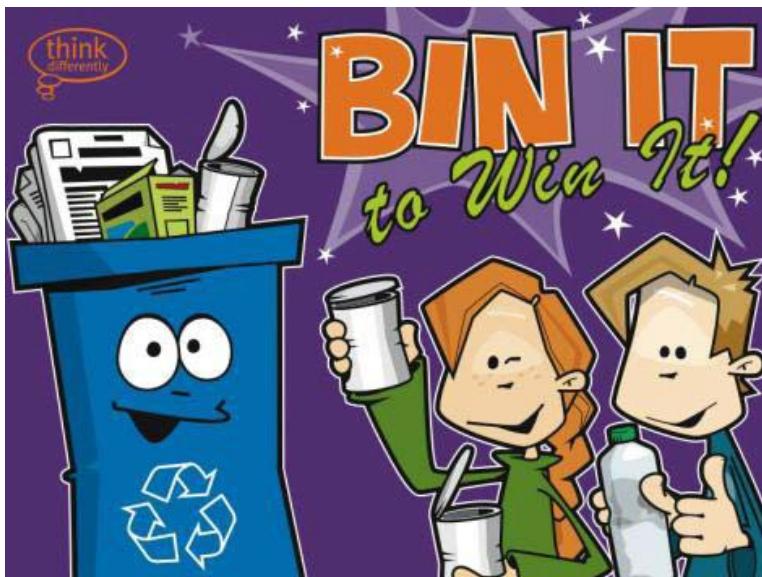
'Bin it to win it' and 'Stalking Litter'

In response to the growing issue of littering, London Borough of Southwark designed two campaigns. 'Bin it to win it' was a lottery where contestant simply had to throw their litter into litter bins to enter the contest. 'Stalking Litter' was a campaign where actors wearing giant litter costumes would create scenes in the street to attract attention and engage with public, as shown in the figure below. Both approaches were designed to raise awareness to the make problem by using **salience**. It appears that citizen satisfaction on the street cleanliness increased¹⁴³.

¹⁴¹ K. Bullock and B. Jones (2004).

¹⁴² A.S. Gerber and D.P Green (2000).

¹⁴³ Southwark programme, http://www.southwark.gov.uk/info/10111/environmental_campaigns/569/bin_it_to_win_it



Deposit Scheme for Recycling and Reverse Vending Machines

Deposit schemes are used to encourage people to return empty packaging, and there is evidence they can reduce littering¹⁴⁴. The principle of the scheme is that consumers pay an additional fee, like a deposit, to the retailer when purchasing a bottle or packaging. The deposit is refunded, either in cash or voucher, when the consumer returns the empty packaging. The current deposit for IrnBru is 30p, and 70% of bottles are returned for cleaning and reuse¹⁴⁵.

Reverse Vending Machines are devices that accept empty containers and can return money to the user. An additional voucher has been offered as an incentive for people to recycle using these machines. These financial incentives exploit the **loss aversion** of consumers. Evaluation based on the experience of other countries using these schemes showed that they increase return rates and that they may also help the reduction in littering. However, DEFRA believed that there are other ways to achieve similar results at less cost¹⁴⁶.

Ecoteams

The EcoTeams programme is designed to help households make improvements in respect of their waste, water use, transport, energy consumption and shopping behaviors. Global Action Plan has been running the EcoTeams programme in various UK communities since 2002. Over a four to six month period, households monitor the environmental impact of their everyday lives. There are monthly meetings with other participants (6-8 households) during which they compare their domestic environmental impact, discuss how to reduce it and encourage each other to improve their environmental performance. **Group meetings**, in which like minded households meet, were either led by a trained facilitator or by the participants themselves. It was found that group meetings without trained facilitator were successful and sometimes worked better than with a facilitator. This could reveal the importance of **feeling engaged** and **group learning**. Through altering social norms and

¹⁴⁴ D. McKenzie-Mohr, W. Smith and W.A. Smith (1999).

¹⁴⁵ AG BARR, Annual Report 2007,

[http://www.agbarr.co.uk/agbarr/newsite//ces_docstore.nsf/wpg/C7B3049D6CEA9D378025741800447930/\\$file/agb_annual_report.pdf](http://www.agbarr.co.uk/agbarr/newsite//ces_docstore.nsf/wpg/C7B3049D6CEA9D378025741800447930/$file/agb_annual_report.pdf)

¹⁴⁶ Department for Environment, Food and Rural Affairs (2008), Review of Packaging Deposits Systems for the UK.

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information dissemination in social networks, the project achieved on average 27% reduction in residual waste, 22% increase in recycling, 28% reduction in electricity usage and 20% reduction in gas usage¹⁴⁷. The more detailed figures are given in the table below.

The key concern for this type of evaluation is that it is based on individuals that choose to opt-in or **self-select** into such ecoteams. These might be the most motivated individuals to begin with. Hence such evaluations can overstate the potential benefits of these programs were they to be **scaled-up** and offered to less enthusiastic households.

Global Action Plan UK – Eco Teams Data¹⁴⁸

	Change	EcoTeams (N=58 teams)
Municipal Solid Waste	Max	- 46.90%
	Min	+ 23.93%
	Average	- 19.66%
Recycling	Average Proportion of Recycling	+ 7.71%
Electricity	Max	- 40.64%
	Min	+ 57.69%
	Average	- 6.86%

Beddington Zero Energy Development

The Beddington Zero Energy Development is a sustainable community in the UK designed to facilitate pro-environmental behaviour. The project transformed a former sewerage work site into an environmentally friendly, energy efficient environment. The project initiated by BioRegional and BDa ZEDfactory, and developed by the Peabody Trust, was completed in 2002. It solves problems such as heating and water usage, offers green transport plan and uses natural, renewable or recycled building materials.

Compared to local average, it achieved 81% reduction in energy use for heating, 45% reduction in electricity use and 58% reduction in water use. Compared to national average, there has been 64% reduction in car mileage. Finally 60% waste is recycled and 86% of residents buy organic food¹⁴⁹.

Health

STD and AIDS

Thailand has managed to dramatically transform sexual behaviors to reduce the transmission of AIDS and other sexually transmitted diseases. This was achieved by a sustained, multilevel attempt to change **social norms** concerning condom use. The campaign combined consultation with national **information campaigns**, active **engagement** of at-risk groups, severe **penalties** for brothels not following safe practices, and practices that empowered prostitutes to be able to insist on condom use. But perhaps the most important aspect of the programme was how the **parallel application** of all these elements created a sense that habits were changing and fostered the emergence of new social norms¹⁵⁰. This is a

¹⁴⁷ Idem.

¹⁴⁸ M. Nye and J. Burgess (2008).

¹⁴⁹ <http://www.bioregional.com/what-we-do/our-work/bedzed/> BioRegional, a charity that works to develop practical local sustainability projects led the development of the project and the Peabody Trust brought a long-term commitment to innovation in construction, quality accommodation and strong communities;

¹⁵⁰ G. Hart, MRC Social & Public Health Sciences Unit.

good example of the type of coordinated policy interventions helping to reinforce the effect of each individual policy.

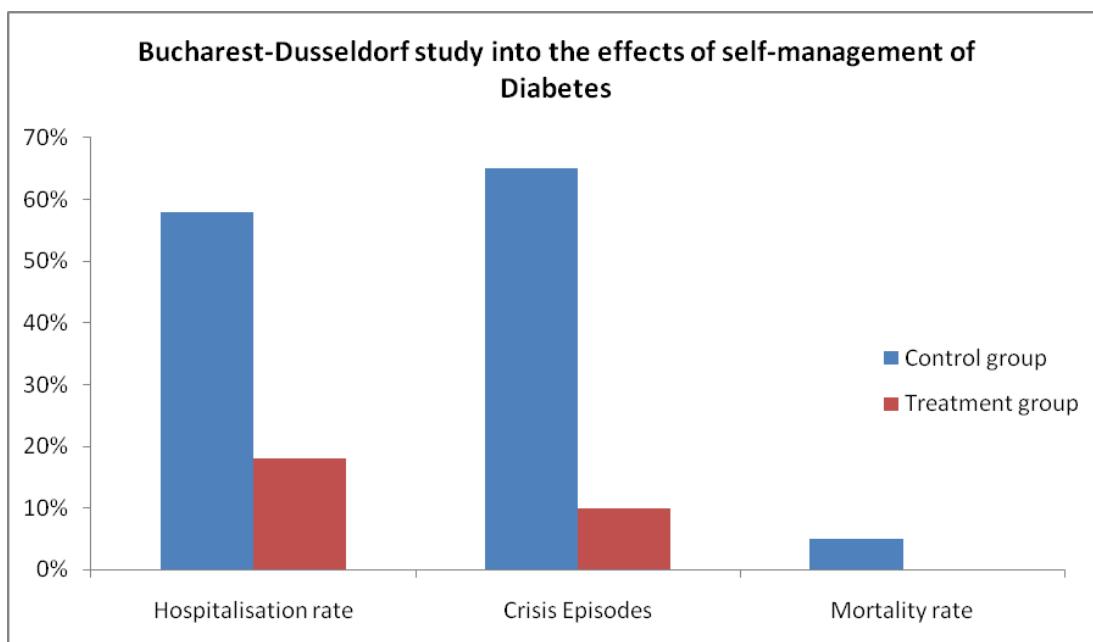
'Get Braids Not Aids'

'Get Braids Not Aids' is a campaign launched by DFID in Zimbabwe. The scheme trains hairdressers in low-income areas in informing their clients of the benefits of female condoms, how they are used and how to introduce them into a relationship. The information is thus being provided by a familiar person., and through agents that lie at the heart of community social networks. In 2005, the campaign had a network of 1,000 hair dressers in 500 salons, which sold over half of total sales of female condoms in Zimbabwe.

A study found that amongst 400 hair salons clients who had seen a female condom demonstration by a hairdresser were 2.5 times more likely to use the product than those who had not¹⁵¹.

Self-management of Diabetes

The Bucharest-Dusseldorf study looks at the impact of behavior change programme in health care. This programme was evaluated using a randomized field experiment methodology. A control group was given conventional diabetes cares while the treatment group participated in an intensive programme of monitoring and self-management technique. The treatment group was found to have significant lower rates of medical crises and hospitalizations¹⁵². The figure below gives an indication of the magnitude of the causal impact of the policy on three health related outcomes.



9. Case Study: Tackling Obesity

16. Examine:

¹⁵¹ D. Hales, K. Attawell, J. Hayman and N. Khan (2004).

¹⁵² D. Halpern, C. Bates, G. Beales, and A. Heathfield (2004).

- a. the latest developments in the evidence-base in relation to changing eating and physical activity behaviour;
- b. who are the most effective agents for the delivery of behaviour interventions to tackle obesity;
- c. how current behaviour change interventions tackle obesity and what use is made of available scientific evidence;
- d. whether such interventions are appropriately designed and evaluated;
- e. what lessons have been learnt and applied as a result of the evaluation process.

Much attention has focused on obesity, its health risks and its burden to society. Prevalence of obesity has risen rapidly in Britain from less than 10% in the 1980s to over 20% today¹⁵³. Asymmetric paternalistic interventions attempts to shift behavior in self-interested directions of "unhealthy" individuals without harming "healthy" individuals¹⁵⁴. Numerous papers attempt to identify the contributing factors of obesity in order to find potential points of interventions. Interventions have in turn been evaluated through controlled experiments. We focus on a few studies here. In the Appendix tables we provide a more comprehensive survey of the available evidence on behavioral change – using a variety of research design – related to obesity.

Sedentary Habits

There are many experimental studies which support theories regarding the contributions of sedentary behaviour to weight status. Television watching has been the main focus for many studies as it is associated with overweight¹⁵⁵ through decreased physical activity¹⁵⁶ and unhealthy dietary behavior.

Anti-obesity measures need to address television watching, a major sedentary behavior as well as one that exposes viewers to countless high calorie advertisements. It has been estimated that a ban on these advertisements in the United States would reduce the number of overweight children ages 3-11 in a fixed population by 10 per cent and would reduce the number of overweight adolescents ages 12-18 by 12%¹⁵⁷.

Reducing television viewing and computer use can play an important role in preventing obesity. During a two year experiment, seventy children aged 4 to 7 years whose BMI was at or above the 75th BMI percentile for age and sex were randomized to an intervention to reduce their television viewing and computer use by 50% versus a monitoring control group that did not reduce television viewing or computer use. Children randomized to the intervention group showed greater reductions in targeted sedentary behavior, BMI, and

¹⁵³ Health Survey for England 2001 (22%); Central Health Monitoring Unit, Department of Health 1986-7 (9.5%).

¹⁵⁴ T. Brennan G. Loewenstein and K.G Volpp (2007).

¹⁵⁵ J. Utter, D. Neumark-Sztainer, R. Jeffery, and M. Story (2003). S. Gable, Y. Chang, and J.L. Krull (2007).

¹⁵⁶ R. Lowry, H. Wechsler, D.A. Galuska, J.E. Fulton, and L. Kann. (2002) analyzed data from the 1999 national Youth Risk Behavior Survey, a representative sample of 15349 US high school students. TV viewing on an average school day exceeded 2 hours/day among 43% of students; it was greater among Black (74%) and Hispanic (52%) than White (34%) students. Overall, 11% of students were overweight, 31% of students were sedentary (i.e., did not participate in moderate or vigorous physical activity at recommended levels), and 76% ate less than five servings/day of fruits and vegetables. Watching TV more than 2 hours/day was associated with being overweight, being sedentary, and eating insufficient fruits and vegetables among White females, and with being overweight among Hispanic females.

¹⁵⁷ S.Y. Chou, I. Rashad, and M. Grossman (2008).

energy intake compared with the monitoring control group¹⁵⁸. However, some argue that television advertising, rather than viewing per se, is associated with obesity¹⁵⁹.

Until now, most weight loss programmes offered rewards for those who succeeded in losing weight. Unfortunately, this financial method has not reached long term maintenance of weight loss¹⁶⁰. An alternative approach could use our **loss aversion** as an incentive for weight loss. One study asked some participants to deposit money into an account, which was returned to them if they met weight loss goals. After seven months, this group showed significant weight loss compared to the control group¹⁶¹.

Commitment strategies have significantly increase success of programmes designed to increase physical exercise. For example, B.R. Williams, J. Bezner, S.B. Chesbro, and R. Leavitt (2005) report findings from their study on 43 postmenopausal African American women who were randomly assigned to an experimental or control group. Those in the experimental group signed a behavioral contract. A pedometer, daily log, 7-day physical activity recall, and qualitative analysis were used during a 7-week program. The contract group adhered more to the brisk walking goal ($P = .006$). A behavioral contract is effective in increasing exercise adherence in postmenopausal African American women.

Eating Habits

The dietary patterns of children from families in which television viewing is a normal part of meal routines may include fewer fruits and vegetables and more pizzas, snack foods, and sodas than the dietary patterns of children from families in which television viewing and eating are separate activities¹⁶². Fast food consumption and breakfast skipping increased during the transition to adulthood, and both dietary behaviors are associated with increased weight gain from adolescence to adulthood. These behaviors may be appropriate targets for intervention during this important transition¹⁶³.

The rise in obesity rate over the past 30 years has been paralleled by the increases in portion sizes and the prevalence of eating away from home¹⁶⁴. Many studies have shown

¹⁵⁸ L.H. Epstein, J.N. Roemmich, J.L. Robinson, R.A. Paluch, D.D. Winiewicz, J.H. Fuerch, and T.N. Robinson (2008).

¹⁵⁹ F.J. Zimmerman and J.F. Bell (2010). J.L Wiecha, K.E. Peterson, D.S. Ludwig, J. Kim, A. Sobol and S.L. Gortmaker (2006).

¹⁶⁰ Paul-Ebhohimhen and A. Avenell (2008).

¹⁶¹ K.G. Volpp, L.K. John, A.B. Troxel, L. Norton, J. Fassbender, and G. Loewenstein. (2008) conduct a randomized study on fifty-seven healthy participants aged 30-70 years with a body mass index of 30-40, well above the national average. Participants were randomized to 3 weight loss plans: monthly weigh-ins, a lottery incentive program, or a deposit contract that allowed for participant matching, with a weight loss goal of 1 lb (0.45 kg) a week for 16 weeks. The incentive groups lost significantly more weight than the control group (mean, 3.9 lb). Compared with the control group, the lottery group lost a mean of 13.1 lb and the deposit contract group lost a mean of 14.0 lb. Although the net weight loss between enrollment in the study and at the end of 7 months was larger in the incentive groups (9.2 lb) than in the control group (4.4 lb), these differences were not statistically significant. However, incentive participants weighed significantly less at 7 months than at the study start whereas controls did not.

¹⁶² K.A. Coon, J. Goldberg, B.L. Rogers, and K.L. Tucker. (2001) find that children from families with high television use derived, on average, 6% more of their total daily energy intake from meats; 5% more from pizza, salty snacks, and soda; and nearly 5% less of their energy intake from fruits, vegetables, and juices than did children from families with low television use. Of course, in this non experimental framework, there is no causal link established to television use. For example there might be some common factor that determines household's television usage and the diet composition.

¹⁶³ H.M. Niemeier, H.A. Raynor, E.E. Lloyd-Richardson, M.L. Rogers, and R.R. Wing (2006). report findings based on 9919 adolescents participating in Waves II (age range 11–21 years) and III (age range 18–27 years) of the National Longitudinal Study of Adolescent Health were monitored. Marked increases in fast food consumption and decreases in breakfast consumption occurred over the 5-year interval. Greater days of fast food consumption at Wave II predicted increased BMI at Wave III. Fewer days of breakfast consumption at Wave II and decreases in breakfast consumption between Waves II and III predicted increased BMI at Wave III.

¹⁶⁴ J.H. Ledikwe, J.A. Ello-Martin, and B.J. Rolls (2005).

that portion size has a direct impact on obesity¹⁶⁵. American health authorities have recognized the impact of portions on obesity and are calling for portion size reductions. However, fast-food portions in the United States are still larger than in Europe¹⁶⁶. Comparison between customers who purchase standard portion and those who purchase the larger size increase their energy intake of the entire meal by 25%¹⁶⁷.

Healthy default schemes appear to give the right “nudge” without restricting the freedom of choice of customers. Setting a healthy default meal with the option of changing for a less healthy meal has been evaluated. In the school setting, it has shown some success. The Eat Smart intervention was conducted in 56 intervention schools over a 2-year period. Five consecutive days of school menu, recipe, and vendor product information were collected from intervention and control schools to assess the nutrient content of school menus as offered. There was a significantly greater mean reduction in the percentage of calories from total fat and saturated fat in intervention compared with control schools from baseline to follow-up. Average total calories decreased significantly; however, the mean total calories (683 kcal) for intervention schools remained above one-third of the Recommended Dietary Allowances for this age group¹⁶⁸.

Fast food and soft drinks have been blamed for much of the rise in obesity. Consequently, adjusting their **relative price** and **availability** has been considered. Many countries already apply sales tax to particular items but not others with health concern in mind. In France for instance, sweets, chocolates, margarine and vegetable fat attract VAT of 20.6% whilst other foods attract VAT of only 5.5%¹⁶⁹. Evidences on introducing higher prices have mix results on people's consumption behaviour. Some researchers have shown that taxes on soft drinks have little impact on population weight¹⁷⁰ and taxes on food-away from home could actually increase body weight¹⁷¹. A more positive result can be found in an experiment on the prices of items sold in vending machines. Prices of the low-fat goods were reduced by 50% for three weeks and sales were recorded before and after this trial. Whilst total snack sales did not change, the percentage of total sales that were low-fat goods rose from 25.7% to 45.8%, but afterwards, the percentage fell back again to 22.8%, suggesting that it was the price that was the key factor¹⁷².

Assistance and support can help those trying to lose weight easier. Adding e-mail counseling to a basic Internet weight loss intervention program proved to significantly improve weight loss in adults at risk of diabetes¹⁷³.

¹⁶⁵ L.R. Young and M. Nestle (2002).

¹⁶⁶ L.R. Young and M. Nestle (2007).

¹⁶⁷ N. Diliberti, P.L. Bordi, M.T. Conklin, L.S. Roe, and B.J. Rolls. (2004) report findings based on 180 adult customers that were monitored. Portion size had a significant effect on intake of the entrée ($p < 0.0001$). Compared with customers who purchased the standard portion, those who purchased the larger portion increased their energy intake of the entrée by 43% (719 kJ; 172 kcal) and of the entire meal by 25% (664 kJ; 159 kcal). There was no difference between the two groups of customers in ratings of the appropriateness of the portion size or of the amount that was eaten in relation to their usual meal.

¹⁶⁸ S.K. Osganian, M.K. Ebzery, D.H. Montgomery, T.A. Nicklas, M.A. Evans, P.D. Mitchell, L.A. Lytle, M.P. Snyder, E.J. Stone, M.M. Zive (1996).

¹⁶⁹ A. Leicester and F. Windmeijer (2004).

¹⁷⁰ J.M. Fletcher, D. Frisvold, and N. Tefft (2010).

¹⁷¹ C. Schroeter, J. Lusk and W. Tyner (2008).

¹⁷² S.A. French, R.W. Jeffery, M. Story, P. Hannan and P. Snyder (1997).

¹⁷³ D.F. Tate, E.H. Jackvony and R.R. Wing, (2003) conducted a single-center one-year randomized controlled trial on 92 overweight adults whose mean age was 48.5 years and body mass index, 33.1. Participants were randomized to a basic Internet ($n = 46$) or to an Internet plus behavioral e-counseling program ($n = 46$). Both groups received one face-to-face counseling session. Intent-to-treat analyses showed the behavioral e-counseling group lost more mean weight at 12

Social Environment

Social origin, rather than adult life socio-economic position, may play an important role in the development of obesity¹⁷⁴. Many researches concur that physical attributes of the home environment and parental behaviour are associated with physical activity and dietary behaviour¹⁷⁵. Parents' education could help prevent obesity developing at an early age. A parent led intervention involving daily tasting of a vegetable holds promise for improving children's acceptance of vegetable.

Although social network shape our behaviour (for tobacco and alcohol consumption¹⁷⁶), researches have shown that it has practically no impact on our probability to be overweight¹⁷⁷.

Environment on a larger scale seems to impact our obesity rate. Inverse associations were observed between obesity and variables such as economic (real domestic product), food, urbanization, transport (passenger car, gasoline price, motorways) and policy (governance)¹⁷⁸. Technological changes such as new food technology and processed food can produce obesity¹⁷⁹. Variables such as the per capita number of fast food restaurant, the per capita number of full-service restaurants, the price of a meal in each type of restaurant, the price of food consumed at home, the price of cigarettes, clean indoor air laws, hours of work per week and hourly wage rates have all shown the expected effects on obesity rates¹⁸⁰.

Contextual Factors

The location and the provision of local supermarkets play an important role in dietary intakes¹⁸¹. Therefore, measures such as **financial incentives** or **regulation on access** can be taken to modify these factors. Favoring healthy food through discounted price in supermarkets has had significant and sustained effects on food purchase¹⁸². Reducing access to soft drinks in schools has also been unsuccessful in reducing consumption¹⁸³. Policies restricting access to fast food near school on the other hand show promising results on obesity among children¹⁸⁴.

Information and Education

Knowledge is inversely related to the probability that an individual is obese. Schooling's effects on relative weight and the probability of being obese are explained by differences in

months than the basic Internet group, and had greater decreases in percentage of initial body weight, body mass index, and waist circumference.

¹⁷⁴ M. Okasha, P. McCarron, J. McEwen, J. Durnin, and G. Davey Smith (2003).

¹⁷⁵ N.J. Spurrier, A.A. Magarey, R. Golley, F. Curnow, and M.G. Sawyer, (2008) conduct a study in which information via direct observation and interviews were taken from 280 preschool children. Parental physical activity, size of backyard and amount of outdoor play equipment were associated with more outdoor play. Fewer rules about television viewing and presence of a Playstation were associated with more indoor sedentary time. Lower fruit and vegetable intake was associated with reminding child to 'eat up' and offering food rewards to eat main meal. The availability of food groups in the home was associated with children's intake of these foods.

¹⁷⁶ J. Fletcher and S.L. Ross (2010).

¹⁷⁷ E. Cohen-Cole and J.M. Fletcher (2008).

¹⁷⁸ T.K Boehmer M. Rabin and R.C. Brownson (2007).

¹⁷⁹ D. Lakdawalla, T. Philipson, and J. Bhattacharya (2005). D.M. Cutler, E.L. Glaeser and J.M. Shapiro (2003).

¹⁸⁰ S.Y. Chou, M. Grossman, and H. Saffer (2004).

¹⁸¹ K. Morland, S. Wing, and A.D. Roux (2002). J.N. Bodor, D. Rose, T.A. Farley, C. Swalm, and S.K. Scott (2007).

¹⁸² C. Ni Mhurchu, T. Blakely, Y. Jiang, H.C. Eyles, and A. Rodgers (2010).

¹⁸³ S.N.E. Visit (2008).

¹⁸⁴ J. Currie, S. DellaVigna, E. Moretti, and V. Pathania (2009).

knowledge. The result also may imply that the most effective method of health education is to highlight the disease element of poor dietary habits and health¹⁸⁵. Moreover, education is an important determinant in the decision to use preventive care. Increasing education alone could have potentially spill-over on long-term health choices¹⁸⁶. It has also been demonstrated that there exists a relationship between risk knowledge and obesity¹⁸⁷.

Advertisement of poor nutritional food has been shown to be a determining factor in the link between television and overweight. Adolescents are primary targets of advertising for fast food restaurants, snack foods, and sugar-sweetened beverages, which may influence their food choices¹⁸⁸. This is evidence that television viewing through advertisements may have long-term effects on eating choices and contribute to poor eating habits in young adulthood¹⁸⁹. Soft drink advertising is related to increased consumption of soft drinks among elementary school children¹⁹⁰.

Educational programs have been tested in different environment. At a school-level, there have been positive results on the consumption of fruits, vegetable and juices¹⁹¹, fat intake¹⁹² and overall diet¹⁹³. Unfortunately, despite initial success in behavior change, there are ambiguous results on the long term behavioral changes in school-based interventions¹⁹⁴. Worksite educational interventions have had mixed results. Some have shown little effects in changing behaviors¹⁹⁵ while others have been successful in delivering the message¹⁹⁶ or effectively changing diet¹⁹⁷. Finally, mass media health education in communities has been undertaken and has been effective in targeted groups¹⁹⁸. Even though some results have been modest, taken together these trials have demonstrated the feasibility of activating schools, work-sites and entire communities in pursuit of healthier citizens. Children should be the priority population for interventions¹⁹⁹.

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¹⁸⁵ R.M. Nayga (2000) and R.M. Nayga (2001).

¹⁸⁶ J.M. Fletcher and D.E. Frisvold (2009).

¹⁸⁷ K. Kan and W.D. Tsai (2004).

¹⁸⁸ L.M. Powell, G. Szczyplka, F.J. Chaloupka, and C.L. Braunschweig (2007).

¹⁸⁹ D.J. Barr-Anderson, N.I. Larson, M.C. Nelson, D. Neumark-Sztainer, and M. Story (2009).

¹⁹⁰ T. Andreyeva and I. Rashad Kelly (2010).

¹⁹¹ T. Baranowski, M. Davis, K. Resnicow, J. Baranowski, C. Doyle, L.S. Lin, M. Smith, and D.T. Wang (2000).

¹⁹² B. Caballero, T. Clay, S.M. Davis, B. Ethelbah, B.H. Rock, T. Lohman, J. Norman, M. Story, E.J. Stone, L. Stephenson (2003).

¹⁹³ T.M. Harwood (2009). S.L. Gortmaker, K. Peterson, J. Wiecha, A.M. Sobol, S. Dixit, M.K. Fox, and N. Laird (1999).

¹⁹⁴ N. Rodriguez-Planas (2010).

¹⁹⁵ R.E. Glasgow, J.R. Terborg, L.A. Strycker, S.M. Boles, and J.F. Hollis (1997).

¹⁹⁶ M.K. Hunt, R. Lederman, S. Potter, A. Stoddard, and G. Sorensen (2000).

¹⁹⁷ G. Sorensen, A. Stoddard, K. Peterson, N. Cohen, MK Hunt, E. Stein, R. Palombo, and R. Lederman (1999).

¹⁹⁸ R.V. Luepker, DM Murray, DR Jacobs Jr, MB Mittelmark, N. Bracht, R. Carlaw, R. Crow, P. Elmer, J. Finnegan, and AR Folsom (1994).

¹⁹⁹ II Baum, L. Charles, and C.J. Ruhm (2009). Age, socioeconomic status and obesity growth. Journal of health economics, 28(3):635-648.

Written evidence from Research Councils UK (RCUK) (BC 108)

Summary

- **Human behaviour is extremely complex and is influenced by multiple genetic, social and environmental factors. These determinants operate at various levels in different individual, group and societal contexts.**
- **The Research Councils' objectives are to understand the mechanisms and drivers of behaviour which affect many aspects of our daily lives including savings and pensions, environmental behaviours, work, social interactions, schools and education, and health and disease.**
- **The Research Councils support research which generates and evaluates new knowledge in understanding behaviour, providing insights into the development of effective interventions and providing evidence to inform policy.**
- **Research shows that as social beings, we are very strongly influenced by our environment. This highlights the problem of attempting to control human behaviour solely at the level of the individual. We therefore need to adopt a holistic approach to policy and interventions, which takes account the social, economic and environmental context, as well as the individual.**
- **Changing behaviour is difficult, as we see from many failed attempts. However, there have been successes, and we need to learn from these.**
- **Successful approaches for one outcome (such as smoking) may not work for other outcomes (such as improving diet).**
- **Addictive behaviour, and the prevention and treatment of addiction, remains an especially challenging problem. The ESRC and MRC are building upon significant Research Council contributions to international research effort through cross-council initiatives. Other cross-agency initiatives such as the National Preventive Research Initiative (NPRI) have made important contributions to preventing illness and addressing addictive behaviours.**
- **Due to the complexity of the area, and at times the imperfect evidence available, knowledge exchange about behaviour to inform the development of future policy and interventions will require closer dialogue between researchers, policy makers and practitioners. It will be important to work together to identify areas of research priority and focus which are most likely to accelerate research outcomes into effective interventions and practice.**
- **Interventions in this area may have effects at multiple levels, including some knock-on or 'rebound' effects which may neither intended nor desirable. It is important to assess a range of socioeconomic and health impacts resulting from changes in policy and practice, in particular to ensure that they do not further increase health and socioeconomic inequalities.**

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- **Adequate consideration must be given to the evaluation of interventions. It is vital that robust evaluation processes are built into interventions at the outset.**
- **Ethical issues around behaviour change are considerable, and ethics should always be explicitly considered in respect of any intervention.**
- **Obesity is a complex physiological and socio-economic issue requiring an interdisciplinary approach to study mechanisms, its relationship to health and lifestyle factors and metabolic disease, and the development of preventive strategies.**

Introduction

1. Research Councils UK is a strategic partnership set up to champion research supported by the seven UK Research Councils. RCUK was established in 2002 to enable the Councils to work together more effectively to enhance the overall impact and effectiveness of their research, training and innovation activities, contributing to the delivery of the Government's objectives for science and innovation. Further details are available at www.rcuk.ac.uk

2. This evidence is submitted by RCUK on behalf of the Research Councils listed below and represents their independent views. It does not include, or necessarily reflect the views of the Science and Research Group in the Department for Business, Innovation and Skills (BIS). The submission is made on behalf of the following Councils:

Biotechnology and Biological Sciences Research Council (BBSRC)
Economic and Social Research Council (ESRC)
Engineering and Physical Sciences Research Council (EPSRC)
Medical Research Council (MRC)

The following Research Council funded Research Centres and individuals have contributed directly to this response (in alphabetical order): ESRC Centre for the Analysis of Risk and Regulation (CARR)²⁰⁰, London School of Economics and Political Science; Dr Deborah Christie, University College London Hospitals NHS Foundation Trust; Dr Michael Donnelly, Centre of Excellence for Public Health Research (Northern Ireland)²⁰¹; EROS Research Group (Emotion Regulation of Self and Others)²⁰², based at the Universities of Sheffield, Oxford, Manchester, Reading and Wolverhampton; Dr Nick Eyre, Environmental Change Institute, University of Oxford (Co-Director of the UK Energy Research Centre)²⁰³; Professor Simon Garrod, Department of Psychology, University of Glasgow; Professor Nigel Harvey, University College London; Professor Peter John, Institute for Political and Economic Governance, University of Manchester; MRC Population Health Sciences Research Network²⁰⁴; MRC Population Health Science Group²⁰⁵; Professor Elizabeth Shove,

²⁰⁰ <http://www.lse.ac.uk/collections/CARR/>

²⁰¹ <https://coe.qub.ac.uk/>

²⁰² <http://www.erosresearch.org/>

²⁰³ <http://www.ukerc.ac.uk/support/tiki-index.php>

²⁰⁴ www.populationhealthsciences.org

²⁰⁵ www.mrc.ac.uk/Ourresearch/Boardpanelsgroups/PHSG/index.htm

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Department of Sociology, University of Lancaster; UK Centre for Tobacco Control Studies (UKCTCS)²⁰⁶;

3. RCUK welcomes this Call for Evidence. Since behaviour is influenced by both an individual's genes and the influences of the social and physical environment, interdisciplinary research within and across the remits of all the participating Research Councils is crucial to its in-depth understanding. Unsurprisingly, given the complexity of the topic, its study necessitates a range of methodological approaches, including (but not limited to) observational research in the real world context, experimental studies carried out in laboratory settings to investigate specific aspects of behaviour, natural experiments which, for example, measure the effects of introducing an intervention in one location (e.g. improved access to facilities for physical activity) with a control area where no such intervention is introduced, empirical studies of hypothesised interventions and the use of neuro-imaging techniques to identify which areas of the brain are involved in different facets of behaviour. These approaches are complementary and inter-related.

4. The Research Councils have a long-standing interest in behavioural change, and our objectives relate to understanding mechanisms across a wide range of activities and behaviours which influence many aspects of our daily lives, including savings and pensions, workplace behaviours, environmental behaviours, anti-social behaviour, schools and education and health behaviours. Increasingly, behavioural change research is interdisciplinary across the biological, social, medical, engineering and environmental sciences.

5. Research Council interests include understanding the mechanisms that regulate behaviour change, the development and early evaluation of interventions and their impact and cost-effectiveness, and the impact of policy changes. Both ESRC and MRC, have identified research priorities relating to behaviour and interventions. "Understanding Individual Behaviour" is a strategic priority area of research for ESRC.²⁰⁷ Social science enables a focus on understanding behaviour and decision making in the context of the family, neighbourhood and social relations more generally. The MRC Strategic Plan 2009-2014²⁰⁸ has identified "Lifestyles affecting health" as a research priority, specifically the development of more effective strategies which have a greater focus on community, macro-level and multi-level interventions, which take account of social factors that play an important roles in behaviour and lifestyles.

6. The Research Councils, individually and jointly, support a broad range of research relating to understanding and influencing human behaviour. Research is funded through support to universities, medical schools and research organisations and within Research Council Institutes. ESRC, MRC and BBSRC support research and training in human behavioural sciences within their own remits, and work seamlessly across those remits. Other Research Councils have other focused priorities, such as EPSRC who fund cross-disciplinary research and training in sustainability, which involves understanding and influencing environmental behaviour. EPSRC also fund work in computer science and robotics which is resulting in important new insights into human behaviour, and they are

²⁰⁶ <http://www.nottingham.ac.uk/ukctcs/index.aspx>

²⁰⁷ <http://www.esrcsocietytoday.ac.uk/esrcinfocentre/strategicplan>

²⁰⁸ 'Research Changes Lives' MRC Strategic Plan 2009-2014. (2009). Medical Research Council, London.

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encouraging a trend towards user-centred design to engage users in the development of technologies.

7. Working collectively, or in partnership with other funders outside of the Research Councils, allows the Research Councils to address interdisciplinary questions, for example through cross council programmes. The RCUK Digital Economy (DE) Programme led by EPSRC provides support in this area focusing on realising the transformational impacts of ICT on business, government and society. The transformational ability of new ICTs could have major implications in the area of behaviour change. However, we would caution that technology does not alter behaviour in an uncomplicated way. Technologies and behaviours are co-constitutive; in the same way that human behaviour can be transformed by technology, so technologies are themselves liable to transformation, sometimes in unpredictable ways, by the behaviour of their users. This co-evolution of behaviour and technology should be borne in mind when considering behaviour change interventions for the 21st century.

8. The RCUK Lifelong Health and Wellbeing programme led by the MRC supports multi-disciplinary research addressing factors across the life course to promote healthy ageing and wellbeing in later life. Two of the four objectives of the programme aim to identify and develop effective interventions, and inform policy and practice including the development of services and technologies to support independent living. The Research Councils, in partnership with the UK Health Departments have recently invited applications for phase 2 of the programme which supports the development of novel interventions to promote healthy ageing, independence and wellbeing in later life, including interventions taking a preventative approach across the life course.

9. The National Prevention Research Initiative (NPRI) is another example of the effectiveness of joint working and collaboration of funders in this area. It is one of a small number of complementary programmes established to support interventions and evaluations in population health sciences research. NPRI²⁰⁹ is a UK-wide initiative made up of Government Departments, Research Councils and major medical charities who are working together²¹⁰ to increase high quality research into chronic disease prevention by influencing health behaviours, focusing on conditions such as certain cancers, heart disease, diabetes, obesity, stroke and dementia. Since 2004, NPRI partners have committed over £23m to 55 new research projects through the first three phases of the initiative. A further call for proposals has been launched under a fourth phase to support translational research, relevant to, or directly impacting upon policy and/or practice. Up to £10m will be committed to support cross-disciplinary research which develops, tests or evaluates interventions that can potentially have a major impact on population health, using the full range of evaluation methods, including experimental and quasi-experimental (or observational) designs and natural experiments.

²⁰⁹ <http://www.mrc.ac.uk/Ourresearch/Researchinitiatives/NPRI/index.htm>

²¹⁰ As at 1st September 2010 NPRI partners included the Alzheimer's Research Trust, Alzheimer's Society, Biotechnology and Biological Sciences Research Council, British Heart Foundation, Cancer Research UK, Chief Scientist Office, Scottish Government Health Directorate, Department of Health, Diabetes UK, Economic and Social Research Council, Engineering and Physical Sciences Research Council, Health & Social Care Research & Development Office for Northern Ireland, Medical Research Council, Stroke Association, Wellcome Trust, Welsh Assembly Government, World Cancer Research Fund.

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10. ESRC administers the UK Clinical Research Collaborations' Public Health Centres of Excellence.²¹¹ a £20m investment from a consortium of Research Councils, Health Departments and Charities over 5 years from 2008. Based at Newcastle, Cardiff, Belfast, Cambridge and Nottingham, the centres aim to produce excellent research that has potential for impact upon the health of the nation, including a focus on improving health behaviours. These aims will be achieved through support for building academic capacity, increasing infrastructure and promoting multi-disciplinary working in public health research. The 5 UK Public Health Centres of Excellence²¹² bring together leading researchers with practitioners, policy makers and members of the public to tackle complex public health issues.

11. Further examples of effective partnerships include the EPSRC and the Technology Strategy Board (TSB) funded the 'User-Centred Design for Energy Efficient Buildings' initiative, and the NERC-led UK Energy Research Centre, which is working to affect behavioural change at community level, improve energy security and equity, and achieve reductions in green house gas emissions. The Centre is funded by the joint RCUK Energy Programme. Details on Research Council programmes and research are available at www.esrc.ac.uk ; www.mrc.ac.uk; www.epsrc.ac.uk ; www.bbsrc.ac.uk ; www.nerc.ac.uk ; www.rcuk.ac.uk/energy ; www.rcukdigitaleconomy.org.uk.

12. Ethical issues around behaviour change are considerable, and ethics should always be explicitly considered in respect of any intervention, and indeed any research on human behaviour. The ESRC Framework for Research Ethics²¹³ and the MRC Ethics and Research Guidance²¹⁴ outline the primary considerations and the MRC's guidance on the design and evaluation of complex interventions²¹⁵ provides further guidance on addressing ethical issues. Other funders have comparable mechanisms; for example, BBSRC uses a combination of its Institutes' processes, its committees and the Bioscience for Society Strategy Panel. Most UK academics involved in research on human behaviour are affiliated to a professional body, and are bound by their Codes of Ethics and Conduct²¹⁶. Given the ethical sensitivity of behaviour change research, public engagement is important.

What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?

13. Behaviour is the product of choices within constraints, and can be changed by action on the choices, or on the constraints, or both. It can be influenced in a number of ways. Evidence indicates that positive messages about benefits are more effective at influencing behaviour than negative messages. **Explicit influences** involve providing information about the costs of not changing behaviour versus the benefits of changing it (e.g. 'if you drink too much you may become addicted', as opposed to 'if you stop drinking so much you will find it easier to attract a partner'). Evidence indicates that positive messages about benefits are more effective at influencing behaviour than negative messages. Information aimed at

²¹¹ Funding partners are: the British Heart Foundation; Cancer Research UK; ESRC; Health and Social Care Research and Development, Public Health Agency, Northern Ireland; MRC; National Institute for Health Research, Wales Office of Research and Development for Health and Social Care, Welsh Assembly Government; Wellcome Trust.

²¹² <http://coe.qub.ac.uk/> <http://www.mrc-epid.cam.ac.uk/cedar/> <http://www.fuse.ac.uk/>
<http://www.nottingham.ac.uk/ukctcs/index.aspx> <http://www.decipher.uk.net/>

²¹³ http://www.esrcsocietytoday.ac.uk/ESRCInfoCentre/opportunities/research_ethics_framework/index.aspx

²¹⁴ <http://www.mrc.ac.uk/Ourresearch/Ethicsresearchguidance/index.htm>

²¹⁵ <http://www.mrc.ac.uk/Utilities/Documentrecord/index.htm?d=MRC004871>

²¹⁶ E.g.; http://www.bps.org.uk/the-society/code-of-conduct/code-of-conduct_home.cfm

changing behaviour can be provided in two ways. Firstly, by **direct** communication aimed at the target audience; this can be either explicit (e.g. through the content of a communication) or implicit (e.g. designing communication to promote implicit influences such as using an effective role model to convey the content). Secondly, it can be **indirect**, aiming the communication not at the target of behavioural change, but at those who can influence the target. This might involve targeting parents in relation to childhood eating behaviour, or peer networks in relation to adolescent drinking behaviour.

14. **Implicit influences** relate to findings of research in Social Cognition²¹⁷ that much of human behaviour is governed by automatic mechanisms subject to priming, though as yet we do not know enough about the underlying cognitive-neural mechanisms responsible. For example, after encountering words associated with ageing, participants started to walk more slowly; and after encountering words associated with intelligence, participants performed better on intelligence tests. There are indications that implicit influences are particularly important in the context of social groups with individual behaviours strongly influenced by social norms and stereotypes. Professor Simon Garrod and his colleagues at the University of Glasgow are currently investigating social interactions from cognitive-neurosciences perspective²¹⁸, in a project jointly funded by ESRC and MRC. A key strand of this research is investigating interactive alignment, a process by which interacting agents come to behave (and by extension, think) in the same way as a result of their social interactions²¹⁹.

15. Inheritance plays a major role in behaviour, as shown by selection and strain studies for animal behaviour and by twin and adoption studies for human behaviour. However, unlike simple Mendelian characteristics, genetic variance for behavioural disorders rarely accounts for more than half of the phenotypic variance, and multiple genes with small effects appear to be involved rather than one or two major genes. The environment and social factors clearly have a major effect on the development of behaviour and we need to know more about how genes and environmental/social factors interact. A future research challenge will be to quantify the environment and social factors in a way that facilitate genetic and social studies to proceed hand in hand to inform policy and interventions.

16. UK researchers have made seminal contributions to work on factors affecting the development of behaviour. For example, the Social and Genetic Developmental Psychiatry Centre (SGDP) at the Institute of Psychiatry at King's College, London, has made important contributions to the literature on the:

- heritability of IQ and school achievement,
- the discovery that brain development in violent, persistent adolescent criminal offenders lags behind normal brain development,
- that boys who had suffered maltreatment, were much more likely to become violent as adults when they had low activity of a specific enzyme, and
- that father absence from the family predicted more conduct disorder in children, but if the father had antisocial personality, his presence was associated with greatly elevated conduct disorder in his children - this

²¹⁷ Bargh, J.A. and Chartrand, T.L. (1999). 'The unbearable automaticity of being'. *American Psychologist* Vol. 54, No. 7, pp. 462-479 (July 1999).

²¹⁸ <http://www.socialinteraction.gla.ac.uk/index.php/strand2>

²¹⁹ Pickering, M.J. and Garrod, S (2004). 'Toward a mechanistic psychology of dialogue.' *Behavioral and Brain Sciences* 27, pp. 169-225; Garrod, S. and Pickering, M.J. (2004). 'Why is conversation so easy?' *Trends in Cognitive Sciences*, 8, pp. 8-11.

highlights the need for research evidence informing social welfare policy as well as health policy.

17. Human behaviour can be considered at the individual, micro (e.g. within a small group of individuals), meso (e.g. within a specific neighbourhood or locality) and macro (e.g. across the UK, or globally) levels. It is likely that different but complementary strategies would be needed in order to influence behaviours at these different levels, if behaviour change at, for example, organisational level is of interest as well as at the level of the individual.

18. Rational choice theory, (i.e. that behaviour is based on the 'rational' decision making of individuals weighing up all available information and carrying out a form of cost: benefit analysis), which is widely used as an assumption of human behaviour in microeconomic models and analysis, has also been influential in respect of policy interventions. This is illustrated in efforts to influence food choice by listing ingredients and recommended levels on the packaging. However, this approach has limitations; research across the social sciences and beyond demonstrates that behaviour is the consequence of a complex interplay of inherited genetic endowments, gene expression, brain chemistry and connectivity, and social and economic incentives, and is in reality only rarely 'rational'. Only a fraction of our decisions are made by calculation of costs and benefits, because our brains have only a limited capacity to work in this way. Our emotions, and the ways in which choices are framed play a significant role. In the food labelling example, behavioural changes are shown not to follow rational lines, but reflect more complex interplays of a wide range of factors. If we start to think about our own everyday activities and how they are accomplished, we soon find ourselves looking beyond our own individual capacity to decide and choose between options, and find that they are grounded in complex, socially situated and interweaving routines, or 'practices'²²⁰.

19. Knowledge on how behaviour can be influenced is increasing, and as we demonstrate below, there is evidence that insights are applicable across a range of behaviours, such as pro-environmental behaviour, gambling, internet use and financial behaviour, as well as some health behaviours. The emerging discipline of Behavioural Economics has had considerable influence on recent debates. Thaler and Sunstein (2008)²²¹ summarise a large body of research on behaviour change interventions carried out by behavioural economists and cognitive psychologists, and provide a framework within which to interpret all this work. Specifically, they discuss how people's choices can be influenced by making changes to the context within which those choices are made. They refer to changing this context to ensure that people are more likely to make a desired choice as altering the 'choice architecture'. Thus, a change in choice architecture is an intervention intended to produce behaviour change. Thaler and Sunstein term such interventions as 'nudges'. The importance of this work is reflected in a number of substantial reports produced by the Cabinet Office,²²² the

²²⁰ Medd, W. and Shove, E. (2005). Workshop report (incorporating background report) for the 2nd Workshop of the UKWIR funded seminar series *Traces of Water*, Thursday 9th June 2005. <http://www.lec.lancs.ac.uk/cswm/Traces.php>

²²¹ Thaler, R.H. and Sunstein, C. (2008). *Nudge: Improving Decisions About Health, Wealth and Happiness*. New Haven and London: Yale University Press.

²²² Halpern, D., Bates, C., Mulgan, G. and Aldridge, S., with Greg Beales and Adam Heathfield (2004) *Personal Responsibility and Behaviour Change*. Cabinet Office: Prime Minister's Strategy Unit. <http://cdi.mecon.gov.ar/biblio/docelec/dp4105.pdf>

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Government Social Research Unit²²³ and the Cabinet Office and Institute for Government,²²⁴ listed in the call for evidence for this Inquiry.

20. There are a number of examples of effective behaviour change interventions which have had a measure of success, such as some anti-smoking initiatives, and campaigns to prevent drink driving, encourage seatbelt wearing, and to place babies on their backs to sleep. However, other behaviours, such as unhealthy eating leading to obesity, excess alcohol consumption, and carbon-intensive energy use, have so far proved more resistant to change. Some examples of the types of strategies which have been shown to be effective in respect of behaviour change across a range of domains are reviewed below.

21. Undesirable behaviours are often encouraged by social factors, as when people 'follow the herd', or conform to traditional or evolving habits and practices. For example, obesity is very common in particular social groups: it appears that, if people's friends become fat, they too are at increased risk of gaining weight, almost as though it were contagious.²²⁵ 'Herd' behaviours have also been investigated in respect of financial markets, by researchers at the ESRC Centre for Economic Learning and Social Evolution (ELSE).²²⁶ This work argues that herd behaviour can have adverse consequences for markets, as it causes important informational inefficiencies. However, these social factors can be turned to advantage: for people whose behaviour is less desirable than the norm, sometimes merely informing them about what other people are doing can help to improve their behaviour. Thus Linkenbach (2003)²²⁷ and Linkenbach and Perkins (2003)²²⁸ were able to help Montana students who were heavy drinkers and smokers by advertisements that proclaimed 'Most (81%) of Montana college students have four or fewer alcoholic drinks per week' and 'Most (70%) of Montana teens are tobacco free'. Schulz et al (2007) showed that information about social norms could also reduce above-average energy use²²⁹.

22. Reducing the financial or non-financial costs of a desired behaviour and increasing those of an undesired one can also yield benefits. As is now well known, the use of defaults is a powerful way of manipulating people's choices. Agreeing with the default is the line of least resistance. Thus, in the USA, defaults have been shown to be very effective in increasing the money that people save for their pensions²³⁰ and more controversially, in increasing organ donations for transplantation.²³¹

²²³ Darnton, A. (2008). *Practical Guide: An overview of behaviour change models and their uses*. Government Social Research Unit. http://www.civilservice.gov.uk/Assets/Behaviour_change_reference_report_tcm6-9697.pdf

²²⁴ Dolan, P., Hallsworth, M., Halpern, D., King, D. and Vlaev, I. (2010). Cabinet Office and Institute for Government. <http://www.instituteforgovernment.org.uk/images/files/MINDSPACE-full.pdf>

²²⁵ Christakis, N.A. and Fowler, J.H. (2009). *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives*. New York, Boston and London: Little, Brown and Company.

²²⁶ <http://else.econ.ucl.ac.uk/papers/uploaded/381.pdf>

²²⁷ Linkenbach, J.W. (2003). 'The Montana Model: Development and Overview of a Seven-Step Process for Implementing Macro-Level Social Norms Campaigns'. In Perkins, H.W. (2003) (Ed.). *The Social Norms Approach to Preventing School and College Age Substance Abuse*. Pp. 182-208. New York: Jossey-Bass.

²²⁸ Linkenbach, J.W. and Perkins, H.W. (2003). 'MOST of Us Are Tobacco Free: An Eight-Month Social Norms Campaign Reducing Youth Initiation of Smoking in Montana'. In Perkins, H.W. (2003) (Ed.). *The Social Norms Approach to Preventing School and College Age Substance Abuse*. Pp. 224-234. New York: Jossey-Bass.

²²⁹ Schultz, P.W., Nolan, J.M., Cialdini, R.B., Goldstein, N.J. and Griskevicius, V. (2007). 'The Constructive, Destructive and Reconstructive Power of Social Norms.' *Psychological Science* 18 (2007), pp. 429-434.

²³⁰ Benartzi, S. and Thaler, R.H. (1999). 'Risk Aversion or Myopia? Choices in Repeated Gambles and Retirement Investments'. *Management Science* 45 (1999), pp. 364-381.

²³¹ Johnson, E.J. and Goldstein, D. (2003). 'Do Defaults Save Lives?' *Science* 302 (2003), pp. 409-51.

23. Explicit financial incentives can also be effective as long as the incentive scheme is well designed. For example, MIT's Poverty Action Lab developed a scheme in which participants who were quitting smoking put the amount of money they would usually spend on cigarettes into a bank account at the end of every week. At the end of a six-month period, they were given a urine test to determine whether they had smoked recently. If they passed the test, they got their money back; if they failed, the money was given to charity. Initial results indicate that this approach is more effective than other anti-smoking strategies, such as nicotine patches.²³² Price discounts have also been shown to be more effective in changing purchasing behaviour than intensive tailored nutrition education.²³³ The effect was very modest, but a useful example of how upstream interventions may be more effective than those based on education. In another context, there has been much discussion about the use of financial incentives for weight loss. However, questions have been raised as to whether such strategies are effective in changing the intrinsic motivators which are necessary to sustain improved long-term behaviour. The NPRI has funded a number of interventions using financial incentives. For example, the use of supermarket coupons to influence food purchasing behaviour by low income consumers was shown to be effective for the duration of the intervention, but not sustained subsequently.²³⁴ A separate ongoing study modelling the taxation of energy-dense/nutrient-poor foods suggests that a blanket fiscal policy is too blunt an instrument to improve diet across the population. Indeed the study indicates there may be a trade-off between public health and economic welfare from imposing a 'fat tax' on society, and that policies which specifically target people consuming energy-dense/nutrient-poor diets may be more appropriate.²³⁵

24. Visual and auditory warning signals are also often effective. For example, auditory warnings reduce people's failure to use car seat belts. These warning signals can be construed as a basic type of advice. Interestingly, however, the provision of more complex advice, such as that aimed at helping people to avoid undesirable financial behaviours, or nutritional labelling on food packaging, appears to be less effective, though evaluation is challenging. Differences may arise because simple warning signals are intrusive and carry a very simple message, whereas more complex advice has to be actively engaged with and integrated with existing belief structures.

25. Social science research has provided compelling evidence that factors such as attitudes, norms, confidence in one's ability to act (self-efficacy) and intentions have a meaningful causal impact on people's behavior.²³⁶ One important development during the past ten years has been to show that although there is often a 'gap' between intentions (people's decisions about how to act) and their behaviour. This gap can be closed by forming specific plans called implementation intentions.²³⁷ This type of intervention has proved relatively easy to deliver, and effective and adaptable to intervening in a variety of

232 (<http://www.povertyactionlab.com/projects/project.php?pid=65>)

233 Ni Mhurchu, C., Blakely, A., Jiang, Y., Eyles, H.C., and Rodgers, A. (2009) Effects of price discounts and tailored nutrition education on supermarket purchases: a randomized controlled trial Am J Clin Nutr Am J Clin Nutr 91: 736-747, 2010

234 Sparks, L, Eadie, D, Findlay, A, MacKintosh, AM, and Stead, M. An initial assessment of the impact of a food retailer intervention to encourage healthy eating in low-income consumers. ACRA/AMS Triennial Conference, New Orleans, 30 September – 1 October 2009.

235 http://www.mrc.ac.uk/Ourresearch/ResearchInitiatives/NPRI/Dietphysicalactivity/index.htm#P80_11724

236E.g., Webb, T. L., & Sheeran, P. (2006). 'Does changing behavioural intentions engender behavior change? A meta-analysis of the experimental evidence'. *Psychological Bulletin*, 132, pp. 249-268.

237 Gollwitzer, P. M., & Sheeran, P. (2006). Implementation intentions and goal achievement: A meta-analysis of effects and processes. *Advances in Experimental Social Psychology*, 38, 69-119.

behaviours, including exercising, medication compliance, and pro-environmental behaviours.²³⁸

26. However, caveats exist in respect of behaviour change interventions. People's responses to interventions downstream have been explored, to try to understand the longer term effects. This work has revealed interesting insights into how policy or practical interventions appear, in some cases, to have the opposite to intended effects on behavioural change. For example, improvements in energy efficiency are shown to encourage greater use of the services (for example heat or mobility) which energy helps to provide. Behavioural responses such as these have come to be known as the energy efficiency "rebound effect". While the impact of these effects vary in scale, in some cases they have been shown to be sufficiently large to lead to an overall increase in energy consumption - an outcome that has been termed 'backfire'²³⁹. Rebound effects are very difficult to quantify, particularly in relation to behaviours which, unlike energy consumption, are difficult to measure. In addition, the effects operate through complex and varied mechanisms, and a lack of clarity about these means that the reliable evidence base to underpin policy interventions based on models of the effects is as yet incomplete.

Addictive Behaviour

27. Addiction remains a sizeable challenge for the UK. To give one example, in England around 200,000 people seek help for dependency upon illegal drugs every year. Most of these are addicted to heroin and/or crack cocaine. They will have been using their drugs of dependency for eight years on average before they seek treatment. Addictive behaviour is typically characterised by excessive consumption of some sort, often followed later by regret that this has taken place, and recognition that this behaviour is likely to be damaging in the long term. People know that they have a problem with self-control: when not in a 'hot' state (under temptation), they will even pay for treatment to reduce their craving for the object of their addiction. An insight from behavioural economists suggests that we can think of people as having two selves: an immediate 'doer' that finds it hard to resist temptation, and a longer term 'planner' that endeavours to keep the 'doer' under control. Providing people with self-control strategies can support the 'planner' in this task. For example, some casinos have schemes whereby compulsive gamblers can put themselves on a list of people who are banned from the premises.²⁴⁰ Similarly, cooling-off schemes, including regulatory measures such as the Consumer Credit Act, can enable impulsive shoppers to withdraw from large purchases for some period after they are made.

28 The role of biomedical research in addictive behaviours has been extensively and thoroughly reviewed by both the Academy of Medical Sciences²⁴¹ and by the Government's Foresight team.²⁴² Conclusions were that advances in genetics, neuroscience, pharmacology and psychology have already provided far-reaching insights into how drugs of abuse can

²³⁸ Sheeran, P., Milne, S., Webb, T. L., and Gollwitzer, P. M. (2005). 'Implementation intentions and health behaviour'. In M. Conner & P. Norman (Eds.), *Predicting health behaviour. Research and practice with social cognition models* (2nd Ed., pp. 276-323). Berkshire, UK: Open University Press.

²³⁹ Sorrell, S. (2007). *The Rebound Effect: an assessment of the evidence for economy-wide energy savings from improved energy efficiency*. A report produced by the Sussex Energy Group for the Technology and Policy Assessment function of the UK Energy Research Centre.

²⁴⁰ ESRC have funded a substantial body of research into problem gambling in partnership with the Responsibility in Gambling Trust (RIGT).

²⁴¹ <http://www.acmedsci.ac.uk/p99puid126.html>

²⁴² <http://www.bis.gov.uk/foresight/our-work/projects/published-projects/brain-science>

'highjack' certain brain processes, such as those mediating reward, leading to dependency and addiction in some people.

29. There is now evidence that most addictive drugs may act on a common brain system that also operates in food addiction (as opposed to 'behavioural obesity') and gambling. The UK has made a sizeable contribution to this body of knowledge, and the field is now ripe for translation into policy and treatment, which is a focus of recent ESRC and MRC activity. The Research Councils have concluded that more work is needed on understanding the harm and causes of addictions, and MRC, together with ESRC have established an addiction initiative (see paragraph 34 below).

30. UK research centres have contributed enormously to helping people who have substance use problems. Initially people are generally stabilized on maintenance pharmacotherapy such as methadone to reduce illicit use, encourage engagement with services and reduce criminal behaviour. Recently a UK study²⁴³ discovered that almost half of those discharged in one year subsequently demonstrated sustained recovery from addiction. Alongside this, or where there is no equivalent pharmacotherapeutic approach, psychosocial approaches such as those based on social learning or motivational theory are offered. Such motivational enhancement, cognitive-behavioural skills training and relapse prevention techniques have helped individuals recognize, avoid and cope with urges to abuse illegal or legal drugs.

31. Nevertheless, the 'treatment' of addiction remains a challenge, as only a limited number of addicts remain completely drug free for the rest of their lives. Continued investment in brain science holds the promise of informing significant practical and therapeutic outcomes for treating mental illness and addiction. For instance, treatment approaches have traditionally focused on modulating 'reward pathways and reactivity', but advances in neuroscience suggest targeting impulsivity or memory might be more beneficial. Research is needed to inform the formulation of better prevention strategies, and to better understand and identify physiological and socio-economic factors that put particular individuals and population groups at risk of both mental illness and drug misuse.

32. Although most interventions derived from theories of behaviour change have been developed and tested in relation to non-addictive behaviours, these theories can still inform the development of interventions for addictive ones. The constituent actions that are required to perform an addictive behaviour (e.g., asking a friend for a cigarette, holding it, lighting it, inhaling) are voluntary behaviours that can be controlled.²⁴⁴ Similarly, a recent study on 'addictive' drugs such as heroin²⁴⁵ suggests that some users may be able to control their addiction, though many are seriously harmed. For a review of how theories of behaviour change can be used to inform interventions for addictive behaviours, see Webb, Snihotta, and Michie (in press).²⁴⁶

²⁴³ <http://www.nta.nhs.uk/new-hope-for-drug-addicts.aspx>

²⁴⁴ Baumeister, R.F., Heatherton, T.F., & Tice, D.M. (1994). *Losing Control: How and Why People Fail at Self-Regulation*. San Diego, CA: Academic Press.

²⁴⁵ Shewan, D. & Dalgarno, P. (2005). 'Evidence for Controlled Heroin Use? Low levels of negative health and social outcomes among non-treatment heroin users in Glasgow.' *British Journal of Health Psychology*. Feb 2005, Vol 10, Issue 1, pp. 33-48.

²⁴⁶ Webb, T.L., Snihotta, F.F. and Michie, S. (in press). Using theories of behaviour change to inform interventions for addictive behaviours. *Addiction*.

What are the policy implications of recent developments in research on behaviour change?

33. Research on behaviour change indicates that policy interventions may be effective in many domains, including (but not limited to) those related to food, alcohol, finance, energy and transport. However, effective policy-making must be based on research evidence from across the entire spectrum, all policies should take account of the evidence base, and policy-makers should use advice and evidence from a wide range of sources. The MRC is currently undertaking a three year study to review theory-based approaches to health behaviour change in order to identify the key elements of successful approaches, and to suggest how to incorporate them in the development of future interventions.²⁴⁷ Another MRC-funded study, which began in May 2010, aims to develop a scientific method for describing behaviour change interventions by defining the specific techniques used (e.g. goal setting or use of rewards).²⁴⁸ The establishment of clear and reliable definitions for each technique will inform the standardised reporting of interventions and support effective synthesis of research findings in systematic reviews. This more systematic approach to developing and describing behaviour change interventions would assist both policy-makers and researchers by fostering the development of a more reliable evidence base.

34. In the area of addiction, MRC and ESRC are supporting policy relevant studies through the MRC/ESRC Addiction Research Strategy.²⁴⁹ This initiative is funding work both on evaluation of government-level macro interventions and on more individual-level interventions (e.g. drugs for addiction informed by the latest developments in neuroscience). The MRC-led strategy for addiction and substance misuse research funds cross-discipline research addressing the biological, medical, social and economic aspects of addiction and substance misuse, and it aims to strengthen the translation of research into public health benefit to reduce the harm caused by illicit drugs, alcohol and gambling. The total spend on research under this strategy so far is just under £6.3m (2009 – 2011) and importantly, the investment has been partly driven by stakeholder needs. For example, one project will combine and compare treatment records and criminal (Home Office) records to better estimate how many people are involved in serious drug use, and how many of these get involved in crime, what proportion die, and how helpful treatment has been in reducing death and crime. Another study will support policy research into drinking behaviours and inform policy interventions such as minimum pricing of alcohol. The aim for this research programme is to develop a step-change in capabilities for robust scientific appraisal of new and existing alcohol policy interventions. Two further studies are looking at drug targets and one includes a major experimental medicine platform to look at the roles of impulsivity and stress in loss of abstinence.

35. Applying understanding of human behaviour has also been identified as a critical factor in other areas besides health, such as the energy efficiency research portfolio supported by the RCUK Energy Programme. The EPSRC funded ‘Sustainable Urban Environments’ programme involves engineers, social scientists and policy makers in identifying how policy implications around sustainability might impact on an individual’s lifestyle, and when suggested changes may fail to be accepted. Projects funded by the RCUK Energy and Digital Economy Programmes under the £9M TEDDI (Transforming Energy

²⁴⁷ <http://www.populationhealthsciences.org/themes.html>

²⁴⁸ <http://www.mrc.ac.uk/ResearchPortfolio/Grant/Record.htm?GrantRef=G0901474&CaseId=15859>.

²⁴⁹ (<http://www.mrc.ac.uk/Ourresearch/ResearchInitiatives/Addictionresearch/index.htm>)

Demand through Digital Innovation) initiative aim to use digital technologies to reduce energy demand at several levels of interaction between society and the energy system in particular:

- Presentation of information to influence individual and community decision making;
- Use of digital technologies to understand and influence individual and collective behaviour;
- Energy implications of working practices.

36. Changes in choice architecture that serve as effective interventions for behaviour change can be straightforward, simple to implement, and save money for the public purse. For example, see the pension contributions example in paragraph 22. However, for some behaviours, such as peace processes involving the cessation of terrorist violence, change is clearly much more problematic.

37. For many of the most successful instances where behaviour change has been brought about, such as the switch from leaded to unleaded petrol, concerted, multi-level interventions, combining elements such as information campaigns, withdrawal of the harmful product, an element of choice (lead-substitute petrol was still available), technological innovation, regulation which made compulsory the necessary changes to engine design to new cars, pricing strategies, and emotional appeal in respect of the danger to vulnerable children of high lead levels. Complex, multi-level interventions involving combinations of different approaches have generally proved more effective than smaller ones which focus upon one aspect of the problem. A range of approaches and policy instruments such as theoretically-integrated and informed interventions, traditional regulatory approaches, fiscal policies, "nudge" policies, the provision of clear information and education campaigns is therefore recommended. In other contexts, the main policy implications from the tobacco control experience is that success depends on a consistent approach which includes individual motivation and support, but is driven by 'top-down' population measures.

38. It is important to understand why different social groups indulge in undesirable behaviours. Recent ESRC funded research on young people's drinking behaviour demonstrates that drinking to intoxication is central to social life, and accepted as normal behaviour among certain groups of young people. High levels of uncertainty and instability over jobs, education, family life, and a focus on the individual as central to one's success or failure put particular pressure on the young. The friendship groups that are the core of the culture of intoxication are therefore very significant in a social and psychological sense, forming an important locus and sense of 'belonging'. Therefore any interventions would need to recognise the significance of both drinking to the group identities of these young people, and the friendship group to their drinking practices²⁵⁰. The research did not specifically address the impact of the price and availability of alcohol, but the potential impact of cheap deals, especially spirits, on young people's drinking practices, cannot be discounted. The researchers suggest that, without a parallel focus on the activities of the retail trade, the drinks industry, marketing of alcohol and the wider context of the culture of intoxication, behaviour change interventions alone are unlikely to be effective. A separate NPRI-funded study set out to shed light on the complex relationship between drinking and

²⁵⁰ Hackley, C., Griffin, C., Szmigin, I., Mistral, W. and Bengry-Howell, A. (2008). 'The Discursive Constitution of the UK Alcohol Problem in *Safe, Sensible, Social*: a Discussion of Policy Implications.' *Drugs: Education, Prevention and Policy*, 2008, 15 (1), pp. 65-78.

marketing, and specifically on whether advertising encourages consumption in teenagers. The study had an impact at a European level through the alcohol platform of the European Commission's Directorate General for Health and Consumer Affairs (DG Sanco), in Scotland through the Holyrood alcohol team and Alcohol Focus, and also made critical contributions to UK policy reports from the British Medical Association²⁵¹ and from the House of Commons Health Committee.²⁵² There has been a large quantity of research showing that price and availability can affect consumption at the population level, and studies have shown gender differences in responses to alcohol pricing.²⁵³ MRC and ESRC have recently funded an interdisciplinary Addiction Research Cluster to develop capacity for research in alcohol policy effectiveness.

39. Improving understanding about the relationships between statutory and non-statutory agencies, the environment, the socio-technical infrastructure, individuals, families, communities and their social capital, is key to the design of effective policy approaches to wide scale behaviour change. Policies need to be informed by evidence in the areas of biomedicine, social science, technology development and environmental science. Perhaps the most significant implication is the need to transcend traditional boundaries between relevant parties at various levels and contexts, including government departments and academic disciplines.

40. Allcott and Mullainathan (2010)²⁵⁴ suggest the following three key policy implications for government. Although their research was in the of energy policy, they appear more broadly applicable:

- Provide funding for potentially high-impact behavioural programmes.
- Encourage private sector firms to generate and utilise behavioural innovations that 'nudge' consumers to make better choices.
- Provide independent information, such as vehicle emission data.

Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

41. There is emergent research expertise in the social sciences on contextual effects on behaviour in the UK.²⁵⁵ However, in recognition of the need to establish collaborations in this important area, ESRC, MRC and BBSRC co-funded 7 Exploratory Networks in Understanding Individual Behaviour, under the Directorship of Professor Nigel Harvey of UCL. These short, capacity building awards, which have recently finished, have been successful in developing capability and research partnerships in this area, and this line of research could usefully feed into the development and testing of behaviour change interventions. However, given the constraints on public funding for research, making use of

²⁵¹ Under the influence: The damaging effect of alcohol marketing on young people. BMA (September 2009)

²⁵² Alcohol. HC 151-I, First Report of Session 2009-10 - Volume I: Report Together with Formal Minutes (HC 151-I January 2010).

²⁵³ Chaloupka, F.J. and Wechsler, H. (1996). Binge drinking in the college: The impact of price, availability and alcohol control policies. *Contemporary Economic Policy*. Volume 14, Issue 4, pages 112–124.

²⁵⁴ Allcott, H. and Mullainathan, S. (2010). 'Behavior and Energy Policy'. *Science* 5 March 2010: Vol. 327. no. 5970, pp. 1204 - 1205

²⁵⁵ E.g., at the University of Warwick (e.g., Nick Chater, Neil Stewart), UCL (Nigel Harvey), and City University (Stian Reimers). Other research on behavioural economics is being carried out at London School of Economics and Political Science (e.g. Paul Dolan), Leeds University Business School (e.g. Barbara Summers, Darren Duxbury), Bolton (e.g. Rob Ranyard) and Durham University Business School (e.g., Daniel Read).

this new capacity will require careful prioritisation across the Research Councils and other potential funders of research. There are important issues about (a) directing funding across the disciplines and researchers who are best placed to undertake this research, and (b) the level of funding. Psychologists, sociologists, and economists develop theories that underpin effective behaviour change interventions,²⁵⁶ and it is vital to ensure that this work is linked to expertise from the biological, medical, engineering, physical and environmental sciences.

42. The Research Councils have a long-standing interest in health inequalities, ranging from understanding causality and the impact of policy change, to the development and early evaluation of interventions aimed at reducing health differentials. ESRC and the MRC, in collaboration with other key stakeholders such as the National Institute for Health Research (NIHR) also support the development of new methodologies that will strengthen our ability to understand and address inequalities in health, including the impact and cost-effectiveness of interventions across marked social gradients.

43. Studies supported by NPRI, as shown elsewhere in this submission, explore a range of approaches to promoting positive health behaviour, to encourage people to avoid these habits and to follow a healthy lifestyle. Many are taking place in local settings, in schools, neighbourhoods, homes, the workplace and GP surgeries, and with members of the community helping to develop and test new interventions. Some projects use the internet to influence health behaviour, develop partnerships with local food shops, train members of the community to be health advisors, or use marketing communication skills to promote healthier living.

44. An example of a behaviour change intervention that has been developed using a formal framework is the Southampton Initiative for Health, which aims to improve the diets and physical activity levels of women of childbearing age from disadvantaged backgrounds.²⁵⁷ It was developed by researchers at the MRC Lifecourse Epidemiology Unit at the University of Southampton, the local primary care trust and Southampton City Council. The intervention was developed in response to strong evidence of inequalities in the diets and physical activity levels of women living in Southampton. The Southampton Women's Survey²⁵⁸ (SWS) demonstrated that women who are disadvantaged by low levels of educational attainment have diets of poorer quality, and are less likely to take part in strenuous exercise than more advantaged women. Further research identified some of the underlying psychological factors that may contribute to these trends. Disadvantaged women had lower levels of self efficacy and felt less in control of their lives than other women. They believed less in the benefits of healthy eating and gave food a lower priority relative to other needs. They also had less social support for healthy eating. The research suggested that four aspects of intervention design were important in increasing the effectiveness of interventions: the use of an educational component, provision of continued support after the intervention, family involvement, and social support from peers or lay health workers.

45. Research on behaviour change interventions is often complex, multi-staged and often medium to long-term, often requiring large samples to reliably measure relatively small effects. The cost can therefore be significant. Some costs associated with the intervention

²⁵⁶ See <http://www.apa.org/science/about/psa/2010/08/stem-report.pdf>

²⁵⁷ Barker M, Baird J, Lawrence W, Jarman M, Black C, Barnard K, Cradock S, Davies J, Margetts B, Inskip H, Cooper C. The Southampton Initiative for Health: a complex intervention to improve the diets and increase the physical activity levels of women from disadvantaged communities. *Journal of Health Psychology* 13 August, E-pub ahead of print, 2010.

²⁵⁸ <http://www.mrc.soton.ac.uk/index.asp?page=4>

are attributable specifically to the research and can be supported by the Research Councils and via dedicated initiatives such as the NPRI. Other costs, mainly those associated with implementation and evaluation, are non-research related, and the source of those funds is not always clear. Costs of evaluation may fall across partners and funding streams. Where the implementation and evaluation is to take place in an NHS setting, the non-research costs should be covered by the ARCO agreement.²⁵⁹ However, it should be noted that competing demands on NHS budgets may threaten this source.

46. Where the implementation or evaluation is outside of the NHS (such as in schools, the community or the entire population) the origin of funds is less obvious. Some research sources, such as the NPRI, will cover implementation and evaluation costs but others, such as the NIHR Public Health Research (PHR) programme do not, which may limit opportunities for the implementation of interventions outside NHS settings. The NIHR PHR programme supports research in non-NHS settings throughout the UK in both communicable and non-communicable disease, and across a wide range of health behaviours. The programme is multi-disciplinary and wide-ranging, and the main focus of the programme's evaluation of public health interventions will be on gauging the effectiveness and cost-effectiveness of interventions.

47. Incentives within the UK for wider participation in inter- and cross-disciplinary research on behaviour change policy intervention development have been expanded by RCUK (for example as part of the RCUK Energy, Digital Economy and Lifelong Health and Wellbeing Programmes' activities), but could be taken further. Funding is required to undertake research on various aspects including design and development, implementation and policy translation as well as on evaluation methodologies to gauge costs and outcomes. There is also a need to devote resources to capacity building in terms of training a cadre of researchers who would be capable of 'travelling' across disciplinary boundaries and translating research into policy-level interventions.

48. Evaluation is a key challenge. The failure to thoroughly evaluate policies and programmes designed to address health inequalities was identified by a recent Health Select Committee report on health inequalities as the key weakness of policies in this area.²⁶⁰ Adequate consideration must be given to the evaluation of interventions, particularly complex health interventions, where there is uncertainty about their effectiveness or value for money. Many behaviour change interventions (particularly at population level) are extremely difficult to assess in formal trials, and so may need to be assessed during a pilot phase before full implementation. Skills and resources to support evaluation must be considered at an early stage and the MRC has developed guidance to support this activity²⁶¹. The guidance stresses the need for thorough piloting and development of interventions prior to large scale evaluation, rigorous evaluation of effectiveness and cost-effectiveness, transparent reporting of evaluation findings to aid replication, and comprehensive synthesis of evidence. It also encourages researchers, policy makers and practitioners to work together to ensure that novel interventions are implemented in ways that allow for a rigorous evaluation. There is a need to develop fora for such exchanges to occur more readily and suitable metrics need to be developed to reward scientists who invest time and

²⁵⁹ (http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4125280)

²⁶⁰ House of Commons Health Committee. *Health Inequalities*. 3rd Report of Session 2008-9, p 38.

²⁶¹ <http://www.mrc.ac.uk/Utilities/Documentrecord/index.htm?d=MRC004871>; Craig P et al. Developing and evaluating complex interventions: the new Medical Research Council guidance. BMJ 2008;337:a1655 doi: 10.1136/bmj.a1655

Professor Susan Michie, Professor Elizabeth Shove, Professor Imran Rasul, Medical Research Council and Economic and Social Research Council

energy in this area. The RE-AIM framework similarly emphasizes the importance of considering aspects of an intervention such as its reach and sustainability, as well as its effectiveness.²⁶² Some behaviour change interventions can be evaluated using randomized controlled trials, and there are many successful examples across a wide range of settings and behaviours.²⁶³ Others, such as national legislative or fiscal changes, are difficult or impossible to evaluate using randomized experimental methods. The MRC Population Health Sciences Research Network is developing guidance on the use of natural experiments to evaluate population health interventions²⁶⁴ which will be published in early 2011.

Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

49. Research evidence about behaviour may be complex, and as the science is often very new, can be compounded by issues such as incompleteness and conflicting findings. It is therefore essential that researchers work closely with policy makers and practitioners to ensure that the most robust knowledge available about behaviour (and its limitations) is used to address needs and develop future policy and interventions. Structures and approaches to narrow the gap between suppliers and users of research should be explored, to both focus research priorities and accelerate evidence into effective interventions. Examples such as the MRC/ESRC Addiction Strategy, NPRI programme and the UKCRC Public Health Research Centres of Excellence are in effective pooling their expertise with practitioners and policy makers to support translation of research into policy and practice. The development and evaluation of interventions, including the use of non-experimental methods where appropriate should be prioritised. The question of funding for associated costs should be addressed to ensure that funding for evaluation is available in time to coincide with the implementation of an intervention.

50. Agencies and funders could explore further ways of enabling closer dialogue and exchange of skills, particularly at local level. In addition, there is a need to increase incentives for academic researchers to generate forms of knowledge of most value to decision makers.

What should be classified as a behaviour change intervention?

51. Any measure that changes, or is intended to change behaviour, habits or practices; any policy or activity designed to modify overt actions could be classified as a behaviour change intervention. Behaviour change interventions should be defined sufficiently widely to include interventions designed either to change individuals' beliefs, attitudes, preferences,

²⁶² See Glasgow RE, Davidson KW, Dobkin PL, Ockene J, Spring B. Practical behavioural trials to advance evidence-based behavioral medicine. *Annals of Behavioral Medicine* 2006;31(1):5-13; Glasgow RE, Klesges LM, Dzewaltowski DA, Bull SS, Estabrooks P. The future of health behavior change research: what is needed to improve translation of research into health promotion practice. *Annals of Behavioral Medicine* 2004;27(1):3-12; 4. Glasgow RE, Vogt TM, Boles SM. Evaluating the public health impact of health promotion interventions: the RE-AIM framework. *American Journal of Public Health* 1999;89:1322-7.

²⁶³ For two contrasting examples, Campbell R, Starkey F, Holliday J, Audrey S, Bloor M, Parry-Langdon N, Hughes R, Moore L. An informal school-based peer-led intervention for smoking prevention in adolescence (ASSIST): a cluster randomised trial. *Lancet* 2008;371:1595-1602; Kramer MS, Chalmers B, Hodnett ED, et al for the PROBIT Study Group. Promotion of breastfeeding trial (PROBIT): A randomized trial in the Republic of Belarus. *Journal of the American Medical Association* 2001;285(4):413-20

²⁶⁴ See <http://www.populationhealthsciences.org/Using-natural-experiments-to-evaluate-population-health-interventions.html>

habits, practices etc., or to change the environment within which they make their choices. The classification should include broad population- level upstream activities including legislation, fiscal policy and national-level activities such as Change 4 Life and the Sure Start programme as well as individual level interventions. Which mixture of levels and types of intervention is appropriate will vary according to the goals of policy and the nature of the behaviour in question. However, there is evidence that action is required at all of these levels if behaviour change is to be maximised. Further research on the different levels and types of intervention and how they interact is a priority.

52. The impact of behaviour change campaigns on health inequalities strengthens this view. Campaigns which rely solely upon people understanding and responding to health information may improve population health overall, but at the expense of widening health inequalities. This is because better-educated or wealthier people are often more likely to both understand the messages and have the wherewithal to respond to them. For example, the ‘back-to-sleep’ campaign noted above was very effective at reducing sudden infant death syndrome, but socio-economic inequalities in death rates from SIDS widened markedly as sleeping position became less important as a risk factor, and parental smoking and sleeping with a parent on a sofa rather than a bed became more important. To improve health without widening health inequalities, individual-level interventions should be combined with measures to ensure that people have adequate opportunities to respond. For example, campaigns to promote physical activity should combine encouragement with the provision of accessible and affordable facilities, or an attractive and safe environment in which to take exercise.

How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

53. Insufficient research has so far been undertaken that simultaneously addresses different levels of intervention. Research on different levels and types of intervention and how they interact should therefore be prioritised. An example of this approach is the NHS Health Scotland’s MESAS study, which is using a portfolio of studies to evaluate the Scottish Government’s alcohol strategy. It includes work on the impact of measures to control price and availability, as well as on the provision of brief interventions to people who already drink harmfully.²⁶⁵

54. Interventions should be designed to complement each other to provide as comprehensive coverage as possible of all aspects and motivations to change. The evidence points to the necessity for different types of intervention to work together. The way this happens, or should happen, is dependent upon context.

55. The method and manner of this type of interaction is dependent upon an integrated way of communicating and working between government departments, policy makers, academic researchers, service providers and practitioners and the members of the target population (or their advocates). There may be merit in establishing strategies to guide a given policy and associated interventions via a genuine cross-departmental, cross-sectoral

²⁶⁵ For information on the programme, see <http://www.healthscotland.com/scotlands-health/evaluation/planning/MESAS.aspx>

and collaborative working experience from initial formulation and assessment of problems or needs to the design, development and implementation of a given intervention.

Should behaviour change interventions be used in isolation or in combination with other policy interventions?

56. In one sense, all policy interventions rely at least implicitly on behaviour change. For example, making an activity illegal implicitly relies upon some people changing their behaviour by ceasing participation in the activity. However, this strategy on its own is probably unlikely to result in the complete cessation of the activity in question. As there are multiple determinants of behaviour, which operate at various levels, there is a need for complex, integrated interventions that take account of individual and group behaviour in particular contexts – a sort of ‘population in context’ approach to behaviour change. Behaviour change interventions should be used in combination with other policy interventions where possible, taking account of the many influences on people’s behaviour. For example, the Southampton Initiative for Health, described above has made use of the provision of Sure Start at national level, and has used the healthy eating and physical activity messages of Change 4 Life and the Food Standards Agency.

Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

57. Comparatively few behaviour change interventions have been, or could be, evaluated through conventional randomised controlled trials. However, a more rigorous approach to evaluations in this area is necessary, and may require new methodologies. One of the most important factors on effectiveness is the extent to which the intervention is based on behavioural theory.²⁶⁶ The implication is that behavioural scientists may hold the key to informing more effective interventions in the future²⁶⁷.

58. Evaluation is complex, and as we note above, often difficult to put into practice. It seems self-evident, for example that cigarette companies advertise their products to increase sales, and makes little sense to argue (as has happened in the past) that any other motive explains their spending on this activity. However, evidence that banning advertising impacts on smoking behaviour is extremely difficult to collect, particularly without the cooperation of the companies doing the advertising. In some cases it may therefore be appropriate to introduce measures without concrete proof of effectiveness. In other cases, measures such as the smoking cessation services have been thoroughly monitored and their success, in treating nearly 5 million smokers and generating nearly 700, 000 sustained (>1 year abstinent) quitters is well established. The UK Centre for Tobacco Control Studies (UKTCS), one of the Public Health Centres of Excellence (see paragraph 10) is carrying out research into smoking cessation, exploring the best and most effective ways of providing Stop Smoking services and assisting people to quit. They also research determinants and prevention of incident smoking; smoking in pregnancy and harm reduction²⁶⁸.

²⁶⁶ Michie, S., Prestwich, A and de Bruin, M. (2010). Importance of the nature of comparison conditions for testing theory-based interventions: reply. *Health Psychology* 29(5), pp. 468-70.

²⁶⁷ Webb, T.L., Joseph, J., Yardley, L and Michie, S. (2010), Using the Internet to Promote Health Behaviour Change: A Systematic Review and Meta-Analysis of the Impact of Theoretical Basis, Use of Behaviour Change Techniques and Mode of Delivery on Efficacy. *Journal of Medical Internet Research* Vol 12, No.1.

²⁶⁸ <http://www.nottingham.ac.uk/ukctcs/index.aspx>

59. The NPRI is funding a number of studies which evaluate interventions intended to improve public health. For example, one study which is due to report soon evaluated the effect of the UK 2007 OfCom restrictions on television food advertising to children. A second study, still ongoing, evaluates the impact of English tobacco control policy on smoking cessation activities. These projects, and others, may provide evidence of whether these publicly funded interventions achieved what was intended.

60. The House of Commons Select Committee Inquiry into health inequalities (2009) highlighted the difficulties in evaluation, and commented on the use of evidence in public health policy-making. The Committee noted that 'The most damning criticisms of Government policies we have heard in this inquiry have not been of the policies themselves, but rather of the Government's approach to designing and introducing new policies which makes meaningful evaluation impossible.'²⁶⁹

Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

61. The marketing and advertising sectors have a great deal of expertise in influencing behaviour. For example, a recent book written by a former FDA commissioner documents how the food industry has succeeded in changing eating cultures over the last 30 or 40 years.²⁷⁰ Economic modelling suggests restrictions on advertising unhealthy food to children may be a particularly cost effective intervention because of low cost and wide-scale population reach.²⁷¹

62. Social marketing is the systematic application of marketing, along with other concepts and techniques, to achieve specific behavioral goals for a social good. This approach to behaviour change, particularly in relation to motivating more sustainable behaviours, is a particular focus of the ESRC Centre for Business Relationships, Accountability, Sustainability and Society (BRASS).²⁷² Substantive insights generated from their work are included in a separate BRASS submission into this consultation process.

63. The voluntary sector has a key role to play. There is a growing appetite to learn lessons regarding behaviour change activities (such as parenting interventions), and promote change for the better, especially among disadvantaged groups. However, the capacity for the sector to implement relevant lessons would benefit from further strengthening. There may be a need to take a targeted approach with appropriate funding to facilitate the uptake and translation of lessons learned, for example through the ESRC Placement Fellowships scheme.

²⁶⁹ <http://www.publications.parliament.uk/pa/cm200809/cmselect/cmhealth/286/28602.htm>

²⁷⁰ Kessler, D. (2009). *The end of overeating. Taking Control of the Insatiable American Appetite*. New York: Rodale Press.

²⁷¹ Magnus A, Haby M.M, Carter R. and Swinburn B. (2009). *International Journal of Obesity* 33(10), pp.1094-102. Epub 2009 Aug 4.

²⁷² <http://www.brass.cf.ac.uk>

What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

64. A much closer partnership between policy makers and academia is warranted. The five UK Centres of Excellence for Public Health²⁷³ are good examples of growing partnerships between the different sectors, and could provide a model for transcending boundaries, creating partnerships and initiating processes of designing, developing, piloting, implementing and evaluating policy-orientated behavioural interventions. Approaches to implementation should also be considered as these can vary significantly from the formal approaches taken by Primary Care Trusts, such as HENRY (an early years parenting intervention)²⁷⁴ and MEND (a childhood weight-loss intervention),²⁷⁵ to more ad hoc approaches in education and Social Services.

What mechanisms exist within government to coordinate and implement cross-departmental behaviour change policy interventions?

65. No comment.

What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?

66. Government agencies, such as NICE²⁷⁶ (and its equivalent in other areas) are potential providers of relevant learning material and best practice exemplars. For instance NICE reviews and recent guidance on obesity reflect the best evidence available to inform research studies, interventions and policy.

When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

67. This question was considered by the Nuffield Council on Bioethics in its 2007 report, *Public Health: ethical issues*.²⁷⁷ The report proposed a stewardship model of public health. According to this model, the state should not coerce people to lead healthy lives, but should do more than simply provide information about the benefits or harms associated with health-related behaviours. The report argues that intervention can be justified in order to protect vulnerable groups, help people to overcome addictive behaviours, reduce the risks that individuals impose on one another, or to provide an environment conducive to leading a healthy life. The report introduced the idea of an ‘intervention ladder’ to highlight

²⁷³ Three in England, one in Wales, one in Northern Ireland and their counterpart in Scotland (the Scottish Centre for Public Health Research and Policy)

²⁷⁴ <http://www.henry.org.uk>

²⁷⁵ <http://www.mendprogramme.org/mendservices/mendprogramme>

²⁷⁶ National Institute for Health and Clinical Excellence

²⁷⁷ <http://www.nuffieldbioethics.org/public-health>

the balance that needs to be struck between benefit and intrusiveness: more intrusive interventions require stronger evidence of benefit to be acceptable. Prohibition, for example of speeding in built-up areas or smoking in enclosed places can be acceptable when there is clear evidence that it can prevent harm or protect vulnerable people. This highlights the need for rigorous evaluation, noting where the evidence is weak or inconclusive. In the current, partial state of evidence about effective behaviour change, piloting of new interventions, coupled with a rigorous approach to evaluation, is essential to ensure that they are well-designed, cost effective and do not have harmful unanticipated consequences, such as widening health inequalities.

68. Behavioural economists refer to their approach as one of liberal paternalism. They see it as liberal because they ultimately allow people freedom in their choices, and paternalistic because they try to influence people's choices in a way that will make them better off, as judged by the choosers themselves. Nevertheless, there have been debates about the ethics of use of defaults in organ donation (e.g., within the House of Lords). Thaler and Sunstein (2008) suggest that use of a default presumes consent. While, opponents of their approach argue that this is unethical, and that, e.g. organ donation in particular requires explicit consent, others have debated whether defaults do, in fact, presume consent.

69. It may be appropriate for the state to intervene to prevent dangerous behaviour, but the extent of that intervention depends on who undertakes the behaviour, and whether others are harmed. Where there are significant implications for the safety of vulnerable groups, or a danger of factors such as secondary exposure, or for poverty and deprivation, there may be a strong argument for powerful intervention. It may be appropriate in some instances to intervene when public funds are required to remedy and address the consequences of harmful behaviour. Ethical considerations, wide consultation and the appropriate timescale for intervention should be identified by a careful review of evidence regarding its effectiveness, and positive and negative impacts on the consequences of behaviour.

Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

70. In principle, the involvement of the public in the design and implementation of behaviour change interventions is likely to lead to better uptake and adherence, and may also be desirable for ethical reasons. However, recent reviews have found a lack of evidence on the impact of public involvement in research.²⁷⁸ Research involving health service users provides good examples of models and methods of working (e.g. the community participatory approach) that may be transferrable to other sectors, and further testing is needed to identify effective approaches. There are also specific planning frameworks such as Intervention Mapping that indicate how the public might be involved at various stages in the

²⁷⁸ Stanley K (2010) Exploring impact. Involving the public in NHS, public health and social care research. INVOLVE, Eastleigh. (www.invo.org.uk/pdfs/Involve_Exploring_Impactfinal28.10.09.pdf); Brett J et al. (2010) The PRICOM study. A systematic review of the conceptualisation, measurement, impact and outcomes of patients and public involvement in health and social care research. UKCRC (www.ukcrc.org/systematic-review-on-ppi-in-clinical-research/).

process, such as community needs assessment, intervention design and planning. The public should be consulted about the proposed behaviour change measures, and as noted above there should be a 'try-and-test' phase before deciding the nature and degree to which they should be implemented.

71. Although transparency and public accountability are important features of behaviour change research and interventions, it is also necessary to take into consideration the evidence from behavioural science that people have defensive biases which often cause them to downplay the true risks of their behaviour. Prejudice and stigmatisation are important considerations in the case of interventions aimed at changing addictive behaviour.

What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?

72. A great deal of research on behavioral economics has been carried out in the US, and ESRC, in collaboration with the NIA and NAS, are currently in the process of organising an international workshop to explore new approaches in this area. One suggestion is that we need to investigate the effectiveness of behaviour change interventions in relation to cross-country and cultural differences. It is likely that the principles of behaviour change techniques are generally transferable between different societies and cultures on the basis of our common humanity. However, more comparative research is needed to identify any exceptions or limits to this. Even where there is consistency at the level of principle, there is a need to translate the principles in a way that takes account of issues such as social and cultural relationships and environmental and economic processes. More work is needed on the process and practicalities of tailoring interventions to particular populations and contexts. Although there have been some attempts to work towards integrating the various theories and identifying 'common core theoretical constructs' or general principles and techniques, further attention needs to be given to the need to incorporate social, cultural, physiological and environmental factors in theory integration and related intervention development and implementation.

The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally, in order to examine:

73. In 2008/09, MRC committed over £14 million to research directly relevant to obesity including mechanistic, epidemiological and proof of concept research. The MRC's activities in obesity research are centred on the causes of obesity and the processes by which it causes disease. Research into the prevention of obesity and related diseases is an area of growing interest, in which activity has increased over the last five years as new translational opportunities have arisen. The Research Councils have also made substantial additional contributions to the NPRI.

74. The MRC Epidemiology Unit, MRC/CSO Social and Public Health Sciences Unit and the MRC Centre for Obesity and Related Metabolic Diseases are capitalising on the methodological strengths and available datasets to tackle key research questions in the field.

Professor Susan Michie, Professor Elizabeth Shove, Professor Imran Rasul, Medical Research Council and Economic and Social Research Council

Collectively, the research covered is broad and spans fundamental experimental research, clinical studies in patients, right through to the study of social and environmental influences on health, and includes assessments of the effectiveness and impacts of different individual and population level approaches to behaviour change and disease prevention. These multidisciplinary and complementary approaches will inform a continuum of knowledge to inform understanding of the mechanisms responsible for obesity and related metabolic diseases, as well as facilitating the development of interventions to prevent and treat them.

75. Food preferences are established early in life in comparison with other appetites, and eating behaviour may be controlled by more complicated physiological / psychological / social mechanisms than other behaviours. Obesity should therefore be considered a complex physiological and socioeconomic issue, spanning many disciplines and requiring research investment from a variety of funders. The MRC's objectives for obesity research are to produce an understanding of the mechanisms of obesity and of its links to disease, and to use these insights to develop effective interventions to prevent and treat these conditions, whereas those of the ESRC are in the social and economic factors involved. Other councils fund different aspects of the obesity issue; BBSRC supports research and training in diet and health, food choice and energy balance.

76. The MRC priorities for obesity research, issued in July 2010²⁷⁹ were developed in partnership with the research community, and are based on disease burden, unmet need, timeliness, value for money/added value, impact on disease and tractability/feasibility. They aim to address relevant areas of the Government's national obesity research strategy, while acknowledging the importance of research into the wider socioeconomic drivers. The MRC's research plans recognise that obesity cannot be managed in the same way as single risk factor changes, and that there are lessons to be learned from examples of multifaceted research strategies that have been successful in improving health outcomes in other complex disease areas, such as cardiovascular disease.

77. Over the last three years a number of reports have contributed significantly to the evidence base. We would draw the committee's particular attention to two recent Special Issues on behavioural treatment of obesity,²⁸⁰ the Government Foresight Report, *Tackling obesity: future choices*²⁸¹ which supported the foundations of the *Healthy Weight, Healthy Lives* strategy, a review and guidelines by NICE²⁸², and papers by various academic researchers in the field such as Wardle (2007)²⁸³ and Musingarimi (2008) who conducted a review and comparative analysis of policies targeted at obesity in the four UK countries²⁸⁴. A Northern Ireland Assembly Inquiry Research Paper (2009) identified the extent of overweight and obesity levels in NI and the associated policy response from the DHSSPS²⁸⁵. The paper also highlighted the key causes and risk factors associated with obesity and provided a comparative overview of a number of interventions and treatments in the UK and internationally.

²⁷⁹ <http://www.mrc.ac.uk/Ourresearch/Priorities/Obesityresearch/index.htm>

²⁸⁰ Behaviour Research and Therapy (Volume 48, Issue 8, August 2010); Annals of Behavioural Medicine (Volume 38, Supplement 1, December, 2009)

²⁸¹ <http://www.bis.gov.uk/foresight/our-work/projects/current-projects/tackling-obesities>

²⁸² <http://www.nice.org.uk/guidance/CG43>

²⁸³ Wardle, J. (2007). Eating Behaviour and Obesity. Short Science Review. Foresight Tackling Obesities: Future Choices. Obesity Reviews, 8(s1):73–75. (<http://www.foresight.gov.uk>).

²⁸⁴ Musingarimi, P. (2008). Obesity in the UK: A review and comparative analysis of policies within the devolved regions. London: International Longevity Centre.

²⁸⁵ : http://www.niassembly.gov.uk/health/2007mandate/reports/report10_09_IOR_.htm

78. NPRI and NIHR both support programmes which will increase research evidence on the effectiveness of interventions. Research supported by NIHR, such as the Convenience Stores project, which puts fruit and vegetables into local shops in deprived areas, and the Healthy Towns project also seek to embed more evaluation into policy interventions.

a. the latest developments in the evidence-base in relation to changing eating and physical activity behaviour;

79. Different approaches to promoting physical activity have been reviewed by the Public Health Programme of NICE. Researchers supported by ESRC and MRC have contributed to these reviews both in terms of providing the studies that are part of the primary evidence base, and also the process of reviewing. An initial NICE review of four commonly used methods for promoting physical activity (PH2) suggested that brief advice was probably effective but that exercise referral schemes were largely of unknown effectiveness. They suggested that exercise referral schemes to promote physical activity should be encouraged only when they were part of a properly designed and controlled research study to determine effectiveness. The NICE review suggested that pedometers were a promising approach and a subsequent systematic review²⁸⁶ suggested that the use of a pedometer was associated with significant increases in physical activity and decreases in body mass index and blood pressure. Whether these changes were sustained over the long term was uncertain. As in all areas of behaviour change, interventions are generally more effective if based on a theoretical foundation.

80. Systematic reviews of interventions for the treatment of childhood obesity²⁸⁷ have found few high quality trials, and these mainly involved small numbers of primary school aged children, carried out in academic tertiary care centres with highly specialised staff, and involving white, middle class, motivated families. The applicability and generalisability of these studies is therefore limited, and the reviews conclude that 'there is an urgent need for quality trials of adequate power to be carried out in samples that are representative of the population at large, where process evaluation has been addressed and appropriate lifestyle tools applied'. The authors reviewed 64 randomised controlled trials (RCTs), with 5230 participants in total. The trials focused on lifestyle interventions, diet changes and behaviourally orientated treatment programs. Three types of drug interventions (metformin, orlistat and sibutramine) were reviewed. Since publication, sibutramine has been withdrawn due to safety concerns. Design, outcomes and quality varied significantly across the 64 studies. Meta-analyses indicated a small reduction in overweight at 6 and 12 months follow up in:

- i) lifestyle interventions involving children; and
- ii) lifestyle interventions in adolescents with or without the addition of orlistat or sibutramine. A range of adverse effects was noted in drug RCTs.

81. In a review of interventions in Children and Young People (PH17) there was evidence among adolescents of the effectiveness of multi-component interventions and

²⁸⁶ Bravata DM, Smith-Spangler C, Sundaram V, Gienger AL, Lin N, Lewis R, Stave CD, Olkin I, Sirard JR. Using pedometers to increase physical activity and improve health: a systematic review. *The Journal of the American Medical Association* 2007 Nov 21;298(19):2296-304.

²⁸⁷ Oude Luttikhuis H, Baur L, Jansen H, Shrewsbury VA, O'Malley C, Stolk RP, Summerbell CD. (2009). Interventions for treating obesity in children (Review). *Evidence-Based Child Health: A Cochrane Review Journal*. 4, pp.1571-1729.

interventions that included both school and family or community involvement.²⁸⁸ However, it was noted that a lack of high quality evaluations hampered conclusions concerning effectiveness, especially among children. NICE have also reviewed workplace interventions (PH13) suggesting that there is evidence from studies in the public sector that workplace walking interventions using pedometers that focus on facilitated goal setting, diaries and self-monitoring and walking routes can produce positive results. Multi-component interventions that combine the provision of signs to encourage stair use with modifications to make stairwells more attractive can increase the frequency of stair use.

82. At the environmental level (PH8) there was relatively little definitive evidence of how changes to the environment impacted on physical activity, particularly when activity is assessed objectively rather than by self-report. This issue of appropriate measurement of physical activity is common to all studies in this area. Evidence about the impact of environmental change on activity would come from natural experiment studies and from longitudinal cohort study approaches, study designs which are now being actively promoted in this area. The development of methods for natural experiments is of particular importance to ensure that policy makers, researchers and funders are aware of appropriate methodologies. The MRC Population Health Sciences Research Network is leading the development of such guidance. In the physical activity field, natural experiments such as the evaluation of major transport infrastructure investments are underway, led by the UKCRC Centre of Public Health Research Excellence Centre for Diet and Activity Research (CEDAR). Observational approaches have suggested that there is a reasonably consistent association between physical activity levels and the accessibility of physical activity and other facilities, the density of residential areas, land use mix and urban 'walkability' scores. There are also reasonably consistent links between physical activity levels and the perceived safety of an area and the availability of footpaths or equipment for exercising. There are less clear links between physical activity levels and the aesthetic features of the environment, topographic factors and perceived levels of crime²⁸⁹.

b. who are the most effective agents for the delivery of behaviour interventions to tackle obesity;

83. The most effective delivery agent for behavioural interventions will depend upon whom the intervention is aimed at. In respect of overweight children, there are indications that interventions should be aimed at both the children and their parents. the best outcome data come from Family-Based Behavioural Treatment (FBBT; sometimes called the Traffic Light Diet because of the dietary component of the programme). The results of this programme, published in a series of studies by Epstein and colleagues,²⁹⁰ have shown impressive results. FBBT is delivered in group sessions to 8 to 12-year-old, mildly to moderately overweight children and their parents. It consists of dietary and exercise advice and behaviour therapy to help implement these changes. Ten-year follow-up of 158 children who participated in 4 randomised controlled trials indicated that, on average, 30% of children reached non-obese status, with a further 34% reducing their percentage overweight

²⁸⁸ E M F van Sluijs, A M McMinn, S J Griffin. Effectiveness of interventions to promote physical activity in children and adolescents: systematic review of controlled trials *BMJ* 2007; 335 : 703

²⁸⁹ A.E. Bauman and F.C. Bull. Environmental Correlates of Physical Activity And Walking in Adults and Children: A Review of Reviews. . NICE, February 2007

²⁹⁰ E.g. Epstein, L.H., McCurley, J., Wing, R.R. and Valoski, A. (1990). 'Five-year follow-up of family based behavioural treatments for childhood obesity. *Journal of Consulting and Clinical Psychology*, 58(5), pp. 661-4

substantially. Improvements in blood pressure and cholesterol were also been reported, with no sign of disadvantage to linear growth or of disturbed eating attitudes.²⁹¹

84. FBBT is widely cited as the most effective treatment for childhood obesity in both international and British reviews, but the generalisability of this treatment approach to a UK population has yet to be established. Epstein's research was carried out in a relatively select study population (in a university clinic in the US) and has not been tested extensively in other settings. The participants were predominantly white, and of higher socioeconomic status. It is unclear whether children from different backgrounds and settings would fare as well. There are indications that families who are at greatest social disadvantage are at most risk of being obese, and therefore determining the applicability of this treatment model in such populations is essential.

85. While Epstein's programme of research on FBBT has been exemplary, some earlier research on the topic do not meet contemporary standards for inclusion in systematic reviews, and thus do not achieve their full potential to influence decision-making about treatment services.

86. A recent study conducted by MRC Human Nutrition Research found that commercial weight loss programmes such as Weight Watchers were more effective agents of behaviour change (reflected in weight loss) than health professionals. Findings showed that people referred to such programmes do better than those on standard NHS weight management programmes, and that the weight loss observed compared favourably with other reported community interventions. A second study to examine weight loss in routine referrals to Weightwatchers by health professionals found that a third of all referrals led to >5% weight loss. In the context of other research literature, the elements associated with success are likely to be peer support, regular weighing, goal setting and accountability which form part of the 'package' of interventions provided by Weight Watchers. The studies followed the publication of NICE guidance on obesity (2006)²⁹² which highlighted gaps in research and suggested partnerships between primary care organisations and commercial weight loss programmes could be beneficial. Both research studies were specifically designed to examine this issue and measure real-life weight loss. Although they were funded by Weight Watchers, the research was independent and conducted on the agreement that the scientific results would be presented and published without interference from Weight Watchers, whatever the outcome.

87. For obesity prevention the evidence that community based, participatory interventions can drive change is growing. Studies in New Zealand and Australia indicate that factors associated with success include local champions, community collaboration and partnerships, good planning and co-ordination and sustained effort for several years²⁹³. This has had some success,²⁹⁴ especially for younger children, though less in adolescents.

²⁹¹ Epstein, L.H., Valoski, A., Wing, R.R. and McCurley, J. (1990). Ten-year follow-up of behavioral, family-based treatment for obese children. *Journal of the American Medical Association*, 264(19):2519-23

²⁹² <http://guidance.nice.org.uk/CG43>

²⁹³ Bell AC, Simmons A, Sanigorski AM, Kremer PJ, Swinburn BA. Preventing childhood obesity: the sentinel site for obesity prevention in Victoria, Australia. *Health Promotion International* 2008;23(4):328-336.

²⁹⁴ de Silva-Sanigorski AM, Bell AC, Kremer P, Nichols M, Crellin M, Smith M. (2010). 'Reducing obesity in early childhood: results from Romp & Chomp, an Australian community-wide intervention program'. *American Journal of Clinical Nutrition* 91(4), pp.831-840; Sanigorski, A.M., Bell, A.C., Kremer, P.J., Cuttler, R., Swinburn, B.A.(2008). 'Reducing unhealthy weight gain in children through community capacity-building: results of a quasi-experimental intervention program, Be Active Eat Well'. *International Journal of Obesity* 32(7), pp.1060-1067.

However, success has been limited in parallel studies in Fiji, where socio-cultural issues may mitigate against success for weight reduction.

88. Population-level interventions, which recognise the impact of the food environment on eating habits and food choices, are increasingly being deployed. The salt reduction campaign, primarily focused on reformulation of food and accompanied by consumer awareness raising, has led to measurable decrease in salt intake. Steps are now underway to replicate this in relation to saturated fat, but as yet it is too early to see the results of this work.

c. how current behaviour change interventions tackle obesity and what use is made of available scientific evidence;

89. There is a great need for effective interventions to prevent or treat obesity to build on current research which seeks to identify behaviours that might be targeted. To be of use in a public health context interventions must be feasible and cost-effective on a large scale as well as in a controlled (and resource-intensive) experimental setting. It can also be challenging in general to conduct appropriate research for behavioural, psychological and environmental interventions. Explanatory trials and proof of concept studies represent an important gap in research. Across all these areas, a balance between studies on prevention and on treatment will be required to produce a balanced approach to obesity and related metabolic diseases. The identification of critical points in the life course for intervention will be important, as will the investigation of differences in effectiveness of interventions between different groups (e.g. age or cultural groups). Research priorities in this area include:

- Identification of (testable) opportunities for intervention from basic and small scale detailed research (e.g. psychological/behavioural interventions) and translation into proof of concept trials in natural settings.
- Evaluation of natural experiments and opportunistic policy experiments – particularly when the primary focus is not obesity-related (e.g. transport policy).
- Explanatory and proof of concept trials of population-based interventions, with a focus on how these can be used to influence policy development (and with an awareness of current policy, such as around incentives) and linked to biological mechanisms.
- Investigation of synergy and conflicts between different intervention strategies.

90. One example of the few intervention studies that have been carried out is the Healthy Eating Lifestyle Programme (HELP), a treatment programme designed by researchers at University College London Hospital NHS Foundation Trust. The programme uses best evidence on effective strategies for adolescent obesity. A developmentally appropriate curriculum supports self management of weight in partnership with parents. The programme content is based on six key factors identified in effective obesity management programmes focusing on; a) eating behaviours and eating attitudes b) increases in daily activity levels c) decreases in sedentary activity d) nutrition and healthy eating e) emotional and behavioural difficulties.

91. Systemic approaches offer encouraging results where engagement and motivation are critical issues in effective delivery of health related behaviour change. A theory of change model is used to promote behavioural change. Motivational interviewing is a client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence.

92. Motivational interviewing is based upon the transtheoretical Model of Change which suggests that people go through the motivational stages of pre-contemplation, contemplation, determination, action then maintenance in changing a problem. The therapist matches any intervention to the client's motivational stage, which reduces the resistance that may occur if a client believes they do not have a problem (pre-contemplation) or acknowledges concern but is not ready to start changing their behaviours (contemplation). Once change begins, the theory suggests that people start to re-discover skills and resources, which in turn help to maintain the changes made and move the client through subsequent stages. However, no studies have been published of the effects of motivational work on weight management in young people, and it remains unclear whether it is sufficient to produce lasting change, or is best used as an engagement promoter combined with other interventions.

93. In HELP, solution-focused techniques are used to identify strengths, abilities and resources and build on identified successful weight management strategies. Solution-focused therapy (SFT) is a parallel psychological technique that has significant promise with young people who are reluctant to engage with more traditional psychological approaches. SFT views the patient as the expert and aims to focus on "what works" e.g. identifying "what helped" during periods when their 'problem' was under control. SFT aims to be non-pathologising and normalizing. The approach is widely accepted as effective in promoting engagement, motivation and behaviour change and researchers have found it to have significant benefits in direct clinical work with overweight young people.

94. Video transcribed focus groups with young people and their families demonstrate high levels of satisfaction with the programme as well as increases in confidence, self esteem and school attendance. Clinical data show improvements in weight and/or body composition. The feasibility of delivering HELP to a diverse population, in a busy clinical service has been demonstrated.

d. whether such interventions are appropriately designed and evaluated; and

95. HELP is supported by a written manual with descriptions of aims and objectives for each session, worksheets, activities and delivery format. Graduate mental health workers will receive training in the delivery and programme content and will offer group sessions to families randomised to the intervention. Regular clinical supervision will be provided to ensure integrity and accuracy of delivery. Input from families has been used to refine the content and delivery of the programme. HELP consists of 12 weekly sessions. Each module has worksheets and homework for the young person and parents. The programme is currently being evaluated in a DH- funded randomised control trial in a primary care context. It is the only trial currently being evaluated for adolescents with obesity in the UK.

e. what lessons have been learnt and applied as a result of the evaluation process.

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96. The review of evidence that was conducted to inform the development of the Southampton Initiative for Health (SIH) suggested that peers may be effective agents in the delivery of behaviour change interventions provided. As described above the SIH capitalises on the strong relationship between Sure Start Children's Centre workers, who are often women from the local communities that they serve, to support and empower disadvantaged women to change their health behaviour. The intervention has been feasible because of the strong collaborative relationships built up over time between researchers at the MRC and University with the PCT and City Council. The MRC Lifecourse Epidemiology Unit is conducting a non-randomised controlled trial of the intervention, whose findings will demonstrate whether this type of intervention is an effective route to improving health behaviour.

October 2010

Professor Susan Michie, Professor Elizabeth Shove, Professor Imran Rasul, Medical Research Council and Economic and Social Research Council

Oral Evidence, 16 November 2010, Q86-138

Evidence Session No.3. Heard in Public.

Members present:

Lord Crickhowell
Baroness Hilton of Eggardon
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Baroness Perry of Southward
Earl of Selborne
Lord Sutherland of Houndwood
Lord Warner

Examination of Witnesses

Witnesses: **Professor Susan Michie**, [Professor of Health Psychology, University College London], **Professor Elizabeth Shove**, [Department of Sociology, Lancaster University], **Professor Imran Rasul**, [Professor of Economics, University College London], **Dr Wendy Ewart**, [Director of Strategy, Medical Research Council], and **Dr Dawn Woodgate**, [Economic and Social Research Council].

Q86 The Chairman: Let me start by welcoming you and thanking you very much indeed for coming; welcome also to the members of the public behind. Just so everybody is aware, the proceedings are webcast. There is an information note available for members of the public and that gives Members' interests insofar as they are relevant. What we would like is for the five of you to introduce yourselves for the record. Secondly, if you would like to make an opening statement, please feel free to do so. Then we have quite a lot of questions that we would like to ask you. So would you like to start?

Dr Dawn Woodgate: My name is Dawn Woodgate. I am from the Economic and Social Research Council and I am representing RCUK (Research Councils UK) today.

Dr Wendy Ewart: I am Wendy Ewart. I am Director of Strategy at the Medical Research Council. Dawn and I are both here to respond to your questions about Research Councils UK. As an opening statement, I must say that we are delighted to be asked to contribute to this very important Committee meeting and I hope to be able to give you some idea of the way Research Councils in the UK contribute to this important agenda. Perhaps the watchword for some of the things we will hopefully describe to you is partnership; across the Research Councils, with the third sector, with Government Departments and finally with relevant industry.

Professor Imran Rasul: I am Professor Imran Rasul. I am Professor of Economics at University College, London. My research is predominantly in economics, but it draws on cognitive psychology, sociology and neuroeconomics, so I hope to bring some of those insights here today. I have engaged in policy evaluations with firms in the private sector,

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NGOs and charities based in the UK and overseas that I also hope can be relevant to today's proceedings.

Professor Susan Michie: Good afternoon. My name is Susan Michie and I am Professor of Health Psychology at University College, London. The focus of my research is behaviour change; both looking at theories and techniques of behaviour change. The policy work that is relevant to this that I am engaged in is that I am a member of the Public Health Interventions Advisory Committee of the National Institute of Clinical and Health Excellence; it is a standing committee.

The Chairman: Susan, I am really sorry to interrupt you, but I don't think we are hearing you terribly well. I don't know whether other people are finding that, but I am getting a strong echo.

Professor Susan Michie: Is this better?

The Chairman: That is better.

Professor Susan Michie: Do you want me to start again?

The Chairman: Yes, please.

Professor Susan Michie: I am Susan Michie, Professor of Health Psychology at University College, London. The main focus of my research is theories and techniques of behaviour change and applying those to developing interventions, especially in the public health arena. On current policy work, I am a member of the National Institute of Health and Clinical Excellence's standing committee, called the Public Health Interventions Advisory Committee. We meet several times a year to review the evidence on various aspects of interventions in relation to public health. I am also chair of the Behaviour and Communication Sub-Group of the Scientific Pandemic Influenza Advisory Committee, which is a cross-Government committee. Up until a month ago, I was leading the British Psychological Society consultancy with the Department of Health to provide advice to them on public health.

The Chairman: Thank you.

Professor Elizabeth Shove: I am Elizabeth Shove. I am a Professor of Sociology at Lancaster University. At the moment I have an ESRC fellowship called 'Transitions in Practice: Climate Change in Everyday Life' and I am running a social change/climate change working party and doing various other things in climate change with the British Sociological Association. So my research could be seen as being about energy, water, mobility and climate change, but in fact it is about changing conventions and practices; things like cleanliness, comfort and convenience. I find the call on the questions we are faced with somewhat narrow. I am interested in how that comes to be; behaviour is framed in a very familiar and dominant way, but in a way that does not go very much beyond what you may think of as the ABC of attitudes and behavioural choice. I am interested in the opportunity now to really explore the potential for making much better use of a much wider range of social theory.

Q87 The Chairman: Thank you. I am going to start off and then various Members of the Committee will come in. The first question is: what do you as a group and individually regard as the most recent scientific developments across all contributing disciplines that have implications for the Government's use of behaviour change interventions? You obviously have quite strong views about that. I don't know who would like to start.

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Dr Dawn Woodgate: May I start?

The Chairman: Please do.

Dr Dawn Woodgate: Thank you. The most recent scientific developments across all disciplines would be very hard to cover in the time available. It is a very important topic, with a wide range of contributing disciplines within medical research, within social and economic science, within environmental disciplines, within engineering and technology disciplines and within the arts and humanities. As it is not possible to do justice to all, I hope your Lordships will allow us to concentrate on a few selected ones. We have representatives from psychology, from sociology and economics whom I am sure can outline the key developments in all of their areas and my colleague Dr Ewart I am sure can speak about the medical sciences side. From an RCUK point of view, I would say that research across a range of disciplines has shown that human behaviour is very complex and is influenced by multiple social, genetic and environmental—that includes the social environment-factors. These determinants operate at various levels²⁹⁵. Perhaps understandably, sometimes interventions can have unforeseen and sometimes undesirable effects. We would be interested to follow up on this area. Thank you.

Q88 The Chairman: Thank you. Does anybody want to come in with a specific? Do please.

Dr Wendy Ewart: One thing that has come to the forefront of the Medical Research Council's planning for use of the resource is, as the genomic information comes out, there is a real opportunity to start to match that with the population-based data. The Research Councils have under their care a number of extremely large population cohorts. As we start to interrogate those cohorts, some of which stretch back to 1946, some of the biological data does not change over that time, and we learn much more about the biological contribution to health and wellbeing, so we can start to look at the interplay between, for example, genetic factors for either behaviours or metabolism, obesity and so on and start to tease apart the biological contribution from the environmental and sociological ones. So there is a real need now—and it is very complex—to be able to manipulate these huge datasets and tease out the biological data from the population-based data. Of course it is quite expensive and will require some of the very best ways we have of manipulating large datasets and interrogating them and of course a degree of coordination between those holding the datasets and also putting in the right place the ethics of using these data and so on. So there is a real opportunity for the next five or 10 years to start to get population data and to dissect it to look at these different contributors to it. One of the areas where that will come to the fore is the UK Biobank project, which is a very big investment. Of course, in the collection of data donated by the half million participants, is an understanding of their lifestyle; not just their biology from their blood samples and blood pressure, but equally their activity measures, their diet and so on. That will bear fruit over the coming years; that is going to be quite new and exciting.

Professor Imran Rasul: I think one way to frame the discussion in terms of policy interventions—this is not the only way to frame it—is in terms of factors that are internal to the individual; those relating to their psychology, their personality, their beliefs and expectations, and those that are external to the individual; their economic environment and the peer group that they reside in. We can think of different disciplines as emphasising

²⁹⁵ For example, at the levels of the individual, a social group, and society as a whole.

different factors internally versus externally. So you might think of neuroeconomics or cognitive psychology as emphasising the internal drivers of behaviour and economics more broadly, sociologists and social psychologists as emphasising the external factors. I think that is part of where there is complementarity, but also where some of the cross-disciplinary problems come in; we tend to think of different factors of drivers of behaviour as being differentially important. So let me give a few very specific examples of some of these factors that recent evidence has suggested are important drivers of behaviour. For example, there is lots of recent evidence to suggest that time preferences form in a very particular way; that individuals tend to overweight things that are going to happen to them in the near future and underweight things that will happen to them in the distant future. So policies, for example, that tend to frontload costs on individuals or to backload benefits are likely to be less effective than other types of policy, everything else being equal. Other types of internal factor that are important in our behaviour are individual's perception of agency or their ability to control changes in their own lives. So again, the provision of constant feedback to individuals may be one way to make sure policies are more effective. The provision of short-term targets as opposed to large targets that seem unobtainable initially might also be avenues by which more effective policy can be designed. Whichever of the internal factors we are thinking about, the key constraint for policy is going to be that individuals cannot be compelled to undertake any policy. Policies can be offered and if individuals are aware of the internal factors that drive their behaviour, they always have the option to self-select out of those policies. It is important to try to take into account, when we evaluate the effects of policies, that some individuals may not expose themselves to the policy. It is similar with external policies. Things that try to change people's peer group or provide information about what others are doing have the benefit that you cannot self-select away from a policy that is targeted towards everybody, but they have the cost that they target individuals whose behaviour you might not necessarily want to change. For example, changes in pricing strategy to reduce the consumption of cigarettes or alcohol will affect not those who might be over-consuming those goods but everybody, even if they are under-consuming them initially.

Professor Susan Michie: I would like to talk about the more recent scientific developments in three areas, which are partly methodological, partly conceptual and partly application, rather than pick out some of the substantive findings that we have. It would take a programme of research to do that comprehensively. In terms of methodological, I think the MRC's framework for designing and evaluating complex interventions, which behaviour change interventions are an example of, has been very helpful across the disciplines as a way of systematically thinking about intervention design; thinking about how you apply theories—i.e. mechanisms of behaviour change—to designing and how you model different components of what could be included. Within psychology, we have improved in terms of specifying the types of interventions we are talking about, what the components are. If one looks at the literature, quite often there are very generic terms. For instance, "behavioural counselling"; people mean very different things by that. In biomedicine, we do not talk about a big red round pill, which is the equivalent of that. So until we can be more precise in our methodologies, we are not able to maximise scientific development. Another methodological advance has been to be much more aware of the extent to which interventions as described in the research literature do or don't get implemented in practice. The literature shows, where this has been looked at, that about half of the components of interventions are delivered in practice. We also know that only about half—sometimes half—the interventions that are described in the intervention protocols are actually reported in the published reports. There is a big mismatch between the published

reports of evidence of effectiveness and what's being delivered in practice. I think we've made progress in both those areas. The fourth methodological area is evidence syntheses; more advanced ways of putting together bits and pieces of evidence from different contexts, different populations and different behaviours. In terms of conceptual advances, I very much endorse what Dr Woodgate said; I think that all disciplines have made progress in thinking about multi-level interventions—that any one approach on its own is not likely to be maximally effective and especially is not going to maintain behaviour change, which is absolutely key for public health benefits. A second area of conceptualisation has been improving the way we think about systematic, reflective choice versus more automatic, impulsive information processing and the implications of that for behaviour-change interventions. I would have to take a slightly different approach than Professor Rasul: I don't think it is very helpful to think of internal versus external factors. There is a continual interaction between behaviour, cognition, emotion and their context, the surrounding environment, and it is important to understand that interaction as absolutely key for understanding behaviour and behaviour change. Finally, in terms of application, there has been, certainly from my perspective, an advance in multidisciplinary working. I am principal investigator or co-applicant on more than 20 different research projects; all of those are multidisciplinary. There are areas where there is not multidisciplinary working, but there are definitely areas of good practice. Another very important area has been increasing awareness that the implementation of research evidence is crucially dependent on behaviour and behaviour change. That has opened up a big and very important avenue of research. Those are the main areas where there have been scientific developments, which I know is a different type of answer than saying, "Here is the substantive evidence of different kinds of intervention".

Q89 The Chairman: Professor Shove, do you want to add anything?

Professor Elizabeth Shove: Thank you, yes. I will take the same approach. The most exciting thing in the fields that I work in is actually to do with theory; not necessarily specific answers or particular results, but how problems are framed. That has huge implications for the kind of inquiry you would do, for what you might count as evidence and for policy as well. I will give two examples, the first being social theories of practice. It is always a tricky number to be clear about the difference between an approach to practice as compared with behaviour, but you might say, well, what matters, especially in climate change, is what people do collectively, together. So you might take an example from a behavioural point of view: the issues would be like spending so many minutes under a shower or running the temperature like this. From a practice point of view, the issue is: why are we having a shower every day at all? In other words, the unit of inquiry is the doing; it is the practice. The arguments that are new and that are coming through might open the way for thinking of people as almost unwitting carriers of practices. You have an opportunity to think about the whole landscape of what constitutes daily life and how those pieces that make it up are themselves dynamic. I agree this is quite different from some of the other work that people have been talking about, but adopting a practice orientation—what is practice oriented policy?—generates interesting and new questions. Further, that means not just deciding which factors it is useful to think about, but wondering whether it is useful to think about factors at all in that sense in as far as the kind of material, the infrastructural ordering of those doings (i.e. the practices that make up daily life), is inseparable. You can't say people are just showering without paying attention to the infrastructures of water and so on. So there is a connection between social theories of technology, infrastructure, materiality and

these units of practice, these doings. So it does generate some further questions, including what the elements of practices are, the materiality, the kinds of meanings and the forms of competence. Competence is also interesting in terms of food, and in relation to the question whether skills are disappearing. There is an agenda concerning which practices are vanishing, which is not a normal thing to consider in terms of behaviour change, but in a way it fits your agenda too. So I think by changing the units and thinking of the practices, not just the individual behaviour, there is much greater scope to really make use of the kinds of things that Governments can do. Those are some of the possibilities of really promising and optimistic social theories of practice; along with Dutch theories of transitions, and with “multi-level theories dealing with social change on a scale”, which is not captured by tweaking a few factors.

Q90 Lord Sutherland of Houndwood: I wanted to ask Dr Ewart about a specific recent scientific development that I have had a tangential part in; Generation Scotland. I chaired their advisory board when they needed one for the first few years. Because laid alongside your list of examples of databases building up, it seems to me necessary to be reassured that there is a capacity to pull that data in and use it effectively. For the benefit of the Committee, what Generation Scotland is doing is complementary to the large DNA database being constructed across the UK. It deals with families, recruited through general practice, and looks at the DNA, in individuals and sometimes families, and they don't always match up in the way they should—there is an ethical question. But the problem then is, if you apply that to the medical histories—which of course the general practices can provide—and you look at the correlations, can that data be drawn in to be used in an effective way; and how aware are we of that work down here?

Dr Wendy Ewart: As you know, the MRC operates throughout all the nations.

Lord Sutherland of Houndwood: Yes, indeed.

Dr Wendy Ewart: And through the all MRC's units in population health sciences there's a network that links them together and indeed that network has been quite influential in producing the framework for complex interventions. Our colleagues and Professor John Frank, who leads the Scottish Collaboration for Public Health Research and Policy, which is funded by the MRC and by the Chief Scientific Office in Scotland, brings the Scottish experience very much into the whole fulcrum of discussion of how best to use these large datasets. Funding permitting, there is a wish to bring some of that shared learning together under something called the Cohort Resources Facility, which is being led by ESRC and with MRC funding as well. I hope that this will ensure that there is learning from the Scottish experience and, indeed, the Welsh, because they have an extremely good way of linking the data from general practices interlinked with health outcomes and so on, which is very important. There is a recognition of the need to link the databases; there is an understanding of the extremely good and rich data that the Scottish experience has provided and there is a gradual movement to bring that into place to ensure that these are perhaps linked with some of the older cohorts. There are always challenges in harmonising the data, because sometimes they were collected in different ways and, again, resolving some of the issues of finding out the health outcomes from the National Health Service in terms of bringing it into the research environment which are still there. There is some work to be done on that in making sure that data can be linked. There is quite a lot of cross-council work on that, trying to get the linkages, but certainly the Scottish work is

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quite integrated, particularly through John Frank, who is a very strong advocate for what is going on in Scotland.

Q91 Lord Sutherland of Houndwood: I am not waving a nationalist flag here, at least not much, but what strikes me as important in this is that it lines up basic data—DNA—with family medical histories and that ought to begin to tell us where behaviour change is a reasonable goal and where there may well be other factors at play that suggest that a rather different approach is necessary.

Dr Wendy Ewart: Indeed. Some of the recent work reported from the West Country on Attention Deficit Hyperactivity Disorder showed that the genetic component might be in the region of 9%. The remarkable thing is perhaps that it was only 9% and therefore looking for other broader social factors and other contextual ones is really important. Those data, which will help us understand the genetic contribution to some of these areas, are only just coming out. Again, there has been a lot of better joined-up working between ESRC and MRC-funded resources so that if you are collecting data, you have the opportunity to get the biological, along with all the social data that has been historically collected. Sometimes you have to go back to the population and collect blood, which can be done. It really is a new frontier. I do not think to date we have really grasped the richness of putting those together, but I think there is a real opportunity to do that now. But there are some significant challenges in harmonising the data and of course maintaining these longitudinal datasets is costly. The MRC spends something like £14 million a year supporting the various cohorts and that is in addition to one-off investments. In UK Biobank, the original investment was £40 million, plus the MRC has just invested a further £12 million in the next stage of UK Biobank. So this sort of population health science is an extraordinary resource and it is very important it is there, but of course it requires stable funding over a long period. That has been recognised in our strategy, *Research Changes Lives*; it has been recognised that protecting these data sources is a very important strategic direction. Another way we have put in our strategy is making the best use of these population data as some of them come to fruition.

Q92 The Chairman: I am going to have to ask everybody to be brief, because there are five of you and rather a lot of us. I want to follow up on Professor Michie and Dr Ewart. Others may wish to comment, but briefly if possible. You have both been saying that we have got much better at tying things in from different disciplines and making sense of it and therefore, if you like, designing interventions as a result of knowledge gained from different disciplines. Given that we have got better at that, can an intervention be based on the results of one study even if the study has different disciplines working within it—or even a few studies—or do we need systematic review and meta-analysis?

Professor Susan Michie: The answer would be “It depends”. If there was a very well designed, well powered intervention with very clear results of high effectiveness, that would be sufficient for that particular population in that particular context. The issue is always about how you generalise across populations, across contexts and often across types of behaviour. Given that most studies aren’t as I described them and that we do want generalizable interventions, it means that we will strengthen our evidence if we can synthesise across different settings. Having said that, there are problems of evidence syntheses, in that often there are different constructs that are measured, different measurement tools are used and interventions have different components in them, so you

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are trying to put apples and pears together. I mentioned earlier the problems of reporting; if one just sticks to synthesising evidence from published reports, you will definitely miss a lot of what is going on. So if you want to get the best evidence out of the research that is being done, first one needs to get the intervention protocols—i.e. what was planned—but also get some indication of what was delivered, because that's what the results are about. Evidence syntheses are important, but a lot of methodological work needs to be done in order to improve it. My experience of working on the NICE committee is that the public health part of NICE has been doing some very intelligent and helpful methodological work.

Q93 The Chairman: Dr Ewart, do you want to add to that?

Dr Wendy Ewart: Yes. I think the experiments can be profound in what they teach us, so long as they are good experiments. The data that comes from a study has to answer the question. So the whole issue of powering sample size is important, and that the statistics work: that you can actually say that they prove something or tend towards proving it. It comes back to the importance that quite a lot of the investment the Research Councils have in developing methodology, because it is fundamental. To be quantitative in these areas of all areas is quite difficult. So I totally support that. Again, systematic reviews sound very unglamorous, and they are not new research: “Oh, you are just counting other people’s work”. But it is a science in itself, tremendously important and has to be done. Again, together with the Chief Scientist Office in Scotland, funding the Scottish Collaboration for Public Health Research and Policy, they are about to publish a systematic review about the obesogenic environment. So funders are willing to tackle these less glamorous areas to get the importance of what is done before and then our hope is that when we see applications coming to us is that an investigator will actually refer to this and not go and start somewhere else, because that builds the level of knowledge and we can go on from there. So it is quite important to commit funding, perhaps from the public purse, to do this sort of work, because it’s fundamental in ensuring that the foundation of knowledge is solidly built.

Q94 The Chairman: Right. Does anybody else want to add to that?

Professor Imran Rasul: There clearly is a lot of value in putting together systematic evidence; that is part of the communication chain that’s sometimes missing between all the players here. But synthesising bad evidence is going to lead to bad policy, so we need to do is raise the standards of the evidence that we are providing. What are the ideal standards? What are the gold standards? To use the same as medics use, they are where we have well identified treatment and control groups and we can measure causal impacts. Inevitably, those are going to be based on relatively small samples, so you are going to need to make some kind of assumptions on how those policies would scale up if applied to people who could self-select into the policy or self-select out; if they were implemented by other Government agencies and so on and so forth. Inevitably, that leads to a margin of error that then needs to be factored in. To go back to the earlier point raised by Lord Sutherland, one benchmark to think about is the data that is available from Scandinavia. In Sweden, social scientists have been using, for a long time, genetic markers across generations to look at the causal impact of genes versus environment. Some of those results are very interesting.

Q95 The Chairman: Thank you. Professor Shove.

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Professor Elizabeth Shove: This completely depends on how the problem is framed and therefore what constitutes or falls into the range of evidence. That should be a topic in its own right. So this talk about evidence as if that is obvious seems to me, especially in this field—many fields—really should be the point of inquiry. In other words, what timescale are we talking about? Why? In what other situation would you expect lessons from one area of daily life—smoking or whatever—to be the same as eating or driving cars or cycling or showering or whatever? This is simply amazing. In that sense, if you say, “Well what must lie behind that approach?” universality is somehow involved—there is a comparability of human behaviour that also underpins the ABC orientation. There are plenty of people here whose work depends on that; I am not being critical, I am just saying that a very important task for this Committee is to think about what evidence is.

Q96 Baroness O'Neill of Bengarve: I would like to deviate from the state of the science to the state of publicly funded use of the science or whatever bits of science there now are, and in particular to ask each of you to indicate which publically funded interventions you think were sufficiently evidence based and appropriately evaluated. What are the examples that we already have—maybe none—of such evidence-based and effectively evaluated behavioural change interventions? Equally, what are the bad examples? What would be in your black museum of behavioural change interventions that are not based on available evidence or not appropriately evaluated?

Dr Dawn Woodgate: With all due respect, Research Councils are not responsible for the evaluation of publicly funded research. Following the guidance set out by the Treasury in the Magenta Book—

Baroness O'Neill of Bengarve: Granted. I am simply asking for examples, not about who was responsible for good or bad examples.

Q97 Lord May of Oxford: Can I just interject a question here? If someone submitted to you a research proposal to look into this issue and it was well framed, surely you would fund it?

Dr Dawn Woodgate: We would. It would go into the competition with all the others, yes.

Q98 Lord May of Oxford: Yes, but your statement could be misread as saying that you would not, but you would?

Dr Dawn Woodgate: We might possibly, yes.²⁹⁶

Lord May of Oxford: Okay, do continue.

Q99 Baroness O'Neill of Bengarve: So can you give an example of, as it were, good and poor use of such evidence as you think has been produced? Where has the science

²⁹⁶ Research council funded research, for example in developing scientific methodologies for interventions and evaluation methods, and training and developing the skilled people who are capable of carrying it out, is important in underpinning effective evaluation. We certainly have a responsibility to ensure that we evaluate the quality and impact of the research that we support, and use the lessons from this work to feed into future initiatives, including those that we fund in collaboration with Government Departments.

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been properly used; where has it been badly used? It is a simple question, in a way, but quite germane to what we are trying to think about.

Dr Wendy Ewart: I suppose the obvious one is probably smoking, in that the evidence was quite clear for some time that smoking was harmful to health and therefore policy has been developed on that basis.

Q100 Baroness O'Neill of Bengarve: I'm sorry, that is much broader than the question I'm trying to put, which is not about the evidence for the practice of smoking being harmful or overeating being harmful, or other things, but about behavioural change interventions being adequately evidence based or not adequately evidence based. If examples do not spring to mind, we will just move on. I am sure Professor Michie has good examples here. Why don't we move to you, as the question seemed to resonate more with you?

Professor Susan Michie: I actually do not want to pick out examples of bad practice, because I think the—

Baroness O'Neill of Bengarve: It would be very helpful.

Lord May of Oxford: We would really love you to.

Professor Susan Michie: From my experience from the Department of Health, I know that a lot of the interventions and policies are not based on or draw on scientific evidence, as I would define it. So I think the point that Professor Shove raised about what evidence is very important, because evidence that comes from a focus group receiving an intervention saying they liked it very much isn't the same as evidence of a rigorously designed experimental study looking at effectiveness. If we talk about scientific evidence, there is a long list of interventions that don't draw on this. However, I would like to mention two interventions using good evidence that I have been directly involved with; I have submitted evidence about both to this Committee. One is the National Health Service smoking cessation services, which were originally developed 10 years ago on the basis of scientific evidence. In recent years, there has been an appreciation that there was large variation across PCTs with huge discrepancies in the rates of smoking cessation that were being achieved. So the Department of Health set aside £3 million for a three-year project called the NHS Centre for Smoking Cessation and Training to develop the evidence base and to apply it to the existing services. We are half way through that work at the moment. We have done systematic reviews of the evidence, looked at the Cochrane evidence reviews, used methodologies to identify which the effective components are within that, both from the reviews and from the data that the Department of Health collected on smoking cessation. That evidence has been used to underpin the development of learning outcomes and training programmes that are currently running; I refer to knowledge on the internet and skills in terms of face-to-face courses. That is being rigorously evaluated at every stage along the way. There is change just in self-reported behaviour and confidence in being able to behave, but behaviour before and after training; and people are looking at the extent to which the protocols in the Primary Care Trusts, or whatever they are going to be, are delivered in practice. That is a perspective where the combination of people from academic psychology, PCTs and the voluntary sector working together are able to take evidence from the research literature into practice and continually evaluate and improve practice as a result of it. I know time is limited so I won't say more about that, but that is a really good model that could be applied to issues of obesity and many other behavioural issues. The second example I wanted to mention was NHS health trainers, which was developed on the

basis of a review of the evidence and has been designed, supported and implemented with the support of behavioural scientists who were specifically working as part of the consultancy with the Department of Health. It was very much a partnership all the way along. The behavioural scientists helped to develop the training, wrote a training manual, an internet version of it, and also advised on the data to be collected routinely, again so that we could continually look to see whether the change we were hoping for was happening in practice, whether we were getting to the people whom we were aiming for, because this was very much about reducing health inequalities as well as changing behaviour. The original concept was for the intervention to be delivered within what is called a stepped-wedge design, so different parts of the country would have had it at different points, and there would be measurements taken all the way along so that there could have been some kind of conclusions about cause and effect; that isn't possible if it is rolled out across the country at the same time. However, cuts back then precluded that from happening. That's a good example of an intervention that drew on evidence but could have given so much more valuable evidence had a research design been incorporated from the beginning.

Q101 The Chairman: You don't want to give us any really bad examples?

Professor Susan Michie: I would prefer not to, because there are so many and I don't want to privilege one over another.

Baroness O'Neill of Bengarve: That in a sense would be extremely instructive, but I realise we haven't time.

The Chairman: Sorry, Professor Shove; I didn't mean to interrupt you.

Professor Elizabeth Shove: What matters is the match or mismatch between the policy and the kind of research domain with which policy might engage. Sometimes there is a window and there is communication right through it; the policy question is framed in a way that is consistent with the framing of research, which is in case a lot of the psychology and economics, which fits with a psychology, economics framing of a policy question. If a policy question is framed differently, there are different opportunities and gaps in whether there are ears there, in a way, to listen to what might count as evidence or insights from a whole range of other disciplines. There would be plenty of examples where there is a kind of deafness, but it's not an accident; it's a consequence of the way the problem is framed. It's important to be relational. So it is about how policy is organised, what kinds of questions inhabit that policy arena and therefore about the points of intersection with a full range of academic disciplines. There are plenty of good examples of how those institutions are differently structured; they are dealing with different kinds of questions.

Dr Wendy Ewart: I wonder if I could add something that, follows on from smoking cessation? We need to think about how a policy isn't a one-off: there isn't a one-off time, before and after. Often a policy goes in and there is an opportunity to follow it, put an intervention in and the policy might develop and change. The NHS smoking cessation policy has been looked at from a study point of view, particularly at how it addressed inequalities in health. It has been known that the residual level of smoking particularly in Pakistani and Bangladeshi men is quite resistant to change. So the National Prevention and Research Initiative put in a study—a very small study—in Birmingham where they compared the standard NHS cessation policy with that combined with outreach to go to look at community groups, workers visiting workplaces, having more clinics. That small study showed that you could improve the effectiveness of the policy of having cessation services

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by this additional outreach at what was thought to be a cost-effective level. A small study, but I think the outcome from studies like this can be quite useful in developing policies and possibly tailoring them, particularly to address health inequalities.

Q102 The Chairman: Professor Michie, you wanted to come back in. I also have Lord Crickhowell and Lady O'Neill has some more things she wants to ask, so be very brief please.

Professor Susan Michie: Okay, very briefly, I want to give an example of policy that is not drawing on evidence; that is, our current alcohol policy, where there is a large amount of evidence that price and availability as interventions make a big difference, but that evidence isn't finding its way into policy.

Q103 Lord Crickhowell: Dr Ewart, you referred to a particular attitude of a particular ethnic group, which prompts me to ask a question. I have been noting, as the evidence was given to us, that we are told that rather than concentrate on individuals, we should look at shared social practices and the landscape of daily life and what the collective infrastructures are in issues and matters of that kind. I was prompted to ask, as you were talking in those terms, what knowledge we have about the likely impact on different ethnic, religious, social and geographical groups. If we are thinking about these social changes, the fact is that we now are an extremely complex society with widely different attitudes, very often based on religion and ethnicity but even between different parts; north and south or—I am a Welshman—Welsh and English. Do we have any real approach to or knowledge on this whole topic about how we deal with these huge differences amid social groupings?

The Chairman: Professor Michie.

Professor Susan Michie: NICE's review of behaviour change a couple of years ago has demonstrated, and been supported by lots of evidence since, that interventions that are tailored towards the targeted population tend to be more effective than those that aren't. An important principle is to understand the nature of the population that one is targeting. In addition, looking at the NHS Health Trainers data we have, we didn't find a differential effectiveness according to ethnic minority group or to socioeconomic status groups, which we found encouraging, in that it showed that what we were doing was having an impact across the board. A systematic literature review I did with The King's Fund specifically looking at interventions that are targeted at low-income groups across physical activity, healthy eating and smoking showed that the kind of approaches that had been shown to be effective in general populations were also effective in those populations. I have two points: one is that there are general principles one can draw on, and secondly, tailoring should happen in all interventions.

The Chairman: Professor Shove and then back to Lady O'Neill.

Professor Elizabeth Shove: I have a slightly different point. I think the variety, in a way, is a laboratory in its own right and helps us to understand, certainly in terms of climate change, different kinds of lower and higher impact and ways of life, all of which count as normal. The question would then be: what is the rest of the system that holds an environmentally lower impact way of life in place? So in that sense understanding how the diversity came to be provides important lessons for what might be changed. In that sense, it would not be so much a question of target populations, because a population is going to be doing very many

different sorts of things. Rather, it is target activities, practices and doings that you are interested in and can learn from. Let us understand the variety of ways in which those doings and practices are reproduced so we can see what is making a difference perhaps over a long term. It's not just a short term question.

Q104 Baroness O'Neill of Bengarve: I may be unfair, but I think I'm detecting, behind the wealth of information you are giving us, some rather different definitions of behavioural-change interventions. We need to get a little sense of that. In particular, by concentrating on the smoking cessation programme, one is concentrating on a programme that has been framed by very considerable legislative, regulatory and fiscal prohibitions: "You can't buy it here, you can't sell it in this way, you can't do it here, there and t'other place". Do these various interventions you talk about take as a common baseline the reality of these legal, regulatory and fiscal conditions or do they count those as behavioural change interventions? It really matters to us quite a lot to know how you are taking it and you may be taking it differently.

Dr Dawn Woodgate: I think I would see behaviour change interventions as encompassing all of those regulatory—

Q105 Baroness O'Neill of Bengarve: And legal prohibition?

Dr Dawn Woodgate: Legal prohibitions, pricing policies, maybe tax policies, plus the softer, nudge policies.

Q106 Baroness O'Neill of Bengarve: I hear what you are saying. For you, a behavioural change intervention is something that changes behaviour.

Dr Dawn Woodgate: Yes. Or is intended to do so.

Q107 Baroness O'Neill of Bengarve: Or is intended to change behaviour. And thereby, as it were, you simply look the other way when it comes to the principal political justification for behavioural change interventions, which is that they are non-coercive.

Dr Dawn Woodgate: Is that what they are?

Baroness O'Neill of Bengarve: Non-coercive. Whereas the law is ultimately based on coercion. Others may take a different view.²⁹⁷

Q108 The Chairman: Professor Michie, do you want to come in on that? And then Professor Shove.

Professor Susan Michie: There are lots of different levels at which that could be answered. I think part of what you are may be asking is what behaviour is, because any one behaviour

²⁹⁷ RCUK took a broad view of the concept of a 'behaviour change intervention', as we stated in our written submission. It is indeed possible to take a more selective view, for example to concentrate on 'non-coercive' interventions, and these may be very effective in some contexts, and with some behaviours. However, given the complexity of human behaviour, it is unlikely that such interventions would be effective for all, hence the breadth of our approach.

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can be at different levels. Even when one is talking about smoking cessation, there are lots of sub-behaviours in that that will help achieve smoking cessation.

Q109 Baroness O'Neill of Bengarve: I was concentrated less on how to define behaviour and the different levels of description than whether you have a common definition of a behavioural change intervention, because on one view, which I think Dr Woodgate has espoused, it's anything that alters behaviour. On another view, it is not anything that alters behaviour, but rather more specific—we might say social or possibly social and psychological, intervention, and there are other possibilities. It is difficult for us to understand what is meant.

Professor Susan Michie: Right, okay.

Baroness O'Neill of Bengarve: I think Professor Rasul has a—

Professor Imran Rasul: I would think of any intervention that affects any of the external factors, say through prices or information or advertising, as being a behavioural change, as well as factors that try to change the internal drivers of behaviour related to people's psychology and personality. Where I think the controversy lies, and there has not been enough public debate, is whether people are willing to accept Government interventions that try to target those internal drivers of behaviour. On the one hand, we are well used to Government targeting prices and having other types of regulatory behaviour to shape behaviour; we are less used to Government interventions trying to change those internal drivers of behaviour, either subtly or not so subtly. At the same time, the private sector and charitable organisations are doing this all the time. So it doesn't seem to be as if this is something that people don't want to be exposed to; they are exposed to it daily and, we know, marketeers are well aware of some of the tricks. The question for us and where some of the evidence base is lacking is whether some of these measures are effective in the long run or whether people can just get used to them or sidestep these types of interventions. So that's where I think there's a big gap in our knowledge: the relative importance of all of these factors. It is a separate debate on whether ethically we want the Government to intervene on those types of internal driver.

Baroness O'Neill of Bengarve: I am going to stop. I find it very difficult, because in a sense the breadth of the answers to the question suggests that any effective policy is a behavioural change intervention, which in my view opens the topic to the unmanageable, but I will leave it there.

Q110 The Chairman: I'm going to come to one thing that Professor Michie said in your submission and tease that out, which I think may help slightly, and then I am going to have to move us on, because we are going to run out of time. Professor Michie, you said that there was a major limitation of approaches offered by Nudge, which is that they do not canvas the full range of intervention types. I think the question is: what is the full range of intervention types? You also said they don't engage in a systematic analysis to determine likely intervention effectiveness. I wondered if you would like to add to that, whether you still agree with yourself and then whether anybody else has anything to add to that. Then I am going to move us on to talk more about translation of research.

Professor Susan Michie: In the paper that I submitted that you are quoting from, I also summarised the results of a review of 19 different frameworks of interventions and

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synthesised those into nine categories. Those are conceptualised as any intervention to change behaviour. Behaviour is not static and is not in a behaviour-change-free context, so I completely agree with what Professor Rasul said; that our behaviour is being changed all the time. So when one is talking about intervention, one is talking about not just doing something versus not doing something; one is talking about systematically and targetedly doing something in a context in which other forces are pushing in a different direction. In terms of *Nudge*, it covers some of the types of behaviour change interventions. I think there are two sets of limitations to it. One is that it rather cherry picks bits of evidence about some types of intervention and I think it has been done in an ideological context rather than a comprehensive scientific context. The other is the way that it is currently being cited and used in Government circles—I have heard it referred to as “The Bible”—and it is mandatory reading. I think that limits being able to think about particular behaviours and particular contexts and what are likely to be the best interventions for the purpose and takes a rather dogmatic, limited view about the interventions that should be on offer. There is a bigger discussion about why that is happening but I will leave it there.

Q111 The Chairman: Does anybody else want to comment before I go to Lord May and then to Lady Perry?

Lord May of Oxford: I will submit a little comment and it is not meant as rudely as it may sound, but I am going to be a little less gentle than the Chairman. If we are to get through this tonight, it would be good if you could keep the responses a little crisper.

The Chairman: Yes. So you are going to be really tough about that? Okay. Could we move on to Lady Perry and the translation of research and research funding? I do think it would be helpful if you keep comments short?

Q112 Baroness Perry of Southwark: My question is about the way in which research can be translated as a basis for policy formation. The RCUK submission says, “Due to the complexity of the area and the imperfect evidence available, knowledge exchange about behaviour in formal development of policy will require closer dialogue”. You are saying that the body of knowledge about behaviour change is still at too nascent a phase; that it is very difficult to use it in hard-edged policymaking. I have to say, having sat at Secretary of States’ tables for many years of my life, Secretaries of State do not like too many nuances; they like a nice direct answer: will it work or won’t it work? What you are saying is you are a long way off from being able to answer that question—is that right?

Dr Dawn Woodgate: I think that is probably correct, yes.

Q113 Baroness Perry of Southwark: Does anyone want to comment on how the development of the evidence base might be moving in ways that really could make a difference to policy formation?

Professor Susan Michie: I will keep it very brief. It is already being used effectively in terms of policy formation. For example, my work with the Scientific Pandemic Influenza Advisory Committee, where we have a group of scientists—multidisciplinary; social and behavioural scientists—and are regularly asked to inform policy by drawing on evidence. A part-time researcher does specific targeted reviews to inform that and those are finding their way into policy. The independent report by Dame Hine suggested that the

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behavioural sciences should be used more fully in informing policy, but that is a good example of it working in practice at the moment.

Professor Imran Rasul: A number of models are currently being used, either to bring researchers more closely aligned with particular Government Departments to both provide short run responses to their policy needs but also to set into place longer term research that might understand how to change behaviour. But whatever evidence base we have, it is very hard to value that without some kind of underlying knowledge of the theory that is driving people's behaviour. This comes back to some of the earlier questions that were raised: what do we know about heterogeneous responses to policies? We are only going to get guidance on that from theory. Theory is going to tell us why people should be responding differently and that is going to allow us to design better interventions to begin with to test those theories and then over time to eradicate from what we think of as behavioural change those things that don't seem to work. One way to narrow down the focus of the relevant set of policies is to use evidence to iterate, but all of that will be based on theory. That comes back to the point that Elizabeth made right at the start, that some of the most exciting developments are related to understanding why people behave in the way they do and secondary to that comes the design of good experimental variation to understand whether that is true or not.

Q114 Baroness Perry of Southwark: So you are optimistic?

Professor Imran Rasul: I am optimistic, but one of the bridges that's missing is within the academic community, there is a lack of discussion between theorists and empiricists. A lot of emphasis is brought to discuss across disciplines. I think those differences have narrowed; there is a common framework to view evidence, but there is not enough discussion between theorists to understand what should be the appropriate model to answer the question that was raised before: why would different ethnic groups behave in a different way? As an economist, we would say, "If you could measure everything, they shouldn't behave in a different way"; there is nothing special about ethnicity; it is just a marker for something else. But theory can tell us a way to test that.

Q115 The Chairman: Dr Ewart, do you want to come in?

Dr Wendy Ewart: Yes. I do not want to be negative, but there is also a lot we still need to know about the biology of behaviour. So understanding the drives in the central nervous system for the control of food intake, for addictive behaviour; some of that basic biology may give us some new mechanistic interventions as well as behavioural ones. Again, in terms of the complexities, there is still a lot to discover about the biological components of behaviour. Again, as cognitive neuroscience is developed with functional imaging so we can look at what lights up in the brain with those behaviours, there is yet more to learn that may well inform intervention development.

Baroness Perry of Southwark: That is promising for our inquiry, because if you had all said no, it could have brought it to a halt.

The Chairman: Yes, it is quite good to be optimistic.

Professor Elizabeth Shove: I think it is important to distinguish between those areas of policy that see themselves as dealing in behaviour change, pretty much as you were implying, as a topic in its own right and those areas where actually there are issues and important

changes going on that matter, but are not seen in quite those terms. So what kind of social science, what kind of evidence counts, as we have said, is really different in those settings. One of the problems is that you would get areas of technology policy that would think they have nothing whatever to do with behaviour change, but actually are structuring what people do. That is not to escape the question, “Well then what is the topic that we are looking at?”, but in terms of the theories, some of us are really very different along this row here, I think. Some would externalise the context and say, “Well that is the context and here is behaviour”. That fits some areas of policy. When you have a special behaviour change unit, that is fine. But it’s not fine at all where you have another area of policy that just does stuff, in which there are infrastructures and institutions; roads and railways are coercive in other ways, not necessarily through legislation. That fits part of a structuring of what happens in daily life.

Q116 Lord Sutherland of Houndwood: I want to move on a bit to a question about policy relevance and to the effects of interventions on behaviour. We heard some evidence from a very senior civil servant and advisor of the Government that suggested that sometimes there is insufficient evidence to inform the policymaking, let alone the policy implementation. This insufficient evidence is perhaps—I think he was suggesting, but maybe you can help me with this—because not enough of what he called “practical” research has been done.²⁹⁸ I am not sure quite what the word “practical” means. I’m hoping you might help me on this with the answer to the question of whether enough is being done and if not, how could we commission such research? Just to add one gloss on this, you seem at times to me to be suggesting, “Well, this is what the science can offer and there ought not to be any policies until the science is ready to inform it”. But sometimes the policies are driven by problems in the community and if the problem is there, there will be a wish on the part of the electorate that something happens and so politicians are driven. Now, is there a case for the politicians coming to you and your colleagues and saying, “I would like this bit of research done. Has anybody done it?” Is there a mechanism for doing that?

Dr Dawn Woodgate: There is certainly a mechanism for Research Councils and Government Departments to work together and we often do on particular issues.

Q117 Lord Sutherland of Houndwood: Can you be a bit more specific on that?

Dr Dawn Woodgate: Yes. There is an initiative on subjective wellbeing in public policy, which is very topical, I gather.

Lord Sutherland of Houndwood: So I read, yes.

Dr Dawn Woodgate: Just last week, members of the DWP and the Department of Health went to an ESRC and NSF-funded workshop in Washington DC with a number of academics, none of whom are here today, unfortunately, to discuss how subjective wellbeing can be measured, which is one of the areas of science that we would like to see moved forward.

²⁹⁸ If ‘practical’ research means the same as ‘applied’ research, RCUK certainly fund a lot of that. We also fund the basic science essential to underpin applied research.

Q118 Lord Sutherland of Houndwood: Well I take it, but I think that's slightly at a tangent to the question, because the question really is about behavioural change²⁹⁹. Ought we to make people more miserable or happy? That is not the issue we are looking at; it is behaviour change, rather than informing general views the Government seems to be developing. I am a bit of a sceptic on wellbeing, I have to say. Are there other answers to practical research being commissioned that will affect policy?

Professor Imran Rasul: In terms of the mechanics of getting the dialogue between academics and policymakers, there seem to be problems of communication both ways. There are problems of timing; that Government often wants things done in a far shorter timeframe than academics typically are used to. Also, ultimately, there is a problem of incentives. If there was the carrot and stick approach; for example, if Government—

Q119 Lord Sutherland of Houndwood: You mean money?

Professor Imran Rasul: Not money; I am talking about a promise of implementing credible research designs going forward. Then academics in the short run would be willing to engage in short run policy advice, if they had sufficiently high probability that that would result in them having an influence in designing potentially a small scale but credibly evaluated pilot study. Ultimately, the incentive structure is not there either from universities providing incentives to young academics; if I look at some of my junior colleagues, they do not have many incentives to get involved in policy-relevant work; they are not going to be rewarded or promoted on that basis. So there is a problem both within universities as well as between universities and Government Departments. But I see things moving in the right direction. Two things are not the problem. There is no lack of data. The UK produces fantastic data; we are able to match up different datasets. That is not the constraint that I see. There is no lack of expertise; there are plenty of people in academia who are working on large scale evaluations in other countries with other private sector organisations and so on and so forth. That is not the issue. The issue is just getting the incentives aligned and thinking about that input that gets credible research design actually implemented.

Q120 Lord Sutherland of Houndwood: Can I push you on these incentives? It seems to me that you are setting an exceptionally high standard if what you are suggesting is that the Department will say to the scientist, "Well, come up with the answer to this and we will do it". No Minister will ever, ever take that view.

Professor Imran Rasul: This is the model that is being implemented by the International Growth Centre, which is funded by DfID, which is based at the LSE, Oxford and UCL and is providing Government advice to 10 developing country Governments. There, the two way dialogue is established as follows. Governments come to us and say, for example, "We would like to know more about how to reform our health and education system"; we pull in academics who have evaluated similar policies in other countries and, first, provide a set of feasible policies that they might want to implement. Secondly, we provide the technical assistance to implement and evaluate those policies. This is being done by other Governments. Now, nobody is expecting a blank cheque to say we would necessarily implement whatever academics suggest, but there is sometimes a demand to know what the feasible set of policies is we could do, what we should definitely not do and what

²⁹⁹ It is however an area which is of great interest to behavioural economists, and closely linked to some (though not all) of the perspectives represented within this inquiry.

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experiences we can learn from. I think there is a gradual movement towards that and academics will become more involved as long as there is that carrot at the end of the stick—at the end line.

Lord Sutherland of Houndwood: I think that is a good metaphor, the carrot at the end of the stick.

Dr Wendy Ewart: The MRC as a rule does not go as far as commissioning research, because in wanting to be able, in a competitive environment where there is not enough money, to fund research of the highest value, there is always that competitiveness. Even if an area is determined as very important to fund and which is articulated, this area of important research in the area of behavioural change that can be translated to policy is a strategic direction we invite the community to respond to. So we still want to be able to say, “There it is. There is the funding. Come to us with your best proposal” so that the research excellence comes to the fore. Of course, then there are the targeted calls, like the current call for the National Prevention Research Initiative, which is a £10 million pot from a number of funders coming together, both Government Departments and devolved Governments, that is saying, “We want to support practical research in the area of translating behavioural issues into practice and policy and there will be competition for that”. So there is always this balance between directly commissioning and yet letting the best of research come through.

Q121 Lord Sutherland of Houndwood: So there is nothing as important as, say, the Manhattan Project or commissioning decoding Ultra during the war. Is it only in a war situation where that applies? Is climate change not sufficiently powerful here?

Dr Wendy Ewart: Two recent examples come to mind. The Human Genome Project was commissioned; occasionally these things do come out like that. Indeed, UK Biobank was a commitment; we are going to do that. So you do not say, “Never”, but the normal modus operandi is to do it and to make sure that you can support the very best research done by the very best people.

Lord Sutherland of Houndwood: That is a good start, yes.

Professor Susan Michie: There is often a contradiction between the incentives of policymakers and scientists. My experience is that policymakers want to have very quick answers, they are working to a very short timeframe and they want to show that what they are doing is effective. There are huge drivers for that. On the other hand, academics, if they do work with policy, need to be able to publish in academic peer-reviewed journals, because that is how they are mainly incentivised. So there's quite a clash and I think that needs to be dealt with. Certainly, I have been in a situation where I felt what was being wanted was to say, “This has the stamp of approval of the British Psychological Society” when our evidence wasn't being used and at one point I had to say, “Please withdraw that because you are not using the evidence that's been provided”. So that is one issue. The other issue is when there are large pots of money for policy-related research, often behaviour does not figure in that at all. My last experience was that of pandemic flu, when there was £2.25 million for short-term research looking at pandemic flu and obviously behaviour was key in terms of hand hygiene and vaccine uptake and so on, and 14 projects were funded. The Behaviour and Communication groups of the Scientific Pandemic Influenza Advisory Group put forward five research projects and none of those was funded. So there was no behavioural science, apart from one tiny project right at the end; £67,000

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out of £2.25 million. When I looked at who was on the commissioning board, there were no behavioural scientists. One has to make sure that the people who are taking decisions about policy-related funding either are behavioural scientists or know about behaviour science.

Q122 The Chairman: At least take it seriously.

Professor Susan Michie: Yes.

Q123 Lord May of Oxford: I am not sure that what I am going to say is helpful or even intelligible, but I want to come back to Lady O'Neill's point. In a sense, what we were trying to get at here, as I understood it, is what are the range of approaches to behavioural issues—how are they coordinated, are they in silos or are they not and how do they address particular things? The aim, for example, if you have someone who has eventually lost their licence after consistently breaking speeding laws, is that you want to ask, for society and the person: do we know enough to say what is the effective action? Do we put a person in jail or send them to a psychiatrist? Why is it done or do we not ask that? That is the sort of thing we are often wrestling with. Do you deal with it legally? Do you deal with it procedurally? I don't think we have really engaged that question in many of the things we have tried to get at. This involves the question I was to have asked but in the interest of time I skipped—we have implicitly the answer to it—namely, is there coordination within the subject of doing things that come from quite different approaches to look at a specific problem? As far as I can make out from the discussion, the answer is that you don't even relate very well to the question, much less the answer. The answer seems to me to be no.

Professor Elizabeth Shove: I think there might be really good reasons why that's the case. Disciplines have huge—

Q124 Lord May of Oxford: Lord Sutherland's example came from what are called the hard sciences, which are the easy sciences: fundamental invariance principles. Life sciences are more difficult, because they are the same underlying physics but they are more complicated. Social sciences are much, much worse, because not only are they as complicated as the life sciences, but the thing you are looking at reacts to your looking at it. So we do appreciate how difficult they are. I may be alone in this but I find this a little frustrating—I do not feel we have engaged the question of how you distinguish the kinds of change or the different approaches to different things and what is appropriate to different things. Rather, there is a set of specialities and I suspect each have their own journal and—

Professor Elizabeth Shove: But also they have their own problem definitions and their own theories. That's what disciplines are; that's what they are good for, right? They are forms of organising knowledge. So in that sense, it is not a surprise—

Lord May of Oxford: With respect, don't tell me about disciplines.

Professor Elizabeth Shove: No, but it is not a surprise, okay? So the question is how to respond to that realisation; how to increase, probably, the number of different ideas in circulation, rather than search in that sense for one kind of magic synthetic answer.

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Professor Imran Rasul: I have to disagree with your statement. The ESRC has been instrumental in funding a number of research centres that have brought academics together from different disciplines. The ELSE research centre at UCL, which brings together psychologists and economists is one example. A lot of the new theory—

Q125 Lord May of Oxford: Give me a problem where that has done something concrete and try to do it quickly.

Professor Imran Rasul: Okay, let me try to come back to the specific example that you gave of why somebody might persistently behave in a way to violate certain laws. The underlying theory of that would suggest that we need to have some kind of understanding of their psychology; does this person have a very short-term time horizon, are they subject to some constraints, are they being influenced by their peers, for example? Or is it the case that the level of the fine or the probability that they actually get caught is sufficiently small that they are not factoring that in at the time that they are making their decision? So there are going to be some kind of internal factors—their preferences, their beliefs and their expectations of getting caught—and some external factors; how their peer group is behaving, the expected likelihood that they get punished and the amount of punishment in that case. These are very simple structures you can write down in an economic framework, but some of them come from psychology and some of them come from changes in prices and punishments that economists are well used to thinking about. Taking that framework, you can then design an experiment to see how changes in some of these parameters would affect their behaviour. You can put this into a dynamic framework and say, “What makes somebody behave this way for the very first time?” and perhaps that is the point where you want the highest targeted interventions, because once somebody is down this path, it is very hard to shift their behaviour through habit formation or through the persistence of behaviour.

Q126 Lord May of Oxford: That was a description of a process, rather than an example of its application.

Professor Imran Rasul: So if you think about obese behaviour, there is evidence to suggest that people are more likely to be obese if they reside close to a fast-food restaurant. There are price effects: if prices go down, people are more likely to consume more fast food. Things that standard economic theory would predict seem to have an influence on the likelihood that people are obese. Other theories from psychology, such as people's self-confidence or self-worth, also seem to predict people's BMI as well as the BMI of their peers or other people whom they are interacting with. So there is a mountain of evidence from a range of disciplines to look at this and put that into one common framework. I disagree that the disciplines are not talking to each other. I think they are bringing together their expertise to write down concrete frameworks.

Professor Susan Michie: I'm not completely sure I understand the frustration or necessarily the question, but I will make two points. One is that I think the science of behaviour change is in its infancy, on the one hand, and very, very under-resourced if you compare it with pharmacology, etc. Secondly, I think there is good evidence: if you take pretty well any behaviour and situation and ask us to go away and come back with evidence about what works, we would be able to do that. However, it's not a question of just putting research into practice, because there are issues of public acceptability, feasibility, politics, etc

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that all get factored into the equation of what interventions are actually put into practice. I do not know if that is answering the question, but it may be I just don't really understand the question.

Q127 Lord May of Oxford: My real longing was for an illustrative example.

The Chairman: A hard example.

Lord May of Oxford: And we have not had it.

Professor Susan Michie: Okay. New York tobacco control policy is a hard example, where there were changes in price, smoking restrictions and mass availability of behavioural support and free nicotine patches were sent out. That multi-level-both individual and more environmental-set of interventions had a big impact on smoking cessation rates. That was back in 2002.

Q128 The Chairman: And that was multidisciplinary? People were working together?

Professor Susan Michie: I can't say chapter and verse on that. If you want me to follow that up, I could find out exactly how that was put together, but that was policymakers, politicians—

Q129 Lord May of Oxford: For that example, what would you say to someone who said the primary factor there was legislation that made it illegal to smoke here, there and everywhere and that was the main thing? Would you agree or disagree?

Professor Susan Michie: Usually examples of legislation being maximally effective are when there is also work done on persuasive communication—for example, seatbelts and the smoking ban. If these legislative measures had been taken out of the blue, I don't think they would have been as effective as having a big communications campaign at the same time. On the other hand, if one just did the persuasive communication, it wouldn't have been effective. So in a lot of these—and that is another example—you need to look at the panoply of the kinds of interventions and select those where there is an evidence base, acceptability, etc. In the paper that I put forward, I have produced what I think is a fairly comprehensive categorisation of interventions and policies that can be drawn on.

The Chairman: We are running out of time, so I am going to hand over to Lord Warner.

Q130 Lord Warner: I am not going to ask the question about are sufficient resources put into research, because you will say yes. I want to ask you a more difficult question. This afternoon, we have heard quite a lot, particularly from a number of you, that there are very large numbers of examples where behavioural change interventions have not worked and, to spare embarrassment, you didn't want to list them all. Let me put to you another proposition. Isn't there some obligation on people like yourselves and the funders of your research to start getting a handle on all the things that have not worked and actually producing, in judicial terms, a Minnesota grid that actually does tell these impatient Secretaries of State and these anxious policymakers where they should start looking for some of the behavioural change interventions for particular types of problems? That is a challenge to you, but do you not think instead of waiting for them to always come up with

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the right set of questions for you to provide answers to, there is now enough information around for you to actually distil from that what is good, what's bad, what's likely to work and what's not likely to work for some of the policymakers and politicians?

Professor Elizabeth Shove: A huge amount of that goes on and some of the frustration has to do with what is visible in this discussion and what is not visible in this discussion. So, for example, working in terms of changing hygiene infrastructures—plumbing—was really important; that really did work, but that's on a timescale and a frame that does not appear in these kinds of discussions. Or there is the case that I referred to in Japan, where summer clothing across all the office workers changed radically in five years, which is a mixture; it is not a behavioural change programme, it is about air conditioning systems as well. So my frustration in this conversation too is the lack of specificity about this kind of grounding of the behavioural in terms of the wider context. So I think there are examples, but of what?

The Chairman: Professor Michie?

Professor Susan Michie: The problem about going down that road is when you have evidence that something hasn't worked, there are often many, many methodological explanations as to why it hasn't worked, so one is able to build evidence more successfully by looking at what has worked than what hasn't worked. Also, we do have evidence of things that haven't worked. I refer, for example, to working with industry to persuade them to regulate themselves; there is a huge amount of evidence that that hasn't worked, but that is still happening. So we can say, "This hasn't worked", but that does not necessarily mean it will be implemented. I mentioned that the British Psychological Society consultancy has come to an end; all of the tobacco team, bar one or two individuals, has come to an end; the public health behaviour change programmes have come to an end, the Behavioural Insight Team doesn't have any behavioural scientists in it. So the people who could say, "Here is the evidence of what works and what does not work" aren't even there and it may be that people do not want to listen to some of our evidence. That is a bigger problem than us not being able to summon or communicate the evidence.

Q131 Baroness Hilton of Eggardon: In relation to what you just said, I don't know whether you have seen the article in this morning's paper about the Department of Health having set up networks that are dominated by the food and drink industry to advise them on health policy. Obviously there is a great deal of concern about that and I don't know whether you share our concern about that, that it is not going to be evidence based but is going to be commerce based, self-interested, voluntary and not going to assist at all. Do you have comments on that?

Professor Susan Michie: I completely agree with your concern but, in addition, the evidence is that it's not going to work and there is a direct contradiction between the interests of public health and the interests of shareholders.

Q132 Baroness Hilton of Eggardon: Indeed. You were nodding, I think, as well, about having seen this particular article.

Dr Dawn Woodgate: Yes, I did see it.

Q133 Baroness Hilton of Eggardon: Does it concern you?

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Dr Dawn Woodgate: It does, but we are always keen to work with industry, as long as any resulting research collaborations can be independent and looking at research that is excellent and has impact.

Q134 Baroness Hilton of Eggardon: But the evidence is that it doesn't work.

Dr Dawn Woodgate: Some evidence, but we do also have examples where we do work with industry and it does work.

Q135 Baroness Hilton of Eggardon: Any other comments?

Professor Imran Rasul: There are two separate questions: one whether academic advice should be given in conjunction with the private sector firms and there the quality of your work might be compromised given that the incentive structures are not aligned. But a second issue—which may be more pertinent to this example—is whether the private sector should be involved in the formation of policy. There are costs and benefits of them being involved; we shouldn't think about policies being designed which do not take account of the private sector. Clearly, they are very well informed about some aspects that will be key—for example, how the private sector will always respond to what Governments try to do in terms of behavioural change; the private sector can always respond in another way. So it is important to try to factor in those responses of other agents who are involved in any given marketplace. Their level of involvement is open for question, but there are just costs and benefits of doing so.

Q136 Earl of Selborne: I have a very specific question for Dr Ewart. In the RCUK written evidence, we are told, "The MRC is currently undertaking a three year study to review theory based approaches to health behaviour change in order to identify the key elements of successful approaches". Will this three-year study also identify the unsuccessful approaches?

Dr Dawn Woodgate: They haven't reported yet, have they?

Dr Wendy Ewart: The short answer is that they haven't reported yet, but one would hope in taking a very broad area it is important to look at the successful and unsuccessful. Indeed, systematic surveys and reviews of literature can help in identifying that. It is very important to know what doesn't work.

Q137 Earl of Selborne: Well clearly, if the lessons are going to be drawn from the successful approaches, you can draw just as much, perhaps rather better lessons from the unsuccessful approaches. So one would hope that that is very much taken care of in the report.

Dr Wendy Ewart: Hopefully, yes.

Professor Imran Rasul: Can I just come back to this point, because it has been raised twice now, about providing evidence on interventions that do not work? The process that you described about gradually learning that things don't work is exactly the history of understanding whether microfinance works in developing country contexts. When microfinance was first touted in Bangladesh, it was regarded to be a step change that would

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drive millions of people out of poverty, improve their empowerment and change lives. All of those earlier interventions were based on non-credible research designs, where people who were taking the microfinance were the better off in society to begin with, so naturally their outcomes would improve. Over time, as academics scrutinised the provision of microfinance, we found that the approximate effect is close to zero and now, in terms of the International Growth Centre, for example, the policy advice that we give is that microfinance is not necessarily the answer. People in developing countries at the bottom of the world's income distribution have access to credit; that is not the problem. There are other constraints that they face. So that is exactly the type of iterative process where now academics have been able to have direct input into policymakers to tell them, "This policy doesn't work, at least in the average setting in which it has been tried".

Q138 The Chairman: That has to be published as something that does not work.

Professor Imran Rasul: Absolutely. Now, the incentives for academics are not always there to publish articles with a null finding, but if you can understand the mechanism of why there was no result there and then extrapolate to other settings under some assumptions, that has incredible academic worth.

The Chairman: We have to stop. Can I say thank you to all of you? You have faced some reasonably tough questioning and there is some more stuff we would really like to know from you. You will get a copy of the transcript and are welcome to correct it, obviously. But if you have points from this session, and I think particularly on this, "Where is the evidence quite hard and where do you think is the evidence that some interventions don't work?" that would be very helpful. If there is other supplementary evidence that you want to send to us, we would be very grateful to receive it and that material will be published alongside the transcript in due course. Thank you very much indeed.

Supplementary written evidence from Professor Robert West and Professor Susan Michie, University College London (BC 147)

Summary

This document expands on Professor Michie's answers to questions raised by the Inquiry Panel at the Evidence Session on 16th November 2010. It lists the categories of behaviour change intervention and policy available to governments. It notes that effectiveness of interventions within a given category depend on many factors including the behaviour at issue and the context. It then gives examples of effective and ineffective interventions within each category. Then it examines principles involved in the design of interventions and offers a further critique of the nudge doctrine in the light of this. It finishes with a brief discussion on cost-effectiveness and inequalities.

What is a behaviour change intervention?

A behaviour change intervention is a coordinated sets of activities designed to change specified behaviour patterns. Usually these behaviour patterns are measured in terms of the prevalence or incidence of particular behaviours in specified populations (e.g. prevalence of tobacco smoking or incidence of delivery of brief advice from a physician to stop smoking). A systematic literature review of 19 classifications of behaviour change interventions has identified nine broad categories of interventions [1, 2]. The categories with definitions and examples are listed below.

Interventions	Definition	Examples
Education	Increasing knowledge or understanding	Providing information to promote healthy eating
Persuasion	Using communication to induce positive or negative feelings or stimulate action	Using imagery to motivate increases in physical activity
Incentivisation	Creating expectation of reward	Using vouchers to motivate smoking cessation
Coercion	Creating expectation of punishment or cost	Raising the financial cost to reduce excessive alcohol consumption
Training	Imparting skills	Advanced driver training to increase safe driving
Restriction	Using rules to reduce the opportunity to engage in the target behaviour (or to increase the target behaviour by reducing the opportunity to engage in competing behaviours)	Prohibiting sales of solvents to people under 18 to reduce use for intoxication
Environmental restructuring	Changing the physical or social context	Providing on-screen prompts for GPs to ask about smoking behaviour
Modelling	Providing an example for people to aspire to or imitate	Using TV drama scenes involving safe-sex practices to increase condom use
Enablement	Increasing means/reducing	Behavioural support for smoking

	barriers to increase capability beyond education and training	cessation, medication for cognitive deficits, surgery to reduce obesity, prostheses to promote physical activity
Policies		
Communication/marketing	Using print, electronic, telephonic or broadcast media	Conducting mass media campaigns
Guidelines	Creating documents that recommend or mandate practice. This includes all changes to service provision	Producing and disseminating treatment protocols
Fiscal	Using the tax system to reduce or increase the financial cost	Increasing duty or increasing anti-smuggling activities
Regulation	Establishing rules or principles of behaviour or practice	Establishing voluntary agreements on advertising
Legislation	Making or changing laws	Prohibiting sale or use
Environmental/social planning	Designing and/or controlling the physical or social environment	'Traffic-calming' measures; use of prompts and reminders
Service provision	Delivering a service	Establishing support services in workplaces, communities etc.

To our knowledge this is the first time a classification system has been developed based on a review of previous systems with a clear goal of being 1) comprehensive, 2) coherent and 3) based on an overarching model of behaviour. Others in common use such as MINDSPACE are not comprehensive in that they do not cover all possible intervention types. Neither are they coherent in the sense of using categories that are mutually exclusive and at similar conceptual levels. Our classification system also clearly shows where doctrines such as 'Nudge' fit within the broad framework of behaviour change and the *a-priori* limits they impose on intervention options.

Each intervention category is made up of one or more specific behaviour change techniques. Taxonomies of such techniques that can be reliably used for specifying interventions have been developed for the key behaviours related to health: smoking, excessive alcohol use, physical inactivity and unhealthy eating [3-5].

What are examples of effective interventions?

The following examples are a small selection derived from a very extensive evidence base. They address broad questions concerning what types of intervention can be effective but it must be stressed that the same type of intervention can be delivered in many different ways that would influence its effectiveness. Implementation of evidence-based interventions across behaviour, population and setting is not a mechanistic process and is underpinned by a recent but rapidly developing science (see the journal *Implementation Science*). There is an extensive evidence base on specific behaviour change techniques to apply within each of these categories of intervention.

- a. Education: provision of educational materials can increase uptake of cervical cancer screening [6]

- b. Persuasion: hard-hitting mass media campaigns can increase smoking cessation rates [7]; brief GP advice increases smoking cessation rates [8]; mass media campaigns can have an immediate effect in increasing rate of HIV testing [9]
- c. Incentives: vouchers for pregnant smokers to stop can increase smoking cessation rates for the duration of the pregnancy [10, 11]
- d. Coercion: increasing the price of alcohol and tobacco reduces consumption [12]; speed cameras and speeding fines reduce speeding and vehicle crash rates [13]; random breath testing and driving bans reduce drink-driving and alcohol-related death rates [12]
- e. Training: social skills training can reduce antisocial behaviour [14]; parenting training can reduce unintentional injury rates in children [15]
- f. Restrictions: restricting availability, for example by reducing outlet density, has been found to reduce excessive alcohol consumption and alcohol related harm [12]
- g. Enablement: behavioural support and medications such as nicotine replacement therapy, bupropion and varenicline are effective in helping smokers to stop [16-19]; methadone maintenance treatment is effective in reducing criminal activity to fund heroin use [20]; gastric banding surgery reduces calorie intake and therefore obesity [21]
- h. Modelling: hand-washing by senior role models can increase hand hygiene behaviour of healthcare workers [22]
- i. Environmental restructuring: prompts and reminders can improve health professional management of diabetic patients [23]

What are examples of ineffective interventions?

The following examples of ineffective interventions are a small selection from a very extensive evidence base. It must be remembered, however, that proving a negative is impossible and when it comes to conclusions about intervention effectiveness with regard to behaviour change it is more common to encounter statements of the kind 'the evidence is too weak to support any firm conclusions'. Where the negative evidence is strong we simply state the finding but where it is weaker we use phrases such as 'does not appear to'.

- j. Education: drug and alcohol education in schools has been found to be ineffective [12, 20]
- k. Persuasion: school-based programmes including attempts at persuasion have not been effective in reducing overeating in children [24]; public service announcements have proved ineffective in reducing excessive alcohol consumption [12]
- l. Incentives: financial incentives have not proved effective in promoting long-term smoking cessation [25]; the current form of financial incentives through Quality Outcome Framework payments to record smoking status and raise the topic of smoking with patients does not appear to have increased rates of prescribing stop-smoking medications as an objective marker of smoking-cessation activity [26]
- m. Coercion: criminalisation and decriminalisation of use of psychoactive drugs appear to have little or no effect on prevalence of drug use [20]

- n. Training: advanced driver training does not appear to promote safer driving or reduce traffic accident rates [27]
- o. Restrictions: residency restrictions on sex-offenders do not appear to be effective in reducing reoffending [28]
- p. Enablement: relatively brief physician counselling does not appear to be effective in helping obese individuals reduce calorie intake [29]
- q. Modelling: The widely adopted Drug Abuse Resistance Education project which included use of role modelling was ineffective in preventing later illicit drug use in adolescents [30]
- r. Environmental restructuring: prompts and reminders have been found to be ineffective in increasing the rate of physician prescribing of antihypertensive medication [31]

Examples of effective and ineffective intervention types for a specific behaviour: vaccination uptake

A systematic review of interventions to increase vaccination amongst health care workers [32] investigated the effects of the following types of interventions in 12 randomized controlled trials and controlled before-and-after studies which were published from 1992 to 2009:

- education or promotion (efforts to raise awareness and increase knowledge about influenza and vaccination)
- improved access to vaccination (e.g. extended opening hours, mobile vaccination)
- legislation or regulation (e.g. mandatory vaccination);
- measurement and feedback where rates are tracked and then publicised;
- role model work where senior staff encourage vaccination.

The study found that in hospital settings, education campaigns and interventions to improve access resulted in only small increases in rates of uptake. Campaigns involving more coercive components achieved higher rates of uptake. In non-hospital health care settings, they concluded that a combination of educational campaigns and improved access yielded greatest increases in uptake. This nicely illustrates the importance of context in intervention effectiveness.

Examples of specific behaviour change techniques in intervention design

Within the broad intervention types there is an extensive body of evidence to help design the specific intervention [3-5]. There are too many to give more than just a small selection here. When it comes to providing behavioural support for reduction of calorie intake (an enabling intervention), encouraging the clients to set clear goals and form very specific 'if-then' rules about diet has been found to increase weight loss [33]. Clear adoption of specific 'if-then' rules has also been found to improve emergency contraception use [34]. A large study of the NHS Stop Smoking Services found that service manuals that included advice on changing routines, fostering an 'ex-smoker identity', and advising on ways of dealing with cravings had higher success rates than those that did not [5].

How does one go about developing an effective intervention strategy?

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An effective ‘intervention strategy’ will involve a judicious blend of appropriate intervention types, enacted using appropriate policies based on criteria such as effectiveness, cost, practicability and acceptability. Of these criteria, effectiveness is clearly a necessary condition.

A crucial lesson from the accumulated evidence in many different areas is that what is effective for a given behaviour, delivered in a particular way, in a given target group and a given context may not be effective for other behaviours, target groups etc. The only way to be sure that a proposed intervention strategy in a given context will be effective is to try it and evaluate it.

The choice of strategy to implement and evaluate must be based on the best available relevant evidence coupled with a sound understanding of the underlying principles. A theoretical understanding of behaviour and behaviour change, and previous research evaluating specific interventions are crucial in designing intervention strategies that stand a better chance of success or ruling out strategies that are unlikely to be effective.

The best starting point for determining an intervention strategy is therefore to look for relevant systematic reviews. Two very good sources for these in domains related to health are the Cochrane Library (www.thecochranelibrary.com) and National Institute for Health and Clinical Excellence (NICE) guidance documents (www.nice.org.uk). NICE has written generic guidance on behaviour change interventions [35]. Because it was constrained by its brief not to go into specific examples, the guidance was necessarily general and could be seen as promoting ‘motherhood and apple pie’. However, careful inspection of the guidance will reveal important guiding principles that are rarely adopted in practice, but if they were a great deal of public money would be saved on repeated promulgation of ineffective intervention strategies.

For example, key psychological targets (which address both ‘reflective’ and ‘automatic’ aspects of human motivation) identified were:

- Knowledge and outcome expectancies (helping people to develop accurate knowledge about the health consequences of their behaviours)
- Personal relevance (emphasising the personal salience of health behaviours, that is, what the consequences mean for individuals)
- Positive affective attitudes (promoting positive feelings towards the outcomes of behaviour change)
- Descriptive norms (promoting the visibility of positive health behaviours in people’s reference groups – that is, the groups they compare themselves with, or aspire to)
- Subjective norms (enhancing social approval for positive health behaviours in significant others and reference groups)
- Personal and moral norms (promoting personal and moral commitments to behaviour change)
- Self-efficacy (enhancing people’s belief in their ability to change)

- Intention/goal setting and the formation of concrete plans (helping people to form plans and goals in graded steps, over time and in specific contexts, including making if-then plans and developing appropriate coping strategies)
- Behavioural contracts (inviting people to commit to their plans with others)
- Social relationships (helping people recognise how their social contexts and relationships may affect their behaviour)
- Relapse prevention (helping people to develop skills to cope with difficult situations and conflicting goals once they have initiated change).

When it comes to using theory to design an intervention strategy this requires:

- (i) an understanding of the nature of the behaviour to be changed and the context. We have proposed of a model that analyses the behaviour in terms of 'capability', 'motivation' and 'opportunity' as necessary conditions for the new behaviour pattern to emerge and where the deficiency currently lies. This allows one to determine what needs to change in order for the behavioural target to be achieved
- (ii) a system for considering the full panoply of possible categories of behaviour change interventions and identifying which are likely to be effective to bring about the necessary change identified above
- (iii) a method for designing the intervention strategy. Candidate categories of interventions are selected on the basis of the analysis at (i) and relevant evidence of effective interventions and component behaviour change techniques. Relevant evidence should be searched systematically rather than "cherry picked".

Further details of this approach are available in [2].

Comments on the Government's approach to changing behaviour

The Government has stated its intention to avoid coercive interventions or those that impose bureaucratic restrictions on individuals or industry. This is evidenced in the response to a House of Lords parliamentary question (emphases ours)

Asked by Lord Bassam of Brighton

- To ask Her Majesty's Government how many staff are employed in the Behavioural Insight Team in the Cabinet Office; what are their terms of reference; to whom they report; to whom they are accountable; and when they are expected to complete their work programme. [HL3958]

Lord Taylor of Holbeach: The Behavioural Insights Team has seven full-time staff. Their terms of reference are to develop more cost-effective **and less bureaucratic ways** of changing behaviour in ways that give citizens and communities greater control of their own lives. They will achieve this in three ways. First, by proactively developing ideas for achieving behavioural change using **less bureaucratic methods** across a wide range of 17 Nov 2010 : Column WA21 government policy and activity. In this mode the team will actively seek out areas where behavioural science applications could be usefully applied. Secondly, by pursuing **non-bureaucratic and non-coercive** alternatives to regulation. And thirdly, by creating and facilitating alliances and partnerships between government, business, media and the third

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sector to deliver and activate the ideas developed above. The team reports through senior management to the Cabinet Office's Efficiency and Reform Group, and is accountable to a steering group chaired by the Cabinet Secretary. It has a two-year sunset clause (beginning July 2010), with a checkpoint review in July 2011.

The drawback of this approach is that it pre-judges the key issues that are involved in choice of intervention strategy. Interventions need to be affordable, practicable and publicly acceptable but if they are not effective these count for nothing. There is no substitute for a hard-headed look at the evidence as indicated above and a rigorous analysis of the behaviour in context in the light of that evidence. The issue of public acceptability then comes into play as does affordability and practicability. If a government turns its back on interventions that evidence clearly shows are likely to be effective and which are affordable, practicable and carry public support, and instead they back interventions that derive from inconclusive evidence that is tangentially related to the behaviour at issue but fits with a particular doctrine such as 'Nudge', human lives may be lost in their thousands.

Thus the nudge doctrine begins the process of designing a policy, not on the rational basis of what the evidence indicates is likely to be effective, affordable, practicable and publicly acceptable but by choosing from a more limited set of options; coercive and restrictive options (e.g. tax increases on tobacco) are very often the most effective solution and widely accepted by the public because they see them as helpful in overcoming temptations

Two final comments may be made about the current Government's approach. First, the 'nudge' doctrine appears to be favoured in cases where major industries, such as the alcohol and food industries, fear they may lose business, but not in cases where there are no major industry stakeholders. Thus the new stimulant drug 'methadrone' was quickly banned even though the harms to users and society appear to be substantially less than from tobacco or alcohol. Secondly, the arena of behaviour change does not involve a level playing field. Industry can and does use interventions that go well beyond 'nudge' to influence the behaviour of consumers. Thus a socially responsible behaviour change strategy needs to take account of the fact that all our behaviours are subject to powerful manipulation by companies through marketing and product design. The tobacco, gambling, 'fast food' and alcohol industries spend many millions of pounds and dollars exploiting our psychology to sell their products. If governments eschew interventions that protect us against this, 'choices' are not free - they are just being dictated by industry rather than our own welfare.

Are behaviour change interventions currently being proposed cost-effective?

The Lancet, in collaboration with WHO and other partners, has convened some of the world's leading scientists working in chronic diseases to examine the evidence for behavioural interventions aimed at disease prevention. Amongst the highly cost-effective interventions identified were those tackling unhealthy diets, physical inactivity, obesity, smoking and salt reduction.

A modelling analysis of behavioural interventions combining the health and economic outcomes of interventions targeting unhealthy diets, physical inactivity and obesity showed that fiscal measures that increase the price of unhealthy food content or reduce the cost of healthy foods rich in fibre can produce the largest health gains in the shortest timeframe, being consistently cost-saving and generating the largest health effects in both 20 years and 50 years [36]. Regulation of food advertising to children that improves nutritional

information or restricts the marketing of unhealthy foods to children also have very favourable cost effectiveness ratios, as do mass media and worksite health promotion campaigns. Physician counselling of individuals at risk in primary care is one of the most effective interventions, but its health effect is greatest and cost-effectiveness best in countries where a larger proportion of the population has regular access to primary-care physicians and facilities. School-based health promotion interventions consistently have unfavourable cost-effectiveness ratios up to 50 years from their initial implementation. However, the cost-effectiveness of interventions targeting young children tends to improve substantially in a longer timeframe (greater than 50 years), as these interventions realise their full potential in improving health. Consistent with other evidence, the modelling found that multiple-intervention strategies would achieve substantially larger health gains than individual interventions, and often more cost effectively.

In another study, modelling demonstrated implementing interventions to reduce tobacco and salt intake over 10 years (2006–2015) could avert 13·8 million deaths at a cost of less than US\$0·40 per person per year in low-income and lower middle-income countries, and US\$0·50–1·00 per person per year in upper middle-income countries (as of 2005) [37]. The tobacco control interventions were four of those from the WHO Framework Convention on Tobacco Control (FCTC) [38]: increased taxes on tobacco products to reduce smoking prevalence; enforcement of smoke-free workplaces; requirements for FCTC-compliant packaging and labelling of tobacco products combined with public awareness campaigns about the health risks of smoking; and a comprehensive ban on tobacco advertising, promotion, and sponsorship.

What about health inequalities?

Smoking remains the single biggest driver of socio-economic inequalities in premature mortality but obesity is beginning to play a role as well. Other major drivers are childhood accidents and excessive alcohol consumption. In the case of smoking, those from poorer backgrounds have the same desire and make the same efforts to stop but are more nicotine dependent, have more adverse environments and find it more difficult to stop [39]. Environmental factors, social factors, personal and social resources, as well as knowledge and attitudes can all be expected to play a role in driving inequalities in the other behaviours. A crucial message from the literature is that people from poorer backgrounds are more vulnerable to industry manipulation and will often require more intensive and supportive interventions to achieve behaviour change.

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30 November 2010

Supplementary evidence from Professor Elizabeth Shove, Professor of Sociology, Lancaster University (BC 153)

I Non coercive intervention and everyday practice

The state (past and present) clearly has a hand in shaping the range of practices of which daily life is made. Although some of this is a direct or indirect consequence of regulation, much else is not. How different sectors of society spend their time, where they travel to and what they eat is bound up with and in many respects inseparable from aspects of urban planning, investment (or not) in a range of infrastructures and in state and commercial systems of provision. To give a specific example, living beside a road you cannot cross is a form of ‘non-coercive’ behavioural influence the effects of which are, in fact, quite coercive.

In relation to pressing problems of climate change, effective response to which implies significant changes in daily life, policies of all kinds matter for the reproduction of more and less sustainable arrangements. For example, education policy (in promoting choice of schools) increased to the ‘need’ to travel for many individuals. In heating and cooling their own buildings to something like 22 degrees C. Governments perpetuate the idea that this is a normal thing to do (significant energy savings would follow and the rise of air-conditioning might be stemmed if indoor temperatures varied more across the year and if occupants adjusted their clothing to suit). This is a good example of unwittingly sustaining what are probably unsustainable habits. It is important to notice that governments are variously involved in eroding, maintaining and generating new practices and that the processes at stake are not necessarily the same.

In any event, interventions in what we might think of as the elements of practice go on all the time but are not framed or evaluated as behavioural interventions. While some policies structure opportunities and possibilities, now and in the future, others – including those that are informed by behavioural psychology-economics, routinely overlook the social organisation of “choice”. This is relevant. Issues of climate change are, for instance, of such a scale that effective ways forward entail transformations like those of reducing the mobility required for effective participation in society. It would be inappropriate to view this as a matter of persuading individuals to drive less, or to respond by thinking about how to encourage people to cycle more, as if this was an expression of personal preference.

Likewise, major reductions in water consumption or in energy demand follow not from individual interest in energy efficiency, but from intervening in ways that reconfigure the persistence of resource intensive practices. Such practices have radically different histories and trajectories. Accordingly initiatives that might be effective in promoting water-efficient forms of gardening will not be at all the same as those that deal with the dynamics of laundry or of bathing and showering – each involving different sets of commercial, symbolic, and cultural considerations, none of which bear any relation whatever to smoking, to wearing seatbelts or driving fast.

Taking a step back, and again concentrating on the non-coercive but nonetheless influential aspects of government policy it is important to reflect on the UK’s role, on a global stage, in promoting or limiting the possibilities and the potential for lower carbon ways of life around the world. What examples is this country setting? What are the qualities and characteristics of a significantly lower carbon society and what does this look like in terms of the ‘normal’ practices that are unwittingly or inadvertently promoted? If such questions are beyond the scope of the enquiry, it would be useful to make that very clear.

2 Beyond behaviour and driving factors

Most of the questions we were asked, and many responses, conceptualised behaviour as something that is driven by various factors, even to the point that behaviour might be driven by habit. But this is not a paradigm that is shared across the social sciences. Other potentially useful accounts of how the social world operates *do not distinguish* between behaviour on the one hand and driving or contextual factors on the other. Not surprisingly, alternative ways of understanding the social world point to a significantly different set of options for intervention, many of which are routinely taken across government, but rarely recognised as such.

To give just one example, technologies and infrastructures do not figure in behavioural models other than as ‘context’ but their importance in holding some ways of life in place (and preventing others) is tacitly exploited in the form of policy initiatives that seek to transform systems of provision. For instance, the widespread availability of recycling bins together with organisations to collect and manage such waste made a vast difference to rubbish disposal. Similarly, the temperature at which clothes are routinely washed has dropped dramatically – laundry behaviours have changed beyond recognition over the last half century, but again with no ‘behaviour change’ programme involved.

It is important to recognise that transformations in these and in other practices are historically and culturally specific, and are emergent, not ‘driven’ processes. In terms of social change, this diversity is simply how things are, it is not a matter of avoiding the issue and nor is it a problem to be somehow overcome.

3 Evidence and intervention

A shift from individual behaviour (as the focus of attention) to social practices reproduced across time and space (as the site and object of change) requires a distinctive approach to evidence and intervention.

As regards evidence the question is not whether a specific policy momentarily changed the behaviour of a target population in some cause-effect relation, but did an intervention change the set of practices reproduced and enacted in society, and if so, how? On this point it is obvious that governments are not the only actors involved and that their agency is limited. It is also obvious that governments intervene in very many ways, not all of which are intended. Evaluating the impact of policy on practice is consequently a matter of demonstrating how the state had a hand in configuring the elements of practices like those of commuting, eating, laundering etc. I know of no studies which take this approach and of only a few policy interventions that are explicit about intervening at the level of practice. As such there is no ‘evidence’. At the same time, such evidence is all around us: the traces of such interventions are embedded in the details of our daily lives.

Government interventions in social practice have to be understood as part of and not somehow ‘outside’ the arrangements they seek to change. Congestion charging in London is an interesting example. For all the research on which the scheme was based, no one really knew how Londoners would respond: which practices would change, which would not? A lot of monitoring and evaluation went on, and by most of these measures the scheme was a success. At the same time, there is another very real sense in which congestion charging represented an intervention in a living system of routines, obligations, commitments and associated patterns of mobility. Since this system is dynamic, the effect of congestion charging continues to be ‘made’ and transformed not by individual attitudes or decisions, and not by flows of traffic, but through the arrangement and re-arrangement of household

Professor Susan Michie, Professor Elizabeth Shove, Professor Imran Rasul, Medical Research Council and Economic and Social Research Council

schedules and working arrangements that it occasioned. It would take a lot of creative effort to turn this experience into a ‘hard’ example of evidence based impact, or to strip out ‘transferable’ lessons. I am sure it could be done, but the point is that such effort would obscure the essentially emergent character of the scheme-in-action. This does not mean that policy should ignore research, but that action and expectation should be informed by a fuller sense of what it means to intervene in social arrangements that have what amounts to a life of their own.

4. Interdisciplinarity and the social sciences

Finally, some of the questions put to us were about how the social sciences might collaborate and speak with a single scientific voice. It is easy, and normal, to say that multi-disciplinarity is a good thing and several people did just that. However, this is to overlook the point that questions, answers and observations are always ‘theory laden’, admitting some ways of understanding social change and in the same move excluding others. The solution is not to pretend otherwise but to recognise the different paradigms on which divergent and otherwise confusing responses are based. The multiplicity of underlying theories in the social sciences is a strength, not a weakness and the challenge – as much for social science as for policy - is to make better use of a plurality of properly and usefully incommensurable positions.

November 2010

Supplementary evidence from Research Councils UK (RCUK) (BC 132)

I. Introduction

I.1 Research Councils UK is a strategic partnership set up to champion research supported by the seven UK Research Councils. RCUK was established in 2002 to enable the Councils to work together more effectively to enhance the overall impact and effectiveness of their research, training and innovation activities, contributing to the delivery of the Government's objectives for science and innovation. Further details are available at www.rcuk.ac.uk

I.2 This evidence is submitted by RCUK on behalf of the Research Councils listed below and represents their independent views. It does not include, or necessarily reflect the views of the Knowledge and Innovation Group in the Department for Business, Innovation and Skills (BIS). The submission is made on behalf of the following Councils:

Economic and Social Research Council (ESRC)
Engineering and Physical Sciences Research Council (EPSRC)
Medical Research Council (MRC)

I.3 The Research Councils, individually and jointly, support a broad range of research relating to understanding and influencing human behaviour. Research is funded through support to universities and research organisations and within Research Council Institutes. RCUK welcomes this second case study Call for Evidence regarding behaviour change. We would refer their Lordships to RCUK's previous submission which provides considerable generic evidence on the contribution of research to the understanding of behaviour change, including transport behaviours specifically (Annex I provides the relevant sections). In the context of the previous submission this contribution focuses on our strategic interests and activities in relation to this transport agenda, rather than return to the research evidence itself. In that context we would note that RCUK does not undertake research itself, although some individual councils do through their institutes, nor do the administrations recommend behaviour change interventions in their own right. We do however take an interest in and, from time to time, take steps to inform stakeholders about the findings of research which we have funded and to demonstrate what effective interventions might look like or how they might work.

I.4 The Research Councils have a long-standing interest in transport research having funded significant investments in a number of centres, including, for ten years, the internationally renowned Transport Studies Unit at University College London. Details of major investments funded by RCUK in the area are provided at Annex 2. Increasingly, this work has sought to suggest how the transport system and transport policy might evolve jointly, to the benefit of both transport users and the environment in the context of environmental change. In the interests of helping ensure their Lordships receive a full range of research informed submissions the Research Councils have recommended to the researchers whom they fund to carry out work in this area that they respond to their Lordships in their own right. We would note to their Lordships that the RCUK portfolio of research on this agenda is expected to decline in the future following the decision to withdraw support from the UK Transport Research Centre by the Department for

Transport, as a consequence of the current fiscal pressures facing the Government. ESRC is currently considering whether to support some ongoing work packages from the Centre.

1.5 The Universities' Transport Study Group (UTSG) represents universities and institutions of higher education in the UK and Ireland involved in transport teaching and research. Amongst other activities it acts as a focus for liaison between researchers, users and sponsors of transport research through e.g. its annual conference. The Research Councils use this forum as a conduit to inform stakeholders and learn about new developments in the field

2. Affecting and changing individual's travel choices, changing behaviour (questions a, b, d and e)

2.1 The ESRC in collaboration with the Technology Strategy Board and the Department for Transport recently hosted a series of public policy seminars focussed on generating better understandings of, and informing policy debate about, transport choice and behaviour and the effects of recent developments on those choices (ESRC 2006). These events provided an opportunity for leading researchers in the social science transport field to explain some of the complexities of human transport decision-making and to discuss their findings with representatives from Government, industry, think tanks and the Third Sector. This research informed debate addressed a number of the questions raised in this enquiry.

2.2 There is an assumption that people will make 'best' travel choices if they have access to the right kind of information (i.e. that they will make a rational choice). However, this is known not to consistently be the case. Studies have shown that an individual's response to travel information is not always rational, but is bound up with many factors including their personality, habits, family structure and social networks. Rational choice theory has however been widely used as an assumption of human behaviour in models and analysis, and has historically been influential in respect of policy interventions. However, as noted in RCUK's earlier submission to this enquiry, this approach has limitations. Research across the social sciences and beyond demonstrates that behaviour is the consequence of a complex interplay of inherited genetic endowments, gene expression, brain chemistry and connectivity, and social and economic incentives, and is in reality only rarely 'rational'. Only a fraction of our decisions are made by calculation of costs and benefits, and this reflects the embedded nature and powerful effects of habits and practices. If, for example, we start to think about how our own everyday travel choices are made and how they are accomplished, we soon find ourselves recognising that we do not routinely critically reconsider travel options for regular or common travel. We simply adopt entrenched behaviours built on the experience of habit in favour of looking beyond our own individual experience and presumed preference to decide and choose between options.

2.3 If we were to explore these complexities we would quickly find that they are grounded in complex, socially situated and interweaving routines, or 'practices' (Medd and Shove 2005) rather than rational, informed decisions that appeal to rationality. It is therefore unlikely that behaviours can be changed solely by interventions that appeal to rationality alone, such as those based upon, financial or environmental costs or even apparent safety or convenience.

2.4 Key insights reported at the ESRC's public policy seminars are:

Most travel is local and familiar – 68 per cent of trips are less than five miles and 84 per cent are less than ten miles. (National Travel Survey 2006)

“Intelligence is a marriage between technology and human behaviour”. R&D has so far mostly focused on technology but it is increasingly recognised that attention to human behaviour is equally important if the marriage is to work. (Lyons 2008).

Travel and travel choices are framed by the social practices of daily life; they are enabled, but are not determined by technology.

The effect of all kinds of travel information, from in-car navigation to overhead signs and travel websites are less powerful than the engineers and designers assume.

Making the ‘best’ travel decision requires more effort than most people are prepared to make.

Travel information may have less impact on behaviour than other IT-based initiatives such as smart regulation and control, the availability of alternatives to travel and differential pricing.

2.5 The form in which travel information is presented is likely to be crucial in determining the choices that people make, for example, messages which include a description of the effect of a travel problem such as an accident on a motorway, preferably in terms of time or distance are more likely to lead to a change in intended behaviour. Travel information systems should therefore be perceived as enablers of behaviour change as opposed to being misinterpreted as the creators of behaviour change.

2.6 Ways are needed to encourage people to review their travel choices through a range of targeted interventions at key life stages/events when people are expected to be more inclined to reappraise their behaviour.

2.7 Information alone will not make people use public transport. Research shows that if people are motivated to use public transport the need for information will follow.

2.8 In summary, if a better understanding of future travel choices are to be realised and these insights used to affect behaviour change it is essential that recognition is given to the complexity of the challenge and that ‘whole systems’ solutions are developed and their effectiveness evaluated. Such complex interventions should bring together the full range of agents from individuals who make travel choices through transport and infrastructure providers, policy makers and regulators.

3. Policy interventions (questions c, g, h and i)

3.1 The research suggests that the most effective policy initiatives would encourage people to reflect upon and reappraise their behaviour, as opposed to attempting to directly change their behaviour. However, effective policy-making must be based on research evidence from across the entire spectrum, all policies should take account of the evidence base, and policy-makers should use advice and evidence from a wide range of sources. To this end RCUK has taken steps to facilitate engagement and knowledge engagement between researchers and policy makers through, for example, the public policy seminars reported here and the placing of researchers in Government Departments. These and other dialogues have suggested that policymakers can influence travel behaviour by drawing together a range of interventions or measures into a combined strategic intervention to affect change. An example of a package of interventions which research indicates might be successful has been proposed by Professor Bosnell (ESRC 2006). The package includes:

- the use of regulation and enforcement – e.g. via speed limits, vehicle design standards etc.;
- the provision of new or improved infrastructure – thus giving more choice, if it provides services that people want;
- fiscal measures including taxation and differential pricing – e.g. for different modes, routes or times of travel;
- providing general information or advice – this can change people's awareness and attitudes and perhaps the social norms; and,
- providing specific information – e.g. in response to specific questions about infrastructure or services.

3.2 Policy interventions therefore need to be complex and multi-level involving combinations of different approaches rather than focus upon one aspect of the problem. For example, during the switch from leaded to unleaded petrol, concerted, multi-level interventions, combining elements such as information campaigns, withdrawal of the harmful product an element of choice (lead-substitute petrol was still available), technological innovation, industry engagement, regulation which made compulsory the necessary changes to engine design to new cars, pricing strategies, and emotional appeal in respect of the danger to vulnerable children of high lead levels were successfully combined.

3.3 A range of approaches and policy instruments such as theoretically-integrated and informed interventions, traditional regulatory approaches, fiscal policies, "nudge" policies, the provision of clear information and education campaigns is therefore recommended.

3.4 Transport behaviour remains an important social issue, requiring research across a multitude of disciplines, through RCUK programmes such as the Energy and Digital Economy programmes, as well as through the core programme of individual councils.

4 References

(Lyons 2006) G.Lyons in ESRC Seminar Series 'Mapping the public policy landscape – The impact of teleworking and teleconferencing on transport policy'
ESRC Seminar Series Mapping the public policy landscape

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Human behaviors to moving people more intelligently;
ESRC/Department for Transport public policy seminar on road pricing; and,
The impact of teleworking and teleconferencing on transport policy
Medd, W. and Shove, E. (2005). Workshop report (incorporating background report) for the 2nd Workshop of the UKWIR funded seminar series *Traces of Water*, Thursday 9th June 2005.
(Lyons 2008), G. Lyons 2008. Direction of travel. *Science & Technology*, 1, 146-147
(P. Bosnell 2006). ESRC, Human behaviours to moving people more intelligently.

21 January 2011

National Institute for Clinical Excellence, UK Centre for Tobacco Control Studies and Dr Tim Chatterton

Written evidence from the National Institute for Health and Clinical Excellence (NICE) (BC 52)

Introduction

1. The National Institute for Health and Clinical Excellence (NICE) is the independent organisation responsible for providing national guidance on promoting good health and preventing and treating ill health.
2. NICE's Centre for Public Health Excellence produces guidance for the NHS, local government and other sectors about populations, communities, groups and individuals on activities, policies and strategies that can help prevent disease or improve health. The guidance may focus on a particular topic (smoking), a particular population (schoolchildren) or a particular setting (the workplace). All recommendations, standards and services are developed in consultation with independent advisory committees which include experts and members of the public and which examine the best available evidence of effectiveness (does it work?) and cost effectiveness (is it good value for money?).
3. The Centre for Public Health Excellence is a national leader in the synthesis and review of the evidence about health related behaviour change. The Centre utilises a broad multidisciplinary perspective drawing upon health, economics, social and behavioural sciences, and has developed one of the most robust systems in the world for evaluating the evidence about the effectiveness of behaviour change interventions across the full spectrum of the UK population, both in specific topics and generically³⁰⁰.
4. In October 2007, NICE published *Behaviour Change*,³⁰¹ recommendations for NHS and other professionals with responsibility for helping people to change their health-related knowledge, attitudes and behaviour so that they can lead healthier lives. The guidance is based on a comprehensive assessment of the evidence on what approaches and strategies are effective in bringing about health-related benefits for the population as a whole. Our submission reflects some of the recommendations in this and other related NICE guidance, a full list of which can be found on our website at www.nice.org.uk/Guidance/PHG/Published.

Summary

³⁰⁰ Swann, C., Owen, L., Carmona, C., Kelly, M.P., Wohlgemuth, C., Huntley, J. (2009) A nudge in the right direction: developing guidance on changing behaviour, in Killoran, A. & Kelly, M.P. (eds), *Evidence Based Public Health: Effectiveness and Efficiency*, Oxford : Oxford University Press; Abraham, C., Kelly, M.P., West, R., Michie, S. (2009) The UK National Institute for Health and Clinical Excellence (NICE) Public Health Guidance on Behaviour Change: A Brief Introduction, *Psychology, Health and Medicine*; 14:1-8; Kelly, M.P. & Abraham, C. (2009) Behaviour change: The NICE perspective on the NICE Guidance, *Psychology and Health*, 24: 131-33, <http://dx.doi.org/10.1080/08870440802643013>; Kelly, M.P., Morgan, A., Ellis, S., Younger, T., Huntley, J., Swann, C. (2010) Evidence based public health: A review of the experience of the National Institute of Health and Clinical Excellence (NICE) of developing public health guidance in England , *Social Science and Medicine*, 71 :1056 - 1062 <http://dx.doi.org/10.1016/j.socscimed.2010.06.032>

³⁰¹ www.nice.org.uk/PH6. The guidance is due for update at the end of 2010

5. We are pleased that the importance of health related behaviour change is being recognised. Medicine can achieve only so much in treating disease and disability. A genetic predisposition to disease is difficult to alter, and a person's social circumstances can also be difficult to change, at least in the short to medium term. However, changing people's behaviour – as individuals and collectively – may be easier. Evidence shows that approaches and interventions aimed at changing people's behaviours, and also at preventing harmful behaviours from being taken up in the first place, can be both effective and cost effective.
6. There is an enormous amount of high-quality evidence on behaviour change at individual level which NICE has reviewed,³⁰² and the psychological techniques and principles have been well researched and understood. However, the evidence base is not complete, and it is only relatively recently (and most notably in the years following publication of NICE's guidance) that researchers and policy makers have begun to piece together the evidence from different disciplines and levels of intervention into co-ordinated theories of change³⁰³. As the evidence has been collated and assessed, it has become increasingly clear that although we know what works – and why – in some areas, in other areas the evidence is less clear cut, contradictory, or even absent.
7. The majority of *experimental* evidence about behaviour change relates to individual approaches, and comes largely from disciplines within psychology. Some of this evidence is compelling, and it can be used to make clear recommendations about how best to influence people's health-related behaviours. However, much of the evidence is limited and it is rare that this evidence can be extrapolated or generalised from those interventions to the wider population with confidence, and without caveats. Additionally, theoretical evidence and accounts of how and when change happens (for example, psychological theories of change) is often narrow, fairly speculative and based on the favoured position of the author, for example whether they are informed by behaviourism, social cognitive or social constructionist theories about the nature of behaviour.
8. There is less experimental evidence about what works to influence behaviour when working with or at community and population levels. But other types of evidence, for example from observational and other less controlled types of studies, evidence from practice, and the accumulated experience of policy implementation and subsequent social change, can be pieced together to help understand what works. The NICE guidance on behaviour change considered the full range of evidence in making recommendations about what works.
9. Many attempts to encourage health-related behaviour change by the NHS and other organisations are limited in their effectiveness, or actually fail, because
 - they do not take account of the evidence

³⁰² A useful place to start is in the 'background information' section of our Behaviour Change guidance, which includes a summary of the key behaviour change theories, an economic evaluation and a number of reviews commissioned by NICE.

³⁰³ See, for example, Thaler, RH & Sunstein, CR (2008) *Nudge: improving decisions about health, wealth and happiness*. Yale University Press and Institute for Government (2010) *Minspace: influencing behaviour through public policy*. Cabinet Office.

- they do not take account of the theories and principles of successful planning, delivery and evaluation, and/or
- they are based on non-evidence-based precepts and theories.

10. This could be avoided by following the principles outlined in the NICE behaviour change guidance. These include:

- The need to ensure that the best available evidence is used.
- The need to carefully plan interventions and programmes aimed at changing behaviour, taking into account local and national contexts, and working in partnership with recipients
- The need to adequately equip practitioners with the necessary competencies and skills to support behaviour change, using evidence-based tools
- The need to co-ordinate behaviour change interventions on individual, community and population levels.
- The need to evaluate interventions, and learn from the findings of those evaluations, using the evidence to inform policy and practice

11. Although these principles are straightforward, achieving behaviour change is not simple, even though (or perhaps because) it appears to be so. The reality of changing individual or societal behaviour is complex. One-off solutions or interventions are usually not enough.. For example, in many parts of UK society we have de-normalised smoking as a socially acceptable activity, but it has taken nearly 60 years of intervention and action at different levels to do so – since Doll and Hill's first paper on the link between smoking and lung cancer³⁰⁴ – and smoking is still very much acceptable and engrained in some population groups.

12. At present, there is no strategic approach to behaviour change across government, the NHS or other sectors, and many different models, methods and theories (many of which are not evidence based) are being used in an uncoordinated way.

13. Interventions with individuals can be a very effective way of changing some behaviours in some circumstances, especially when those interventions are of appropriate intensity, delivered by a trained professional, focused, tailored to the individuals needs and sustained long enough for change to be engrained. For example, cognitive behavioural therapy (CBT) can be effective for people with mild or moderate depression³⁰⁵. But individually-based approaches can also be expensive compared with interventions that target communities or populations and may not be effective or cost effective unless they clearly target the groups who are at most risk if their behaviour does not change. What is more, although consciously engaging individuals in behaviour change can be effective and worthwhile, it can also bring into play a host of social and psychological factors in terms of their self-efficacy (belief in their own ability to change), their history, how they see themselves in relation to others, and their motivation. If there is no expertise or flexibility in the intervention to address some of these barriers, it may not be effective.

³⁰⁴ Doll, R & Hill, A.B. (1952) Smoking and carcinoma of the lung, *British Medical Journal*; 2: 84-92.

³⁰⁵ See NICE clinical guideline CG90: Treatment and management of depression in adults, including adults with a chronic physical health problem. www.nice.org.uk/nicemedia/live/12329/45890/45890.pdf

14. Sometimes legislation, regulation or some other change to the social and economic environment that people inhabit is needed to produce or support behaviour change³⁰⁶. Relatively simple things, like changing the default option to a healthier choice, using opt-out rather than opt-in techniques³⁰⁷ or making the healthier choice the easier or less expensive one, can have a huge influence on behaviour. Even here, though, the relationship between intervention and behaviour is not straightforward and other factors can have an impact on the outcome. For example, legislation enacting the smoking ban, and the introduction of mandatory seat belts were both successful – we can show a definitive reduction in deaths in hospital admissions and RTAs respectively since the bans – but the ban on mobile phone use whilst driving has arguably been less effective.
15. People from some groups, for example, lower socioeconomic groups or black and minority ethnic groups may face economic, social or cultural barriers which hinder efforts to change their behaviour or make healthier choices. Sometimes, interventions that benefit the majority of the population may act to widen inequalities in health (by improving the health of the majority whilst leaving others behind), or may even be harmful to some groups. The potential impact of interventions on health inequalities should be assessed on a case-by-case basis, and action may be needed to specifically target or support those less able (or willing) to change their behaviour³⁰⁸.
16. Despite the great strides made in recent years, NICE's work on developing guidance on behaviour change has identified a number of gaps in the evidence related to behaviour change interventions and programmes:
- Evidence about the cost-effectiveness of behaviour change evaluations in some topics is lacking, in particular, in relation to specific sub-groups (for example, 19–30 year olds, low-income groups and particular ethnic and disadvantaged groups).
 - Evaluations of behaviour change interventions frequently fail to make a satisfactory link to health outcomes. Clear, consistent and specific outcome measures need to be specified.
 - Evaluations of interventions based on specific psychological models tend not to relate the outcome measures to the model. As a result, it is difficult to assess the appropriateness of using the model as a means of describing behaviour change.
 - Few studies explicitly address the comparative effect that behaviour change interventions can have on health inequalities, particularly in relation to cultural differences.
 - There is a need for more information on the links between knowledge, attitudes and behaviour. Conflation between them should be avoided.

³⁰⁶ A review of the evidence on road safety and pro-environmental behaviour, carried out to inform the behaviour change guidance, contains some excellent examples of these sorts of interventions
www.nice.org.uk/nicemedia/live/11868/44522/44522.pdf

³⁰⁷ See draft NICE guidance on increasing the uptake of HIV testing in men who have sex with men:
www.nice.org.uk/nicemedia/live/12065/50930/50930.pdf

³⁰⁸ Kelly, M.P. (2010) The axes of social differentiation and the evidence base on health equity. *Journal of the Royal Society of Medicine*, 103: 266-72, DOI .1258/jrsm.2010.100005

- There is a lack of reliable data from which to extrapolate the long-term health outcomes of behaviour change interventions.

Questions posed by the committee

Research and Development

I. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?

We know a great deal about how to influence behaviour – both about how to stop people from taking up harmful behaviours in the first place, how to help people to change those harmful behaviours, and the contexts in which those harmful behaviours are more likely to develop in the first place. The NICE guidance on behaviour change contains a set of evidence-based principles for people working with individuals, communities or populations about how best to change behaviour. Other NICE public health guidance³⁰⁹ provides recommendations on how to influence specific health-related behaviours, such as smoking, physical activity, weight management, and alcohol misuse. In short we know that in order to effect change, commissioners, practitioners and policy makers should:

- a. Base their intervention on the best available evidence and be clear about the theory that underpins the behaviour change desired – in other words, why they think this intervention will work, under what circumstances, for whom, and how;
- b. Carefully plan interventions and programmes aimed at changing behaviour, taking into account local and national contexts, and working in partnership with recipients;
- c. Make the most of key ‘teachable’ moments in the life-course – points of change (e.g. leaving or changing schools, changing or losing a job, having a baby, divorce, retirement) where people may be vulnerable to risk factors (behaviours that might harm their health), but also more open to positive change;
- d. Train and equip practitioners with the necessary competencies and skills to support behaviour change, using evidence-based tools;
- e. Co-ordinate behaviour change interventions on individual, community and population levels, and ensure that both policy and delivery infrastructures are there to support, monitor and improve intervention and practice;
- f. Evaluate interventions, and learn from the findings of those evaluations, using the evidence to inform policy and practice.

Addictive behaviour does pose particular challenges, as the behaviours have taken time and effort to establish (smoking, for example, is rarely experienced as pleasurable when first tried), are usually deeply engrained, supported and reinforced by the individual’s lifestyle and / or social context, and very difficult to influence. Additionally, by definition, addictive substances perpetuate a desire for their continued use, physically, psychologically or both. Some population and community-level interventions have been effective in some areas, but

³⁰⁹ See, for example, NICE guidance on school-based interventions to prevent smoking www.nice.org.uk/PH23 or promoting physical activity in the workplace www.nice.org.uk/PH13

rarely without good-quality, appropriate intervention with the individual themselves. In fact, what we know from areas like smoking is that concerted action at all levels is required to effect change. Nevertheless, there is some good evidence – and NICE public health guidance – about individual interventions influencing a range of addictive behaviours, including preventing alcohol misuse, smoking prevention and cessation, and drug misuse. For example, in the development of NICE guidance on brief interventions and referral for smoking cessation,³¹⁰ several interventions were found to be effective and highly cost effective: brief advice lasting 5 minutes, brief advice plus self help material and brief advice plus nicotine replacement therapy.

It may sometimes be easier (and more cost effective) to identify those at risk of taking up addictive behaviours and intervene appropriately, than subsequently to change an addictive behaviour. In many cases the risk factors for various addictive behaviours can be identified in early/mid childhood, before the behaviour has been initiated, with a reasonable degree of accuracy. NICE guidance on school based interventions to prevent the uptake of smoking recommended that peer-led interventions³¹¹ with the following characteristics would be likely to be effective (and cost effective) at preventing smoking uptake if they

- a. Linked to relevant PSHE activities
- b. Were delivered both in class and informally, outside the classroom
- c. Were led by young people nominated by the students themselves (the peer leaders could be the same age or older)
- d. Ensured the peer leaders were trained outside school by adults who have the appropriate expertise
- e. Ensured peer leaders received support from these experts during the course of the programme
- f. Ensured young people can consider and, if necessary, challenge peer and family norms on smoking, discuss the risks associated with it and the benefits of not smoking.

Although individual-based approaches to addictive behaviours can be effective, they are more likely to be effective if they are supported by a range of co-ordinated activities and information at community and population levels, and where there is appropriate and sustained support at national and local level to train staff appropriately, support and deliver interventions, monitor and evaluate services.

One of the key issues is distinguishing between the initial cues to action and sustaining the behaviour change by reinforcement. For example, in smoking cessation we have found evidence that different factors are related to attempts to stop and the success of those attempts. Interventions to increase smoking cessation in the population therefore need to take account of this. In one study beliefs about the effects of smoking on future health and having a partner who disliked their smoking were positively associated with making a quit attempt at follow-up, while reporting enjoying smoking at baseline was negatively associated

³¹⁰ www.nice.org.uk/PHI

³¹¹ Campbell R, Starkey F, Holliday J et al. (2008) An informal school-based peer-led intervention for smoking prevention in adolescence (ASSIST): a cluster randomised trial. Lancet (371) 9624: 1595–602.

with making a quit attempt at follow-up. How long from waking to the first cigarette of the day and age of starting smoking were positively associated with success of quit attempts.³¹²

2. What are the policy implications of recent developments in research on behaviour change?

There is a marked lack of information about what works to change behaviour at policy level, in part because few policies have been evaluated in these terms (and those that have – in full, or part – have not necessarily been well or appropriately evaluated). What we do know about developing policy for behaviour change is contained within the NICE guidance.

Some of the most important non-psychological research about behaviour change has been done by Dr Ray Pawson³¹³. His work emphasises the importance of describing the detailed causal pathways from intervention to outcome and the connections between the different points along the pathway. Clearly describing the intention, pathway and outcome of interventions then in turn provides a clear framework for evaluation of the intervention – its pros and cons – and its effects over time. This approach can also help us to learn from experience and the evidence, because it is easier to ensure that the results of that evaluation are used to inform and develop what we do. We are of the view that this approach – articulating the causal pathway of intervention at this level - is vitally important and should be routinely used in planning and implementing interventions³¹⁴.

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

A considerable amount of public health research – especially evaluation research - is at least implicitly concerned with behaviour change. There is less research that explicitly concerns itself with testing different models or approaches for change.

The UK's capacity for this kind of research is good, with much potential, but the approach is disparate and often highly individualistic. There is not enough funding available for behaviour change evaluation. In the past many policies were not rigorously evaluated. This has changed in that the vast majority of new project funding is contingent upon an evaluation being built in; however it is difficult to access this highly disparate data.

All NICE public health guidance contains a list of gaps in the evidence, and recommendations for research to fill these gaps. These are based on thorough consideration of the evidence, and are fed into research funders' strategies. Funding needs to be sustained – it is often difficult to show short-term effects, and policy makers / funders should understand that they are in it for the long haul. See our earlier comments on smoking policy for example – sometimes, population-level change can take concerted effort across multiple levels over a decade or more.

³¹² West R, McEwen A, Bolling K & Owen L (2001) Smoking cessation and smoking patterns in the general population: a 1-year follow-up. *Addiction* 96: 891 - 902

³¹³ Pawson , R. (2006) *Evidence Based Policy: A Realist Perspective*, London: Sage.

³¹⁴ Baxter, S. Killoran, A., Kelly, M.P., Goyder. E. (2010) Synthesising diverse evidence: the use of primary qualitative data analysis methods and logic models in public health reviews. *Public Health* 124: 99-106.

<http://dx.doi.org/10.1016/j.puhe.2010.01.002>

Research should also be sufficiently powered (include enough people) to pick up on changes arising from the ‘intervention’. As a rule of thumb, for interventions that are intended to be rolled out nationally at least 10% of the total budget should be spent on research. There is little point in encouraging ad hoc, small scale local evaluations that tell us very little. An initiative to capture and share evaluation findings - so that they may be used to develop and inform planning and purchasing – would be of universal benefit.

4. Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

It sometimes appears that research is not fed back into policy and practice, and cross-departmental mechanisms in government for sharing knowledge / evidence do not have the status that is needed. Evidence from both research that specifically evaluates different behaviour change theories and models, and from the more ‘routine’ evaluation of public health interventions, is often left out of the next cycle of planning, commissioning and delivering policies and services. We suggest that better cross departmental mechanisms in government for sharing knowledge / evidence are required. This could include, for example:

- a. Developing shared understanding of what behaviour change activities are undertaken, how they would work, and with whom (understanding the ‘causal pathways’ of policy interventions) within and between departments
- b. Collating evidence about the impact and effectiveness of behaviour change interventions across all levels, for dissemination to Government and the public sector
- c. Providing training and support for planning and evaluation

It needs to be explicitly recognised that research, suitably synthesised and appraised, with relevant training, is a core part of government and the public service.

5. What should be classified as a behaviour change intervention?

Anything that seeks to influence behaviour, either at a population or individual level. This is generally at the heart of most work in government and public service. Much policy has a behavioural component that requires people to act in certain ways or to change, regulate or modify their behaviour. It may be wiser to consider the behavioural components of all policies rather than label certain interventions as ‘behaviour change’

6. How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

The NICE behaviour change guidance explores this in detail. See paragraph 10 of our summary.

It is worth noting, too, that although of late there has been much scientific and policy level discussion of ‘behaviour change’ as a distinct field of activity, it is in fact engrained in much of what the public sector does on a day-to-day basis. Much (if not the majority of) public health

intervention is concerned with influencing behaviour in some way. Although it is helpful to synthesise evidence across the board, from a range of disciplines and activities, about what works to change behaviour, it is not necessarily helpful to see this work as separate from the remainder of public activity and intervention. So in addition to synthesising and developing the evidence base on what works to change behaviour, the findings – and an overall ethos of behaviour change – need to be integrated across the public sector.

7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

Much of policy is concerned with influencing behaviour – of individuals, families, groups, organisations or services - by preventing it, changing it, or stopping it altogether.

It may be unhelpful, then, to think about behaviour change as something separate from other types of intervention or policy goal or behaviour more generally. In fact, we know that multicomponent interventions, operating at different levels and on different aspects of the problem, tend to be more successful than more narrowly focused activities. Evidence shows that the most useful way to think about this issue is in relation to packages of interventions and activities.

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

There are some examples of publicly funded behaviour change interventions that have been evidence based, and others that have been appropriately evaluated – there are fewer to which both apply. Others may have been developed using the best available evidence, but poorly or only partially implemented. Our published public health guidance includes recommendations about effective interventions across a range of topic areas – most if not all of these will have been publicly funded, and in order to feature in our guidance they will have been robustly evaluated. The evidence reviews that are produced to inform our guidance also all contain comprehensive evidence tables of UK and non-UK intervention studies, evaluations, RCTs and other trials.

More specifically, we have examples of tobacco control strategies that have included interventions targeted at all levels, from population (taxation, smokefree legislation, mass media) through to community and individual level, which have been aimed at preventing uptake of smoking as well as smoking cessation. They have been aimed at different age groups – children, adolescents, adults, older people, and taken place in different settings – GP practices, community settings (church halls, libraries, supermarkets) and workplaces. All have good evidence of effectiveness and cost effectiveness.

Another example is the recent obesity strategy ‘Healthy Weight, Healthy Lives’ This was guided by the conclusions of the 2007 Foresight report and used a cross government expert advisory group. Evaluation was embedded in this work (e.g. rigorous evaluation of the Healthy Towns initiative) but the results of this are not yet available, and if halted risks being another short term strategy.

In general, there has been too much time and other resource expended upon short-term pilots – which are often strategically and theoretically unrelated to the evidence base or to other initiatives, and for which it is hard to demonstrate short term success.

9. Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

More needs to be done in this respect. The ‘silos’ that exist between teams and Government departments also seem to operate between public sector organisations, and also across parliamentary terms. Lack of shared understanding about behaviour change, a lack of common ownership for projects that should be cross-departmental or cross-organisational, lack of platforms or repositories for evidence, and the short-term nature of many funding initiatives mean that lessons are often lost. Unfortunately when organisations involved in implanting behaviour change interventions are closed or reorganised, little is done to retain their institutional knowledge.

10. What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

There needs to be a more systematic approach to this at both local and national level, although NICE provides a very well-informed set of public health guidance and recommendations aimed at doing just that. It would benefit from expanded capacity for implementation.

11. What mechanisms exist within government to coordinate and implement cross-departmental behaviour change policy interventions?

12. What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?

See question 4 on translation. This is difficult to answer from outside government. If such mechanisms exist they are not sufficiently visible.

13. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

This is a difficult and contentious area. Generally speaking, public health follows the principle that if the behaviour directly harms others, the state has a duty to intervene. If the behaviour harms self, then advice and education is the appropriate way forward. If some members of society are particularly vulnerable and are unable to act on their own behalf (children, the very old and frail) once again the state has a duty to intervene. A difficult and

sensitive area is where people's behaviours do not directly harm others (e.g. by causing cancer or road deaths), but where the consequences of their behaviour (e.g. being obese, smoking) result in the use of considerable amounts of public money (such as the NHS) to treat or support. These general principles have been explored in detail by the Nuffield Council on Bioethics³¹⁵. However, these principles are sometimes complex to enact and due account of freedoms and liberties need to be borne in mind. NICE's Citizens' Council has explored some of these issues³¹⁶.

I4. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

Yes, and this is already the case with NICE guidance, which is sent out for consultation (via stakeholder groups) before being published. NICE has produced guidance on community engagement³¹⁷ - the process of getting communities involved in decisions that affect them. The guidance recommends how communities can be effectively involved in the planning (including priority setting and resource allocation), design, delivery and governance of health promotion activities, and activities and initiatives to address the wider social determinants of health.

In our other guidance, there are recommendations related to the need to address local concerns during the development of initiatives, for example about the cost of a healthier diet, the risks of cycling, and concerns about crime.

International comparisons

I5. What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?

The US Surgeon General, among others, has identified the importance of a comprehensive approach to tackling the use of tobacco. Cancer Research UK has been funding an international comparative study of tobacco control strategies. NICE has also identified an internal comparative study on rates of unintentional injuries and strategies to reduce them. However, we always need to give careful consideration to the applicability of work in other countries to the UK context. As we pointed out earlier, social and cultural factors can be highly influential in determining the success (or failure) of an intervention, and so applicability needs to be carefully considered.

Tackling Obesity

I6. The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or

³¹⁵ Nuffield Council on Bioethics (2007) *Public Health : Ethical Issues*, London: Nuffield Council on Bioethics.

³¹⁶ www.nice.org.uk/niceMedia/pdf/NICE_Citizens_Council_Report_Public_Health.pdf

³¹⁷ www.nice.org.uk/PH9

by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally, in order to examine:

- a. **the latest developments in the evidence-base in relation to changing eating and physical activity behaviour;**
- b. **who are the most effective agents for the delivery of behaviour interventions to tackle obesity;**
- c. **how current behaviour change interventions tackle obesity and what use is made of available scientific evidence;**
- d. **whether such interventions are appropriately designed and evaluated; and**
- e. **what lessons have been learnt and applied as a result of the evaluation process.**

NICE has issued a range of recommendations for a wide range of organisations, including the NHS, on behaviour change that will directly or indirectly impact on efforts to tackle obesity. These include public health and clinical recommendations in the 2006 guidance on the prevention and management of obesity and public health guidance on weight management before, during and after pregnancy (2010), the prevention of cardiovascular disease (2010), physical activity in children and young people (2009), and maternal and child nutrition (2008). Guidance on a whole system approach to preventing obesity is currently being developed.

The introduction to the 2006 guidance on obesity noted that small, sustained improvements to daily habits help people maintain a healthy weight but making changes can be difficult and is often hindered by conflicting advice on what changes to make. It is stressed that

- a. People choose whether or not to change their lifestyle or agree to treatment
- b. Barriers to lifestyle change need to be explored and
- c. Advice needs to be tailored for different groups.

In this and other guidance, it is noted that health professionals have on-going training needs in order that they might best support behaviour change. In this and other guidance of relevance (as above), consistent evidence has been identified that:

- Promotional, awareness raising activities should be part of long term, multi-component interventions rather than one off activities (and should be accompanied by targeted follow-up with different population groups).
- Behavioural change programmes should be supported by tailored advice for people who are motivated to change.
- Family based as well as individual interventions considered for families of children and young people identified as being overweight.
- Programmes should have a clear aim to improve weight.
- Population programmes should address the concerns of local people – such as the cost of changing behaviour.

- Interventions to increase physical activity should focus on activities that fit easily into people's everyday life (such as walking), should be tailored to people's individual preferences and circumstances and should aim to improve people's belief in their ability to change (for example, by verbal persuasion, modelling exercise behaviour and discussing positive effects). Ongoing support (including appropriate written materials) should be given in person or by phone, mail or internet.
- Interventions to improve diet (and reduce energy intake) should be multicomponent (for example, including dietary modification, targeted advice, family involvement and goal setting), be tailored to the individual and provide ongoing support.

Multicomponent interventions are the treatment of choice for individuals identified as being obese. Weight management programmes should include behaviour change strategies to increase people's physical activity levels or decrease inactivity, improve eating behaviour and the quality of the person's diet and reduce energy intake. The guidance states that behavioural interventions for adults should include the following strategies, as appropriate for the person:

- self monitoring of behaviour and progress
- stimulus control
- goal setting
- slowing rate of eating
- ensuring social support
- problem solving
- assertiveness
- cognitive restructuring (modifying thoughts)
- reinforcement of changes
- relapse prevention
- strategies for dealing with weight regain.

Behavioural interventions for children should include the following strategies, as appropriate for the child:

- stimulus control
- self monitoring
- goal setting
- rewards for reaching goals
- problem solving.

Although not strictly defined as behavioural techniques, giving praise and encouraging parents to role-model desired behaviours are also recommended.

Self help, commercial and community weight management programmes should only be recommended if they meet best practice, of which one aspect is including some behaviour

change techniques, such as keeping a diary and advice on how to cope with ‘lapses’ and ‘high-risk’ situations.

NICE has also made many recommendations on changes to the wider environment (including built environment, schools, workplace or LA and NHS premises) which can support individual or population behaviour change. In line with the conclusions of the 2007 Foresight report, the evidence NICE has reviewed suggests that the role of the “obesogenic environment” cannot be ignored when considering the effectiveness of interventions aiming to change behaviour.

Significant gaps in the evidence exist. For example, it is not possible to state with certainty who are the most effective agents for the delivery of behaviour change interventions to tackle obesity.

All NICE guidance makes research recommendations. Many of the research recommendations made in guidance of relevance to this inquiry (as above) will be of interest. Research recommendations include:

- Interventions should be undertaken in ‘real world’ everyday clinical and non-clinical settings and should investigate how the setting, mode and source of delivery influence effectiveness. There is a need for research evaluating multicomponent interventions to manage obesity in primary care, because factors such as the types of participant, the training of staff and the availability of resources may affect the results.
- Evaluation of campaigns (including social marketing campaigns) should go beyond the ‘reach’ of the campaigns and more fully explore their effectiveness in changing behaviour.

8 October 2010

Written evidence from the UK Centre for Tobacco Control Studies (BC 17)

This submission is made on behalf of the UK Centre for Tobacco Control Studies, a UKCRC Public Health Research Centre of Excellence established in 2008 and comprising a network of leading tobacco control researchers from nine UK universities. A full listing of the researchers involved in the Centre, and background information on the objectives and activity of the Centre, are available at www.ukctcs.org.

Tobacco smoking is a highly addictive and extremely hazardous behaviour which has been endemic in the UK for over a century. The major fall in smoking prevalence that has occurred in the last fifty years in the UK, particularly among young people and particularly in the last decade, is an example of how substantial behaviour change can be achieved by a combination of population- and individual-level interventions. Whilst there is still a great deal more to do to reduce the prevalence of smoking still further, the experience of tobacco smoking also provides important lessons for achieving substantive behaviour change in relation to other hazardous behaviours.

We therefore respond to the questions posed, where appropriate, as follows:

Research and Development

- 1. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?*

The key to smoking prevention has been to harness interventions across the entire spectrum of smoking behaviour, from those that generally discourage smoking at population level (such as the ban on smoking in public places; high prices; sustained and hard hitting health promotion campaigns), to the widespread provision of individual interventions to treat the addiction to smoking in people who want to quit. Individually, each of these measures has a modest effect on smoking behaviour, which can often be difficult to define; collectively they provide comprehensive incentives and support for smokers who want to quit, and dissuading young people from starting to smoke. This multifaceted approach to smoking prevention forms the basis of the World Health Organisation Framework Convention on Tobacco Control ¹, is endorsed by the World Bank ², and is also supported by most international public health expert opinion. Most of the policies themselves were first advocated fifty years ago ³.

The special consideration relating to smoking as an addictive behaviour is to recognise that for most people, addiction is established by experimentation with smoking in teenage years, long before reaching the age of adult majority. The decision to start smoking is therefore rarely an informed adult choice, and given the health hazards of becoming a regular smoker, there is a clear duty of care at government as well as individual level to do all possible to prevent smoking uptake in children. This includes avoidance of exposure of children to smoking role models and tobacco products ⁴.

- 2. What are the policy implications of recent developments in research on behaviour change?*

The main policy implication from tobacco control is that success depends on a consistent approach which includes individual motivation and support but driven by 'top-down' population measures.

3. *Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?*

No. The bulk of spending on medical research goes to, and hence attracts interest in, basic science. Behaviour change policy and interventions are key strategies that are not prioritised by funders and hence do not attract adequate research capability. Furthermore, new interventions are often implemented without consideration or identification of adequate resources for their assessment. Many interventions in behaviour change (particularly at population level) are extremely difficult to assess in formal trials, so need to be assessed in the process of their piloting or full implementation. The skills and resources to do this are generally lacking in the UK.

Translation

1. *Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?*

No. The failure to implement tobacco control measures that had been shown to be effective, for example: provision of nicotine replacement therapy, which was blacklisted by government for 20 years or more; banning advertising and sponsorship, which took until 2006 to implement in the UK; smoke-free policy, which was not introduced until 2007; all of these illustrate failure to translate evidence and theory into practice. Many of the key recommendations made by the Royal College of Physicians in their landmark report on *Smoking and Health* in 1962³ took over 40 years to be implemented. The failure of translation lies primarily in poor political leadership. At local level however, translating preventive measures into practice is always vulnerable to more pressing acute needs, and is often sidelined.

Policy design and evaluation

General

1. *What should be classified as a behaviour change intervention?*

Any measure that changes behaviour, or is intended to change behaviour.

2. *How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?*

They should be designed to complement each other to provide as comprehensive coverage of all aspects and motivations to change as possible.

3. *Should behaviour change interventions be used in isolation or in combination with other policy interventions?*

No, the key to success is comprehensive coverage.

Practical application

1. *Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?*

Much behaviour change policy is based on theory and common sense. It is obvious, for example, that cigarette companies advertise their products to increase sales; and ludicrous to argue (as the companies have in the past) that any other motive explains their spending on this activity. Banning the advertising of tobacco is therefore an obvious common-sense

tobacco control measure. Evidence that banning advertising impacts on behaviour is extremely difficult to collect, particularly without the cooperation of the companies doing the advertising. So, in many cases it is necessary to introduce measures without concrete proof of effectiveness. In other cases, measures such as the smoking cessation services have been thoroughly monitored and their success, in treating nearly 5 million smokers and generating over 700,000 sustained (>1 year abstinent) quitters is well established ⁵.

2. *Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?*

Lessons have not been learnt in dealing with powerful industries. The tobacco companies successfully blocked most measures to prevent advertising and smoke-free policy until the late 1990s, by arguing and engaging (for example) in a series of voluntary agreements on advertising (which allowed advertising to continue) and the Smoke-free Charter (which allowed smoking in hospitality venues to continue). The tobacco industry will continue to do all it can to block further restrictive legislation. These lessons apply strongly to the alcohol and food industries.

3. *What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?*

Expertise exists in service and academic public health groups, but political priorities often result in the implementation of measures without appraisal.

Cross-government coordination

1. *What mechanisms exist within government to coordinate and implement cross-departmental behaviour change policy interventions?*

Few. For example, exposure to tobacco use in films is a major driver for the uptake of smoking among young people, and smoking remains highly prevalent in popular UK films certified as suitable for viewing by children and young people ⁶. Prevention is the remit of the Department for Culture Media and Sport, where the Minister recently responded to us (in a letter date 7.7.10) that he feels current safeguards are adequate. The British Board of Film Classification takes a similar view. The evidence clearly indicates otherwise.

2. *What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?*

We are not aware of any.

Ethical considerations

1. *When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?*

It is appropriate for the state to intervene to prevent dangerous behaviour but the extent of that intervention depends on who undertakes the behaviour, and whether others are harmed. For tobacco use, which is a powerful addiction generally established in childhood or

adolescence, and which has significant implications for secondary exposure of children and adult non-smokers, and for poverty and deprivation, there is a strong moral argument for powerful state intervention⁴.

2. *Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?*

It is crucial to seek input from people affected by hazardous behaviour in understanding and designing prevention, and to educate and engage the public in their development and implementation. All measures should be piloted if feasible to do so appropriately. This applies to addictive and non-addictive behaviours.

International comparisons

1. *What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?*

Australia and Canada are examples of countries in which smoking prevalence has been reduced substantially by continued implementation of major tobacco control policies that were suspended in the UK during a period of 5-7 years in the 1990s. If UK prevalence had continued to decline as it did before and has done since it would now be among the lowest in the world. Sweden is an example of a country with exceptionally low smoking prevalence arising in part from the availability of viable harm reduction options (in the form of low-nitrosamine oral tobacco)^{7,8}. Harm reduction as a means of reducing the health impacts of nicotine addiction is an area of policy that has, until recently, been largely ignored in the UK.

Tackling Obesity

16. *The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally, in order to examine:*

- a. the latest developments in the evidence-base in relation to changing eating and physical activity behaviour;*
- b. who are the most effective agents for the delivery of behaviour interventions to tackle obesity;*
- c. how current behaviour change interventions tackle obesity and what use is made of available scientific evidence;*
- d. whether such interventions are appropriately designed and evaluated; and*
- e. what lessons have been learnt and applied as a result of the evaluation process.*

There are several key components of effective tobacco control policy that would translate directly into the prevention of obesity: these would include the use of high price and prohibition of advertising to discourage consumption of unhealthy, energy-dense foods; effective package labelling to enable rational consumer choices, strong and sustained media campaigns to encourage behaviour change, and a range of other interventions.

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1 October 2010

Oral Evidence, 23 November 2010, Q139-184

Evidence Session No.4. Heard in Public.

Members present:

Lord Alderdice
Lord Crickhowell
Baroness Hilton of Eggardon
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Baroness Perry of Southwark
Earl of Selborne
Lord Warner

Examination of Witnesses

Witnesses: **Professor Mike Kelly** [National Institute for Clinical Excellence (NICE)], **Professor John Britton** [University of Nottingham and Director of the UK Centre for Tobacco Control Studies], and **Dr Tim Chatterton** [University of the West of England].

Q139 The Chairman: Welcome to the three of you and thank you very much for agreeing to come. We've lost one of our witnesses. Professor Jackson is not well so it's the three of you. And members of the public, welcome to you. The proceedings are being webcast, as I think you know, and there's an information note for members of the public that gives you some information. What we would really like you to do, please, is to introduce yourselves for the record and then if you want to make an initial statement, please do. Then I'll start with the questions. Would you like to start by introducing yourselves for the record?

Professor John Britton: I'm John Britton. I'm Professor of Epidemiology at the University of Nottingham. I'm a consultant in respiratory medicine at Nottingham University hospitals and I am head of the UK Centre for Tobacco Control Studies, based in Nottingham but a network of universities. My experience is all in tobacco control policy and what has been successful and what hasn't.

Dr Tim Chatterton: I'm Tim Chatterton. I'm a senior research fellow at the University of the West of England. I've worked mainly in the areas of air quality and climate change for the last 10 years, both with national government and local government policy.

Professor Mike Kelly: My name is Mike Kelly. I'm the Director of the Centre for Public Health Excellence at NICE, which means I lead on the development of our public health guidance and recommendations, which included the guidance that NICE produced in 2007 on behaviour change.

Q140 The Chairman: Thank you very much. Does any of you want to make an initial opening statement on this subject before we start?

Dr Tim Chatterton: Yes. I'm happy to. I very much welcome this inquiry. I think the term "behaviour change" is rapidly becoming quite problematic as you might have found out in your previous sessions. I think it might be this year's "sustainable development": a term that is quickly becoming able to mean all things to all people. I think particularly when the term is used in its narrower sense, referring to work orientated specifically around behavioural economics and social psychology, I perceive that there's a real danger that, certainly in popular discussion, some of the techniques might be in danger of being overplayed, particularly regarding some types of problems. While I greatly appreciate the role and potential for behavioural sciences, as they now seem to be termed, in helping to shift behaviour in situations where everything is already in favour of a change occurring, I think it's important to recognise that in many of the cases, particularly in terms of the environment, it's all too obvious why people don't change their behaviour. In those cases, it certainly isn't an effective or an efficient policy decision to try and nudge someone uphill.

Q141 The Chairman: Thank you very much indeed. What we'd really love, because we have quite a lot of questions we want to ask you, is if you can keep your answer fairly snappy where possible. What we would really love from you today are some hard examples, which is one of the things that I think we've found most difficult to acquire thus far. The first question, to all of you: do the Government make the best use of the available evidence base? What concrete examples can you provide of where publically funded interventions have been based on either good evidence or relatively little or no evidence? And if you have some interventions that were not based on good evidence, can you explain why that happened?

Professor Mike Kelly: My own view is that Government do not make as much use of the available evidence base as they might. There are a number of reasons for that I think. The first is I think that there is an unawareness, a lack of awareness, of what's there in the literature: partly because the way the literature is itself available isn't terribly accessible, and partly I think because the supporting Government officials, civil servants, don't always make the most immediate linkages with the kinds of evidence which they could. It's my experience that important resources like the Cochrane and Campbell databases and other relevant information systems are not routinely tested as policy is being developed. I think also sometimes the policy imperatives are much swifter and the needs of Government much more demanding than the timetable to which researchers work, whether it's in behaviour change or, in fact, any other area. Therefore, there is a lack of synchronisation sometimes; policy problems come up, there is a need for information and there is a need for quick solutions, and the timetables in which we produce research results don't always fit with that. Also, one has to say that there is a different language that is used in policymaking circles, political circles and research circles and the connectedness between the two communities—although they're all well meaning—sometimes is less optimal than it might be. So there are a number of reasons why it doesn't happen, all of which are amenable to doing something about; however, we've not moved as swiftly as we might have done it seems to me, particularly in the area of health-related behaviour change, to solving those problems.

Q142 The Chairman: Can you that follow up? You've told us in a sense what the barriers are—different language, different timeframe—what specifically could be done about that?

Professor Mike Kelly: One, on the side of the producers of academic research, I think they could do much more to make their research findings accessible and understandable in the bite-sized chunks which are needed by policymakers often working very, very quickly. I don't think the academic tribe has done nearly enough as it might to do that, nor do there exist very easy conduits through which those kind of things can move. On the other side, I think sometimes what is perceived by academic researchers to be a lack of patience with their very carefully crafted work is equally unhelpful. So opening those lines of communication rather better than they are, I think, would help all around.

Q143 The Chairman: Thank you. Professor Britton, would you like to add anything to that?

Professor John Britton: I'd certainly agree with those last two comments. Also, there is the problem that when evidence is needed for a particular policy decision, often that evidence base just isn't in a suitable state to give a clear guidance as to what needs to be done and yet a decision needs to be made now, as was the case with BSE for example. In tobacco, there are examples from, I think, all of the combinations of good evidence/good result, good evidence/bad result and so on; examples of policies that have been based on very poor evidence have tended to be policies linked through industry where they have been met or established by voluntary agreement with industry. The industry will always go for the policy option that is likely to cause least damage to their market: for example, low tar cigarettes, which were a disaster; voluntary agreements on advertising, which allegedly protected children from positive role models but which didn't. On the other hand, another extreme is smoking cessation services, which were based on extremely good evidence that has been around for two or three decades almost and yet took until 10 years ago to become common practice in medicine. They have been extraordinarily successful. I could give other examples.

The Chairman: Actually, what would also be very helpful would be a note afterwards of some other examples. That is grist to our mill really, so that would be very helpful.

Professor John Britton: Not at all.

Q144 The Chairman: Dr Chatterton, do you have anything to add?

Dr Tim Chatterton: I would just agree certainly very much with what Mike Kelly has said. I'm in a position at the moment with the Department of Energy and Climate Change where I'm on a fellowship as an academic sitting within the department for a year funded by the research councils; I believe you have spoken to Rachel McCloy who is on a similar fellowship. I think these are a great way forward and have opened my eyes to how big the gulfs are between the world of government policymaking and the world of academia. Despite having worked closely with DEFRA for 10 years, I don't think any of that opened my eyes to the realities of 9.00 to 5.00 in the Civil Service. While, as an academic, I can sit and be concerned about some of the ways that policy might be made and implemented, at the same time I've been finding myself equally concerned with academics and their ability to communicate with the policymaking world and, particularly, to make the findings of their

research relevant. It isn't just a question of making the findings of the research relevant; in some ways it is actually what the research questions asked are. There is possibly a tendency for academics to look at things out of interest, not necessarily because they see or appreciate the relevance of their work for the external world and particularly policymaking. I think there is a whole realm of training up both sides and increasing capacity both in Government and in academia that needs to be done in this area.

Professor Mike Kelly: To follow up on that, the point about research questions is important, but I do think we have not been helped by the earlier versions of the Research Assessment Exercise, which has valued particular types of research and particular kinds of academic pursuit. Not surprisingly, therefore, universities have pursued that, sometimes extremely effectively from the point of view of the university, but those sorts of questions are not necessarily the ones that provide the policy answers which policymakers need. I've often wondered whether we need a different kind of institution doing much more policy-relevant type of research in which the career of someone in such an institution would be seen to be on a parallel with someone in a five-star university department, It wouldn't be seen as a form of somehow less important research than that being done in five-star rated departments pursuing their own very important research. That is not to say that I don't think it is important—far from it, it is extremely important—but it doesn't match necessarily the needs of the hurly burly world of government. That is something that is also worth a bit of a long hard look at from this Committee's point of view. You were asking for examples of good evidence. I had a quick look through our back portfolio in NICE. The sorts of things where we have got very clear evidence about things that work, aside from the smoking cessation that John mentioned, include screening and breathing interventions for alcohol misuse. It's an extraordinarily strong evidence base and it works in terms of the sorts of things we're looking at. Health promotion schemes in the workplace work, and we have got evidence of that kind; it is not necessarily being implemented across the piece in the way that we might but there is good evidence on that. Smoking cessation in schools: the ASSIST trial that was published late last year, led in Wales and in the West Country, provides us with as clear evidence of what we need to as you're likely to find. The caveat is that research evidence always requires a form of interpretation by its users and it's that interpretative process, particularly the interpretative process up to policymaking—policymakers expect the research to speak for itself. It never does.

Q145 Lord May of Oxford: This is all admirably helpful. I just want to come back to one example. Professor Britton, you mentioned BSE. I just wonder if you think I have this right; it is an interesting example of a sort of meta-level behaviour. That is to say, the Southwood report was very good, saying that we should promptly stop feeding animals to animals. It wasn't done promptly enough. The thing that people really wanted to know was if this was going to affect humans. It said that, by analogy with scrapie in sheep, probably not but they were not sure. That was a really good report. The behaviour bit came in when the Minister, the politicians, and the civil servants wanted to tell people something unduly affirmative and told them, "Here is me feeding my daughter a hamburger to assure you that it is safe". I see that as a curious thing; even when you've got good information and good studies, they often tell you something that those in a position to implement them don't want to hear.

Professor John Britton: There is no question that that's true. The basic fundaments of existing best tobacco control policy were laid down by the Royal College of Physicians in a

report in 1962. Nearly 50 years later, we still don't have all of those measures in place. So you can take a horse to water...

Q146 Lord Patel: First of all, I don't have any interest to declare pertinent to this inquiry. What I want to ask a question about relates to the connection between policy, the evidence base and examples of where there is strong evidence that the intervention that will work is embedded in the policy, but equally the other side where the policy is there but the evidence for it does not exist. Can you give an example of a strong evidence base but where that evidence is being ignored by the Government?

Dr Tim Chatterton: Out of the examples that I've worked with over the years, I would say transport is a major one where there is evidence that—in order to get some of the transport changes we need, in order to meet air pollution targets and climate change targets—we'll need a very extensive reworking of transport in society. I think there was a huge amount of evidence accumulated throughout the 1990s, which led to the 10-year transport plan. That, for many people I know who worked in the field, was a major achievement of a large amount of evidence going towards a very far-reaching transport plan that never came to fruition. Since then, we've seen a continuing increase in vehicles on the roads, no commensurate increase in terms of massive use of public transport, and we've got to the point where no significant carbon benefits are being achieved and we're facing failure to meet the EU limit values for air quality. In terms of that, I think there is a huge body of evidence about what we needed to do but it was never fully employed.

Q147 The Chairman: There was a particular example that was given to us last week by Professor Susan Michie. She said that we know that the evidence is really quite strong that increasing the price of alcohol and reducing its availability leads to a decrease in consumption but the Government do not seem very willing to do anything about that. That was an example of where there is evidence but we don't do anything again. Is that one that you would buy into?

Professor Mike Kelly: First of all, that the minimum price per unit appears to be well supported, by the economic modelling and the economic evidence which has been marshalled to do it, as a device for dealing with problem drinkers. There appears to be a clear relationship with the price mechanism that has been generally used by Governments forever with respect to alcohol. It's the laws of supply and demand as much as it is evidence. However, the economic modelling which has been done through the Department of Health and for NICE certainly would suggest very strongly that that would be useful approach, potentially, towards certain parts of the problem drinkers and young drinkers presently. Of course, it's early days in terms of the development of alcohol policy so it remains to be seen where that might go.

Q148 Lord May of Oxford: Is it my question? It was very quick; sorry I was thinking about something else. I apologise. There are many of us, through some of our earlier discussions, who feel, possibly incorrectly, that coercive interventions are more effective than nudging, as it were. I wonder if you think that's right or wrong, or if you can provide again any examples that speak to that point.

Dr Tim Chatterton: I would be happy to again. I picked up, when we were sent the questions in advance, the word “coercive”. I think it would be useful to unpack that into measures that possibly force people to take an action or measures that you could possibly term as restrictive, which prevent people from doing things. Returning to the instance of transport, one of the examples I put forward, where recently in the sustainable travel demonstration towns there's been a lot of behavioural work around what are termed “smarter measures”. What they found is that by using these behaviour techniques—better information, encouraging people to take public transport and so forth—you can actually significantly reduce the number of car trips that they take. While you can do that, there's also the other side of the problem that, as soon as you reduce people's car trips, that road space gets instantly filled up. So unless you put forward behavioural measures on one side with restrictive measures on the other, you don't get any net benefit from it. I don't think there is a clear distinction to be drawn between whether policy should be restrictive or suggestive measures. You need to go down a route where they are applied in a coordinated manner in order to get the best effects from them.

Q149 Lord Krebs: If I could just come in on that. I have two questions. One is whether the intervention that you referred to of a non-coercive nature—that is providing information persisted—over time, and I should declare an interest because I chaired the Nuffield Council on Bioethics inquiry three years ago into the ethical aspects of public health. We looked at some of these issues then. Question one: does the non-coercive intervention persist over time? What is the timescale over which you saw this modal shift? Secondly, in thinking about coercion, one could imagine interventions where individual member of society are affected by restrictions on choice or taxation; or one could imagine coercive interventions affecting the industries that supply goods to society—as for example, in the case of tobacco, where the interventions were on advertising tobacco initially rather than on people's choice whether or not to smoke. I wonder if you have any views on interventions that are coercive to industry rather to citizens, and on the persistence of non-coercive interventions.

Dr Tim Chatterton: I would say in the persistence of non-coercive interventions, the example I gave was only written up earlier this year and so I don't think there is a lot of evidence on the long-term benefits of it. From the evidence that I've seen, there is certainly a drift back towards original behaviours, if there is no commensurate action on the part of society to either prevent them returning to those behaviours, in restrictive manners, or to sustain and nourish the new behaviours. For example, if you've encouraged people to go out and start cycling more, if the increased number of cyclists isn't recognised by society and nourished in terms of doing things like providing more cycling lanes, then you just get a continuing increase in motor vehicles and the environment becomes more hostile for cyclists. Then I think it would be no surprise for the drift to come back. In terms of coercive measures on industry and on individual members of society, my personal view is that there needs to be some mixture of both. Within the transport and pollution field, we can see on one side the need to put in measures to improve cleanliness of vehicle technology for instance, and the evidence has traditionally been that that needs to be coercive legislation and that manufacturers have never really responded adequately to voluntary measures in that area. On the other side, some of the issues will need to be put forward at an individual level. In terms of things like low emission zones, there are two sides to that. Within a town, you will prevent individual members of society driving dirty cars, but through encouraging the development of cleaner cars through industry, industry

has its role to play in allowing individuals to escape the hand of coercive legislation, if that's how you want to term it.

Q150 The Chairman: Do either of our other witnesses want to add anything? We have members who want to ask additional questions so is there anything else you want to add?

Professor Mike Kelly: I think that one has to be slightly cautious in using the word "coercion". In political terms, that means getting people to do things against their will usually. Historically speaking, I think there are few examples where Governments have ever been able to sustain societies on the basis of coercion alone. As a general political principle, I think that would remain true. On the other hand, clearly regulation of human affairs, in order to protect the rights of individuals and people to go about their legally sanctioned commercial activities and so on, has been a feature of human society since the fifteenth century and earlier. So as regards the notion of coercion, I think that "regulation" is perhaps a better word to use. What's quite interesting is regulation without public consent is seldom successful. The recent success of the ban of smoking in public places, in workplaces—

Lord May of Oxford: We call that coercion. Possibly wrongly, but we call that coercion. Possibly wrongly, it's probably a wrong word.

Professor Mike Kelly: You can call that coercion. When you're out and about in environments that are now smoke-free, with smokers dutifully walking out to go to do their smoking outside, it doesn't feel like coercion I don't think. It is simply voluntary compliance with a set of rules and regulations.

Lord May of Oxford: You should talk to some of the smokers on that.

Professor Mike Kelly: What I was going to say was, it wouldn't work if there was mass opposition. It's worked because there seems to be societal consent and, indeed, some of the worst predictions about how it wouldn't come to pass that were made prior to that ban taking place more or less faded away without very much opposition because people found the new smoke-free world, even smokers themselves—

Q151 Lord May of Oxford: Don't you think it's partly because it came bit by bit by bit? At first you could only smoke on one side of the cinema and eventually you couldn't smoke there at all.

Professor Mike Kelly: I do. To go back on something that Professor Britton said a moment ago, I was born in 1953 in a fog of smoke domestically. Every single adult relative I had smoked and did more or less up until I was in my teens, when they began to give up. I went to university and people smoked in lectures, tutors smoked while they taught me, in a way that's now unthinkable in any of those kinds of settings. That's been a gradual change but it's taken the best part of 60 years to bring about those changes.

Q152 Baroness O'Neill of Bengarve: I wanted to come in on the same point. It may have been our question that was at fault because I don't think we are really interested in coercion, though of course it is true that legislation and regulation are ultimately backed by coercion. However, I take it that the sorts of things that you're thinking about are restrictions that would ultimately be backed by coercion and if you go and smoke in the

wrong situation, you might get fined eventually, or whatever happens. If you don't pay your fine, that begins to get coercive. You're really contrasting restrictions with enabling and promoting and incentivising, or is that wrong?

Professor Mike Kelly: I am certainly linking them. I don't know that I'm contrasting them because we know that, once the regulatory framework is in place, people who were thinking about making that behaviour change actually do it. People who wanted to stop smoking use the enactment of the ban as a very useful catalyst for them to set about doing it. I don't think that is coercive, I think that is voluntary but within a framework that was put in place. What I was really arguing was that that framework would have been impossible in 1962 when the Royal College of Surgeons indicated that that was what in the end might be required. Sorry, Physicians, I do beg your pardon.

The Chairman: They will get very upset.

Lord Patel: We get very upset if you get it wrong.

Q153 Lord Crickhowell: I just wanted to pick up a point made by Dr. Chatterton, about industry really only moving when it's forced to or pressed to. I suppose in the motor car industry, yes, it's true that probably action in California and so on prompted the beginning of the large-scale manufacture of more environmentally friendly cars, but isn't it also true that, once they did get introduced, it was public demand that began to be the thing that excited the manufacturers? It is in this country. I suspect that they're now all selling combination cars or electric cars, or want to sell electric cars because they've suddenly discovered that actually this is something people begin to want. So there may be a switch from the initial coercion to recognition that they can sell more. I suspect that if we went to a supermarket, we'd find that a lot of what they do in their marketing is because they suddenly discover that people want something, even if perhaps originally they have been forced to take a particular step.

Dr Tim Chatterton: I think you're right and there may well be a switch that happens very often and often shows that, in many cases, industry might be slightly behind the cutting edge of what is going on. But I have seen slides within the last week presenting the progression of CO₂ emissions legislation in vehicles, with what could be possibly be best termed an "absolute failure" to get anywhere near the voluntary agreement, and the only improvements starting to be made once the EU had brought in compulsory legislation on that front. Certainly in terms of climate change, there is evidence that they have had to be forced into action. In terms of work I've been involved in looking at public attitudes to vehicle performance, particularly with regard to CO₂ emissions and/or fuel economy, there is little evidence, I think, that environmental performance is significantly high profile in people's decisions when buying motor vehicles. There is evidence that it might be starting to become more so now, mainly due to the increases in the price of the fuel and the fact that CO₂ emissions are very closely linked to, if not exactly the same as, fuel economy. It's certainly a secondary factor in what people decide when they want to buy a car.

Professor John Britton: I just wanted to come back on the point of coercion and non-coercion and elaborate on Mike Kelly's point about smoking in the home, in lecture theatres and so on. Coercion has been crucial in bringing in the smoke-free workplaces legalisation and that has had its effect, but the great majority of passive exposure to smoke happens in the home. We cannot legislate to stop people smoking in their home but we can educate and nudge people to change. That change has happened dramatically since the smoke-free

policy outdoors came in because smokers recognise that, “As it’s not right to smoke in my workplace, why would I smoke in my home?”. Similarly changing people’s behaviour in smoking in the home is therefore set by the environment that applies in the wider world. These two approaches are two sides of the same coin.

Q154 The Chairman: What you are really saying, I think, is we shouldn’t keep trying to divide them?

Professor John Britton: No.

Q155 The Chairman: Are you saying that you need them as mutual support, one for the other?

Professor John Britton: In tobacco, the success that has been achieved—and it is substantial, although there is still a long way to go—has been achieved by a combination of some very strong coercive measures plus a huge shift in public opinion that has resulted from the coercive measures seeming to make sense and to lead to a better world.

Q156 Baroness Hilton of Eggardon: I had another example about plastic bag use, that supermarkets under the threat of legislation were enormously reducing the amount of plastic bags they were handing out but I gather that has now gone backwards because the threat of legislation has been removed from them. The point about industry is that under the threat of legislation, it can be made to do some things that will change people’s behaviour—the number of people asking for plastic bags also went down, but apparently that is now going backwards because the threat of legislation has been removed.

Dr Tim Chatterton: Just to make a point about industry’s relation to legislation, it’s very easy to use the term “industry” as a homogenous block, but certainly in terms of environmental regulation and the response to it, it is far from that. There are many people in the industrial world who welcome environmental legislation because they would themselves want to run their company in an environmentally benign fashion. However, the laws of competition mean that they’re competing against people who will do things dirty and cheap. For many people in industry, environmental legislation is to be welcomed because it gives them an ability to perform on a level playing field and not get penalised for good quality behaviour.

Q157 Baroness Perry of Southwark: One of the things that puzzled me is that the language of behaviour change, unlike other areas of science, seems to be conducted entirely in terms of individual examples and case studies. We talk about what happened with tobacco, with energy efficiency and carbon emissions and so on. Have people like yourselves and other scientists in the behavioural change area produced any meta-analyses which give principles of behaviour change across the various examples and even a systematic review of the evidence that has come out of the individual examples? Does this meta-analysis exist?

Professor John Britton: I suppose I’m taking you back, just to speak first, to an example from tobacco but yes, it’s perfectly feasible to systematically review and meta-analyse studies of similar principles. An example of that from tobacco is the impact of workplace

bans before the smoke-free policy came in here. However, some of the examples or actions needed in a certain area are very specific to that area. So it's quite difficult to generalise a particular intervention across the board. On the other hand, the impact of price that Mike has referred to with alcohol is very clear in tobacco, too, and I'm sure is clear in any consumer product. So there are general principles but some things are very specific so quite hard to transfer.

Professor Mike Kelly: Yes, if I may. Very interestingly this morning, a meta-synthesis of meta-analyses arrived on my desk, which is an even higher level. It was published last week by the *American Journal of Public Health*³¹⁸. That's the first time that I've seen that level of synthesis being done. What is quite interesting about this is that they come up with a number of principles about things that have been shown to have effect sizes—moving in the direction of the behaviour change that is desirable—and they identify a number of features. I will send you the reference to this. I haven't had a chance to digest it but I thought how fortuitous it was on the day I was coming before this committee. To answer the question before the publication of this, there are quite a number of meta-analyses of both single behaviours linked to very specific types of activities, such as smoking or alcohol or tooth brushing or condom use and things of this kind that you will find in the literature, which are quite helpful in terms of pointing towards the sort of things that are likely to be effective. Typically the sorts of things that have been found in this sort of thing have to be very clearly targeted. What is it specifically you want to change? So, rather than talking about healthy eating, it's about how you reduce your consumption of sugar. Rather than talking about healthy drinking or not drinking, it's about very specifically what you do when faced with a situation in which alcohol is flowing freely. In dieting, it's not just about going on a healthy diet but helping the dieter to recognise the point when they have to confront the fact that another piece of cake has arrived and they are not satiated and they are tempted to eat it. What do they do in these circumstances? These very specific kinds of things are in the literature and are quite helpful. Two or three years ago, NICE produced its overarching guidance on behaviour change and that summarises some of the key principles. At the heart of it, what psychologists used to refer to as the theory or model of self-efficacy seems a reasonably useful way of organising these sets of principles. Certainly the research has grown; some of the work has specifically been done in this country by Susan Michie, whom you have mentioned already, Charles Abraham is another one, who will be well known to this Committee actually.

The Chairman: He's our special adviser but he's just not here today. He wasn't able to be with us.

Professor Mike Kelly: Also Robert West and Stephen Sutton in Cambridge. A number of really key leaders in the fields of behavioural sciences are beginning to put these things together in a way that is far more scientific than we were perhaps 10 years ago in thinking about these things. That in turn is leading to useful meta-analyses—and now meta-syntheses of meta-analyses—of the kinds of things that can be done. There is, in other words, a strong evidence base both theoretically and empirically. The trouble is, as I said in my opening remarks, it's not necessarily terribly accessible if you need swift answers to problems of drink driving or something of that sort.

Dr Tim Chatterton: I was going to say that there is, from a scientific approach as Mike Kelly has just said, increasing work in this area in terms of the meta-analyses, or at least

³¹⁸ Johnson, B., Scott-Sheldon, L.A.J., Carey, M. (2010) Metasynthesis of health behaviour change meta analyses, *American Journal of Public Health*; 100: 2193-98.

combining and packaging the conclusions of multiple studies. The *MINDSPACE* document that you'll have heard about has gone some way to packaging a lot of the social psychology and behavioural economics work so it is suitable for policymakers. However, there is another approach that can be taken, rather than having a fairly individualist, rationalist or, in terms of behaviour economics, non-rationalist approach to decision making; many of the problems we face actually have very complex societal contexts that set them up. This leads to two things. One: behaviours end up being incredibly specific and in relation to the activity being undertaken. Secondly, there is often a social dimension to behaviour that might override individual choices at any particular point in time. Some of the work I've been doing over the last year has particularly been looking at what are termed "social practices", where behaviour gets looked at outside of the context of individual decision making in order to determine what are the patterns and constructs of behaviour that happen and how are those almost determined at a societal level. A really coarse example is simply that if someone wants to catch a bus, and they have been convinced of all the reasons why they should catch a bus, if society isn't providing a bus from where they want to go to where they want to be, they simply can't do it. These societal effects completely constrain that individual's ability to behave as an individual.

Professor John Britton: At one level, it isn't easy or perhaps even possible to come up with strong evidence beyond the level of common sense. An example of that is advertising and tobacco. It isn't feasible to do a randomised trial to show that banning advertising in parts of the UK will reduce to lower consumption than advertising in other parts. The scientific model simply won't work. In the end, it comes down to common sense, that industries advertise products because they want to sell them. If you want to reduce consumption, you stop the advertising. When that happens, it seems to work but for many years, that debate was held up by a lack of evidence.

Q158 Baroness Perry of Southwark: I imagine myself as a Secretary of State or a Minister sitting there saying, "There is a particular initiative I want to promote". I look to experts like you and I ask how I go about it. I do not want to legislate, so do I go for some kind of campaign, education or persuasion? Do I appeal to people's intellectual arguments or emotional arguments, but you are telling me that it is just common sense. You have just talked yourselves out of a job as giving policy advice to Ministers, but I am sure that you do not want to do that.

Professor John Britton: I would be very glad to talk myself out of a job in tobacco control—I needn't have started if common sense had applied 40 years ago. However, the answer to your more specific point—which of those routes do you pursue—is that you pursue almost invariably all or nearly all of them, because one depends on another. As Professor Kelly has said, compliance with a coercive practice isn't going to succeed unless people are ready for it. That means explaining and promoting the idea beforehand. Then, when the point comes where you have sufficient support, you can do something that requires everybody to follow that behaviour. You need all of these things.

Q159 Lord Warner: Whose responsibility is it—the academic communities or the policymakers—to create the archive of meta-analyses or, even better, meta-synthesis? This has bedevilled a lot of this debate. Who should take the responsibility for keeping the keys?

Professor Mike Kelly: It's quite interesting, because this meta-synthesis is itself not terribly accessible. It requires further interpretation. I think that the responsibility for gathering the data, putting them together and using the highest forms of scientific analysis possible remains with the academic researchers. However, the bridge between the two requires people who are prepared to engage in what usually amounts to a process of inference and judgment in terms of what this science means. To go back to your question, if the Minister was saying that what he wanted to do related to smoking or alcohol or driving or whatever it was, you would then assess the behaviour that is in question, rather than talking in general terms. Then you'd be able to turn to the evidence and determine which of those potential strategies that you mentioned were the ones that would be most effective. I don't think that you can leave it to the academic community on its own. It will do what it does very well—and it does it very well. What is further required is a rather more specialist way of making that link. I think that sometimes that specialist linking is the thing that we've been less good at or, rather, that we thought would all work out for itself, rather than being more proactive in trying to bring these two slightly different cultures together.

Q160 The Chairman: Can I just follow that up? You said that this meta-synthesis isn't very accessible, and I suspect that you're rather underplaying that, but could it be? Is it the sort of material that could be presented in a way that would be easier for Ministers to get to grips with?

Professor Mike Kelly: There is absolutely no question of it. A couple of hours working on this and you could have a briefing document for a Minister. It would be very straightforward.

The Chairman: I think that's quite helpful.

Q161 Lord Krebs: I wonder if I could briefly come back to Professor Britton on his insight into the fact that the tobacco industry objected to restrictions on advertising, which kind of tells you the story: it wouldn't object if those restrictions were not going to affect its sales. Do you think that it is a generalisable proposition that, if there is a measure that might improve the lot of the public and in some way disadvantage the industry, one can measure the disadvantage by how loudly the industry protests? I am thinking of other measures to do with tobacco, such as the recent legislation on countertop displays, where the industry produced all sorts of evidence that this would have no effect on consumption. I ask myself the question: if it would have no effect on consumption, why are they protesting so much? Do you think there is a general message there that we could draw?

Professor John Britton: With tobacco it's fairly straightforward, because society doesn't need a tobacco industry. We could close it and none of us would be any the worse off, except the people directly employed by it who would move elsewhere.

Lord Crickhowell: It would strip out the tax revenue.

Professor John Britton: The tax revenue will come in from other sources, Lord Crickhowell. Money in circulation generates tax so, if we close the tobacco industry, poor people who buy cigarettes will spend that money on something else and still pay tax.

The Chairman: Alcohol.

Professor John Britton: Alcohol perhaps. So in the case of the tobacco industry, I think you're right that if the tobacco industry doesn't like it, it is probably good for public health. In other areas, that is much harder.

Q162 Lord Krebs: I wondered if there was a parallel with the food industry. When I was chairman of the Food Standards Agency, the industry objected strenuously to very clear labelling of the nutritional content of food. That told me the story that the nutritional content of food, if clearly displayed, would not be to its advantage.

Professor John Britton: Well, quite. I listened and I may have heard you on the radio rehearsing these arguments and just hearing the tobacco arguments of 20 years previously: "We're not advertising for new customers, we're advertising for market share. People will be confused by these labels, so we will go for a more complicated system", and so on.

Q163 Lord Crickhowell: Talking about industrial advertising, have we any clear evidence about the effectiveness or non-effectiveness of government advertising?

Professor Mike Kelly: In the past, we have seen some very effective government campaigns or, if you like, government advertising with respect to a whole range of health-related behaviours. Two stick in my mind. The first is the campaign when the epidemic of HIV and AIDS was beginning. That was one of the most successful advertising campaigns ever launched by a Government, through the old Health Education Authority, as I think it was then. To this day, people who saw that advertising remember it—the tombstones, the Psycho-type music and so on. At the time, the tracking studies determined, first of all, that the knowledge base relating to the disease went up dramatically as a consequence of that campaign and other things that were happening and, secondly, that among certain at-risk groups sexual behaviour changed, so that would be a good case in point.

Lord Crickhowell: As it happened, I was on the AIDS committee of the Cabinet that took the decisions.

Professor Mike Kelly: A very brave decision it was, too.

Lord Crickhowell: Of course we went and had a look at what was happening in Holland as an example, so we gathered some evidence. We had to overcome the then Prime Minister's reluctance to have advertising on such an unsavoury topic, but it was, as you said, extremely successful.

Professor Mike Kelly: It used the most sophisticated techniques of both television and poster advertising to achieve its goals. As I say, there is still, years later, recall of that campaign at a level that few campaigns of that era would be remembered.

Q164 Lord Crickhowell: So we might look at that example and others and see where it might be applied in other situations.

Professor Mike Kelly: The other one that I think is memorable is the seatbelt campaign a decade or so before that, perhaps longer. "Clunk Click Every Trip"—I still remember the phrase. Although one might say that was compulsion or coercion, because it was legally enforceable, nevertheless the campaign that preceded it was hugely and widely known. Compliance with the front-seat wearing of seatbelts has been a memorably successful public health innovation. The answer to your question is that mass media advertising is effective

and it does work. It doesn't solve all your problems and it doesn't bring about all the things that you might want—it's not a quick fix necessarily—but it is part of the armoury that you discard at your peril.

Dr Tim Chatterton: In reaction to that, I make the point that it doesn't need to be mass media nor does it need to be incredibly memorable to be effective. Evidence has come out of the Department of Energy and Climate Change from work that it has done promoting insulation to people, particularly campaigns that promote insulation within DIY stores. When people are already looking at things to improve their house, they will then go on to consider insulation among that. There are often more low-profile campaigns, which are targeted specifically where that behaviour or those choices are relevant. That shows a very different way from a huge scattergun, often much more expensive, approach.

Q165 Lord Alderdice: The three examples that you've given—tobacco, AIDS and seatbelt wearing—are all simple and straightforward and sum it up in a few words: "Stop smoking", "Sexual hygiene", "Clunk Click". We are looking at things such as obesity, which are much more complex issues. Is there any difference between the capacity to get a message across persuasively on a relatively simple, clear message, such as the three that you've described, and the broader one that we're looking at?

Professor John Britton: I disagree entirely that tobacco is a simple issue. The message may be simple—"Stop smoking"—but "Lose weight" is equally simple. The difficulty is understanding where people are in their understanding of that process and what nudges, support and coercive assistance they need to make the change. As an example from my own clinical work, in my out-patient clinics now, if I see people who smoke there is no question—we both understand that smoking is harmful and we can assume that the great majority would rather not be smokers. However, when I see people who are obese, most of them will not recognise themselves to be obese—they'll consider it normal to become overweight as you get older—nor will they see obesity as a health problem. It may be a simple problem—"Lose weight"—but there are many stages to take on the way. We've had to go through that with tobacco and we still are.

Q166 Lord Alderdice: It is not so simple, because if they lose weight too much you end up with an anorexic eating disorder as distinct from an overeating disorder, but you don't end up with that problem if they simply stop smoking. I think it's not quite such a simple question.

Professor Mike Kelly: I agree with John and I also agree with you, Lord Alderdice. That is to say, I think that the problem with obesity is that while at one level the message is very simple—it's both, "Consume fewer calories" and "Burn more calories in terms of energy expenditure", so it's about energy balance—how you do that is, in itself, quite complicated. The understanding of what calorific intake is is pretty complicated, too. Assessing the calorie content on your plate is pretty tricky, as is understanding the nutritional content of food and so on. It's not so much that food is bad for you. It's an excess of food that's bad for you, whereas you can say that all tobacco and all smoking is bad for you, full stop. In that sense, it's a different and more complicated thing with a more complicated set of players involved. Also, everyone has to eat. So in that sense you're dealing with a complex problem. In and of itself, it will not be as amenable to either a simple mass media campaign or a more targeted campaign as problems such as seatbelts, drink driving, tobacco or AIDS

are. However, that is not to say necessarily that a mass media approach wouldn't be part of the armoury that one would use to try to assist people in their choices, negotiating the supermarket and so on.

Q167 Earl of Selborne: I would like to bring up something quite different: how feasible it is to scale up from an individual evidence base through to a population. I note that, in NICE's written evidence, you say that the majority of experimental evidence about behavioural change relates to individual approaches and that it is rare that evidence can be extrapolated or generalised to the wider population with confidence and without caveats. I wonder if you could tell us how feasible it is to do just that and, again, whether there are examples of where this can be applied?

Professor Mike Kelly: Yes. In addition to that, I would say that the bulk of the evidence that relates to behaviour change of the individual kind that we're talking about tended to be what in the argot of public health is referred to as a downstream approach. That is to say, it is people working with individuals, the behaviour is already established and you are trying to deal with something that requires changing, rather than a more upstream approach, as the argot has it, which is to prevent in a primary sense the behaviour from getting started in the first place. In terms of the population level approach, it's not so much about scaling up lots of individual interventions as much as thinking about what the appropriate levers are at population level to bring about the kinds of changes that we would see leading to primary prevention in the first place. In that regard, primary prevention can take many forms, including the educational kind that we've heard about—education through mass media, legislation and regulation. All these things have an important primary role at population level. It really rather depends on the nature of the problem that you are concerned with. Then it's important to break it down in the way that the NICE guidance does and distinguish between the sorts of things that you can do at population level, at community level, at group or family level and at an individual level. The conundrum is that sometimes the individual level intervention will have population level effects and, of course, population level intervention will have individual effects. You're moving levels in terms of inputs and outcomes. Sometimes there's been a bit of confusion—sometimes through the policies, perhaps—in understanding which level is which and what you're doing with what. You can scale up if you take it into the mass media type of arena, but if the individual intervention is, say, one-to-one counselling, scaling up that up would be hugely expensive and simply wouldn't be a viable economic option—not now, but not ever actually.

Professor John Britton: An example of that is in smoking cessation. That is a behavioural intervention with pharmacotherapy support that for many years was a face-to-face, individual intervention available to very few but that over the last 10 years through the NHS Stop Smoking services has treated nearly 5 million people. An individual intervention has been delivered on such a massive scale as to get across to a huge proportion of the smoking population. So it can be done.

Q168 Earl of Selborne: We have been urged from time to time to look at the virtue of pilot schemes, which suggests to me that you have to start on a relatively small scale. If the object is to get a population scale intervention, does that inevitably mean scaling up or are there pilot schemes that could be population based?

Professor John Britton: The smoking example fits exactly with that. The interventions were established in individual clinics. They were then introduced in what were then health action zones, 20 deprived areas of the UK or England in the late 1990s. When they worked and were effective, they were put everywhere. The piloting is crucial. Particularly where you are dealing with interventions where you are not sure whether they are going to work and you are working on common sense, you have to try things if you can or be prepared to introduce them across the board—across the population—but review and change if they are not working. If you can pilot it, it makes sense.

Professor Mike Kelly: There is a caveat, however. The approach to smoking is a model of good practice in terms of intervention, research, evaluation and implementation. There is little doubt about that. Smoking cessation services are testament to the very rigorous and scientific approach that was taken. However, it hasn't always been the case that pilots, trying to do all sorts of things, have followed that kind of approach. Instead, there are many examples of pilots that have been tried here and there and then rolled out on a bigger scale without being properly evaluated. The critical thing is that pilots are important but they need to be properly evaluated in order to see if they are worth rolling out on a bigger scale. It is sometimes that step that has been missed. It wasn't missed with smoking, but it has been missed in other cases.

Dr Tim Chatterton: It is also worth noting that a small-scale pilot study might not be as effective as a wider national measure would be. For example, the sustainable travel demonstration towns experiments clearly showed that, although you might get a 9% reduction in local trips, the effect on the road network was considerably smaller because it was dwarfed by national transport that wasn't being affected by these measures. You also need to be careful that low responses on a pilot study aren't necessarily just because the pilot study is ineffective or doing it wrongly.

Q169 Lord Krebs: I want to go back to some of the examples that we've talked about—the reduction in smoking prevalence, seatbelt wearing and perhaps drink driving, where dramatic changes in behaviour have been brought about by some combination of legislation, education and, in the case of tobacco, taxation. I wondered whether, from the analyses of the changes and the different instruments that have been brought to bear, it's possible to isolate in some statistical sense the relative importance of those different instruments. Perhaps Professor Britton could talk about tobacco.

Professor John Britton: It is difficult to do that. This relates in a way to the question about meta-synthesis, systematic review and meta-analysis, because for the large-scale population measures there isn't a huge evidence base of countries or Governments that have introduced measures at a time that you're considering them. If you want to wait for clear-cut evidence, sometimes you will wait for ever. So for tobacco control, we have examples of areas such as California, Canada and Australia, where huge drops in smoking prevalence have been achieved but from a combination of all the measures that looked as if they would make sense. Where people have tried to divide up the contributions of different interventions, it is often very difficult to do that, because none of them has been imposed in isolation of others.

Q170 Lord Krebs: So the answer is no, it's not possible to identify the relative importance.

Professor John Britton: It would be possible but pragmatically it would just take too long. My feeling is that, where there is a sufficient evidence base to say that it makes sense to try something, it is better to try it than to prevaricate.

Q171 Lord Krebs: So when we were told that “Clunk Click” had an impact, we don’t know whether it was “Clunk Clink” or the legislation that made it compulsory to wear seatbelts.

Professor Mike Kelly: I suppose the short answer is that we don’t know which is the more significant, but it’s pretty clear that there was a synergy between the two.

Q172 Lord Krebs: Why do you say that it’s pretty clear?

Professor Mike Kelly: The evidence for that is that the non-compliance with the legislation, once it came into force, was minimal and I believe that without the preceding campaign—

Q173 Lord May of Oxford: Was this measured by fines for not wearing them?

Professor Mike Kelly: That sort of thing, yes.

The Chairman: People being caught, yes.

Q174 Lord Patel: There is no evidence that the level of fines initially was extremely high.

Professor Mike Kelly: There was no evidence?

Lord Patel: That the level of fines imposed at the beginning of the legislation was high.

Professor Mike Kelly: I beg your pardon, that’s not what I meant.

Q175 Lord May of Oxford: Fines would give you an idea of how many people wore them a day.

Professor Mike Kelly: My impression—we will have to make sure that my impression is accurate—is that the degree of non-compliance following the D-Day in question, I believe in February, was not such that we saw lots of drivers refusing to wear a seatbelt and therefore the police having to take a lot of action. It wasn’t a very heavy-handed enforcement. That leads me at least to infer that the preceding campaign, the education and so on were an important part of the success of that measure.

Professor John Britton: In the tobacco example, which is the smoke-free legislation of which there were very few breaches, the lesson from southern Ireland was that breaches will come, people will test the legislation to see what they can get away with and it’s very important to crack down on those breaches very quickly. That is what happened in the UK, too, and compliance was extremely high.

Q176 Lord Krebs: What I am not convinced that I have heard is that there is actual evidence, to respond to Lord Crickhowell’s question, that marketing by Governments has done the trick on its own, or even evidence that it had any effect.

Professor John Britton: Well Australia has invested most in government campaigns against smoking and there are academics from Australia who will argue that spending on cessation services, for example, would be better spent on health promotion campaigns.

Q177 Lord Krebs: Have they got evidence that it was the education campaign as opposed to the legislation that made the difference?

Professor John Britton: They have evidence of patterns of smoking and of quitting from surveys that relate to certain waves of advertising.

Lord Krebs: Can we ask for that as written evidence?

The Chairman: It would be very helpful to have the reference for that. Professor Kelly, you said that you would want to check that out and come back to us. That would be enormously helpful. You said to us earlier that you thought that it was the combination of the two, so it would be quite helpful to try to disaggregate, where one can, the evidence as to how one works and how the other works, and then where they interconnect. If we could get that, that would be very helpful.

Q178 Lord May of Oxford: I am sorry to load this on you. Could we also have that from California, because there is two decades of evidence on California and smoking? What are the differences?

Professor John Britton: Massachusetts did it, too. That was a comprehensive approach of saying, "We will do everything we can for a period and see what happens to smoking". In those circumstances, that's very hard.

Lord May of Oxford: We would like to know the balance and what the facts were, if you could.

Professor John Britton: I can look.

Lord May of Oxford: Sorry to load you, but it's interesting.

The Chairman: I have a feeling the Massachusetts one didn't disaggregate, but still. Can we move on?

Q179 Lord Crickhowell: I think that we have probably covered quite a lot of this, but to what extent can evidence for the use of an intervention in a specific policy area be used as evidence for very similar interventions in quite different contexts? Can you switch from tobacco to thinking that this will work somewhere else? Can you provide any examples where an intervention that has been effective in addressing one behaviour has been used successfully to tackle a quite different sort of behaviour?

Dr Tim Chatterton: Not easily and not without checking. Where measures have been successful in one field, looking at them and seeing what worked could provide ideas for how you might develop policy in another area. You would certainly have to do a lot of checking and evaluation before simply transferring between any behaviours, no matter how close. Even within energy-related behaviour, it's quite clear that getting your roof insulated is different from turning your lights off when you leave the room. Even within that sphere of energy, they are completely different, but it's worth looking at what has worked elsewhere to see what might work for you.

Q180 The Chairman: Either of you on that one?

Professor Mike Kelly: At a much more micro level, I think that the evidence of the transferability of the brief intervention approach has proven that it is transferrable. General practitioners have used brief interventions by raising the issue of smoking, for example—this is where it began—but have then moved on to other areas, including encouraging people to take physical activity, to think about their drinking and so on. In that case, it has transferred across but, of course, it has not transferred very far because it's still in the same doctor's surgery—it is still the same doctor giving the advice. Perhaps it's the nature of the authority figure of the general practitioner or the physician that is critical. There are certain underlying things where transferability is much easier than in some of the big things that Tim's talking about.

The Chairman: But the evidence is thin.

Professor Mike Kelly: Yes.

Q181 Lord Warner: This is a question to all of you. What examples can you provide of behaviour change interventions that have been used successfully and unsuccessfully in other countries? It is possible to learn lessons from interventions used in other countries? This is breaking out of the little Englander approach.

Professor John Britton: I'll give a very clear example, which is the use of smokeless tobacco as an alternative to smoking in Sweden, where there has been huge behaviour change among people who use tobacco not in quitting tobacco use but in switching from smoking it to sucking it. The consequences are huge health dividends. The European Commission's response to that has been to ban smokeless tobacco outside of Sweden. It may be the right decision for other reasons, but the point is that there is an example of a harm-reduction strategy from Sweden that could have a huge impact on public health, if it were applied in a mode that was relevant to this country.

Q182 The Chairman: Other examples?

Dr Tim Chatterton: I provided some examples. One that our university uses quite a lot is from the Vauban suburb of Freiburg, where the whole planning of the suburb was designed around encouraging people not to use cars. There have been huge differences in car use there. It ended up with 16% of journeys made by car, whereas a possibly equivalent new suburb in Bristol ended up with 80% of journeys made by car. Throughout Europe, in lots of issues concerning planning transportation and climate change, there are very good examples. However, they involve a large amount of commitment to bring them over, because the scale at which they are being employed—at city or suburb level in Europe—doesn't seem to get taken on here. Even the eco-towns concept employed by the last Government didn't seem to take on these issues about how you lay things out on a street-by-street level.

Professor Mike Kelly: The example that springs to mind is of the unintended consequence of using alcohol taxation as your principal mechanism for control. In certain parts of Scandinavia, this has brought down consumption in terms of people buying alcohol, but it's led to an increase both in people brewing their own and indeed in smuggling. There is a similar issue with tobacco. That, for me, is an example where behaviour change has been

brought about but not necessarily always in the direction that one wants. That's a good reason for being rather careful with using blunt price as your only mechanism for control, which is why NICE of course recommended a rather more targeted approach.

Q183 Lord Warner: You chaps know about these things, but do you think Government knows about them? What is your sense?

Professor Mike Kelly: The answer is sometimes. There are some very sophisticated people with whom we work in government both on the political side and on the Civil Service side of things. One of the troubles is, of course, that the public aspects of policymaking are sometimes done in the glare of publicity, which doesn't always help a rather more reflective approach to the sorts of things that need to be done.

Professor John Britton: In response to that and to an earlier point from you, Lord Warner, on the question about who was responsible for putting some of these policies into practice—and Lord Patel asked for an example of an area where there was evidence but nothing was happening—I will give you the example of smoking in films, which is concentrated in films targeted at 15 and 12 year-olds. There is very strong evidence of an exposure-response relationship on uptake of smoking if young people watch smoking in films. There is evidence that, if you precede films with ads explaining that the smoking is there and it is hazardous, children are less likely to come out of the films feeling positive about them. We've put that evidence to the British Board of Film Classification and to the Department for Culture, Media and Sport. Both declare that there is no problem. The evidence, in my view, is as strong as for any causal relationship between an exposure and a behaviour. The block is not at the academic level but at the political level.

Lord May of Oxford: I thought that this was really very good and, as my wife is fond of saying, no good deed goes unpunished. I would like, if I may, to ask you to follow up—you gave us some written stuff—with something a little more focused on the case studies that we've been talking about. I just suggest two. I declare an interest: the Committee on Climate Change. Some people suggested that we should propose lowering the speed limit. I said, “That's absurd. In Britain, no one takes the faintest notice of the speed limit. We should propose enforcing the speed limit”. Everybody said, in response to that, “That's politically infeasible”. That's a behaviour thing. The difference in Australia and America, both of which I've lived in for a decade or more, is that people obey the speed limit and they do it because if you don't, you will surely get caught, whereas here the speed limit is a joke. Also, drunk driving—we didn't talk about that. That's an important change. In Australia, there are repeated, frequent random tests. In the last 40 years, I've visited each year, but I have been stopped randomly twice. I am a teetotaller so I certainly wasn't drunk driving and I was even under the speed limit. I wonder if you could give us a few more specific comparisons. I was also going to ask you about California and smoking—why are they so far ahead of us? Any thoughts about that would be so helpful, but not to answer now.

The Chairman: In any case, we would like a list of more examples. You have given us good examples, but it would be really helpful to have more internationally and nationally. That would be really helpful to us.

Lord May of Oxford: I'm not saying that everyone else is better than us; I'm just saying that they are different and that they have good things.

Q184 Lord Crickhowell: I wanted to ask a related question. We've looked internationally. You started by talking about the gulf between policymaking and academia. I just wondered whether there are any lessons to be learnt from the private sector. Admittedly people are trying to change behaviour on a much smaller scale there, but there may be many thousands of employees in a large organisation. I don't think that there is a gap, because anyone seeking to change the private sector has to get alongside and work very closely with the business managers to know what they want and what's going on. You build up a relationship without which you cannot operate. I just wonder if there aren't some lessons that the public sector and public departments could learn from what happens in getting change in the private sector.

Dr Tim Chatterton: On a slight tangent to that—and I think that your point is fairly good—about the gulf and filling this gulf, the role that NGOs play is important as well. Certainly in terms of academia getting information out to a lot of practitioners on the ground at a local level, that works very well, but national government doesn't necessarily interface on that level. I've done a lot of work with NGOs, particularly Environmental Protection UK and the UK Public Health Association. They have both been extremely good organisations at taking the academic, scientific level of work and then filtering it through to the professionals involved and then telling policymakers what it should mean in terms of policymaking. There is a huge and often unrecognised role played by them.

The Chairman: Thank you very much. We need to end it here. I thank all three of you very much for this session. It was extremely good and fun, which is absolutely excellent. Thank you very much. You will get the transcript within the next 10 days. Do write in with any alterations that you want to make. Also, Lord May, I and others have asked you whether there are any other examples that you can give us, both international and within the UK, as those would be hugely helpful to us. Anything else you send to us will be published alongside the transcript, so it would very, very helpful indeed. Thank you very much, indeed.

Supplementary written evidence from the National Institute of Health and Clinical Excellence (NICE) (BC 118)

Introduction

1. The National Institute for Health and Clinical Excellence (NICE) is the independent organisation responsible for providing national guidance on promoting good health and preventing and treating ill health.
2. NICE's Centre for Public Health Excellence produces guidance for the NHS, local government and other sectors about populations, communities, groups and individuals on activities, policies and strategies that can help prevent disease or improve health. The guidance may focus on a particular topic (smoking), a particular population (schoolchildren) or a particular setting (the workplace). All recommendations, standards and services are developed in consultation with independent advisory committees which include experts and members of the public and which examine the best available evidence of effectiveness (does it work?) and cost effectiveness (is it good value for money?).
3. The Centre for Public Health Excellence is a national leader in the synthesis and review of the evidence about health related behaviour change. The Centre utilises a broad multidisciplinary perspective drawing upon health, economics, social and behavioural sciences, and has developed one of the most robust systems in the world for evaluating the evidence about the effectiveness of behaviour change interventions across the full spectrum of the UK population, both in specific topics and generically.

Summary

4. As well as reducing emissions from vehicle use, modal shift towards active travel plays an important role in delivering the health benefits from an active population. The majority of the adult population are not active at a level to provide the health benefits. This not only has significant effects on individuals but also contributes considerably to NHS costs and to loss of earnings from ill health.
5. To date, NICE has published four pieces of guidance that look specifically at promoting physical activity using various approaches in several setting with different population groups. In addition, physical activity plays an important part in other public health guidance and in a wide range of NICE clinical guidelines.
6. Achieving behaviour change in any area is likely to need long term, persistent, coordinated action that address a wide range of issues at various levels. These include individual, community and policy level approaches.
7. Although NICE has not specifically examined techniques to achieve modal shift across the board, several pieces of NICE guidance contain recommendations for action that will support modal shift towards physically active transport.

Transport and health

8. This call for evidence notes that 'although technological measures are important in reducing emissions and may be effective in the long-term they are not sufficient to achieve the necessary reduction in carbon emissions in the short-term. Getting

individuals to reduce the amount that they use their cars is necessary if the UK's carbon reduction targets are to be met successfully'. In addition to being important in reducing carbon emissions from transport, modal shift towards active transport has important implications for the health of the population. The NICE briefing on transport and health noted that 'It is clear that transport and health are inextricably linked. Transport has major health impacts – through accidents, levels of physical activity undertaken, effects on air pollution, and access to a range of services.'³¹⁹ (http://www.nice.org.uk/nicemedia/documents/makingcase_health-transport.pdf). Promoting physical activity by encouraging walking and cycling plays an important role in both reducing car use in towns and cities and in addressing the health disbenefits of inactive lifestyles.

9. NICE has published several pieces of guidance aimed at supporting people becoming more physically active. Our submission reflects some of these recommendations. A full list of NICE guidance can be found on our website at www.nice.org.uk/Guidance/PHG/Published.

Physical activity and health

10. Physical activity not only contributes to wellbeing, it is essential for good health³²⁰ (DH 2004). Increasing physical activity levels in the population will help prevent or manage over 20 conditions and diseases. This includes coronary heart disease, diabetes, some cancers and obesity. It can help to improve mental health. It can also help older people to maintain independent lives.
11. In 2004, the DH estimated that physical inactivity in England cost £8.2 billion annually (this included the rising cost of treating chronic diseases such as coronary heart disease and diabetes). It is estimated that a further £2.5 billion each year is spent on dealing with the consequences of obesity. Again, this can be caused, in part, by a lack of physical activity (DH 2004).
12. Levels of physical activity in the population are low. The 2008 Health Survey for England³²¹ looked in detail at physical activity. It found that based on self-reported physical activity, 39% of men and 29% of women aged 16 and over met the Chief Medical Officer's minimum recommendations for physical activity in adults (achieving at least 30 minutes of at least moderate intensity physical activity on 5 or more days a week). Using an objective measure of physical activity, only 6% of men and 4% of women met the government's current recommendations for physical activity.
13. As noted above, the current recommendation is to accumulate at least 30 minutes of at least moderate intensity physical activity on 5 or more days a week. Moderate-intensity activity will usually lead to an increase in breathing and heart rates (to the level where the pulse can be felt) and a feeling of increased warmth. It may also cause the person to sweat on hot or humid days. This level of activity can be achieved during daily life, for example, by walking at a brisk pace (at least 3 miles per hour or 5 kilometres an hour) and cycling.

³¹⁹ Making the Case – improving health through transport (2005).

http://www.nice.org.uk/nicemedia/documents/makingcase_health-transport.pdf

³²⁰ Department of Health (2004) At least five a week: evidence on the impact of physical activity and its relationship to health. London: Department of Health

³²¹ http://www.ic.nhs.uk/webfiles/publications/HSE/HSE08/HSE_08_Summary_of_key_findings.pdf

Physical activity in NICE guidance

14. Four pieces of NICE public health guidance have focused on promoting physical activity. These are ‘four commonly used methods to increase physical activity’ (PH2)³²², ‘physical activity and the environment’ (PH8)³²³, ‘promoting physical activity in the workplace’ (PH13)³²⁴ and ‘promoting physical activity for children and young people’ (PH17)³²⁵. Physical activity is also an important element of other NICE public health guidance, including ‘mental wellbeing and older people’ (PH16)³²⁶ and ‘prevention of cardiovascular disease’ (PH25)³²⁷. Physical activity is a key element in the NICE clinical guideline on obesity (CG43)³²⁸ and is identified as an important element in preventing or treating the condition in around 30 other clinical guidelines. These range from the importance of exercise to induce better sleep in people with Parkinson’s disease (CG35)³²⁹, advice on the role of physical activity on breast cancer risk (CG41)³³⁰, the role of physical activity to promote exercise capacity following heart attack (CG48)³³¹ and the importance of physical activity in osteo-arthritis (CG59)³³².

Questions posed by the committee

What are the most influential drivers of behaviour affecting an individual’s choice of mode of travel?

15. Individual behaviours, including choice of mode of travel, are influenced by a range of factors. The guidance on physical activity and the environment (PH8)³³³ noted that ‘a range of economic, social, cultural and environmental factors influence physical activity levels and the overall impact may be synergistic rather than simply cumulative’.
16. Achieving behaviour change is generally not a straight forward process and frequently takes time and concerted effort to achieve. Current behaviours (including travel choice decisions) have developed over a considerable period. The guidance on physical activity and the environment notes that the distance people walk and cycle has declined significantly in the last 3 decades³³⁴. The average distance walked, per person per year, has fallen from 255 miles in 1975/76 to 201 miles in 2006. Bicycle mileage for the same years fell from 51 to 39 miles per person per year. Past policy and practice has often – perhaps not intentionally – given priority to sedentary modes of transport and ways of using buildings. Over recent decades, environmental changes in England have made habitual activity less common. However, many components of the environment can be modified to make it easier for more people to be physically active. The design and layout of

³²² <http://guidance.nice.org.uk/PH2>

³²³ <http://guidance.nice.org.uk/PH8>

³²⁴ <http://guidance.nice.org.uk/PH13>

³²⁵ <http://guidance.nice.org.uk/PH17>

³²⁶ <http://guidance.nice.org.uk/PH16>

³²⁷ <http://guidance.nice.org.uk/PH25>

³²⁸ <http://guidance.nice.org.uk/CG43>

³²⁹ <http://guidance.nice.org.uk/CG35>

³³⁰ <http://guidance.nice.org.uk/CG41>

³³¹ <http://guidance.nice.org.uk/CG48>

³³² <http://guidance.nice.org.uk/CG59>

³³³ <http://guidance.nice.org.uk/PH8>

³³⁴ Department for Transport (2007) National travel survey 2006. London: Department for Transport

towns and cities can encourage or discourage travel and access on foot or by bicycle. Similarly, building location and design can encourage (or discourage) the use of stairs and other physical activities. These modifications can be achieved by public sector agencies working in partnership with other organisations, including those in the voluntary and community sectors. The need for long term, consistent effort to achieve behaviour change is demonstrated in the guidance on the prevention of cardiovascular disease (PH25)³³⁵. This recommends that regional programmes to prevent cardiovascular disease (for which physical inactivity is an important risk factor) are sustainable 'for a minimum of 5 years'.

17. It is possible to identify evidence about the effectiveness of individual interventions in achieving specific outcomes, and this is frequently what NICE guidance attempts to do. However, real world actions are rarely limited to single interventions in the absence of complicating factors. It is likely that programmes taking different approaches to the same issue will interact and, as indicated above, these interactions may be synergistic rather than simply cumulative. This is further illustrated in the NICE guidance on the prevention of unintentional injuries on the road in children and young people (PH31)³³⁶. This focused on road design and modification to reduce injuries and makes a number of recommendations in these areas. The guidance notes that the recommendations 'should be implemented as part of a broader strategy that includes driver and public education and enforcement activities'

What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?

18. The NICE public health guidance on physical activity and the environment (PH8)³³⁷ looked for evidence relating to changes to the physical environment and changes in physical activity. Interventions included changes to the road environment but were not limited to these. As a result, the committee were able to make a number of recommendations that have relevance to the role of infrastructure in encouraging physically active transport. At a local planning level, the guidance recommended that those responsible for strategies, policies and plans should:
 - involve all local communities and experts at all stages of the development to ensure the potential for physical activity is maximised.
 - Ensure planning applications for new developments always prioritise the need for people (including those whose mobility is impaired) to be physically active as a routine part of their daily life.
 - Ensure local facilities and services are easily accessible on foot, by bicycle and by other modes of transport involving physical activity. Ensure children can participate in physically active play.
 - Assess in advance what impact (both intended and unintended) the proposals are likely to have on physical activity levels. (For example, will local services be accessible on foot, by bicycle or by people whose mobility is impaired?) Make the results publicly available and accessible. Existing impact assessment tools could be used.

³³⁵ <http://guidance.nice.org.uk/PH25>

³³⁶ <http://guidance.nice.org.uk/PH31>

³³⁷ <http://guidance.nice.org.uk/PH8>

19. The guidance also made two recommendations aimed at local planning. The first was to ensure pedestrians, cyclists and users of other modes of transport that involve physical activity are given the highest priority when developing or maintaining streets and roads. (This includes people whose mobility is impaired.) Use one or more of the following methods:
 - re-allocate road space to support physically active modes of transport (as an example, this could be achieved by widening pavements and introducing cycle lanes)
 - restrict motor vehicle access (for example, by closing or narrowing roads to reduce capacity)
 - introduce road-user charging schemes
 - introduce traffic-calming schemes to restrict vehicle speeds (using signage and changes to highway design)
 - create safe routes to schools (for example, by using traffic-calming measures near schools and by creating or improving walking and cycle routes to schools).
20. The second transport recommendation was to plan and provide a comprehensive network of routes for walking, cycling and using other modes of transport involving physical activity. These routes should offer everyone (including people whose mobility is impaired) convenient, safe and attractive access to workplaces, homes, schools and other public facilities. (The latter includes shops, play and green areas and social destinations.) They should be built and maintained to a high standard.
21. Recommendation four looked at public open space. It includes elements of infrastructure by saying ‘ensure public open spaces and public paths can be reached on foot, by bicycle and using other modes of transport involving physical activity. They should also be accessible by public transport.’ Recommendation five looked at the role of buildings and campuses in promoting active travel. It says:
 - Those [architects, designers, developers, employers and planners] involved with campus sites, including hospitals and universities, should ensure different parts of the site are linked by appropriate walking and cycling routes. (Campuses comprise two or more related buildings set together in the grounds of a defined site.)
 - Ensure new workplaces are linked to walking and cycling networks. Where possible, these links should improve the existing walking and cycling infrastructure by creating new, through routes (and not just links to the new facility).

What are the latest developments in the evidence-base in relation to changing travel-mode choice and the implications of those developments for policy?

22. The guidance discussed above (physical activity and the environment PH8) was published in January 2008. The evidence reviews used to inform it were carried out in 2005-6 and captured evidence published before that. As part of usual NICE processes, the guidance has been considered for updating. This has involved a meeting of an expert group to consider the state of the evidence in this area to identify whether the guidance needed updating. It was the view of this group that

there was not sufficient new evidence that would make a substantial difference to the recommendations. This view is currently undergoing consultation with stakeholders.

What are the most appropriate type and level of interventions to change travel-mode choice?

23. The response from NICE to the committee's original call for evidence noted that to achieve behaviour change commissioners, practitioners and policy makers should 'Co-ordinate behaviour change interventions on individual, community and population levels, and ensure that both policy and delivery infrastructures are there to support, monitor and improve intervention and practice'. In addition to the recommendations identified above relating to environmental/infrastructure changes, other NICE public health guidance has made recommendations which are relevant to promotion of active travel (recommendations included here are those which directly refer to the promotion of active travel. Other guidance includes recommendations for promotion of physical activity which could include walking and cycling as transport.) These address achieving change by action at different levels.
24. NICE has considered the promotion of physical activity in the workplace (PH13³³⁸). This recommended the development of an organisation-wide plan or policy to support physical activity. This should link to relevant national and local policies (for example, on health or transport). It also recommended the introduction and monitoring of an organisation-wide, multi-component programme to encourage and support employees to be physically active. This could be part of a broader programme to improve health and could include— policies to encourage employees to walk, cycle or use other modes of transport involving physical activity (to travel to and from work and as part of their working day). A physical activity programme should (among other issues) encourage employees to walk, cycle or use another mode of transport involving physical activity to travel part or all of the way to and from work (for example, by developing a travel plan).
25. PH17³³⁹ considers the promotion of physical activity for children and young people. Recommendations relevant to the promotion of active travel include ensuring there is a coordinated local strategy to increase physical activity among children and young people, their families and carers. This strategy should ensure local transport and school travel plans are coordinated so that all local journeys can be carried out using a physically active mode of travel (recommendation 2). Recommendation 5 aims to ensure that local transport plans are aligned with other plans which may impact on physical activity of children and young people. Transport plans should aim to increase the number of children and young people who regularly walk, cycle and use other modes of physically active travel. Transport planners should continue working with schools to develop, implement and promote school travel plans. School travel plans should continue to encourage a culture of physically active travel (such as walking or cycling). They should have physical activity as a key aim, in line with existing, and integrate with the travel plans of other local schools and the local community.

³³⁸ <http://guidance.nice.org.uk/PH13>

³³⁹ <http://guidance.nice.org.uk/PH17>

26. PH25 (prevention of cardiovascular disease)³⁴⁰ addresses physical activity as part of broad population level prevention strategies. The guidance identifies actions which could be considered for action at a national level to support physical activity. These are:

- Ensure guidance for local transport plans supports physically active travel. This can be achieved by allocating a percentage of the integrated block allocation fund to schemes which support walking and cycling as modes of transport.
- Create an environment and incentives which promote physical activity, including physically active travel to and at work.
- Consider and address factors which discourage physical activity, including physically active travel to and at work. An example of the latter is subsidised parking.

Locally, in addition to the recommendations from PH8³⁴¹ and PH13³⁴², the guidance makes the following recommendations:

- Apportion part of the local transport plan (LTP) block allocation to promote walking, cycling and other forms of travel that involve physical activity. The proportion allocated should be in line with growth targets for the use of these modes of transport.
- Ensure cycle tracks created under the Cycle Tracks Act 1984 are part of the definitive map (the legal record of public rights of way).
- Align all 'planning gain' agreements with the promotion of heart health to ensure there is funding to support physically active travel. (For example, Section 106 agreements are sometimes used to bring development in line with sustainable development objectives.)

27. The NICE guidance documents discussed above make recommendations at various 'levels'. These include options for national policy (the guidance notes that the final decision on whether these policy options are adopted – and how they are prioritised – will be determined by government through normal political processes); those making plans or programmes at a local or regional level as well as those involved developing transport plans as well as those developing programmes of activities.

28. Recommendations also address organisations who own, manage or otherwise influence the space used routinely by the public and so can influence people's ability to be physically active. (For instance, the location and accessibility of a building can affect whether or not people choose to walk or cycle there). These organisations include public sector landowners and managers (such as local authorities, the education sector and the NHS) as well as private organisations (including businesses) and voluntary sector or non-governmental organisations (NGOs). Interventions can and should be taken at a variety of levels to influence travel-mode choice.

³⁴⁰ <http://guidance.nice.org.uk/PH25>

³⁴¹ <http://guidance.nice.org.uk/PH8>

³⁴² <http://guidance.nice.org.uk/PH13>

Who are the most effective agents for the delivery of behaviour interventions to change travel-mode choice?

29. It is frequently difficult to identify how factors such as job title influence the effectiveness of interventions. An additional complication is to identify not just the most effective agents but how cost-effectiveness varies with different deliverers.
30. While there may be differences in effectiveness as a result of aspects of the agent's position or relationships with the subject of the intervention (such as the possibility of a different response to someone perceived as being in authority or someone perceived as a 'peer') it is probably as important that the deliverer is equipped with the necessary skills and information to deliver the intervention. NICE guidance PH6 on behaviour change³⁴³ recommends that training and support for those involved in changing people's health-related behaviour be provided so that they can develop the full range of competencies required. These competencies include the ability to:
 - identify and assess evidence on behaviour change
 - understand the evidence on the psychological, social, economic and cultural determinants of behaviour
 - interpret relevant data on local or national needs and characteristics
 - design, implement and evaluate interventions and programmes
 - work in partnership with members of the target population(s) and those with local knowledge.

How do current behaviour change interventions seek to change travel-mode choice and what use is made of available scientific evidence?

Are current policy interventions addressing both psychological and environmental barriers to change?

Are policy interventions appropriately designed and evaluated?

31. The difficulties of carrying out high quality evaluations of policy interventions are compounded by the wide range of factors at a policy level that may influence individual behaviours such as modal choice. The NICE guidance on physical activity and the environment (PH8)³⁴⁴ notes that 'past policy and practice has often – **perhaps not intentionally** – given priority to sedentary modes of transport and ways of using buildings' [emphasis added]. Given the huge range of policy issues that may influence travel choice (for instance fiscal policy, land use, planning, environment, employment and economy, health and education as well as transport policy) the potential for unintentional impacts are substantial.

What lessons have been learnt and applied as a result of the evaluation of policy?

³⁴³ <http://guidance.nice.org.uk/PH6>

³⁴⁴ <http://guidance.nice.org.uk/PH8>

What lessons can be learnt from interventions employed in other countries?

32. NICE guidance generally incorporates evidence from other countries in its reviews and so lessons are incorporated into NICE recommendations. This is supported by the consultations with stakeholders which would be able to identify and incorporate any key evidence that has been missed.
33. While it is clear that evidence from other countries may be relevant it is important to be aware that it may not be possible to translate a study from one country directly to the situation in this country. NICE reviews attempt to address this by considering the 'applicability' of evidence. Assessing applicability requires a judgement of the extent to which evidence in a review applies to the areas for which recommendations are to be developed. This does not imply that evidence from other countries is not applicable, nor that all evidence from this country is applicable to the specific situation under consideration. It raises issues that may be important in the process of translating evidence into recommendations. The NICE public health methods manual³⁴⁵ identifies several characteristics that need to be taken into account when considering applicability. These include:
 - Population: Age, sex/gender, race/ethnicity, disability, sexual orientation/gender identity, religion/beliefs, socioeconomic status, health status (for example, severity of illness/disease), other characteristics specific to the topic area/review question(s).
 - Setting: Country, geographical context (for example, urban/rural), healthcare/delivery system, legislative, policy, cultural, socioeconomic and fiscal context, other characteristics specific to the topic area/review question(s).
 - Intervention: Feasibility (for example, in terms of health services/costs/reach), practicalities (for example, experience/training required), acceptability (for example, number of visits/adherence required), accessibility (for example, transport/outreach required), other characteristics specific to the topic area/review question(s).
 - Outcomes: Appropriate/relevant, follow-up periods, important health effects.

13 January 2011

³⁴⁵ <http://www.nice.org.uk/media/2FB/53/PHMethodsManual110509.pdf>

Supplementary written evidence from Professor John Britton, UK Centre for Tobacco Control Studies (BC 149)

Examples from tobacco policy relevant to the discussion on behaviour change at the House of Lords Select Committee on Science and Technology, Tuesday 23rd November 2010.

Examples of interventions that have succeeded or failed in tobacco control, and the level of evidence available at the time of implementation:

Smoke-free public and work places, use of higher prices, health promotion campaigns and cessation services have all been effective and implemented – in recent years, anyway - on the basis of strong evidence.

Prohibition of advertising and sponsorship has also been successful, and was based on strong common sense and supportive observational evidence.

Health warnings were introduced without evidence of benefit and probably were not effective in the early years of use in the UK. There is now however good evidence in support of picture warnings.

Low tar cigarettes were introduced to reduce hazard from smoking, with no evidence that they would, and were at best unsuccessful and at worst counterproductive to public health. The same probably applies to labels explaining tar and nicotine content.

Prohibiting sale of cigarettes to young people is logical and consistent with the hazard of the product, but has probably achieved relatively little in terms of effectiveness.

Measures that arise through voluntary agreement with the tobacco industry, including low tar cigarettes and restrictions on marketing, promotion and smoke-free public places have been almost exclusively unsuccessful.

Effect of tobacco control programmes on prevalence:

Examples of countries or states in which tobacco control has been successful include California, Massachusetts, Canada, Australia. All of these have involved combinations of conventional tobacco control policy, such as price and mass media campaigns, though it is difficult to distinguish which of these policy components is most effective. The evidence from Massachusetts and California indicates however that while the programmes were in place, smoking prevalence fell more quickly than in other US states, and that when the programmes ceased, trends in prevalence returned to that of other states.

Two studies summarising this work, and their abstracts, are:

Biener L, Harris JE, Hamilton W. Impact of the Massachusetts tobacco control programme: population based trend analysis. Br Med J 2000;321:351-354.

National Institute for Clinical Excellence, UK Centre for Tobacco Control Studies and Dr Tim Chatterton

Pierce JP, Gilpin EA, Emery SL, White MM, Rosbrook B, Berry CC et al. Has the California tobacco control program reduced smoking? JAMA 1998;280:893-899.

Effect of mass media campaigns

A recent Cochrane systematic review concluded that the evidence in favour of mass media campaigns was mixed:

Bala M, Strzeszynski L, Cahill K. Mass media interventions for smoking cessation in adults. Cochrane Database Syst Rev 2008;CD004704.

However there are specific examples of studies documenting success, including:

Farrelly MC, Davis KC, Haviland ML, Messeri P, Healton CG. Evidence of a dose-response relationship between "truth" antismoking ads and youth smoking prevalence. Am J Public Health 2005;95:425-431.

Hurley SF, Matthews JP. Cost-effectiveness of the Australian National Tobacco Campaign. Tobacco Control 2008;17:379-384.

McVey D, Stapleton J. Can anti-smoking television advertising affect smoking behaviour? Controlled trial of the Health Education Authority for England's anti-smelting TV campaign. TOB CONTROL 2000;9:273-282.

Tobacco imagery in film

There is strong evidence that children exposed to smoking in films are more likely to become smokers themselves, that the effect on children and young people is directly related to the amount of exposure, and evidence that this effect is preventable. However, feature films remain a major source of exposure of young people to smoking and smoking role models and although the British Board of Film Classification argue that their classification takes account of smoking, the evidence (see below) indicates that exposure to smoking, and sometimes to tobacco brands, is commonplace in films passed as suitable for young people in the UK.

Lyons A, McNeill A, Chen Y, Britton J. Tobacco and tobacco branding in films most popular in the UK from 1989 to 2008. Thorax 2010;65:417-422.
Abstract:

A simple change to film classification policy, making 18 certification the default for films including smoking (and allowing exceptions for the relatively rare occasions in which smoking is appropriate or even necessary) would in my view have dramatic influence on the perception and uptake of smoking among young people in the UK

7 December 2010

Profesor Lyndal Bond, Professor Ray Pawson, Professor David Gunnell, Department of Energy and Climate Change and Department for Work and Pensions

Written evidence from Professor Ray Pawson, University of Leeds (BC 6)

I. Lessons from the Evaluation of Behaviour Change Programmes: A Summary

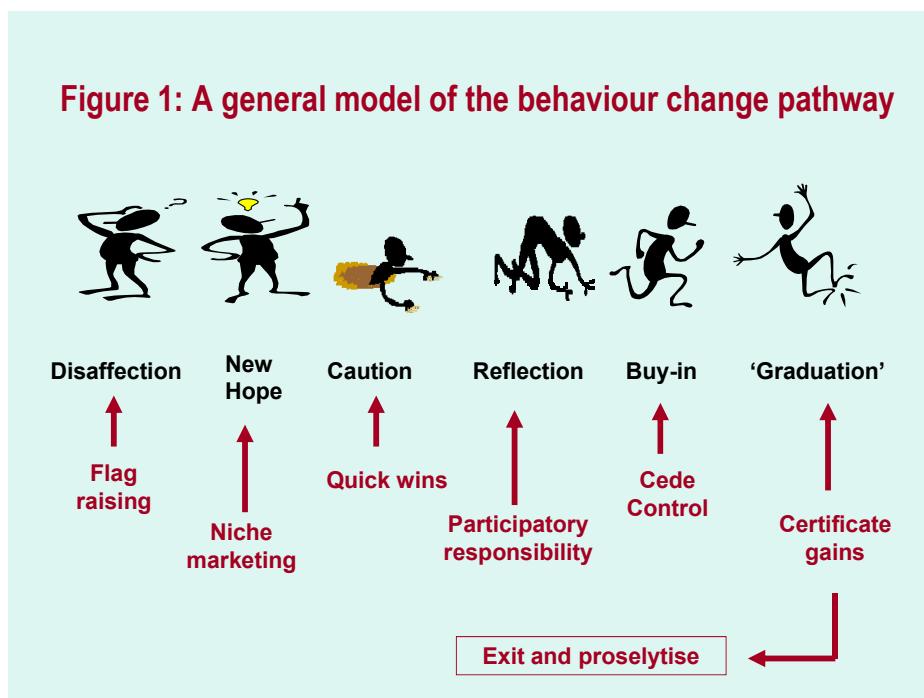
I. How behaviour is changed

I.1. Modern public policy is not without ambition. Persuading the overweight to slim, prisoners to go straight, NEETS to enter the workforce, smokers to quit, addicts to become clean, sink communities to swim, motorists to bus and so on are tasks of considerable complexity. The simple phrase ‘behavioural change’ belies the enormous transformation in individual and collective reasoning that is involved. The programmes that attempt to do so do not work through Pauline conversions, divine deliverance, instant redemption or miracle cures. They work by persuading subjects to change. And subjects, from the very beginning, will be relatively recalcitrant or willing. Subjects on the threshold of a programme will ponder, wait, figure, investigate, and change their minds. Subjects over the threshold will dive in, tread warily, pull out, dawdle, support, sabotage, take over, malingering, proselytise and so on. Programmes work to the extent that they can shift the tide, moving sufficient numbers of the marginal and refractory into compliance and commitment with the intervention goals. The co-ordination of a whole set of ideas, individual and institutions is required to create durable change. Programmes need to construct runways rather than springboards for behavioural change.

I.2. Too much attention in policy making and evaluation has been directed at the ‘manifest’ content of interventions. Policy-making is energised by the hot new idea. Attention is thus drawn immediately to the unique properties and powers of the latest ‘measure’, ‘treatment’, ‘therapy’ or ‘forum’. Thus NEETS are offered ‘mentoring’, the obese are provided with BMI calculators, addicts are introduced to ‘peer learning’, motorists face ‘congestion charges’, prisoners are encouraged to improve their ‘cognitive skills’ and so on. Interventions find support and are brought to life if there are persuasive reasons to believe that a new-fangled idea might have a significant leverage on a long-standing problem.

I.3. But what happens next? The machine takes over. The intervention is assembled in a series of standard procedures. The programme has to be organised and delivered – sites are mulled over and selected, resources are acquired, and staff roles are allocated. Processing a subject through such an apparatus involves a long sequence of behavioural accommodations. Participants need to be: persuaded that there is a problem; made aware that the programme offers a solution; induced into thinking that the solution is for them; recruited efficiently onto the scheme; and offered some immediate gratification for entry (quick wins). Once positioned on a scheme longer-term commitment needs to be reinforced. Subjects need to recognise that as routine members they become co-producers of the schemes, expectations about transferable skills and post-programme lessons need to be inculcated, some process of certification then prepares participants to exit and proselytise. A successful programme will cater for all of these stages and research (see section 3) is now able to show that these ‘latent’ features, the generics of programme building, often have as profound an influence on programme subjects as do the ‘big ideas’.

1.4. It is a familiar psychological cry that subjects vary substantially in their readiness and preparedness to undertake behavioural change. All practitioners will also affirm that once on a programme subjects also vary in willingness to heed, follow, support and apply the guidance on offer. Accordingly, all policy making on behaviour change and all evaluations of programmes designed to induce such change should be underpinned by a model of *incremental motivational shifts*. Such models are developed in part 3 of this submission. Interventions that seek to carry subjects from behaviour X to behaviour Y must do so via a series of micro dispositional adjustments. To enable this, the programme must insinuate a corresponding series of micro inputs to spur on the subject to the next stage. A simplified graphic (Figure 1) captures the sequence – following changes in the subject's thinking (in black) and the parallel intervention response (in red):



2. Some key examples of the significance of 'latent mechanisms'

2.1. The Dodo's verdict.

Alice, during her adventures in Wonderland, comes across a bizarre competition officiated by a dodo bird. It is a simple enough contest, a race around a lake. She is bemused, however, because apparently no one bothers to measure times, distances, placements and so on. Instead, the dodo decrees: "Everybody has won and all must have prizes."

Psychotherapy has always been a challenging topic for evaluation. There are many, many different therapeutic schools. One count, made forty years ago (Parloff, 1986), estimated the number at 418. A longstanding critique argues that the specific techniques associated with specific schools (e.g. Freudian, Jungian, Rogerian, Adlerian, behavioural, cognitive, gestalt, existential, etc.) serve very limited purpose. Every one becomes a winner, however, since most of the positive effect is gained due to the therapeutic *relationship*. This hypothesis

known as ‘common factor theory’ associates positive change with ‘non-specifics’ emanating from purposeful, warm, respectful, tailor-made, one-to-one relationships between practitioner and client.

Common factor theory has been investigated by a method known as ‘active treatment comparisons’. Instead of randomly placing patients in treatment and control conditions, they are assigned to one of two treatments (e.g. cognitive vs. behavioural). This ensures ‘fair’ comparison on a matched population. And as these studies gathered pace it became possible to conduct meta-analyses of the efficacy of ‘x versus y’. Systematic reviews of this ilk in 1975, and repeated in 2002 with a much larger sample of primary studies, came down heavily in favour of the dodo bird verdict. Very few primary studies demonstrated the superiority of one treatment over another. In the round, meta-analysis of the effect size attributable to specific therapy techniques weighs in with a Cohen’s d coefficient of only 0.2 (small and insignificant in lay parlance). Whilst debate continues to rumble about the precise magnitudes of such estimates, few deny the significance of the ‘non-specifics’.

2.2. Anticipatory effects in crime reduction. Crime reduction, for the most part, works by persuading potential offenders that the risk of apprehension and arrest increases under a newly installed programme. Perception is the key to behaviour change and the ‘anticipatory effects’ hypothesis posits that the *threat* of action of an intervention is as powerful of as the *specifics* of action. For instance, a 1997 Oxford study of the effects of security cycle patrols on parking lot crime showed that simply announcing the impending scheme was followed by a reduction in crime before ‘foot was ever laid to peddle’.

Many other programmes appear to show a perverse improvement (crime reduction) *before* the programme is up and running. Indeed, some seem to work without them being properly enacted. This hypothesis is examined in a 2002 review of the UK crime prevention literature. A search was undertaken locating studies that contained time series data sufficiently powerful to distinguish crime fluctuations before, during and after the introduction of prevention programmes. 52 such reports were uncovered that revealed an unexpected pre-initiative drop in crime statistics. Of these 22 had strong *prima facie* evidence that allowed causal attribution to ‘something’ occurring within the early inception of the scheme.

That something has become known as the anticipatory effect. Criminals (the programme subject in this case) make it their business to assess the risks. They may prefer to lie low on first news of a potentially powerful new scheme, awaiting their own ‘evaluation’ of its effectiveness. Publicity, hearsay or even disinformation may thus be the triggers to such behavioural accommodation. The point for reinforcement is that widespread promotion of the intervention is hardly the intended measure but merely a step in implementation (and thus open to further and more mindful manipulation by programme planners).

2.3. Failures in Replication. A frustrating pattern observed frequently in behavioural change interventions is the shining success of major demonstration projects followed by the failure of subsequent ‘replications’. Why is this misfortune familiar? A good example is the US Big Brother Big Sister Programme (BBBS), the 1998 evaluations of which show benefits for disadvantaged youth in terms of better school performance, decreases in drug abuse and improvements in relationships with parents and peers. Partly as a result of such success, many mentoring programmes were subsequently established in the UK. There, a more

familiar outcome for the disaffected mentee is progress and setback, progress and setback, with the mentor having to spend considerable time ‘fire fighting’ family feuds, drug relapse, gang violence and so on.

The explanation for this contrast between originator and imitators lies in the distance to be travelled along the behaviour change pathway. A close look at the BBBS eligibility requirements reveals some vital clues on the participants’ dispositions. It is a venerable programme, having existed for a hundred years, and thus sufficiently cherished to demand a waiting list. Admission to the programme thus requires screening, which involves: an assessment for a ‘minimal level of social skills’; ensuring that youths and parents actually ‘want a mentor’; gaining the ‘agreement of parent and child to follow agency rules’; successful completion of ‘orientation and training sessions’; and the fulfilment of ‘residential and age limitations’. Once on the programme there is ‘close supervision and support of each match by a case manager who makes frequent contact with the parent/guardian, volunteer, and youth and provides assistance when requested’.

This welter of selection and support mechanisms is, of course, significant. It is not too brave an inference to observe that by the time it comes to evaluation, the programme is dealing with a relatively compliant and particularly persevering set of mentees. In such conditions, and via the *latent preliminaries*, ‘mentoring works’.

3. Implications for the committee’s investigation

3.1. Whilst behavioural change is core ambition in modern policy making, the concept of the ‘behavioural change intervention’ is too loose and too ambiguous to motivate coherent forward planning. There is a danger that such programmes are presented as groundbreaking – the ‘next big thing’ – thus requiring the creation of a new institutional apparatus to design, pilot, promote and organise them. In the limit one can say that *all* successful social programmes – new or old and whether they wield carrots, sticks or sermons – rest on a sustained sequence of behavioural adjustment. For instance, legislative interventions might seem to be of a different order and to work through compulsion – behave or be punished. But even here it turns out that efficacy rests on gradual shifts in custom and public opinion. A good example is the relative success of ‘smoke free’ legislation, which rests significantly on a process of ‘denormalisation’. Smoking bans have been enacted on public transport, followed by office and indoor workplace restrictions, followed by smoke-free restaurants and finally bars, pubs, and gambling venues. Through this incremental process public opinion becomes primed for the next location (private cars?).

3.2. Sustained behavioural change is difficult to accomplish and requires much more than a well-aimed ‘nudge’ in the right direction. Programmes need to construct runways rather than springboards for change. The problem raised here is that tempo of construction of modern programmes often rides roughshod over the realisation of the vital preparatory and consolidatory stages of behavioural change. Perhaps the key change in policy architecture in the UK recent years is the dislocation of interventions and services. Once upon a time it was the task of the big public agencies (schools, hospitals, local councils, police, etc.) to tackle generic and longstanding issues. This often left them weak at responding to new challenges but with a strong organisational capacity. Nowadays, the tendency is to design made-to-order programmes aimed at specific and pressing problems. The upshot, already dubbed ‘interventionitis’, is that reform is led by a constant stream of pilot programmes,

demonstration projects, new deals, modernisation initiatives and so on. With so many interventions created afresh it is little wonder that many of them do not possess the infrastructure to carry participants through all stages of a behavioural change pathway. Often especially weak are the preliminaries on publicity, promotion, recruitment and induction,

3.3. Behavioural change policies are unlikely to be implemented successfully in isolation by novel, singular interventions. They require the coordination of a range of programmes and services as well as infrastructural change. For instance, public health ‘smarter choice’ measures to encourage people to cycle to work are often designed on behaviour change principles. Information and training is provided to shape knowledge, attitudes and, hopefully, behaviour. Hope has more chance of becoming expectation if cycle discounts, cycle pathways and secure cycle parking are also offered.

3.4. One common reason for programme failure is to aim a potentially efficacious measure at the wrong subjects. Individuals and groups lie in different states of readiness for change. They make behavioural adaptations at quite different rates. Relapse and backsliding are common when programme objectives are far distant and hard to accomplish. Accordingly, the long runways that cater for behavioural change also need to accommodate multiple entry points and repeated opportunity for entry at second, third and subsequent ‘attempts’. The coordination of such systems and services is one of the greatest challenges for contemporary social policy.

3.5. Evaluation research in the UK has become industrial in proportion. Although there is extensive research capacity, it is not clear that there is expertise in methods appropriate to evaluate complex behavioural change. The favoured model for evaluating impact is the trial testing whether a treatment ‘works’ by applying it to an experimental group but not to a control and then comparing outcomes. Such programme-on / programme-off comparisons work well enough for clinical interventions in which the treatment is singular, tangible, and clearly-defined. The logic comes unstuck whether the intervention is complex, incremental and prone to change in different circumstances. The basic model of gradualist change presented above has profound implications for outcome evaluation. The sweeping interlinkage of mechanisms described above is the programme. Evaluation strategies that attempt to excise, minimise, partial out, or control for latent effects are missing the point. In behavioural change programmes it is impossible to scrape away to the kernel agent for change, because change is always gradual and must be prompted gradually.

3.6. Understanding the processual nature of behavioural change should persuade us, and hardly for the first time, that the evidence base to support such intervention needs to harness a multi-method, multi-case and multi-objective approach. There is a need for close monitoring and rigorous summative evaluation to chart progress through many intermediate outputs and a significant range of outcomes. Qualitative research is needed to understand the interpretative process, through which subjects move in and out and in and out of interventions. Comparative research is required to understand the powerful influence of local and institutional contexts in shaping which pathways are followed in which circumstances. Research synthesis is required to understand the history of success and failure of families of programmes.

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3.7. Durable behavioural change requires the coordination of a range of programmes and services as well as infrastructural change (3.3). Accordingly, the most pressing problem for evaluation is to investigate the extent and success of such coordination. Such an approach is sometimes referred to as ‘meta’ or ‘mega’ evaluation. It remains an embryonic approach given the difficulties in capturing empirically the joint action of administratively separate bodies and agencies. The approach is being piloted in the evaluation of a forthcoming mega-event, the 2012 London Olympic Games.

3.8. More research attention should be focussed upon the latent preliminaries of interventions – they should become objects of inquiry in and of themselves. For instance, in the recruitment phase, many behavioural change programmes have to create waiting lists. In the BBBS example (2.3) the wait for a place provides a valuable ‘proving ground’ ensuring that the appropriate subjects were recruited. In other circumstance such an interlude might feel more like a ‘detention bloc’ or ‘avoidance technique’ and have negative consequences. Another familiar behavioural strategy on the importance of ‘quick wins’ has never been put to test – just how important and for whom are early and visible signs of success?

3.9. Rather than only pursuing newly-minted programmes, more long-term evaluation of existing interventions should be conducted. What happens upstream clearly conditions what occurs downstream. Most obviously, a poorly recruiting programme or one that recruits the ‘wrong’ type of subject is already on the highroad to failure. Many other flows and blockages occur throughout the life of a programme, with equal significance for its fortunes. There are always refractory phases in the intervention pathway and longstanding programmes stand longest because they are likely have deciphered the optimal routes. They will have tinkered; they will have cracked the recruitment problem; they will have learned how to promote reliance and stubbornness in mid phase; and so on. Learning about the ways and means is crucial to understanding ends. The evaluation of programme history is maddeningly absent in programme planning.

10 September 2010

Profesor Lyndal Bond, Professor Ray Pawson, Professor David Gunnell, Department of Energy and Climate Change and Department for Work and Pensions

Oral Evidence, 30 November 2010, Q185-225

Evidence Session No.5. Heard in Public.

Members present:

Lord Crickhowell
Baroness Hilton of Eggardon
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Baroness Perry of Southwark
Earl of Selborne
Lord Warner

Examination of Witnesses

Witnesses: **Professor Lyndal Bond**, [Leader of the MRC programme “Evaluating the Health Effects of Social Interventions”], **Professor Ray Pawson**, [Professor of Social Research Methodology, University of Leeds], **Professor David Gunnell**, [Professor of Epidemiology in the School of Social and Community Medicine, University of Bristol], **Dr Siobhan Campbell**, [Head of Policy Evaluation, Department of Energy and Climate Change], and **Mr Mike Daly**, [Department for Work and Pensions].

The Chairman: Thank you all very much for coming and welcome. Do we have any members of the public at all? Yes, one member of the public. First of all, welcome. I gather that Leeds and Glasgow have not been the easiest of journeys, so we are very, very grateful to you for coming. Welcome to the public as well. The proceedings are webcast, just so that you know that that is what will happen. There is an information note available for the public with some background on the inquiry and the list of Members' interests. What we would like you to do as witnesses is introduce yourselves for the record and then, if you wish to, make a short personal statement. I know that Siobhan Campbell is going to say something about how the policy cycle works. The other thing, which I have already said to the Committee, is that Siobhan and Mike, I think, will be one witness together.

Dr Siobhan Campbell: Yes.

The Chairman: On the whole, if we could get it so that one of you speaks, or the other, but not both—because otherwise we won't get through the material and we want to finish on this at 5 pm at the latest, because we've still got other business to do after it—I would be extremely grateful. Why don't you start?

Professor Lyndal Bond: I'm Lyndal Bond. I'm associate director of the MRC/CSO Social and Public Health Sciences Unit in Glasgow and I lead a programme called “Evaluating the Health Effects of Social Interventions”.

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Professor Ray Pawson: I'm Ray Pawson. I'm Professor of Social Research Methodology at the University of Leeds.

Professor David Gunnell: I'm David Gunnell. I'm Professor of Epidemiology at the University of Bristol.

Dr Siobhan Campbell: I'm Siobhan Campbell. I'm head of policy evaluation, regulation and social research at the Department of Energy and Climate Change.

Mike Daly: I'm Mike Daly. I work in the Central Analysis Division in the Department for Work and Pensions.

Q185 The Chairman: Thank you very much. Professor Bond, would you like to start? Do you want to make an opening statement? It is up to you—nobody has to. Professor Pawson?

Professor Ray Pawson: I will if you don't mind. I had a long time on the train to read the minutes of the previous Committee and saw you struggling with the very remit: what is behavioural change. Perhaps I can make a short statement in relation to that. I think you are suffering here the curse of social science—that is, our terms and concepts already have a place in everyday language. Social science simply draws those ambiguities back in, so a sociologist would understand behavioural change in quite a different way from a psychologist and an economist and so on, not to mention all the sub-tribes therein. I don't think there is a privileged understanding amongst those. I think all can play a valuable part. I worry sometimes that the concept is grabbed by a particular tribe, perhaps the nudgers. My opinion is that each discipline can make a contribution.

Dr Siobhan Campbell: I would like to make a couple of points because this is about evaluation as I understand it today and the role of evaluation in the Government policy cycle. One of the key models used across Government is the Treasury's Green Book, which is a six-point policy cycle: setting out the rationale for a policy, the various options, appraising these options, monitoring, evaluating, and feedback. From that point of view, I would like to stress that there is a key role for evaluation within Government policymaking. It's not just at that E of the ROAMEF policy cycle. It's throughout, so at the rationale, objective, appraisal stage, there is an expectation that you are using evaluation evidence to inform these decisions that are you making along the way. Then you are actually implementing the policy; you are monitoring as it goes round. That is the role as I would see it. All Government Departments have different ways of conceptualising the policy cycle but the Green Book ROAMEF has quite a bit of currency. My involvement in evaluation is that I played a role in the group to strengthen evaluation across Government. I was in the Government Social Research Unit that was responsible for the Magenta Book. The Magenta Book is currently being revised to become the key tool and guidance for policy evaluation in Government. That should be ready in March next year. That is being steered now by something called the Cross Government Evaluation Group, which is a group from across Government. So, 24 different Departments are represented in the Cross Government Evaluation Group, which includes a variety of different disciplines. We have economists, social researchers, statisticians and operational researchers all feeding into this. So, by the time the Magenta Book is ready they should have cross-Government and cross-analytical support for that. The aim of the Cross Government Evaluation Group and the Magenta Book is to strengthen both the quality of evaluation within Government and also the skills of the people using that, so that's the analytical community and the policymaking community.

Q186 The Chairman: Thank you. I am going to start and then hand over to various colleagues. Dr Campbell, you have given us quite a good start on this question about how and when evaluation is currently built into the policymaking process, and in fact I have a second question to ask you about the Magenta Book. But before that, can you tell us—this is for all of you—what incentives there are for policymakers to evaluate appropriately?

Dr Siobhan Campbell: I will start it off. There are certain formal things in train now, as part of the impact assessments, that should be happening to all Government policies that have a regulatory or a spend part of it. There is something built in called a Post Implementation Review. From April 2010, all impact assessments should be followed up after a set amount of time afterwards with the Post Implementation Review. There are also now sunset clauses being built in, from April 2011 this time, that will say that policies expire after a certain amount of time and they should be reviewed. There are formal incentives being built into the system to evaluate. There are also other incentives like the National Audit Office, such as the “one in, one out” process. It will require good quality evidence, which effectively means good quality evaluation evidence to make good decisions. The Spending Review also means that good quality evidence is needed on where to make tough decisions. When it’s published in March, the Magenta Book will provide an incentive. It will be widely distributed and publicised. It will form the basis of training for policymakers and specialists, and be cascaded through these communities. So from both a top-down and a bottom-up approach, it should form an incentive there.

Q187 The Chairman: Would anybody else like to come in on this?

Professor Ray Pawson: This is the teaching grandmothers to suck eggs question. I think everybody here knows more about policymaking than I do, and what everybody knows about policymaking is that it consists of arm wrestling and muddling through. There are dozens of voices that contribute to policy and evidence is only one fragmentary voice I think. It’s a question of positioning evidence more appropriately in that circle.

Q188 The Chairman: One of the things that was said to us frequently, and this is in the written evidence, is that evaluation doesn’t get in early enough. It should be put in right at the very beginning. At the moment that is not what happens. I very much take what you said, Dr Campbell, about how it’s going to change and the Magenta Book and so on, but I think there is a real worry among quite a lot of people who have given evidence to us that evaluation isn’t happening early enough. Is there anything that you think could be done—I think we would all accept it’s only one bit of it—to ensure that evaluation is done and it’s part of the policy process earlier?

Professor Lyndal Bond: I think having a continuous dialogue between researchers and policymakers helps, as well as establishing a good relationship. One of the projects that I’m involved in in Scotland is called Go Well. It is a 10-year evaluation programme that the Scottish Government and Glasgow City Council support. I am a newcomer to the project but it has achieved a great deal of communication between policy and the researchers. As researchers, we’re responsive to the ad hoc requests, if you like, and they’re supportive of our long-term evaluation goals. It is a model that works quite well. It takes quite a bit of time.

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Professor David Gunnell: I think early discussions between policymakers and—

The Chairman: You will have to speak up because this is a hopeless room for hearing.

Professor David Gunnell: Early discussions between policymakers and researchers are absolutely critical. Often once the policy has been formulated and begun to be rolled out, it is too late to build in an effective evaluation. The gold standard method of evaluation is to randomise different areas, different schools, different people, to be exposed to the new policy or not. Without applying that right from the outset, you may not get clear answers. In terms of the issue of what incentives there are for policymakers to want to evaluate their work, I'm not a policymaker, so I am not familiar with what has been described, but I would have thought that policymakers would be interested in the persistence of their policies. If they think it is a good idea, they would want to see that it works, and it's only through good evaluation that you are going to get that evidence to ensure the policy doesn't dwindle and fail when funding becomes tight.

Q189 Lord Warner: Could Siobhan, or anybody else who has spoken so far, explain the extent to which the Green, Magenta or any other coloured book is known to Ministers and used by Ministers? They certainly weren't known to me when I was a Minister. Do they all stop at the Civil Service? Is it only the Civil Service that has to apply the rules of those books?

Lord May of Oxford: And perhaps you could say just a word about the enigmatic book itself, which I hadn't even heard of.

Dr Siobhan Campbell: The Magenta Book was developed and distributed in early 2003. It was designed specifically as a Government social research piece of advice.

Lord May of Oxford: It is news to me. But I was no longer chief scientist, so I'm okay.

Dr Siobhan Campbell: It had two versions: one for policymakers and one for the Government social research community. To be fair, the one for the Government social research community is the one that had currency just among the Government social research community. That is why now we want to position it alongside the Green Book. The Green Book does have a good deal of currency within Government. I'm not sure whether that applies up to Ministerial level, but certainly it informs most economic appraisal, and that is the standard that should be used for economic appraisal in Government.

Q190 Baroness Hilton of Eggardon: Isn't there an earlier stage in evaluation where you need a secure database against which you can measure the consequences of whatever policy you're putting into effect? It seems to me that's often where we fall down. We don't have the information in the first place. People leap into doing things and then they can't properly evaluate them later.

Professor Lyndal Bond: Certainly good routine data helps set up the evaluation. Clearly you could do evaluations without using routine data; you could do primary data collection. It is more expensive but often better suited to the question that you might want to answer. I would advocate that policymakers try to do both.

Q191 Baroness Hilton of Eggardon: I wasn't sure that that appeared in your cycle of data collection in the first place.

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Professor Ray Pawson: Just to respond to that question and the more general point about getting evaluation in its right place, there is a relatively simple trick, I would say, which is to decouple evaluation from the live evaluation of a presently occurring programme, to put it before, so to move it from ex post to ex ante. You can do that by systematically reviewing all the previous evidence for that family of programmes and conjoin that to the policy process. As you will know, that is beginning to happen quite a lot; I think it is imperative that that move should continue.

Q192 The Chairman: Can I just press you slightly on that? You are saying it's beginning to happen quite a lot and that you think it's imperative that it should continue, but what do you think is happening to make it happen more? We are interested in what training and what incentives there are to make sure that evaluation actually happens.

Professor Ray Pawson: It's possibly disappointment with live and ongoing evaluations, which have a tendency just to peter out because policy has changed along the way. The strength of the systematic review communities is growing. There are some significant collaborations that do it. There are significant research centres in the UK that are able to do it, and there is growing interest in methods of synthesis. It is not an easy swap. It is not a swap from the technical difficulties of evaluation to something easier, which is systematic review and synthesis. However, for a lot of reasons, the idea of putting a review in at the start is beginning. You can see it if you look at the invitations to tender. These days, there is often a little bit of systematic review—a rapid review or whatever it would be called—plus an evaluation of the ongoing programmes. It is happening already.

Q193 Baroness Hilton of Eggardon: I wonder whether you can give us some concrete examples of situations where there has been effective evaluation and also—which people seem to be reluctant to do—those occasions when there has not been effective evaluation.

Professor Lyndal Bond: As you can tell, I'm not actually from Britain. Many of my examples are from Australia but some are from Wales, which is closer. What do you mean by Government funded? The ones I've got are Government funded through granting bodies. A project I was involved in in Australia, the Gatehouse project, was a school-based, randomised controlled trial that tried to look at changing the whole school ethos to reduce depression and reduce substance abuse in young people. It successfully evaluated and successfully showed that we could reduce substance abuse over three cohorts of young people, so across a five to 10 year period. There are many examples of randomised controlled trials, probably many more of which are school-based rather than community-based. On the Welsh site that Laurence Moore heads up, there is list after list of randomised controlled trials. There is one in my unit—SHARE, which is school sex education, and again a randomised controlled trial—which showed that in fact that new teaching of sex education made no difference to young people's sexual behaviour and no difference to subsequent pregnancies or terminations. So, effective evaluation should tell you the good news and the bad news.

Q194 Lord Krebs: Just to follow up on that, so you quoted a good news and a bad news story in terms of the outcome, does the evaluation in those two cases also lead us to understand why the Gatehouse project was successful but the sexual behaviour one was

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unsuccessful? That is the whole point, is it not—understanding not just that it works but why it works?

Professor Lyndal Bond: Those two projects had two very different methods of intervention. The SHARE project was curriculum-based. The Gatehouse project had a curriculum base not around substance use but around cognitive behaviour therapy—understanding how you feel and how what you think affects how you feel and how you act—but embedded within a whole school approach changing how students and teachers related to each other. So those two interventions had different effects because they were very different interventions.

Q195 Lord Krebs: So what is the one-sentence message for the policymaker out of that?

Professor Lyndal Bond: One sentence, let's see. A good strong evaluation has clear outcomes—you have to specify what outcomes you are looking at in the first instance—and the evaluation has to take into account an understanding of the intervention, as well as robust evaluation of the outcome. It is a long sentence.

Professor Ray Pawson: My example is not so much the contribution of a specific evaluation but a body of research. I would give, as the most positive example I know, the repeat victimisation story. This is from criminology. Professor Ken Pease discovered this interesting pattern about victimisation in burglary. I don't know whether you've heard of it or not. It is that if your house has been burgled, that vastly increases the chances of it being burgled again. It is slightly counterintuitive. His very nice paper on this is called "Once bitten, Twice bitten". So, there was the discovery of a pattern and policy gets implemented—harden targets; instead of waiting for the next burglary, immediately harden the target. The evaluations of that showed that this scheme was very successful. Then the pattern of repeat victimisation was noticed in terms of other crimes and gradually police action became focused around repeat victimisation. I think it actually became a performance indicator at one stage. So the sequence is: research inspires a policy; policy builds out into a new programme; the programme gets evaluated; this learning then installs itself into the thinking of practitioners. That would be my example. I can give you some negative ones as well but that's some more good news.

Q196 The Chairman: Okay, we'd like some negative ones in a moment, but meanwhile can we hear perhaps from Professor Gunnell?

Professor David Gunnell: In terms of positive ones, Lyndal has also already mentioned the work in Wales. One of the key things with a good evaluation is to have a control group—a group that doesn't receive the policy. Therein lies the challenge very often, because Governments want to roll out policy now. They don't want it to be rolled out over three, four or five years. One of the nice things that has happened in Wales through Laurence Moore's work has been that new policies, for example free school breakfasts for primary school children, have been rolled out in such a way that some schools have introduced those policies whereas others have not. They have been able to act as control schools so comparisons can be made of the impact of that policy in schools that offer free breakfasts and those that don't. One of the challenges with evaluation is when you don't have control areas or policies are rolled out in a chaotic way. A complaint about Sure Start, one of the Government's big evaluations, was that it was rolled out in such a way that would have allowed a more robust, randomised evaluation; this possibly could have been done with

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better collaboration between researchers and policymakers. Going back to the first points we were making about the key of working with policymakers in the evaluation, the difference between the two examples is that in the first, due to good working relations between the Welsh Government and researchers, a policy was rolled out in such a way that it allowed a detailed evaluation. With Sure Start I think that was less the case.

Q197 The Chairman: Dr Campbell and Mr Daly, between you, can we have both the good and the bad, please?

Mike Daly: I'm afraid I'm going to start with the good, but I will say some words about learning from what we've done. One of the examples I did actually have on my crib sheet was the free school breakfasts in Wales, unfortunately. I will pick two that I'm reasonably familiar with. A few years ago we ran a pilot called the Job Retention and Rehabilitation Pilot that was aimed at speeding up the return to work for people who had been on long-term sickness absence. That was implemented as a randomised controlled trial. The somewhat surprising finding to most people involved was that the impact was actually non-existent. That was quite a nice example because, in fact, the service providers were very sceptical and they were quite sure that what they were doing was effective, but because we had a strong randomised methodology, they were willing to accept that and move on from there and see what we could learn about why it didn't work. There is another example, again from DWP. We experimented a few years back with changes to the regular regime for jobseekers signing at local offices, seeing what would happen if we made contact by phone rather than face to face or made contact less frequently in the early months of a claim. The concern there was that with less frequent contact, people would be less intensive in their job search behaviour and stay longer on benefits. That is in fact exactly what happened; they stayed longer on benefits. The more detailed qualitative work showed that it was because they were being less intensive in their job search activity. As for learning from what we've done, one of the very puzzling features of the Job Retention and Rehabilitation Pilot was that it appeared to have a negative impact for people with mental health problems, which was very surprising. Had we anticipated that, we could have done more in the course of the evaluation to try and understand why that happened. As it was, we developed some hypotheses but we couldn't completely narrow that down.

Q198 Baroness Hilton of Eggardon: We've had some reference in the written evidence to the Health Trainer Programme. I don't know whether anyone has been involved in that or whether you know about its evaluation or not?

The Chairman: Any offers on that? No. Lord Krebs, you wanted to come in, and then Lord Crickhowell.

Q199 Lord Krebs: Just briefly going back to the free breakfasts in Wales—I must go there myself some time—what did it show?

Professor David Gunnell: It showed more children having a healthy breakfast. Interestingly, there was little effect on school performance. It showed no evidence of an impact on school performance; so it showed an impact in terms of changing children's diet but it didn't show an impact on their school performance. It showed that the intervention could modify a school children's diet first thing in the morning.

Q200 Lord Krebs: Do you mean after the intervention stopped—it had a long-lasting effect?

Professor David Gunnell: This evaluation was comparing the interventional schools with schools that didn't receive the free school breakfasts. So it was while the intervention was going on.

Q201 Lord Krebs: It seems a bit trivial, that. You give them a free breakfast and they have a better breakfast than the people who didn't get a free breakfast. Sorry, am I misunderstanding?

The Chairman: No, I was thinking the same thing. They would be having a different diet if they were getting free breakfast. So, presumably, the interesting question is whether that continues.

Lord Crickhowell: Depending on the breakfast it could promote obesity.

Lord Krebs: Doughnuts or something like that.

Baroness Perry of Southwark: Fried egg.

Professor David Gunnell: The policy is like the free school milk. It's the provision by schools of state-supported healthy breakfasts to children who might not otherwise be getting healthy breakfasts.

Q202 Lord Krebs: So it's not about behaviour change, it's about a nutritional supplement?

Professor David Gunnell: Yes.

The Chairman: So it wasn't about a behaviour change in fact at all? Okay. Fine.

Q203 Lord Crickhowell: Which leads us rather neatly to the next question, which is: what are the most effective methods for evaluating how and why behaviour change interventions work, rather than simply whether or not they work in the individual, community and population level? Against a background of repeated evidence that, on the whole, evaluations have been rather inadequate and ineffective, I am confronted by Professor Pawson's extremely illuminating and lively paper, which I hugely enjoyed, as it got to issues that we haven't got to in much of the evidence we've seen. I'd like to address this basic question, picking out, if I may, by way of introduction: "Evaluation research in the UK has become industrial in proportion. Although there is extensive research capacity, it is not clear that there is expertise in methods appropriate to evaluate complex behavioural change. The favoured model for evaluating impact is the trial testing whether a treatment "works" by applying it to an experimental room but not to a control and then comparing outcomes". Perhaps you will take us on from that rather informative paragraph.

Professor Ray Pawson: Rarely in my career have I had such a build up. Can I live up to that? Your witnesses are going to disagree about the most effective method of evaluating programmes. Half a dozen will come and you will get six different opinions.

The Chairman: We assumed that you might.

Professor Ray Pawson: The core of my answer to that question belongs in a discussion about the complexity of interventions. I could give a very long lecture now about why programmes are complex. They have great, long implementation chains. The person's encounter with the programme is very long; you have the recalcitrant and the unwilling and those who prefer to dive in. There is a long journey involved there. Programmes themselves change; it is the job of a practitioner to change a programme. They don't just want to implement it in this perfect way to protocol; it is their job to improve programmes. Context is all important, so regardless of whether a programme works in Wigan on a wet Wednesday, it is unlikely to work in Truro on a torpid Tuesday. There are all sorts of contextual differences that make a massive difference to whether a programme works. Perhaps the clincher is this: programmes change the very conditions that make them work in the first place. That sounds quite counterintuitive but if you think about it, it must be true. The classic example goes back to criminal justice interventions and the so-called "arms race". That is to say, you set a programme in place; offenders acknowledge, try to work out a programme and lie low for a while, perhaps make mistakes and get caught because of the intervention; gradually they learn to cope with the intervention. Response: policymakers have to come up with intervention mark 2, mark 3 and so on. So for all of those reasons, programmes are vastly complicated things inserted into vastly complicated contexts. It is very easy to get a clinical "treatment on, treatment off" comparison but—in my view, and not everybody is going to agree with this—the "policy on, policy off" comparison is not that instructive, because the policy itself is mutable, changeable and complex. So the answer to how you go about effective evaluation: I would say the gold standard of these methods is a comprehensive evaluation. That means a multi-method evaluation. That means you do need outcome data—comprehensive outcome data is important—but of a footprint of outcomes, not just an input and an output. You need to understand the processes that lead to the outcomes, so you need qualitative, processual type information. You need to know contextual influences, so you need comparative information. A little bit of history wouldn't go amiss, much is to be discovered by trying to understand the history of programmes. Basically, in my view, the key methods of evaluation require all of those, plus what I have already mentioned about retrospective looks at things through systematic reviews. So you need that whole package of methods. The really difficult trick is to sew them all back together again.

Q204 Lord Crickhowell: Can I ask one supplementary? You go on in your paper to emphasise that point. You say that there is need for qualitative research to understand the process that is being operated and comparative research to understand the powerful influence of local and institutional contexts in shaping the pathways. One word perhaps about what sort of research, where it's going to come from, is it happening?

Professor Ray Pawson: It has happened. Programmes have basically been tried and tried again and researched and researched again. Everyone thinks that their brand new programme is a special innovation. However, another way of looking at that is to say that really there are only three policies: there are carrots, sticks and sermons, and everything is an admixture of those. If you look at any area, such as mentoring of dispossessed youth, there have been hundreds of evaluations of programmes like that. I think we should really get our money's worth out of those rather than assuming that there is a next crucial experiment along the way that will sort it out.

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The Chairman: We will hear from the other witnesses, then I will go to Lord Krebs. I am sorry; Lord May, do you want to do yours quickly now, because you have to go in five minutes?

Q205 Lord May of Oxford: I have to apologise to everyone; I have to be somewhere else at 5 pm. I forget where in the papers I actually read it, but there was one phrase that I found very telling, which has resonance with the question you've been asking. Too often when the programme is evaluated, it is evaluated as to whether it achieved its aim or not and whether it worked or not, rather than why and how the conception or the learning along the way led it to achieve its aim or, alternatively, fail. I was curious whether you think that is a fair criticism of much of that stuff? I must say that the account of the breakfast thing sounded like it was a rather telling example of exactly that.

Professor Lyndal Bond: I think there are two lots of evaluations: there are some that tell you whether something works, and I don't think very many of those are done looking at policy; and many that look at what's implemented and what the process is. I think you need both. I don't think it's helpful to know a great deal about what a programme does if you find out it doesn't work. It doesn't matter. On the other hand, once you know it works, you still have to know why it works.

Q206 Lord May of Oxford: Did I misunderstand that? Did you say if it doesn't work, it's not very helpful to find out why it didn't?

Professor Lyndal Bond: No, it would not be very helpful to have a lot of information if you actually don't know it works, or if you have no information about whether it works. If you've got an outcome and you see that it's made a difference, or hasn't made a difference, or that it's made a negative difference, then you clearly need to know what's going on in the intervention. Yet, there's not much point knowing what's going on in the intervention if you don't know what its effects are, whether it is positive or negative.

Professor David Gunnell: I think it is a very good question. I think it is important to look at outcomes because it can give you some guidance about whether this policy works, but you need to dig below that and look at processes. You need to do qualitative work to understand why it hasn't worked and in which groups it might have worked. You might want to do a series of subgroup analyses: does this work better in the young or the old, in people from ethnic minorities or not from ethnic minorities, and so on? You also want to look at the costs. You want to get good information; so it might work, but how much does it cost? You want to look at issues such as the disbenefits, so you can weigh up the benefits versus the disbenefits. Just looking at the single outcomes for which the intervention is planned alone without looking at side effects, costs and process measures would be incomplete.

Q207 Lord Krebs: I just wanted briefly to refer to another quote from Professor Pawson's paper, at paragraph 3.2: "Sustained behavioural change is difficult to accomplish and requires much more than a well-aimed nudge in the right direction". Had we been in the Chamber, we would have heard the Health Minister telling us that the coalition's public health policy is based on nudging. Are you implying here that the evidence, such as it is, does not support the notion of a policy of public health based on nudging?

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Professor Ray Pawson: Was I that subtle? Yes, that is the implication. The evidence has shown that for any policy to work, it rarely is a single policy. There is a secret that evaluators probably are very loath to disclose—it is called the iron law of evaluation. It says that, in the long run, the net impact of a programme implemented time and time again tends to be zero. The reason is that programmes, whether or not they work, depend upon the conditions in which they're implemented. If they are implemented in auspicious circumstances, they jolly well work. The locations for programmes, when they are initially implemented, tend to be picked specifically. Lots of attention is paid to the programme but in the long run, when the programme disappears into the woodwork, they don't work so rapidly. I think you need everything in place. You know about this in terms of previous public health evidence. I also give a little example in my submission. So Boris Bikes—not that I've seen a Boris Bike up in Leeds—whether they work or not, depends on a lot of infrastructural change. It depends upon the cost of Boris Bikes. It will depend on whether enough people will imperil their life riding around London. It will depend upon the weather. It will depend on lots and lots of factors.

The Chairman: Tube strikes.

Professor Ray Pawson: Unless you set all of those together, you are not going to get a major behavioural change.

Q208 The Chairman: There is one question I want to ask, again particularly to you, Professor Pawson, concerning everything you said about the different circumstances. One of the things that I think you don't say about some of these interventions—and I completely agree with you, as a former funder of various interventions, about going to zero—is anything about the enthusiasm of the people who start them off. One of the reasons that initiative-it is gets so wearing is that people are very enthusiastic at the beginning and that often helps the thing to work. Is that a fair comment?

Professor Ray Pawson: Yes. Again, there's evaluation terminology to describe that. We call it "showcasing".

Q209 Baroness O'Neill of Bengarve: I too was thinking about Hawthorne effects. I suppose what I am hearing is, on the one hand, the thought that we need objective outcomes and that we need to isolate causal effects, in which case we need the most colossal RCTs at vast expense over a large number of conditions, and that is very difficult; on the other hand, the point is to understand process and is the RCT really so important? Is there any objectivity in this? Is there more than carrots, sticks and sermons? You correctly identified from the transcripts of previous meetings that we were confused about the different definitions of behavioural interventions that some witnesses were beginning to accept, and others clearly didn't. Can you untangle that one? We have written evidence that Government were criticised for failing to use objective outcome measures or for failing to isolate the causal effects of interventions. Is that a justifiable criticism? Can you give us examples of objective outcome measures that were used in current behavioural interventions, or do you think that it is just a series of Hawthorne effects, which was slightly the direction in which it was tending?

Professor Ray Pawson: I am aware that I am getting the majority of the say. I have an opinion on that.

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The Chairman: Why don't you start?

Professor Ray Pawson: It's very important in evaluation to have baseline measures and repeat measures. It's very important to measure outputs as well as outcomes but I'm not sure that there is such a thing—where's the question?—as "an objective outcome measure". The classic example that's probably been drawn to your attention is something like waiting list times in the NHS. That is an objective outcome measure, but, looked at very closely, it's a matter of when does the stopwatch start and when does it finish? As soon as a measure becomes a performance indicator—you know the first law of performance indicators—people tend to look at the indicator rather than the performance. So I would never put all my eggs in one basket of a specific outcome measure.

Professor Lyndal Bond: I'm not entirely sure about objective measures. I think one of the issues is that we tend to be rather shy of explicitly stating an outcome that we think a programme or initiative will actually achieve.

Q210 Baroness O'Neill of Bengarve: Why, if I may ask?

Professor Lyndal Bond: I don't know why. If we are putting in a programme that says it's a health improvement programme, we need to be able to specify what we mean by health improvement. Then we need to identify measures. We should use an array of measures. It could be self-report, psychometrically validated measures or routinely collected data. If you are thinking about things like intervention around alcohol, self-reporting on alcohol routinely shows underreporting, but you would hope that there would routinely be underreporting both before and after the intervention so that you have the same bias. You can then look at sales data too to see if that is itself going down, if people are recording this. There are multiple sources and pros and cons for each type of outcome or measure that you've got. None of them is perfect.

Q211 Baroness O'Neill of Bengarve: Wouldn't you worry that that sheer complexity is a sort of insulation against the failure of the programme, because there are many, many different changes that could be taken to be the outcomes—it's failed in some respects and it's succeeded in others?

Professor Lyndal Bond: That is why you'd want a comparison group as well. Having clear outcomes is only step in the evaluation process. It's a good step to take. I have seen and been part of, and tried not to be part of, many evaluations where they have refused to outline what they think the intervention is going to do.

Professor David Gunnell: Just some general points. There are plenty of examples of nice, clear objective outcome measures that can be used in trials of behavioural change, such as body mass index and measured height and weight of children in interventions to reduce obesity. An example of a big trial in Bristol and Wales, aimed at reducing school children's take up of smoking, was called the ASSIST trial, where fellow schoolchildren who were judged to be opinion leaders were trained to influence the smoking behaviour of their peers. This led to a reduction in the take-up of smoking at one year and two years after the intervention had been initiated. Self-report measures of smoking were used as one outcome measure. Now of course, one might be concerned that children who had been exposed to advice about smoking may become more reluctant to describe their smoking patterns. So together with the self-report measures, measures of salivary cotinine were

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used as an objective measure of whether the child has smoked or not. Levels of cotinine in the child's spit were used. They confirmed the children's self-report measures. In a smoking cessation programme, there are both self-report and objective measures of outcome that can be used.

Q212 Baroness O'Neill of Bengarve: That's the objective measures but the other element of the question is that of isolating causal effects. This is one thing that has come up several times in discussion of smoking cessation programmes, that they tend to be multi-pronged and with many different interventions applied in tandem. Are we able to undertake evaluations that can take account of everything from changes in restrictions on where they are sold or where they may be consumed, advice programmes and so on? Or is that really not feasible?

Professor David Gunnell: I think it is more complex. It is really important with health behaviours to tackle them on several different levels. Just tackling the behaviour itself without tackling it in the right context, within an environment where people are susceptible to change within which the health risks are known, is more challenging. Just giving advice about stopping smoking is not enough; you need to give that advice in an environment where there are levels of knowledge about the health risks. If it's a simple intervention—for example, the intervention that I've described is based on using peers to educate peers—a relatively simplistic evaluation is quite possible. With more complex evaluations, I think it is tricky to unpick what part of the intervention was most effective. That's where qualitative work, such as discussions and interviews with people who have been exposed to the intervention, to try and understand what were possibly the effective components, is helpful. This is where subgroup analyses of trials may be helpful to help unpick the particularly important ingredient in a complex intervention.

Q213 Baroness O'Neill of Bengarve: So do I hear scepticism about nudge also in your account?

Professor David Gunnell: I'm not familiar with the nudge approach so I can't comment.

Q214 The Chairman: I am just very keen to hear from our two Government people.

Dr Siobhan Campbell: On good practice for how to evaluate something, the Magenta Book will set out the kind of logic map of exactly what is being intended. That is accepted good practice on which most people would agree. What are the inputs? What are the outputs? What are the outcomes? What are the impacts? What are the assumptions that you're making to get from one to another? Then, from there, you can start to tease it out. All of these things should be evidence-based. This is back to Ray Pawson's point that this doesn't come from nowhere. You are not suddenly saying you have got an idea and you are going to implement it. These things should be evidence based and informed by existing evidence. Then you can look at the assumptions and what aspects of the programme are amenable to be tested and you want to test. They will inform the decisions that you will have going forward. I completely agree that qualitative information is going to be very important in unpicking the relative importance of different aspects of the intervention.

Q215 The Chairman: Part of the question was about particular examples. Could you give us some examples of objective outcome measures used in government at the moment to evaluate the effectiveness of behavioural interventions?

Dr Siobhan Campbell: Can I pass that to Mike, because I think there is a very good one that looks at the different levels.

Mike Daly: To pick one that I know a fair bit about, we have been evaluating for some years a large randomised trial called the Employment Retention and Advancement Demonstration. It is aimed not just at getting benefit claimants back into work but actually helping them to stay in work and advance in work. That's a fairly complex intervention. Part of it is giving them prolonged and specially trained advisory support, part of it is financial incentives, part of it is support for training. The eventual outcomes are well-measured because they are objective outcomes in the sense of whether someone is working or not and how much money they are earning. It is a particularly good example because we are actually measuring outcomes for over a period of up to five years, rather than just looking at what happens to people instantaneously. The difficulty, as others have already said, is that we can use a combination of qualitative methods and quantitative monitoring to try and understand how impacts occur. But ultimately you can only know absolutely whether the programme would have the same effect having taken out a certain component if you do the trial again but without that component. Some things have two components. I mentioned the Job Retention and Rehabilitation Pilot earlier. Part of that was giving individual support to return to work, part of it was intervening with their employer to help broker workplace adjustments. We did actually try the various combinations of that: one and the other and both together. With something relatively simple, it is possible to do those cross-comparisons. Once you get beyond that, it becomes almost untenable.

Q216 Lord Krebs: Just to clarify the nature of that study. Did I understand that you had a group of people to whom you administered the various treatments you've described and then followed their employment history over five years; and then you had another group to whom you didn't administer the treatment and your outcome was to compare the number of people in Group A in employment with the people in Group B?

Mike Daly: Yes; and it was a randomised trial, so it is a direct comparison.

Q217 Lord Krebs: What are the ethical issues of giving some people encouragement to get back into work and other people no encouragement to get back into work?

Mike Daly: This is a question that arises a lot with randomised trials. The first thing to say is that those who were potentially eligible for the trial were already entitled to a certain amount of support that had been available nationally for some time aimed at helping them get back into work. So what was being offered to those who were randomised into the trial was something additional. Nothing was being taken away. It is true that in the pilot areas, half of those who were potentially eligible and who were willing to volunteer didn't receive any extra services but the same was true of everybody in the rest of the country. The key element there is not taking away services that were already available. It was a trial of something that was additional.

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Q218 Lord Krebs: Finally, I'm not sure that that really qualifies as behaviour change as such. There was behaviour change in the sense that if you gave people lots of mentoring, they went back into work, but it is a slightly different sense of behaviour change than, say, encouraging people not to drive their cars but to ride bikes instead.

Mike Daly: It is true. Some elements of that were more likely to be described as behavioural change than others. For example, one of the lessons from previous similar trials in the United States was that as soon as somebody starts work, you encourage them to think about where they are going to go to next rather than waiting for them to become established and move them on. That is very much behavioural type intervention.

The Chairman: I am really sorry, we are running very short of time. We are going to go to Lord Warner's question and then we might go towards the end and work backwards if we have time.

Q219 Lord Warner: I wanted to add a supplementary to the question at the same time so that you can cover both of them. Are policymakers using the most effective methodologies to evaluate behavioural interventions or do they require new methodologies to evaluate successfully? In answering that, could you consider whether we now have enough evidence on evaluations to start indicating what types of methodologies might be appropriate for particular types of interventions? So the Magenta Book could start to spell that out. If you are going to go into certain zones, you should be thinking about particular types of methodology.

Dr Siobhan Campbell: On the Magenta Book, we're not prescribing any methodology. We're not being prescriptive at all. We're trying to set out that these are the variety of the methodologies there are; these are the pros and cons; this is when they will have most applicability. We're not being prescriptive at all about exactly when it should be used and for what interventions. I think that is right because of the complexity of different types of interventions and the broadness of this whole area. It would get quite difficult to narrow things down to that degree. Educating people and making sure people are aware of the benefit of different approaches—if you can't use a randomised controlled trial, then what do you think about—is the best way, or is the way that the Magenta Book is presenting this.

Professor David Gunnell: There is a broad portfolio of research methodologies that would enable evaluation of many interventions. My own view is that the randomised controlled trial provides the most powerful evidence, and there are variants of it which allow us to evaluate by using the randomised design alongside the roll out of a policy. For example, we can use the stepped wedge design, where different areas are randomised to the timing they implement an intervention. My own take is that in the first instance, that's the design we should try and use, but it's not always going to be possible. In that instance, there are natural experimental designs that offer perhaps a second best to that approach. Sometimes that is all that is available to us. I have done work on suicide prevention evaluating the impact of national prescribing regulations, which stop the prescribing of co-proxamol and advise restrictions on prescribing antidepressants. You just have to use a natural experiment. It is impossible to randomise legislation. There is quite a degree of sophistication in analytic approaches. The MRC is in the process of finishing some work on providing guidance on natural experimentation to researchers and policymakers to help with instances where randomised trials aren't possible. There is now a good range of methodologies available to policymakers to help them ensure that policies are evaluated.

Q220 Lord Warner: You're saying something different from your colleague. She seems to be saying that there is a lot of this stuff, take your pick. You seem to be saying there is a gold standard, there is a silver standard and there are some others and you ought to actually think about those standards. Some of them may not be possible but you ought to work your way down the hierarchy. I'm not trying to pick a fight between the two of you but it's quite important that we understand this.

Professor David Gunnell: I suspect my colleague would disagree with me on this but my take is the gold standard is the randomised controlled trial and that should always be considered first. There isn't complete consensus. That is probably the majority view, but that is my take.

Professor Ray Pawson: In terms of waiting for the new methodology that will rescue us all, no, there is no new methodology to be invented. There are evaluation methods by the dozen and they are not all in the Magenta Book. It is a case of handpicking the right method for the right question. I don't believe randomised controlled trials constitute the gold standard, but, as has been very carefully explained, with a randomised controlled trial with mediators and moderators and subgroup analysis, you can get some sophisticated findings. But it can't deal with all of the issues to do with complexity that I raised here. The MRC model of complexity isn't my model of complexity. It would take a long time to bash that out. We're not going to do that in five minutes. My favourite method is one that can pull the different bodies of evidence together—qualitative, quantitative, historical, comparative—and I think we need to begin with a programme theory approach and a logic model approach. Policies are many things, but they begin life—you know this as policymakers—in the heads of policymakers when there's an idea: "There's a problem, I've got an idea that will change it, and the idea is so and so". There is a lot of power to be had in beginning the evaluation there in my opinion. Yet you're not going to get consensus on this.

Professor Lyndal Bond: In this entire set of questions, there is an overuse of the word effective, because it can get confused with "having an effect". I don't think we need new methods but I think that an effective method is a method that addresses the question that you want answered. If you want answered the question, "Does this intervention change health, reduce smoking, improve physical activity?", then a randomised controlled trial or a natural experiment—a hierarchy of them—is the way to get the answer. If your question is, "How might this happen?", then there is process, there is qualitative studies, there are other methods to do that. So it depends what your question is. We tend to get confused when we say we don't like randomised controlled trials so we won't choose them. That doesn't make any sense if that's needed to answer the question you want answered.

Q221 Baroness Perry of Southwark: This just a quick question to Professor Gunnell, because you are working for the MRC on guidelines for the use of natural experiments. Is there a good example of a natural experiment that worked, so to speak, and which was helpful in producing evidence?

Professor David Gunnell: There are several examples in the MRC document.

Baroness Perry of Southwark: Just a quick one would help.

Professor David Gunnell: Okay, I will give you one. A natural experiment, by definition, is something that isn't controlled by research. In my own field of suicide prevention, I've done

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work in Sri Lanka looking at the impact of government regulations to ban the sale of pesticides, which in Sri Lanka were and still are the commonest method of suicide. There have been bans introduced by government to restrict the sales of particular pesticides and they have led to reductions in suicide rates. The evaluation was carried out simply by looking at trends in rates of suicides over time. The natural experiment was legislative bans on the sale of toxic pesticides.

Baroness Perry of Southwark: But that in a sense was just another intervention: an unplanned intervention or experiment rather than a method of evaluation.

Q222 The Chairman: Can you give us another one? It would be quite helpful if you gave us another example that is not quite like that one, because that one is almost accidental.

Professor Lyndal Bond: We evaluated the building of a new supermarket in Glasgow. It was a natural experiment in that it was chosen to be put in one area, but my unit chose another similarly deprived area in Glasgow. We took baseline measures before the superstore was built and we were interested to see whether that superstore would actually increase the uptake of eating fruit and vegetables, which was one of the claims that the supermarket made: that it would improve good quality food uptake in that area. We did our baseline measure. Strangely enough the supermarket chain decided that it would actually build a supermarket in our control group, so our control and intervention group swapped. That was quite useful for us because we felt we had a good comparison group that could be interchanged. Similar studies in Leeds had not had a comparison group and had shown an increase in fruit and vegetables. This is a bad news story by the way. Our study showed that there was an increase of eating fruit and vegetables in the area with the new supermarket but there was a similar increase in the control group.

The Chairman: Very nice. Thank you. Yes?

Professor David Gunnell: I have just one more, very quickly, because I think it is quite neat. In Finland, when it joined the EU, there was a sudden reduction in the price of alcohol to ensure that alcohol was priced at a comparable level in Finland. This price reduction was dramatic. It occurred rapidly and it led within almost two years to a rise in consumption and alcohol-related mortality. So it was very dramatic. Prices go down, alcohol-related mortality goes up. That natural experiment tells us that pricing regulations influence the consumption of alcohol and its effect.

Q223 Lord Krebs: I would just like to slightly change gear and ask whether, in relation to the amount of money spent on interventions themselves, the amount of money that is put aside for evaluation of interventions is in your view adequate, appropriate or insufficient?

Dr Siobhan Campbell: Can I start off from a Government perspective? I don't think there is a one size fits all in terms of how much money should be set aside for evaluation. Different sizes of evaluations will be required depending on the risk, the uncertainty, the evidence that is required. There might be existing data there that would make it relatively cheap. If there is a lot of primary data needed, then you are probably looking at a more expensive evaluation. In terms of identifying a certain percentage or proportion of a policy spend, certainly talking from my own department's perspective, the Department of Energy and Climate Change actually don't spend money per se. A lot of the time they are working through other organisations, so "the spend" could be a bit of a red herring. However—this

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goes back to a point made very early on in the discussion—building consideration of the evaluation into the policy development or thinking at a very early stage makes sure that the resources are considered early. If it's built in to the very foundation of the policy, then the ability to build that into the resource allocation should be possible.

Q224 Lord Krebs: Is that what you think should happen or is that what does happen?

Dr Siobhan Campbell: It varies across Government. I think it is certainly what should happen, and the Cross Government Evaluation Group is pushing to move this as early as possible into the policymaking process.

Professor Lyndal Bond: It is self-serving of us researchers to say no, but I would say probably not, or not effectively. I think good evaluation can be and should sometimes be very expensive. Less robust evaluations can be very expensive too, so you may as well invest well. I also think Government invest in a lot of pilot studies and we underutilise the answers to those. We don't get them to lead on to the next stage of evaluation, so I think a lot is wasted.

Professor David Gunnell: Just two very quick points. The NIHR has recently introduced a public health research programme that is ideal for evaluating public health interventions. That is a welcome initiative. The challenge often is getting in with the policymakers soon enough to develop a robust enough study to get funded. That is the real challenge very often. It's not necessarily getting the funding. It's getting the design right. To get the design right, you have to get in early and work with policymakers to ensure that an intervention is rolled out in a randomised way. As a researcher, that is often the major challenge. If the design is right, if you can roll out the intervention in a way that leads to the possibility of a robust evaluation, then there are funders who may fund it. Funding prospects are based on the strength of the design.

Professor Ray Pawson: I would like to nudge the Government into saving some money here.

Q225 Earl of Selborne: So you do favour nudging after all.

The Chairman: After everything you've said.

Professor Ray Pawson: Well, everything has its place. It is almost a formula that a new intervention comes along and a certain percentage of the cost is attached to evaluation. I would prefer a system, since many interventions are rather similar, where there is just a basic audit of most programmes. Much more money should be spent on systematic review, which I have to tell you is very economical. Ask the University of York Centre for Reviews and Dissemination and the EPPI-centre, University of London how much they charge for a systematic review and they will put a price on that. I have to say, with some interventions—here I disagree with the randomistas—that, because you're looking at the experimental group and what is happening in the control group, the cash registers do ring up when doing those inquiries. Very often, they tell you that there is not much difference or the difference was unexpected. Then you have to do another bit of investigation to find out why.

Professor Lyndal Bond: Systematic reviews are only as good as the evidence that they draw on; so we need both. Yes, a randomised controlled trial might tell you there is no

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difference or there is not much difference, but surely that is better than not knowing anything, and you can stop. If it is not worth doing, stop.

The Chairman: I don't think we're going to solve this problem right now. Can I thank you all very much indeed for coming? It was very helpful. There will be copies of the transcript made available to you. Do correct as you need to. Also, any points that you wanted to say more on, since you were all longing to say more, please do draw them to our attention. Anything you send in will be published alongside the evidence, so that would be really helpful. Thank you very much indeed.

Supplementary written evidence from Professor Lyndal Bond, Programme Leader of the MRC Programme: “Evaluating the Health Effects of Social Interventions” (BC 150)

Do the Government always evaluate interventions successfully? What concrete examples can you provide of publicly-funded interventions which were subject to (a) effective evaluation, and (b) less effective, or no, evaluation? Where interventions were not appropriately evaluated, what were the reasons for this?

For the latter question the Committee may want to read a study by Roberts et al³⁴⁶ that looked at barriers and facilitators to RCTs. The authors found that reasons given by the policy makers for not evaluating included:

- Timeliness - takes too much time
- Costs
- Not wanting to appear uncertain & potential to find out something doesn't work
- Lack of training in appropriate skills

What are the most effective methods for evaluating behaviour change interventions at (a) the individual, (b) the community, and (c) the population level?

Assuming what is meant here is finding out if the intervention had an effect on changing behaviour, the best method(s) involves:

- 1) explicitly stated outcomes(s) – this does not have to be limited to one outcome and many interventions can have effects on several
- 2) using an experimental or quasi-experimental evaluation design: ie having
 - a. a comparison group who are not receiving the intervention (although see MRC guidance – large impacts imply less need for sophisticated design – obvious changes in routine data may be sufficient evidence that the intervention works – eg smoking legislation in Scotland; drink driving & seatbelt legislation in UK and traffic deaths).
 - b. baseline and post intervention measures
- 3) realistic expectation of the size of effect and timescale of change
- 4) caution in considering proxy (early) indicators e.g. change in attitude doesn't often translate to change in behaviour
- 5) sufficient size to examine differential effects on different groups (for which groups is this intervention more effective?)
- 6) multiple sources of data – validated measures, self-report, hospital admissions, sales data, etc. As a general rule, self-report overestimates healthy behaviour – but is often the easiest way of getting information.

It is also necessary to think about feasibility of implementation of the intervention. There is not much point doing a trial to measure outcomes (behaviour change) if it is unlikely that the target group is going to be reached by the intervention.

Are policymakers using the most effective methodologies to evaluate behavioural interventions or do they require new methodologies to evaluate successfully?

³⁴⁶ Roberts H, Petticrew M, Macintyre S, Liabo K, Stevens M. *Randomised controlled trials of social interventions: Report of a pilot study of barriers and facilitators in an international context*. Glasgow: MRC Social and Public Health Sciences Unit, Occasional Paper no.19, 2008. Available from www.sphsu.mrc.ac.uk/publications

No I don't think they are using the most effective methods. The standard experimental methods are so under-utilised that we cannot say they are failing us in evaluating simple or complex interventions in complex settings.

Consideration of complex interventions or simple interventions in complex settings means we need to consider what our interventions are, and how components may interact with each other and the context to create effects. This possibly means we need think about different timescales of effects, but robustly assessing effects/outcomes can still be done using experimental or quasi-experimental methods. In fact because of the complexity, I would argue that they need to be evaluated using experimental methods.

I think there has been growing confusion between interventions and evaluations, especially with discussion of complex interventions. Complexity of an intervention or consideration of what an intervention may be should not affect the choice of evaluation. The type of evaluation depends on whether you want to know how something might work (process and implementation) or whether it does work (measuring behaviour change). If a change in behaviour is detected, we can't know that this is due to the intervention if we do not have a comparison group, as the change could be due to other factors. Hence the best way of establishing whether the change in behaviour is due to the intervention is by using an experimental or quasi-experimental design.

How can complex interventions be evaluated? To what extent is it possible to successfully evaluate the individual components of a complex intervention? Is it important to be able to do so?

I believe complex interventions can be evaluated using standard designs. I would argue further that the distinction between complex and non-complex interventions can be overstated and is often not useful. Most interventions are complex if you consider that in most cases 'effects vary within and between individuals, depend on subtle interactions between deliverers and recipients, and where exposure is uncertain,³⁴⁷ (and see also³⁴⁸).

I don't think it is always appropriate to evaluate the effectiveness of individual components of an intervention. For a complex intervention one is assuming that the components or activities interact with each other and with the context (i.e. whole ending up being greater than the sum of the parts). This could be for an intervention aimed at say school or organisational change to change individuals' behaviours or could be societal and quite long term e.g. all the activities around reduction in smoking (changing knowledge about harmful effects, changing social norms, changing legislation, over 50 years). Would any of these have been successful on their own? If intervention components need to interact with other components to achieve a specific effect, evaluations of the individual components would miss that effect.

Is sufficient funding available for the evaluation of interventions? How much of a policy's budget should be allocated to evaluation?

³⁴⁷ Bond et al, MRC guidelines and the evaluation of health improvement programmes: are health improvement programmes really too complex to assess their effectiveness? BMJ Rapid response 18th February, 2010
³⁴⁸ Macintyre, Good intentions and received wisdom are not enough: the need for controlled trials in public health, JECH in press

Profesor Lyndal Bond, Professor Ray Pawson, Professor David Gunnell, Department of Energy and Climate Change and Department for Work and Pensions

Probably not – or not effectively. A large amount of evaluation resource is spent on evaluating process or implementation – who did the intervention reach, how was it done, was it received positively or not. Which is useful but often the information from these pilot studies is under-utilised – i.e. not used to inform next stage of evaluation – did the intervention do what it was supposed to do – have the desired behaviour change?

Good evaluation can be relatively expensive. Less robust evaluations can also be relatively expensive as you often have to collect a lot of data to try to make a credible case for causality and you can still have less certainty about the results of the study.

14 December 2010

Supplementary written evidence from Professor Ray Pawson, University of Leeds (BC 148)

Examples of interventions which were not effectively evaluated

It is easy to list the ingredients of a worst case scenario. Most evaluations are hindered by at least some of the following points:

1. Many evaluations are put out to tender and organised with a rhythm that excludes the evaluation team from the programme design stage. Most of them begin research during the early implementation of the programme – arguably, as many witnesses appear to have said, too late to have any influence in fine-tuning the intervention.
2. Joining in on an unfolding programme creates its own problems – principally because it will be unclear whether subsequent results will demonstrate success or failure or simply that the intervention is half-baked.
3. A further problem often occurs with the specification of the research design in the ITT. These tend to be rather formulaic (e.g. stipulating brands of evaluation and outcome measures) and may restrict the possibility of valuable adaptation and trial and error on method in the mid-course of research.
4. Often the evaluation will be managed from a Department with an eye on targets (x interviews by such and such a date) rather than on the quality of the policy inferences that are made in the research (much harder to judge).
5. Often the (brightest) civil servant responsible for managing the evaluation will be transferred to another post in the midst of the research - to be replaced with another with a slightly different research agenda.
6. Often evaluations will be asked to report before a programme has fully matured (time is money). Again, there is an especial problem here of distinguishing between programme failure and incomplete implementation.
7. In some instances (e.g. disappointing, ambiguous, contradictory findings) an evaluation final report will be ‘sat upon’ by a Department. This despite, from an evaluation perspective, that nuances and diversity of the finding may well be a sign of rigorous research.
8. Sporadically, evaluation findings are cast into the wilderness because the policy agenda has moved on and a new wave of schemes and programmes has come to the fore.

7 December 2010

Institute of Practitioners in Advertising, M&C Saatchi and Unilever

Written evidence from the Institute for Practitioners in Advertising (IPA) (BC 101)

SUMMARY

Why we are responding to this call for evidence

- 1) The Institute of Practitioners in Advertising (IPA) welcomes this opportunity to submit evidence on the use of behaviour change interventions to achieve policy goals. We agree that new understanding drawn from academic research, particularly Behavioural Economics (BE), alters dramatically and considerably broadens the interventions available to policy makers.
- 2) Advertising³⁴⁹ and marketing communications are proven drivers of behaviour change. We believe no enquiry into behaviour change interventions can be complete without considering the role advertising and marketing communications can play or without considering the skills available within advertising agencies.
- 3) Our submission aims to substantiate three key points:
 - a) Advertising and marketing communications are proven drivers of behaviour change. We will draw on the IPA Databank of over 1,200 IPA Effectiveness Awards case studies, and IPA TouchPoints, a unique study of media habits, to show this. Advertising and marketing communications are an indispensable tool for any Government wishing to bring about behaviour change.
 - b) The IPA is at the forefront of applying BE to advertising and communication problems as well as to upstream strategic issues, including policy. We will provide evidence of our BE programme and its impact on our members and their clients.
 - c) The skills necessary to translate the understanding of BE into behaviour change interventions to achieve policy goals are available in abundance in IPA member agencies. These skills are useful and relevant to the design and execution of behavioural change programmes, whether or not traditional advertising is used as part of the final mix.

Background

- 4) The IPA is the trade body and professional institute for UK advertising agencies, with a membership accounting for 85% of the UK's advertising agency business.

³⁴⁹ Throughout we use advertising in its broadest possible sense. Advertising and marketing communications includes TV commercials, radio commercials, press and magazine advertisements, posters, online display advertising, online search optimisation, websites, direct mail, leaflets, door drops, ambient media (e.g. beer mats, taxi cab interiors, pavement and road decals), events, sampling activity and a host of other established, emerging, improvised and one-off media vehicles. Whereas advertising agencies once only *filled* existing media spaces, they now routinely also *create* new media spaces to reach new or hard-to-reach audiences. Such innovation will be essential in creating behaviour change with Government campaigns.

- 5) In 2008 the IPA published, in conjunction with the COI, *How Public Service Advertising Works*. This book summarised 39 cases drawn from the IPA Databank of proven and effective Government advertising and marketing communication studies spanning from 1983 to 2008. These campaigns were effective because they changed behaviour. They will be referenced throughout our submission. We believe they demonstrate advertising agencies proven track record in understanding, designing, executing and evaluating behaviour change interventions for government via advertising.
- 6) In 2009 the IPA published, in conjunction with the COI and the Government Communication Network, *Payback and Return on Marketing Investment (ROMI) in the Public Sector: How To Evaluate the Financial Effectiveness and Efficiency of Government Marketing Communications*. This publication represents a significant contribution to best practice in evaluation of advertising in the public sector. As public sector campaigns, like all advertising, aim to change behaviour, it is also a significant contribution to best practice in evaluating behaviour change interventions which involve advertising.
- 7) In 2007 the IPA published *Marketing in the Era of Accountability*. This detailed the first findings of the IPA Datamine's meta-analysis of 880 case studies submitted since 1998. It was instantly acclaimed within the industry and is regarded as a landmark publication in the understanding of advertising. It aimed to show that much common practice was not best practice. It showed that campaigns designed to meet hard objectives, like behaviour change, generate more effective and more accountable advertising³⁵⁰ than more commonly pursued soft objectives. Many of the correctives it offered can now be further supported by the new understanding BE offers. We will also frequently cite this valuable study.
- 8) To build on our proven track record of driving behaviour change via advertising and marketing communications the IPA launched a BE initiative to educate, inform and inspire our members. BE is now at the forefront of the most innovative thinking in our industry.
- 9) Full details of the IPA, its membership and activities can be found in Annex A. Further information on the IPA Databank is in Annex B. IPA TouchPoints is further explained in Annex C. Finally, Annex D lists the members of the IPA Behavioural Economics Think Tank and the IPA Behavioural Economics Task Force.

The scope of our response

- 10) Although our submission does not attempt to answer every question posed by the enquiry our evidence is relevant to several areas being covered. Consequently, we have grouped our evidence thematically. Below is a breakdown that explains how the themes are formed from the questions posed.

³⁵⁰ *Marketing in the Era of Accountability* (2007) Binet & Field, fig. 4, p. 20 shows that in all cases where only hard objectives (like behaviour change) are set the effectiveness success rate is 50%, compared to only 11% when only soft objectives (e.g. attitude or awareness) are set. For not-for-profit, the comparison is 30% for hard objectives, 7% for soft objectives. Table 7, p. 21. shows that those setting one hard objective are 28% more likely to report a large business effect, and 41% more likely to accountable. For those setting four or more objectives, these figures rise to 76% and 66%. (Accountability is defined here relatively above an absolute minimum standard of accountability – it is the likelihood of a case study winning an award for excellence, and therefore being deemed by industry and academic judges to offer a higher level of explanation and, therefore, accountability than other papers that only satisfy the minimum criteria.)

- a) The enquiry asks about research capacity (Q. 3) as well as existing evidence for behaviour change (Q. 8) and mechanisms for evaluation of interventions (Q. 9). The IPA Databank provides a rich seam of evidence about advertising as an intervention. Case studies in the Databank are required to isolate the effect of advertising. This requires considering advertising within the context of wider influences that could be driving behaviour (e.g. an increase in sales could be caused by increased distribution, decreased price, or a competitor's withdrawal from the market, so these have to be discounted). Such analysis is, therefore, also informative about other drivers of behaviour change and their evaluation. Likewise IPA TouchPoints offers unique analysis of media and network behaviours, both crucial to understanding behaviour change effects. Both resources are world leading database and analysis tools. They have considerable value to offer in understanding not just advertising's role within behaviour change interventions, but of behaviour change interventions in general. We firmly conclude that behaviour change interventions should combine policy interventions. This includes advertising and all elements are weaker when used in isolation (Q. 8). Both the IPA Databank and IPA TouchPoints provide evidence to this effect and further analysis over time will provide more.
- b) The enquiry asks several questions about the skills necessary for the translation of research into policy interventions (Q. 4) and mechanisms to coordinate interventions and best practice across government (Qs 11 & 12) as well as provide advice and drive cultural change within government (Q. 10). We believe that our member agencies have a huge amount to offer around the issue of translation. Advertising agencies' core function is to make a creative leap from a business problem to a viable solution. The catalyst to this is insight into human behaviour, something the application of BE helps provide. Our work to equip our members to do this transfers exceptionally well to the needs of policy makers.
- c) To educate our members about behaviour change we have had to provide pragmatic definitions of what a behaviour change intervention is and what questions to ask when creating one. Although by necessity simplified they are not simplistic and go some way to helping answer the question of what a behaviour change intervention is (Qs 5 & 6).
- d) Q. 1 asks "What is known about how behaviour can be influenced?" Others will provide more learned, scientific, theoretical and academically referenced evidence in answer to this question. However, when it comes to the *practice* of behaviour change we believe we have much evidence, experience and expertise to offer. Advertising is fundamentally in the business of behaviour change.

ADVERTISING & BEHAVIOUR CHANGE INTERVENTIONS

Why advertising is embracing Behavioural Economics

- 11) Our research into BE is changing the way we believe advertising works. This will impact not only the way advertising is used, but both *how* IPA Members work in the future and *what* they will work on. IPA Members already work on many projects beyond the bounds of traditional advertising. This will only increase in the future.
- 12) To explain why BE is having such an impact on our industry and agencies in particular it is useful to make some general points about how the industry has worked in the

past, and how BE thinking will change this.

- a) All advertising aims to change behaviour. Commercial clients want to drive profit and sales by pursuing market share for existing products and launching new ones. All these involve influencing consumer behaviour. Government campaigns aim to increase citizen's positive behaviour³⁵¹ (e.g. get people to exercise more)³⁵², decrease negative behaviour³⁵³ (e.g. stop people speeding³⁵⁴ and driving drunk)³⁵⁵ and encourage and enforce legal behaviour³⁵⁶ (e.g. compliance with tax)³⁵⁷. Even information campaigns aim to change behaviour, even if we hope the behaviour will never need to be enacted (e.g. Civil Defence protocols).
- b) Historically advertisers and agencies have mostly taken the view that changing attitude was both a necessary and sufficient condition for changing behaviour. If people knew a product was superior, they would buy it. If they knew how to reform their diet they would eat well. Framed by this belief, considerable expertise emerged in shaping messages designed to shape attitude. Changed attitude would, in turn, change behaviour.
- c) The right message is essential in advertising. The central premise of BE, the notion of framing, supports this.³⁵⁸ Framing is academic proof that the way a fact is described influences its impact. Framing messages effectively is the fundamental role of advertising. The IPA Databank shows that the right message is superior to the wrong message.³⁵⁹
- d) However, this focus on the content of messages designed to shift attitude meant that the context of messages was not always given equal effort and thought. The essential contribution of BE is to demonstrate forcefully two things: that the context of a

³⁵¹ How Public Sector Advertising Works (2008) Ed. Lannon, Part I, Section 1 'Initiating positive behaviour', p. 13ff

³⁵² For example see 'Gaving Hastings really does walk on water' – How HEBS used advertising to increase physical activity in Scotland' The Bridge 1998. This campaign changed the context of exercise by pointing out that walking a mile uses as many calories as running a mile. It is summarised in Lannon (2008), pp 17-18.

³⁵³ How Public Sector Advertising Works (2008) Ed. Lannon, Part I, Section 2 'Reducing negative behaviour', p. 37ff

³⁵⁴ For example see The Department of Transport's '30 for a reason' (2006) published in the IPA Databank and at WARC.com.

³⁵⁵ There have been many excellent drink-driving case studies. 'Anti-Drink Driving – 'Shame' Campaign' Lyle Bailie International Limited (2002) is exemplary. It is summarised in Lannon (2008), pp 50-52

³⁵⁶ How Public Sector Advertising Works (2008) Ed. Lannon, Part I, Section 3 'Encouraging law-abiding behaviour', p.65ff

³⁵⁷ A good example of this is the 'Tax doesn't have to be taxing' campaign. See 'Inland Revenue/HM Revenue & Customs – Tax Self-Assessment.' Miles Calcraft Briginshaw Duffy (2005). This is summarised in Lannon (2008), pp 75-76

³⁵⁸ Framing is a cognitive bias that means that presenting the same outcome in different formats alters decision making. The seminal paper in this area is Tversky, A. & Kahneman, D. (1981). 'The Framing of decisions and the psychology of choice.' *Science*, 211, 453-458. People are asked to consider a hypothetical disease where 600 people are at risk and to choose between treatment options. In one condition A) 200 people saved is contrasted with B) a 33% of saving everyone, a 66% chance of saving no-one. These are equivalent, but people avoid the risky outcome – 72% choose A, 28% B. In the second condition C) 400 people will die or D) 33% chance no-one will die, but a 66% chance everyone will die, the risky choice looks better – 78% choose D, 22% choose C. The choice of words alone – the message – explains these shifts despite all conditions being equivalent.

³⁵⁹ Recent commercial examples include campaigns for Cravendale Milk and Tropicana. Cravendale shifted from an unsuccessful rational message about milk's health benefits, to a message about the quality of Cravendale Milk. Tropicana likewise had an unsuccessful rational message about its unprocessed, natural benefits. It shifted to a campaign that celebrated Tropicana as part of the great New York breakfast. In both cases significant business results occurred. In the terms discussed in this paper both moved from a message merely reflecting content unengaged with context (milk is good for you, Tropicana is unprocessed) to messages that connected with content with context (Cravendale is a better quality milk within the implied context that not all milk is the same; Tropicana is the orange juice of choice within the context of people who are really fussy about breakfast, New Yorkers). These are summarised in *Marketing in the Era of Accountability* (2007) Binet & Field, p. 59

message or behaviour is a significant influence and that behaviour may be changed without first changing attitude. Indeed, changing behaviour is often the cause of changed attitude – we align our beliefs with what we do and not the other way around.³⁶⁰

- 13) It is important to note that creating context has driven the success of Government campaigns in the past.³⁶¹ The social unacceptability of drink-driving, created by successful campaigns, itself became a driver of more behaviour change. Contextual change has often been described as the ‘halo effect’.³⁶² This implies these effects are unintentional benefits “beyond the immediate objective at hand”.³⁶³ BE offers an important corrective to this view; that these effects are crucial to success. Creating them, and setting out to measure them, should be part of the aims and objectives of any behaviour change intervention.
- a) In the future, the direct and deliberate construction and influence of context will be an ambition not only of traditional advertising and marketing communication campaigns, but of more ‘upstream’ interventions made at a policy or legislative level. The skills required to make a success of both are the same. These skills are to be found in IPA Member agencies.

The IPA’s Behavioural Economics agenda

- 14) The IPA has embraced BE under the leadership of current IPA President Rory Sutherland. His ambition is for IPA agencies to “turn human insight into business advantage” and this greatly enhanced by using BE to demonstrate advertising’s value as the creator of both content and context.
- 15) The IPA have produced two publications on Behavioural Economics.³⁶⁴
- a) *Behavioural Economics: Red Hot or Red Herring?* established that BE had a contribution to make to advertising and outlined seven key principles that made BE relevant to

³⁶⁰ This is why sampling is such an effective tool. Experience of the product changes attitudes towards the brand. It is also why simulation of behaviour has been effective embraced, for example in two recent British Heart Foundation campaigns. ‘Watch Your Own Heart Attack’ got 6 million people to watch a two minute simulation of a heart attack with their families, so they would know what a heart attack might feel like and could act in time. Yoobots was a game designed to teach children about the connections between diet, exercise, obesity and heart disease. It did this by letting them care for a simulated online version of themselves that led an accelerated life and prospered based on the lifestyle decisions its owner made. See ‘British Heart Foundation – Watch Your Own Heart Attack’, Nick Hirst, IPA Effectiveness Awards 2009 and ‘British Heart Foundation - Yoobot’, Peter Zezulka, IPA Effectiveness Awards 2009.

³⁶¹ Indeed Government has often led commercial advertisers in this regard. Behaviour change interventions often address issues with a particular category or sector, for example why young people don’t take out pensions. Individual commercial brands rarely have enough influence in a category to address these issues, nor believe they can benefit from doing so. De Beers, for example, is a rare exception, where promoting diamonds in general is both possible and rewards a dominant player. In contrast, Government is the sole player in a category (e.g. tax) or *de facto* represents most people’s experience of the category (e.g. Health, Education).

³⁶² See *How Public Sector Advertising Works* (2008) Ed. Lannon, Chapter 10 ‘Measuring Success’, Section 6 ‘Look out for Halo Effects’, p. 170ff. This describes two examples. How a police recruitment campaign also increased overall respect for the police (which itself would have helped with recruitment) and how Self-Assessment Tax advertising increased favourable impressions of HMRC (which itself would have increased people’s willingness to deal with HMRC and contributed to compliance).

³⁶³ *Ibid.* p. 171

³⁶⁴ Copies of both of these presentations have been filed with the Clerks of the enquiry. Further copies can be obtained by contacting the IPA.

advertising practice.³⁶⁵

- b) *We're All Choice Architects Now* was a response to the challenge laid down by Richard Thaler and Cass Sunstein in their book *Nudge*.³⁶⁶ They observe that no choice can be presented neutrally. Therefore, they argue, designing choices to fit with people's objectives is an important task. They challenge people to embrace the findings of BE to help design these choices better, thus leading to desired outcomes. Our publication argues that IPA members, with their experience and understanding of consumer behaviour, are uniquely placed to take up this challenge.
- c) These publications have been widely distributed in our industry. *Red Hot or Red Herring* has over 1750 copies in circulation (25% of which are electronic), *We're All Choice Architects Now* over 1400 (13% of which are electronic). Allowing for in-house reproduction of electronic copies we are confident that the publications are in circulation in nearly all of our 265 member agencies.
- d) We have also been running regular talks, events and workshops. Attendance at these events further shows the rapid impact BE has had on our industry. 1,512 people have attended events, 1,223 from member agencies, representing 160 of our member agencies (60%). Reflecting our industry's dominant location in London, our events have been predominantly held here, although we have also held events in Manchester, Edinburgh and Belfast and we have also had attendance at our London events from agency representatives from Bristol, Brighton, Birmingham, and Newcastle. Attendance rates London agencies, often the UK's largest and most influential, is at 83%. Furthermore, many of the key BE events have been filmed and posted on the IPA website for all members to view. Attendees have been drawn from all disciplines within the industry (media, creative, strategic and account management). Senior executives, department heads and board members have dominated, reflecting the interest opinion formers and influencers have in the innovation BE offers. New training events will launch in December 2010 and more regional events are planned. In both spread and rapidity this is an unprecedented level of interest in a new way of working in our industry and, we suggest, would be highly unusual in any industry.

A framework for working with Behavioural Economics

- 16) Central to our agenda is getting our members to engage with BE ideas, not for their own sakes, but so they can immediately and effectively inform campaign design and execution. This means developing effective and pragmatic working practices.
- 17) We are not the first to attempt this. *Minspace*, for example, offers advice on application and is an acronym of important factors.³⁶⁷ 'Nudge' is also an acronym of

³⁶⁵ The principles are the most commonly used to design 'nudges', the behaviour interventions advocated by Richard Thaler & Cass Sunstein in their book *Nudge* (2008). The seven principles were: Loss Aversion, 'The Power of Now' (the tendency for immediate behaviour to crowd out long-term objectives), Scarcity Value, Goal Dilution (the tendency to prefer singular to combined solutions), Chunking (the importance of breaking tasks into intuitive and manageable chunks), Price Perception and Choice Architecture (the influence the presentation of choices can have on what is chosen).

³⁶⁶ *Nudge* (2008) Richard Thaler & Cass Sunstein. The challenge is put across in the introduction, especially pp 3-4. The call for more nudges is made in chapter 16, p. 229ff

³⁶⁷ See *Minspace: Influencing Behaviour Through Public Policy* (2010), 'Applying MINDSPACE to policy-making', p. 49ff. The acronym (p. 18) is **M**essenger, **I**ncentives, **N**orms, **D**efaults, **S**alience, **P**riming, **A**ffect, **C**ommitments, **E**go.

factors Thaler & Sunstein advocate employing.³⁶⁸ We acknowledge and applaud these contributions.

- 18) However, we feel these approaches presume education of principles must precede changed practice. In other words, that for policy makers (and advertising agencies) a change in knowledge and attitude is a necessary pre-cursor to changed practice. We do not doubt that education is important. Nonetheless, true to the principles of BE, we believe we can change behaviour without first changing attitude.
- 19) To achieve this we have developed working techniques that can be immediately used within existing practice. These small changes in practice yield dramatic results. We feel this nudge into practicing behaviour change is an important contribution to the application and translation of theory into practice.
- 20) To do this we have distilled down the approach of BE to three questions that should be asked of any campaign (and by the same token of any policy). They can be applied without any background knowledge of BE. When applied they direct the better use of existing solutions and easily suggest new solutions. The three questions are:
 - a) *How are content and context interacting?*

This question challenges people to consider whether changing the context of a decision will be more effective than changing the content.

For example, at launch Daewoo promised showrooms without salesmen. This said nothing about the car (the content), but everything about how it is purchased (the context). For those whose greatest barrier to buying a new car is dealing with a salesman, this offer was persuasive.³⁶⁹

- b) *What is the decision relative to?*

People only rarely make decisions in isolation based on carefully researched information.³⁷⁰ Typically they may opt for the default choice, simply repeat what they did before, follow what those around them do, or do what they perceive they ought to do in this situation.

For example, obesity is often the consequence of continuing a poor diet learnt as a child, not evolving or varying that diet, having those habits and diet reinforced by similar individuals around one and a desire to fit in with those around one. The Advertising Association have done much useful work in this area in partnership with Volterra and Business4Life on peer influence in diet, which we understand is discussed in their submission.³⁷¹

³⁶⁸ Nudge (2008), p. 100, They are: iNcentives, Understanding mappings, Defaults, Give feedback, Expect error, Structure complex choices.

³⁶⁹ See 'Advertising That Builds Strong Consumer Brands? That'll Be The Daewoo.' (1996) Rachel Walker & Chris Forrest, IPA Effectiveness Awards 1996.

³⁷⁰ Even marriage is not a counterexample as Thaler & Sunstein note "unrealistic optimism is at its most extreme in the context of marriage... nearly 100% of people believe that they are certain or almost certain not to get divorced!" See Nudge (2008), p. 224 and chapter 15, p. 215ff 'Privatising Marriage' for wide-ranging discussions about how to nudge marriage as an institution.

³⁷¹ See Understanding & Predicting Childhood Obesity (2010) Advertising Association/Volterra Research.

c) *What efforts are involved?*

Every decision involves some effort. Efforts that might be perceived as small by manufacturers, service providers and policy makers are in fact much more significant to consumers and influence their behaviour to a previous unappreciated degree.

The Save More Tomorrow Pension made famous in *Nudge* is the classic example of this.³⁷² Pension providers, employers and policy makers, not to mention the public themselves, felt that the reduction in take home pay after signing up to a pension scheme was a ‘small’ hurdle. In fact it prevented many from taking out a pension. By only taking contributions once someone’s salary increases (so the contribution is ‘invisible’ and taken from ‘money you never had’) savings rates are increased in trials by over 50%.³⁷³

Desirable results are brought about by making decisions easier, as above. Undesirable behaviours can be discouraged by making them harder (e.g. having smaller plates makes taking large portions harder). Effort is also encouraged by rewards. Simple affirmations like a tick next to a reduced energy bill or a smiley face display shown to drivers staying under the speed limit have a disproportionate effect on behaviour while being very cheap to administer. In comparison, sanctions and punishments (e.g. rationed energy, speeding tickets) are costly and slow.

Testing the framework and results

- 21) Our ‘Test & Learn’ session put these principles to the test in March 2010. Four clients provided briefs for 80 IPA Members delegates to work on.³⁷⁴
- 22) The ‘Test & Learn’ session was acclaimed a huge success by both the delegates and clients. The full report was published as part of *We’re All Choice Architects Now*.³⁷⁵ Pertinent highlights are repeated here:
 - a) Ideas generated were relevant, useful, original and achievable.
 - b) Many required no extra budget or the modest reassignment of existing budgets and could be applied immediately or in the short-term.
 - c) Ideas were generated quickly. This has clear benefits for both timings and costs.
 - d) Ideas generated went far beyond advertising and communication solutions.³⁷⁶

³⁷² The approach and background research are summarised in *Nudge* (2008), Chapter 6 ‘Save More Tomorrow’, p. 103ff

³⁷³ Results vary depending on the design of the scheme and previous levels of saving, but this uplift is typical and some uplift is always generated. See reference above for more detail.

³⁷⁴ The briefs were from EDF (Why do people switch utility suppliers?), Aviva (How do we get young people to take out pensions while they are still young?), Birmingham International Airport (How do we get people who live near Birmingham to fly from BIA, not another airport?) and The Electoral Commission (How do we get young people to vote in elections?)

³⁷⁵ See pp 33-43

³⁷⁶ For example, many of the ideas for Birmingham International Airport concentrated on queuing; ideas for the Electoral Commission suggested various redesigns of procedures around Polling Stations and Voting Booths; the Aviva syndicates

- 23) CEO of Birmingham International Airport, Paul Kehoe, despite never having worked with BE before concluded, "For me this was a very targeted activity... 1.5 hours of work from me in briefing has produced a plethora of ideas. There are no big ideas anymore in my business. It's from the little ideas that you get back the big changes."³⁷⁷ Wendy Proctor, Director of the Electoral Commission Account Client Team at the COI remarked, "The difference came in the explosion of ideas. Everyone was liberated. Normally, it's about distilling everything down. This was rich: 30-40 ideas."³⁷⁸
- 24) We concur with these observations. We believe our way of working has demonstrably unlocked the power of BE principles to help create and design behaviour change interventions.
- 25) The session was recently repeated in a condensed 'one-night' format on October 5th 2010 with 15 client advertisers represented working on live briefs ranging from Mini, Halifax, Churchill, The National Lottery and The Child Maintenance & Enforcement Commission. Despite the short time many clients left with ideas they are now acting upon.
- 26) Plainly, these efforts are pioneering and therefore indicative of changes in agency service provision yet to be evolved fully. Programmes put in place have not run for enough time to be meaningfully evaluated. However, we feel confident in concluding that we have found a way to get our members to work with BE inspired techniques that is rapid, penetrating and cost effective in delivery. Such methods are crucial if BE is to rapidly become an actual influence and presence in policy making, rather than a theoretical possibility or merely discussed but unused alternative.
- 27) We are seeking opportunities to further test these methods with Government. We propose running workshops using our methods with policy makers and senior civil servants along side representative from IPA member agencies. A meeting has been set with Cabinet Office to discuss this and other avenues are being actively pursued.

Evaluation, research & return on marketing investment (ROMI)

- 28) The enquiry asks specifically about research capacity and the ability to evaluate programmes. It is a large question but we feel we can make a valuable contribution based on our experience of measuring the effectiveness of advertising. Firstly, this is because advertising is itself a behaviour change intervention. Secondly, good practice demands isolating its effect in case studies, which means understanding the wider context of that behaviour change. Consequently we have learnt much about measuring non-advertising effects. Therefore, we propose that the skills our industry has developed offer both a model for how to measure behaviour change interventions and demonstrate our expertise in designing and executing innovative, pragmatic and useful evaluation tools for behaviour change interventions.
- 29) The IPA founded the IPA Excellence Awards in 1980 to encourage agencies to not only prove the effectiveness of their advertising, but to publish and share that proof in

proposed entirely viable and profitable pension products aimed at Students with Loans and Children under 16; EDF benefitted from various suggestions that would make people more aware of their fuel consumption and fuel bills.

³⁷⁷ We're All Choice Architects Now, p. 40

³⁷⁸ Ibid.

order that others might learn from their experience and thus raise the standard of UK advertising and marketing communications. Thirty years later, the database of case studies runs to over 1,200 and is a unique body of knowledge about the practice and effectiveness of advertising. Indeed, the IPA Effectiveness Awards are regarded globally as the 'gold standard' in proving ROMI.

- 30) Over the years authors have found many ingenious and innovative ways to quantify the financial value of the client's ROMI. Public Sector cases have always pioneered in this area, ascribing a financial value to reduced burglary³⁷⁹, reduced road deaths³⁸⁰, drugs education³⁸¹, Police recruitment³⁸² and increased blood donation³⁸³ amongst others.
- 31) In November 2009 the IPA partnered with the Government Communication Network and the COI to publish *Payback and Return on Marketing Investment (ROMI) in the Public Sector: How To Evaluate The Financial Effectiveness and Efficiency of Government Marketing Communication*. This provided 10 Steps to Payback and ROMI³⁸⁴ and 6 Key Principles for evaluation.³⁸⁵ It also provided a worked example of a case study evaluating the Teacher Recruitment Campaign run between 1998 and 2005.³⁸⁶
- 32) We believe this is evidence of our industry's ability not only to evaluate and measure its own existing practices, but to contribute to the developing debate around how to measure, quantify and evaluate behaviour change interventions.
- 33) One of the core methods of proving the effectiveness and ROMI of an advertising and marketing communications campaign is to use a 'test' and 'control' approach.
 - a) Typically these are two regions of the country which receives different weights of expenditure and thus media exposure, but a de facto 'test and control' can be achieved by the phasing of a campaign and scrutinising closely what happens at each stage of the media build-up.
 - b) One famous case for BMW used the whole of the UK as the 'test' region and European markets as the 'control'.

³⁷⁹ Home Protection: How Advertising Helps Fight Crime' (1983) *Advertising Works*, pp 197-208

³⁸⁰ Rear Seatbelts – Sudden Impact: How Can We Measure The Cost of a Life?" (2000) *Advertising Works* 11, pp 349-382

³⁸¹ HEA Drugs Education Campaign: How Advertising Helped Turn The Tide' (1999) *Advertising Works* 10, pp 3-32

³⁸² Police Recruitment: How Thinking Negatively Ended The Negative Thinking' (2003) *Advertising Works* 12, pp 429-452

³⁸³ Blood Donation – New Strategy, New Blood: How a New Strategy Made a Difference to Levels of Blood Donation in Scotland' (2006) *Advertising Works* 14, pp 205-218

³⁸⁴ The Ten Steps are: 1. Map objectives to outcomes and check expected contribution, 2. Identify stakeholders and set the scope of analysis, 3. Plan to measure campaign outcomes, 4. Measure the impact of the campaign, 5. Put a value on the impact of the campaign, 6. Calculate Payback at present values, 7. Calculate costs at present values, 8. Calculate Net Payback and ROMI, 9. Understand Payback and ROMI, 10. (Optional) Advanced Payback and ROMI

³⁸⁵ The Six Principles are: 1. Start with an understanding of what your campaign is trying to do and how it will work, 2. Isolate the impact of your campaign from the effects of other factors, 3. Make conservative but realistic estimates of the value of the impact, 4. Be transparent: show all your working and list all your assumptions, 5. Net Payback is usually more important than ROMI, 6. Do not use Payback and ROMI to make decisions in isolation from other measures

³⁸⁶ This is a good example of the ingenuity of evaluation design in Public Sector ROMI. The campaign shows a payback of £85 for every £1 spent. The base measure was the extra number of teachers recruited. However, to ascribe a value to this, each new teacher was compared to the cost of employing a supply teacher in their place. As supply teachers are more expensive than new teachers each new teacher saved around £8,000 from education budgets. Allowing for a teaching lifetime of 15 years (£120,000) and 44,107 new teachers (66% of 66,829 new recruits – this allowed for drop out) the total saving is £4.9 billion.

- c) The IPA believes that it would be sensible to measure what happens when advertising and marketing communications are withdrawn from the behavioural change intervention mix by setting up one region of the country as the ‘test’ while the rest is the ‘control’ where Government spending is cut.
- d) In normal circumstance Ministers have been disinclined for their Departmental campaigns to be anything but national ones, but given the far from normal economic circumstances we face, we believe it’s time to carry out properly constructed and measured tests of the efficacy, or not, of Government campaigns through the COI.
- e) The same thinking can be extended to BE where there could be a national ‘nudge’ but supported by advertising and marketing communications in only one region of the country. Thus the Government would seize what could be a unique opportunity to carry out a four-year evaluation whose results could have far-reaching effects on future policy implementation.
- f) This would help establish a greater understanding of the complex relationships involved in behaviour change interventions and the interrelations between ‘nudges’ and other policy levers. This is further discussed below (paragraphs 34-39)

The relationship between advertising and behaviour change interventions

- 34) The enquiry asks, “Should behaviour change interventions be used in isolation or in combination with other policy interventions?” We feel others can better address the use of legislation, sanctions, fiscal levers and contractual frameworks in pursuing policy. We believe, however, that advertising is also a policy intervention. It is advertising’s role in combination with other interventions that we will address here.
- 35) Part of the political popularity of the behaviour change interventions described in books like *Nudge* is their apparent ability to stand alone and create huge effects often at very little cost. We are naturally aware how appealing this hypothesis is to any budget holder, be they in the public or private sector. However, in all our publications to members we have been keen to emphasize that BE and ‘nudging’ do not offer ‘silver bullet’ solutions. The following should be considered:
 - a) Nudges rely on the wider context for their effect.
 - b) Nudges work better when accompanied by other policy interventions, especially advertising.
 - c) Nudges can be amplified by networks. However, when networks fail, advertising is a useful substitute or booster.
- 36) Nudges rarely work alone. Consider the following celebrated and oft-repeated examples of nudges:
 - a) 50% of hotel customers reuse their towels at least once during their stay, persuaded to benefit the environment by using less water, energy and detergents by not having them laundered. However, when signs add “most people reuse their towels at least once during their stay” this increases by 26%. When it is made specific to the room

this goes up to 33%.³⁸⁷ Yet, this ‘social proof’ nudge requires a base acceptance of the need to reuse towels, something established by other means. Alone it could not establish the practice of reusing towels, only amplify an existing behaviour.

- b) The Save More Tomorrow Pension. This nudge requires a pensions industry that is trusted and widespread appreciation that pensions are desirable (even if that attitude is not enough alone to lead to behaviour). This trust and prevalence are driven by pension companies who invest heavily in their reputations and products. Again, the nudge needs wider context.
 - c) Organ donation. Changing organ donation to an ‘opt-out’ from an ‘opt-in’ is often presented as a panacea for a medical establishment unable to harvest enough viable organs. Yet, the 2008 report, *The Potential Impact of An Opt-Out System for Organ Donation in the UK: An Independent Report from the Organ Donation Taskforce*, emphasises that it is still necessary to get families to respect the deceased wishes, to distribute the organs to where they are needed, make sure potential recipients are found and make sure that choosing to ‘opt-out’ does not itself become a new norm. Again the nudge needs a wider context. All of these are tasks that advertising has proven itself to be able to make useful contributions to in the past.
 - d) Nudges, for example, would not be suitable when establishing entirely new behaviours. For example, the introduction of congestion charging in London needed to establish a new behaviour that would be complied with literally overnight. This was done by using an ‘Action Briefing Model’ so that awareness before launch reached 97% ensuring a successful, and compliant, launch.³⁸⁸
- 37) Nudges work best when amplified with other policy interventions. Paul Omerod’s recent work on nudges and networks, *N Squared*, argues persuasively that nudges need networks to spread.³⁸⁹
- a) Advertising is a proven accelerator of networked effects. Analysis of the IPA Databank shows that ‘fame’ campaigns have larger business effects and larger payback than other campaigns. Such campaigns are defined as having, “Got the brand talked about/made it famous.”³⁹⁰ 72% of fame campaigns report a very large success effect on some measure, compared to 61% of ‘persuasion’ or ‘information’ campaigns. They are three times more likely to drive profit than ‘persuasion’ campaigns (39% vs. 13%), more than 50% more likely than ‘information’ campaigns (39% vs 24%).³⁹¹
 - b) BE explains this effect. ‘Fame’ campaigns create context around the content of a campaign. They create talked about advertising and messages that move through a population. In other words, it is advertising that amplifies a network effect. Advertising can do this with public service messages. Slogans like ‘Clunk-Click every trip’, ‘Think once, think twice, think bike’ and ‘Don’t Die of Ignorance’ spread behaviours through

³⁸⁷ This case was popularised by Yes! 50 Secrets from the Science of Persuasion (2007), Cialdini, Goldstein and Martin.

³⁸⁸ See ‘Central London Congestion Charge Scheme – making sure it worked from day one.’ TBWA/Fishburn Hedges (2004). This is summarised in Lannon (2008), pp 70-71.

³⁸⁹ See Omerod *N Squared* published by the RSA 2010

³⁹⁰ *Marketing in the Era of Accountability* (2007) Binet & Field, p. 55, Table 28

³⁹¹ *Marketing in the Era of Accountability* (2007) Binet & Field, p. 58, Table 32

the nation. Nudges work. Famous nudges work better.

- 38) Advertising is also a substitute for network effects when they fail. Information can undergo a ‘market failure’ like any other good and advertising is a good substitute for network effects when they fail. This can be particularly acute amongst excluded, marginalised and hard to reach audiences – the very audiences who are often the target of Government campaigns.
- a) Analysis of IPA TouchPoints 3 shows that people of social class E (those at the lowest level of subsistence) are less networked than other adults. They account for 11.5% of all adults. For example, the average UK adult spends 7.0 hours talking to others face-to-face, social class Es spend only 5.4 hours. This is a loss of potential network spread of 23%. Likewise they email less (index of 45 against the average adults index of 100), and talk on the phone less (index of 78).
 - b) In contrast, these groups are above average consumers of media, especially TV (4.9 hours daily, against 3.7 for average adults, an index of 132), Magazines (index of 150) and Newspapers (index of 120). Media provides a reliable process of transmission in these cases to supplement absent network effects.
 - c) When we consider that some groups that Government needs to reach are isolated even within these classes and communities, we can see that media remains a crucial avenue for information where nudges and networks will fail, or not be able to spread messages quickly enough. This is an area which needs more research and we acknowledge the excellent work the COI have already done in this area.³⁹²
- 39) We conclude that behaviour change interventions are necessarily complex systems.
- a) Advertising and marketing communications should always be considered in the mix.
 - b) Advertising will enhance many behaviour change campaigns by amplifying a nudge and its network effects.
 - c) Advertising can be used to reach excluded groups who may be missed by nudges and networks.
- 40) The enquiry also asks about the role of partnership. This is something our members have great experience with. Agencies routinely use outside production houses, freelance talent and establish ad hoc relationships with suppliers to fulfil campaign needs. Making collaboration work is a necessity for agencies. Our members also have great experience in bringing partners and messages together for public sector campaigns. For example, the THINK! Road Safety campaign helped to drive a 50% decline in deaths on Britain's roads since the 1960's by acting as a powerful unifying identity for the entire road safety effort.³⁹³ Other examples include The Fire authority

³⁹² For example the COI Common Good Research on Black and Minority Ethnic Communities (2003) and Older People (2006).

³⁹³ The THINK! brand prompted re-appraisal of poor road safety behaviour by getting people to take responsibility for the consequences of their actions using issue-driven communications. As a result casualty reduction targets were achieved two years ahead of schedule. THINK!'s contribution was to prevent over 3,000 deaths and serious injuries during this period, representing a saving to society of over £800m and generating payback of £9.36 for every £1 spent on the campaign.

in Northern Ireland securing 50% co-funding of TV production with a smoke alarm manufacturer, The Home Office's partnership with commercial car park operators to reduce theft from vehicles, and even back as far as 1982, partnerships with Crime Prevention Officers and commercial organisations concerned with domestic security to help get people to fit window locks as part of a crime reduction campaign.³⁹⁴

- 41) It is also worth considering that advertising is an inherently public activity. TV commercials are clearly advertisements, as are billboards, radio commercials, press advertisements and so forth. By contrast, one of the objections put against behaviour change interventions is that they maybe regarded as covert, clandestine and underhand. This is also one of the objections put against programmes inspired by BE. The advantage of including an element of publicity and advertising in any behaviour change intervention programme is that it obviates this objection.
- 42) Contrary to popular belief, the majority of people show a balanced view of advertising's role. 72% say they use advertising on a personal basis. 58% agree that advertising is "a power for good" and 54% agree that advertising is a useful source of information about products and services.³⁹⁵ People's acceptance of advertising is mediated by their sense of its relevance: irrelevant communications are irritating, relevant ones useful and often welcomed. Government advertising clearly aims to be in the latter category. Policy-makers should not be discouraged by general poor opinions of advertising driven by other advertisements that are perceived as irrelevant.

CONCLUSIONS

- 43) We have shown that the skills necessary to make adopting behaviour change as an ambition of policy are readily available in advertising agencies. The expertise to develop ideas this way is being developed and tested. The expertise to evaluate and optimise programmes already exists and will be applied as new projects are carried through.
- 44) We have also shown that conceiving, designing, delivering and communicating behaviour change interventions demands the consideration of advertising as one tool within any intervention.
- 45) We anticipate that behaviour change intervention is bound to become a more important tool in policy and we think it essential to take the political opportunity presented by the current economic climate to test different mixes of BE with and without advertising and marketing communications.
- 46) The IPA is both excited by these possibilities and committed to pursuing them for the benefit of our members, more importantly for the benefit of our clients and most importantly for the benefit of the British citizens and consumers who will gain from campaigns and programmes that fit more closely with their intuitions, habits and needs.

October 2010

³⁹⁴ See Lannon (2008), Chapter 1, Section 6 'Magnifying the effect through partnership', p. 22

³⁹⁵ Source: Advertising Association "Attitudes to Advertising", July 2009.

Oral Evidence, 7 December 2010, Q226-261

Evidence Session No.6. Heard in Public.

Members present:

Lord Crickhowell
Baroness Hilton of Eggardon
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Baroness Perry of Southwark
Earl of Selborne
Lord Sutherland of Houndwood
Lord Warner

Examination of Witnesses

Witnesses: **Mr Rory Sutherland** [President of the IPA and Chairman of the Ogilvy Group]
Mr Tim Duffy [Chief Executive, M&C Saatchi] and **Dr Richard Wright** [Director of Sensation, Perception and Behaviour, Unilever].

Q226 The Chairman: Welcome to you all and thank you very much indeed for coming. Can I start by saying we have lost one of our witnesses. I am afraid that Mark Baird from Diageo is stuck in Scotland; he is very keen to come and give evidence but he wasn't able to get here today. We hope to hear evidence from him at another time. For those members of the public who are here who particularly want to hear him we will publicise that if and when that is appropriate. We are delighted you are here. Just a couple of things, I will be asking you in a moment to introduce yourselves and make an opening statement if you want to do so. Before that, can I just make sure that you know that we're being webcast and it will pick up everything that you say. Perhaps I ought to warn people that sotto voce asides get picked up too. The only other thing, and I will remind you of this at the end, is that we will send a transcript of the session to you and you will be able to correct it, and we would obviously also like you to add to it if there are things that you didn't have time to say. Handing over to you, would you like to start and introduce yourselves for the record and make a statement if you wish to do so.

Tim Duffy: My name is Tim Duffy. I am Chief Executive of M&C Saatchi in London.

Lord Crickhowell: Could you speak up please

The Chairman: That is the other thing; this is the most awful room.

Tim Duffy: My name is Tim Duffy. I'm Chief Executive of M&C Saatchi.

The Chairman: Do you want to make any opening statement?

Tim Duffy: I'm obviously a practitioner not an academic. I know that you are very concerned as a Committee about evidence. I would say that my experience, working across a range of public sector and private sector clients, is that Government is quite advanced in the use of evidence in comparison to the private sector as I imagine one would hope when it comes to taxpayers' money.

The Chairman: Wonderful. I am sure we are going to be asking you more about that quote.

Rory Sutherland: My name is Rory Sutherland. I am the Vice-Chairman of the Ogilvy group and President of the Institute of Practitioners in Advertising. My statement is very simple; I think this is an immensely valuable area of scientific investigation. I think it's currently light on evidence-based case studies. However, there are enough of them to show, I think beyond reasonable doubt, that what is true of human behaviour is that the scale of the input need not be proportionate to the scale of the behavioural change. Therefore what I think seems to be uncontestedly true so far, which has been revealed through nudge theory, is that sometimes in certain places relatively small contextual cues and nudges can have an enormous effect on human behaviour. That in itself is a very valuable finding because it suggests it is worth spending the time and the effort to find out what those little contextual cues might be. Even if it is not a perfect science—it is closer to meteorology perhaps than it is to physics—none the less it is very useful to know that these small things can have huge effects and therefore it is worth looking for them. That is my conclusion. I actually think this is hugely important and that the findings so far can be summed up effectively in that one phrase.

Dr Richard Wright: My name is Richard Wright. I am a Director of Sensation, Perception and Behaviour at Unilever. I would like to read a short statement as Unilever didn't submit any written evidence. It is basically to introduce Unilever's interest in this area. We have two businesses, a home and personal care and a foods business. We sell products in 170 countries worldwide and these are used 2 billion times a day. They are used in nine out of ten households in the UK and Ireland. We have a huge opportunity every day to influence people's behaviour. This is particularly pertinent to us at the moment because our ambition is to grow our business; we want more people to use more of our products whilst we want to reduce our environmental footprint, so we need them to use them in a sustainable way. We recently introduced our 'Sustainable Living Plan' that sets out our 10-year strategy. Particularly on the sustainability side, most of the environmental footprint occurs in the consumer usage cycle and so we need to help consumers make small actions to change them into more sustainable behaviour. We believe in working with Government, charities and NGOs to try and achieve these behaviour changes.

Q227 The Chairman: I am going to start, and then hand over to colleagues for different questions; there will be the occasional supplementary. I'm going to ask all of you, and maybe you will take this one in turn, what examples you can provide of successful attempts at changing behaviour by yourselves or indeed your clients, and what if anything can Government learn from these examples? I think you have already said, Mr Duffy, that the Government is well advanced in this, but can we tease that out? If you could give us some examples that would be really helpful. I think you're right when you said there was a lack of case studies here, so we are very keen on hearing from you about some of those case studies.

Tim Duffy: My most recent experience has been with the Department of Health's anti-child obesity team project, Change4Life. This is at a very early stage so long-term outcomes are yet to be determined. To pick up on the statement I made earlier about the evidence base, the strong and successful behavioural change campaigns need a clear hypothesis of how the behaviour will be changed. If you have a clear hypothesis, that requires an evidence base in its own right. My experience on Change4Life is that the work that was done by the Department of Health into understanding precisely the target audience and in segmenting that audience and understanding who was most at risk and who was most open to successful intervention provided a very clear base from a communications perspective, which is where I come from, to target interventions. That was one level. The second level is then understanding the broad range of influences on people and their behaviour. Much work was done to understand the role of networks, peer influences, influences of brands, influences of Government and thereby knitting together a multi-faceted approach using as many cards in the deck as possible to try to influence behaviour. There was a lot of evidence supplied to us, M&C Saatchi, to help us do that.

Q228 The Chairman: I just want to pick up on your segmentation point because you obviously regard that as quite important, and actually in a number of submissions that we had there was quite a lot about an accurate understanding of behaviour in different segments of the population. In the commercial sector, do you think that your business particularly has a better understanding of that kind of segmentation than Government or was that driven, in that particular case you cited, by Government?

Tim Duffy: I think Government has as good an understanding of segmentation, in my experience with the Department of Health, as the commercial sector. I think where there are differences is in use of data. We have broad segmentation—Segment A, Segment B, Segment C and so on—and we can understand the differences between them. The commercial sector is very good at getting data on those people and then using that data in a direct sense. For example, supermarkets are very good at understanding people's behaviour because they own and understand the data and are able to predict and influence behaviour using that data in a very direct way. I think they are much more advanced than Government in terms of data but not generally in terms of practical segmentation.

Q229 Lord Krebs: We are particularly interested in case studies where an outcome has been achieved. Yours was a case study where orderly inputs into the process were presented. Can you give us a case where there has been an outcome as a result of Government marketing campaigns or similar?

Tim Duffy: Yes I can. I should say with Change4Life, intermediate outcomes are being measured; people's response to interventions and their willingness to adopt new behaviours are being measured, but it is still early days.

Lord Krebs: That is raising awareness rather than outcomes. That is an intermediate stage. The outcome is kids getting less fat.

Tim Duffy: Indeed and there is much more work to be done in that, I accept that. In terms of other projects I have worked on, we have seen success in shifting share of London transport towards cycling; in another project trying to drive down incidence of anti-social behaviour on public transport in London. This is an interesting campaign where there are real problems about litter, playing music too loud, eating smelly food, not offering seats.

This was becoming a real social issue on London transport and a campaign and a series of interventions were developed to try to solve that problem. We have seen significant declines in witnessed behaviour: double digit declines in people's witnessing of this anti-social behaviour though the campaign that was put together. By the way, that campaign interestingly used the principles of reciprocity, encouraging people to say 'if you do something, I will do something', which is some of the latest theory from behavioural economics.

Q230 The Chairman: Just to tease that out, the evidence base there is what other people have observed about behaviour change, it has not been a hard piece of data; is that right?

Tim Duffy: It is people's experience when travelling on the tube or on buses, and what they are witnessing.

Q231 The Chairman: It is a before and after survey?

Tim Duffy: Yes it's relying on what passengers themselves observe.

Rory Sutherland: That probably counts as observed behaviour in my opinion.

Q232 Lord Crickhowell: Arising out of that question, one of the issues we are quite interested in is the impact of infrastructure as opposed to the kind of influences that you are talking about. If you travel on a London bus or train now you are being photographed continually. How far do you think the success of your campaign on London transport is due to the fact that people are being clearly photographed all the time they are on the transport and are being prosecuted?

Tim Duffy: It has an influence; there is no doubt about that. I haven't got the data to hand but I could forward it if required. We seek to measure—again it is an intermediate measure, I bring you that caveat—the response of people who have seen advertising, to compare it with those who have not seen advertising. We measure their willingness to take part in the desired new behaviour. You can see differences between those exposed to advertising and those not exposed. So yes, it will most definitely have an effect, but we can equally see an effect between different samples who have and haven't seen advertising.

Lord Crickhowell: One of the impacts of advertising that hits people is the large sign in front of them on the bus: 'you are being photographed'.

Tim Duffy: It is unquestionably a big influence.

Q233 The Chairman: We would like to move on to you, Mr Sutherland. Would you like to give us some examples?

Rory Sutherland: I have a book here of successful examples of behavioural change through public sector advertising. I would be delighted to send anybody who would like one a copy. I don't get any royalties; this is funded by the IPA in case you thought this had turned into a book plugging session. Just to start with, as a useful analogy, I think we ought to look at something where human behaviour is actually surprisingly successful which is the remarkably low incidence of motoring accidents if you consider the speed of cars and the number of

people who drive them. If you look at what encourages people to drive relatively well and why the accident rate falls, you see that their behaviour is curbed and driven and moderated by a whole mix of cues. Some of them are legislative; you can't drive until you are 17, there is a speed limit. There are financial cues as well; obviously a congestion charge would be one example, selective taxation, and the fact that larger cars pay more road tax. There are also quite a lot of things on the road side; signs for example that say "Slow Down: School", "Bend Ahead", contextual signs that flash when you are going over the speed limit, there are speed cameras. We can all have an argument depending on how libertarian we are about the relative mix of those inputs. What I don't think you can argue with is that persuasively we are playing with a full deck. Everything is employed to people to drive better from fairly intrusive legislation to very gentle nudges like the fact that your car goes beep if you don't put your seatbelt on when you start in the morning. I think the insight from this is that quite a lot of Government intervention in things uses the two cues of taxation and legislation very heavily as blunt instruments and fails to make use of other gentler forms of intervention or nudging which may actually be more effective. There is a disproportionality at work here. I think that is the central lesson of this. There is a great phrase, "to a man with a hammer every problem looks like a nail"; as a legislative body the temptation is always to legislate in answer to any perceived problems. I think there is a good, useful insight that comes from nudge theory here, and from the advertising industry, that sometimes persuasion is actually more cost effective, it is more targeted and it can arguably be more desirable in terms of libertarian issues than compulsion or taxation. Not all the time; many problems require a mixture of things to solve them. What the private sector does actually show is that quite a lot of conventional advertising techniques, although they didn't know it when they conceived them, actually cohere quite well with the Government's MINDSPACE initiative of behavioural change. The clearest example is the example of M for Messenger in the MINDSPACE mnemonic, which is to say that the use of celebrities or testimonials in advertising showed a very clear understanding that the credibility of the speaker would have a huge bearing on how the message was interpreted. The use of Billy Connolly to advertise alcohol-free lager is a clear case where you add some degree of credibility to alcohol-free lager by having it advertised by someone who you wouldn't think of as natural buyer of light beverages. Earlier on David Ogilvy did this in reverse when he deliberately used Commander Whitehead to advertise Schweppes in the United States. In the US at the time white spirits had a level of very little masculinity attached to them, so using a naval man to promote gin and tonic effectively had the opposite effect. Quite a lot of marketing inadvertently has used the best examples of behavioural science. There is a very good line for De Beers for engagement rings which said "how else can a month's salary last a lifetime?" which is an ingenious use of a price anchor. No one quite knows how much you should spend on an engagement ring and the second that advertisement appeared they knew exactly where they should aim, and it possibly had an effect on the female target audience as well. If you look at, for example, other cases of the use of heuristics, in distribution quite a lot of advertisers will have a flavour range which is slightly larger than makes money; in other words they actually have loss-making flavours on the shelf but your prominence on the shelf is a strong consumer heuristic that you are a leading brand and therefore successful and reliable. Quite a lot of this work goes on. Generally the private sector doesn't publish these cases because they are commercially sensitive, so you have to deduce them in reverse.

Q234 The Chairman: Can you give us—this is the thing I think we are trying to go for—a couple of case studies where you can demonstrate a change, and I take your point that

there is a mixture of things that happen, but where these techniques have absolutely led to some form of behaviour change on the part of the public or a section of the public?

Lord May of Oxford: Can I just ask a supplementary that sharpens on that last response?

The Chairman: Go on.

Lord May of Oxford: You gave the example of the speed limit. You didn't say this bit: despite the fact that the speed limit is widely ignored in this country, much more than other countries I have lived in, we have a very low accident rate. Can you provide some explanation for something that has always puzzled me, which is, in the United States, the speed laws are enforced far more rigorously and the accident rate is higher. If you can't explain that then I don't really understand what you said about why we are successful.

Rory Sutherland: It actually makes perfect sense to anybody familiar with human behaviour, which is quite often it is counterintuitive. There is some evidence that suggests that a speed camera that fines you £60 and three penalty points is less effective in changing and improving human behaviour and driving than a simple flashing sign with a frowning face on it that reminds you that you are going faster. To a classical economist this is absolute anathema, because something that actually punishes you with a fine and actually deducts penalty points should be a stronger effect on your behaviour than something that is a gentle nudge.

Lord May of Oxford: Coming back to my question, in the States the mechanism is just you get fined, whereas here in general you don't, people know where the speed cameras are. Yet it is less safe driving in the States.

Rory Sutherland: I have seen contrary figures about the US driving record. Of course the distances are enormous; I think it all depends on whether you measure it by distance travelled or by time.

Q235 The Chairman: Could you see if you could give us a couple of examples where you can show there has been a clear behaviour change as a result of some of these techniques where you have been involved, or your clients?

Rory Sutherland: Easy in that case. Direct marketing is a very good example. If you are selling a credit card, making the form easy to fill in—if you can reduce the amount of information required—will have an enormous effect on the uptake. For example—this is a Dick Thaler thing—the difference between prompted choice, asking people yes or no, and having an opt-in or opt-out is absolutely conclusive and proven time and time again. That would be another example where, both in the private sector and in the more famous case of organ donation, it has shown that very small contextual cues have this disproportionate effect. The biggest single cue for whether people agree to organ donation is how you frame the question and whether you make it opt-in/opt-out, or a prompted choice of yes or no. That would be another example. Another absolutely clear cut example which the private sector has found time and time again is that some degree of progressive pricing or upgrading—this is called “chunking” in behavioural economics—generally works. Anybody who has booked a flight online will notice that you start with a base price and add to it. That is because it is easier to get to a price progressively than it is in one go. Routine tests are done on internet pages, which are quite an interesting place to look because they are fairly cheap to test and experiment with. The fact that this is ubiquitous is clear evidence for some of these behavioural theories, chunking in this case—the idea that it is much easier to upgrade someone from green card to a gold card than it is to get them straight to the more

expensive product. This theory has been deployed by the private sector for 20 or 30 years. There are quite a few of them. We didn't at the time have the name of behavioural economics with which to dignify them but they were well known within marketing.

Q236 The Chairman: Thank you. I think what would be very helpful would be some of the hard evidence, if you can let us have it, which shows us how this works. Can I move on? Dr Wright, can you give us a couple of examples?

Dr Richard Wright: I can. We try to be very strongly evidence based in the research that we do, so hopefully you can see some good behavioural changes. I will take one from a completely different context to start with, Lifebuoy soap. Soap is where our company was founded and is a very important preventer of diarrhoeal disease, which is still a major killer throughout the world, particularly in children under five. The use of soap, particularly post defecation and before preparing meals, will help prevent the transmission of diarrhoeal disease. We took a threefold approach looking at Lifebuoy. First we tried to understand the size of the prize. We did an efficacy study; an efficacy study is where the actual intervention isn't thought to be scalable because it is too intensive but it will give you some understanding of the effects of those kinds of interventions. We did a study in Mumbai in 2007-08, and we took 2,000 families. Half the families we gave Lifebuoy soap and gave them the education campaign, the other half³⁹⁶ acted as control. We found that through giving the education, the use of soap increased as much as 10 times. There was a 25% reduction in the amount of diarrhoea among children aged five or below and there were actually fewer days off school, so there seemed to be a real change in behaviour. I will come on to how we monitored the change in soap use. That wasn't seen to be a scalable intervention so we had a campaign called Swasthya Chetna. Swasthya Chetna has been run by Hindustan Lever, which is our Indian company, and it has reached tens of millions of people throughout India. Here the villages are given three stages of intervention where education is given and the children are engaged in this intervention. We saw some sales uplift and we saw a change in actual knowledge about hygiene behaviour from this. But we wanted to see whether there had been a real behavioural change so we ran a randomised controlled study. We ran this in southern India in Andhra Pradesh. There were five villages who received the Swasthya Chetna intervention and five control villages. We did a baseline study and then went back to see soap usage post control. Now because we believe that actually it is very difficult to study behaviour, particularly in our business where there is a lot of private behaviour—people don't necessarily wear clothes when they behave with our goods and it is a very personal thing. Also, if you ask people questions they will possibly give you the answers you want to hear. If you go and watch them they will almost certainly do the behaviour. I always say, imagine someone sat outside your bathroom in the morning and see whether you washed your hands after you went to the toilet. Observation will affect the very behaviour you are there to observe. So we created small sensors which we buried inside the soap and we looked at actual soap usage and we saw before and afterwards whether these soap sensors were picking up more movements in soap. We saw that in the Swasthya Chetna villages there was an uplift in the actual use of the soap relative to the control villages. So it was a three-layered approach: let's evaluate exactly what will happen, let's put that into a scalable intervention and let's understand, using real behaviour measures, what that means in terms of getting the uplift that we want once we had reduced it to a scalable intervention. The evidence base is layered within this approach. That is one example,

³⁹⁶ Control families had access to soap but no education campaign.

where we are trying to shift the consumption of Lifebuoy soap through a communication campaign.

Q237 Baroness Perry of Southwark: Thank you for the interesting examples you have given us. My question is searching for something behind those examples. The evidence that you have has been collected through trying two or three interventions and then measuring how successful they are. Do you have any feeling behind that or do the psychologists who advise you say “this is why some things work and other things don’t”? Governments have spent a fortune over the years in offering education campaigns, poster campaigns and so on to try and change people’s behaviour in relation to taking exercise, how much food they eat, using condoms for safe sex and all the rest of it. We know that much of this has not been successful. Do you ever ask yourselves the “why” question; why do people not react to certain kind of things and why do they react to others? What is the science evidence behind the case studies that you have so helpfully cited to us?

Dr Richard Wright: I guess the way that we would try to develop the interventions is by extrapolating from similar cases. There is not always a clear-cut case where you can say this is our kind of intervention and this seems to have worked. We will look at the triggers and barriers particularly to behaviours under the understanding that the easier a behaviour is to adopt, the more likely it is going to be adopted. We will try to enhance the reward from a particular behaviour. It might be different from what you think the reward is going to be. The consumer might use toothpaste because it tastes nice, but you think the reward for them is the fact that they have improved oral hygiene; there is a difference in what the consumer sees. You are trying to understand the positive benefits for the consumer, the thing that is going to stop the consumer and you are trying to put the balance within that range. There are plenty of psychology theories out there about the various rewards and how to induce those rewards in addition to the involvement of education.

Q238 Baroness Perry of Southwark: We are searching really for a science of behavioural change, of what goes on in people’s heads, because we know very well that people can be convinced that it is bad for them to smoke but they still smoke. They can be convinced that it is bad for them to eat too many fatty foods but they still eat fatty foods and so on. There must be something going on in people’s heads which you—your businesses and the members of the IPA and so on—need to know in order that, before you launch your campaigns, you can be reasonably certain that you are spending a lot of money on a campaign that stands a good chance of success in changing people’s behaviour. What is the science behind those decisions that are made? Not just “let’s try it and then measure and see how successful we are”.

Dr Richard Wright: The reason why we have these intermediate measures, looking at actual behaviours—I talk about the sensors—is because actually if we wait five years to see whether diarrhoeal disease has dropped in a part of India, then that is not fast enough feeding back into our interventions. The standard is actually if we can measure an intermediate behaviour that we have changed, that is indicative that we are doing the right thing. What the bit you talk about, smoking, and I talk about, oral care, have in common is that they both have short-term rewards. Many academics have different theories about behaviour change and I think there are probably more than a hundred different theories of why people change their behaviours and what they do.

Q239 The Chairman: I think what we are interested in is the extent to which you look at the research base for designing the interventions that you are going to try. Mr Duffy, you were nodding away just then, so do you have a view on this?

Tim Duffy: Yes I do. I think every case is different but you are certainly right to search for trends and patterns and understand the science. My view is that science is based on two things, our ability to motivate people and their ability to act, and those two have to interplay. On the first point on motivation, I think where we have learnt from work done in the private sector is identifying what I call the unmet need. The temptation is always, particularly in public sector communications, to say, "stop doing this, stop doing that", "don't do this, don't do that". I believe identifying the unmet need is a very powerful way to engage people. Let me take, albeit early, experience from Change4Life. Saying "don't eat snacks" is not going to help. The unmet need is that it is very difficult for a parent to negotiate the relationship with a demanding child and they want help in how to manage. In that particular case, and to pick a very particular example from Change4Life, there was a development of a product called Snack Swapper. The unmet need was that the parent needs a mechanism to help manage their child and their child's choices; the service and the product was a mechanism that allowed the parent to play a game with the child to ensure that they could successfully negotiate with the child. That was the unmet need. It was the relationship between the parent and the child, not any base-level nutritional issue. Looking for that need and satisfying that need in order to drive the motivation, I find very useful in the work we do. That brings me to the second point, which is about the ability to act. If we can motivate people to want to do something they have got to be able to act on that motivation. I want to pick a particular example from some work we did in trying to drive down the use of illegal minicabs in London. This was a real problem particularly for young women who are coming out of bars and clubs late at night using unsafe minicabs. There was communication about the importance of staying safe and not getting into an unmarked, unlicensed minicab, but most critically the campaign only worked, in our view, because at the point of truth we were able to offer a service which we called Cabwise. We developed it with Transport for London. Cabwise was at the point of truth; they could just text Cabwise and it would automatically direct them to a licensed cab firm. There was the ability to act at the point where the problem was. I think the combination of the motivation and the ability needs to be knitted together in all the campaigns we do.

Q240 The Chairman: Is that based on any behavioural theory? Is that based on some research?

Tim Duffy: I am treading into academic territory and I am not necessarily the most qualified person to respond. I think some of the health models I have seen are interesting concerning people's perception that there is a problem, whether the problem applies to them, whether the solution to the problem will be more severe than they consider the problem to be itself and whether they have the ability to act on it. We seek to apply this theory—willingness to act and ability to act—to some of the campaigns I have dealt with.

Q241 Baroness Perry of Southwark: But you see, we are all as consumers at the mercy, very often the tender mercy, of your companies and your members in the IPA who are directing our behaviour all the time. They are telling us what we should buy for our Christmas presents or what we should buy for our grandchildren's Christmas presents, what kind of booze we should buy for Christmas and so on. They are not doing that in the

public spirit, they presumably know in advance that by offering us certain things and by certain kinds of advertising they will successfully change our behaviour. Was it the Marmite family, the one who used to make different kinds of Marmite dishes?

Rory Sutherland: Oxo.

Baroness Perry of Southwark: It was Oxo cubes, that's right. Hugely successful; it must have been based. They wouldn't have spent all those tens of millions of pounds on that campaign without having some scientific theory behind it which said this is the kind of thing that will appeal and will make people go out and buy Oxo cubes. One of the very successful campaigns was the Frenchman with the martini, where he said "the ice of the English women and the warmth of the Frenchman"; it sent sales of Cointreau up 25% within weeks. Somebody must have known beforehand that these would work before they put their money in it. I am sorry to keep labouring this but it is to try and get behind the issue.

Dr Richard Wright: I may be incorrect because I am not in marketing and I'm not in advertising but I don't think they tend to be grounded in behaviour change theory.

Rory Sutherland: That's true.

Dr Richard Wright: I think it is about insights, and you may say "actually in this advert it conforms to good behaviour change practice" but I don't think it has been derived from theory. I am not sure that it is as scientifically grounded as you are expecting. The other thing is that we don't want to go and send everybody to do a psychology degree who is in marketing and we have lots of different companies and, lots of different countries that we operate in. So what we have tried to do in Unilever, in terms of trying to get theory in, is to create a simple process by which you could target a behaviour-change intervention through a creativity session which involves engaging with lots of different theories. The theories weren't explicit in this creativity session but they drove it. This created lots of intervention ideas which could then be put together. In terms of theory, we drove behaviour change theory into it but not by formally introducing the actual rules. You can think about other various things that might change behaviour. I have to say, just as a final point, that I think there is a distinction between behaviour change and habit change. What you are talking about is brand choice; moving someone from one soap powder to another soap powder is different from getting somebody to use soap powder in the first place; it is developing a new habit. I think Government are much more interested in habit change than actual behavioural change.

Rory Sutherland: If I was to be candid I think that the advertising industry, until recently, has underestimated the importance of contextual cues. I think that it had a philosophy of how advertising works which probably overstated the importance of preference, which is not to say that preference isn't important, but it doesn't always translate into actual behaviour. Equally I think there is a false dichotomy sometimes made now at the heart of Government which is the suggestion that if you have behavioural economics you don't need advertising. I think the two are highly complementary. I think behavioural economics actually compete with each other in the same way that British Airways and the Heathrow Express compete, which is to say they don't, they are extraordinarily complementary to each other. We need an understanding of both: advertising very much creates the context with which we choose, whereas behavioural economics provides certain cues and prompts at the moment of choosing. They can operate together or they can operate dissonantly, but I think there is a fundamental mistake being made in Government at the moment which is to see behavioural economics as something that supplants the need for wider communication rather than something that works alongside it.

Q242 Lord Krebs: Did this Snack Swapper regime you described actually work?

Tim Duffy: In the sense that the demand for it well exceeded expectations and target, yes. It proved to be enormously useful to mothers. It is still early days in terms of absolute behaviour change.

Lord Krebs: You don't know whether the kids are eating different things as a result.

Tim Duffy: We know attitudes are changing.

Q243 Lord Krebs: No I didn't ask that. I said "are kids eating different things as a result"?

Tim Duffy: We don't know that yet

The Chairman: But that is being measured.

Tim Duffy: That is being measured.

The Chairman: But we are not there yet.

Q244 Lord Sutherland of Houndwood: At the very beginning one of you, I'm not sure which, said what you need is a clear hypothesis. Our question is, in part, where does the evidence come in? Does it come in in selecting the hypothesis, in formulating the hypothesis or measuring whether it's worked? I can see how you can measure whether it has worked, I can see the rational argument you could have between competing hypotheses, but I just wonder if there is something else that may not be quite so susceptible to so-called scientific method, which is actually creating a hypothesis.

Tim Duffy: I think you are right. It goes back to the conversation we were just having; standard "one size fits all" measures are not helpful in creating the hypothesis.

Lord Sutherland of Houndwood: This is very important.

Tim Duffy: I think this is very important; it is because, certainly in my experience, almost every case is different. The nature of the problem is different, the scale of the problem is different, the nature of the audience is different, the nature of the influences on that audience is different, the nature of the media available might be different. Every case is different and so I and my colleagues have found it very difficult to say there is the off-the-shelf solution to that. Rather, the evidence that one searches for is in people's attitudes and their behaviour, how they are thinking, what their friends are thinking. In that sense, base level research is often commissioned from scratch in order to develop the hypothesis.

Q245 Lord Sutherland of Houndwood: Adam Smith worried about this in terms of economics being a rational science and rational human behaviour; he didn't think that was the whole story. Sympathy was the word he used, and a very technical use he had for it, but he felt a measure of insight was necessary into people's behaviour. Now, if that is the line then it is a very different sort of question that we are asking. The second point is: if this is the case and selecting a hypothesis is critical to the success of the operation, you should at least be able to give us some examples of where a campaign has bombed because somebody selected the wrong hypothesis or was willing to spend money on it.

Dr Richard Wright: I will give you an example. We were talking outside. In Indian villages there are the Government-built toilets for people in order to change their defecation behaviour. All they have done is stored wood in these toilets and carried on with the same behaviour³⁹⁷.

Lord Crickhowell: Coal in the bath maybe was the British version.

Dr Richard Wright: So the hypothesis was that the sheer provision of the ability to go to the toilet will change behaviour and that doesn't seem to be true. You can use the world and the environment, and we use products to change people's behaviour, but just giving them the product isn't a necessary and sufficient condition to seeing a behaviour change.

Q246 Baroness O'Neill of Bengarve: Some of the NGOs, including I think DfID, have gone into changing toilet behaviour by considering the issues of dignity and privacy in accessing the facility so that people can do it without, as it were, walking across the public space and other people seeing how often you need to go. That has apparently been done in the occupied territories. Do you draw in that sort of evidence?

Dr Richard Wright: Not specifically, no.

Q247 Lord Warner: I have been puzzling over why there is a sense of dialogue here which is not quite connecting. Let me try on you this idea. Around this table there are a lot of eminent scientists who are very interested in evidence-based research and you go into that body of theory based on that evidence-based research. I have a sense from the three of you that you are practical chaps who are confronted with a set of problems. My question really is *a) is that true; b) do you actually have an evidence base consisting of a series of trial and errors which have been tried over time by different organisations and companies?* And therefore, you do actually have an archive; it may not fulfil all the scientific evidence that people around this table would look for but you do actually have your archive of evidence. Have I interpreted you correctly?

Dr Richard Wright: I think the best practice is the similar thing to that. The sense, picking up the earlier point, is that we just don't know enough about the complexity of human behaviour to use science to actually mechanistically create interventions. It is a guided creativity process and that may be based on prior case studies or it may be based on theory.

Rory Sutherland: As is science, to a great extent.

Q248 The Chairman: Can we just pick that up? I thought that was a very good point that Lord Warner made. I think that would be interesting to us; do you have a file or a system where you keep your past experience and you use that as the basis on which you make present decisions about how, for instance, to design a campaign? Is there something like that? Is there some background thinking that informs how you create it?

Tim Duffy: Courtesy of the IPA there is a publicly available backlog of published case histories which, as a practitioner, I find very valuable. Then from one's own company and from experience there are proven theories that one works with. I will give you one example; in the insurance sector it is proven that what is known as first mention—people's ability to mention a brand first in a survey—will have a big influence on their purchase habit.

³⁹⁷ Defecating in the fields.

We work for Direct Line, which is why we spent so much money to get a red telephone embedded in people's brains. That is because this theory is known and we live by the theory. In such cases, I think you are absolutely right, that is what we do.

Q249 The Chairman: That is actually very helpful for us to know. And there is the IPA directory of interventions?

Rory Sutherland: There is a databank. However, it is fair to say that we are much better at reporting our successes than our failures. That is true. It is very difficult to get someone to sit down for three weeks and write up a failure. I might like to say that is because our failures are remarkably few, but to an extent it is not an unsuccessful business I would say.

Q250 Lord Krebs: I wanted to explore with you the role of Government working in partnership with businesses. Just looking at the Public Health White Paper which I have here, the Government places a great deal of emphasis on this: the Minister's announcement of the White Paper said "rather than nannying people we will nudge them by working with industry to make healthy lifestyles easier". Yet it seems to me that often the interests of industry are directly contradictory to those of the Government in, say, promoting public health. For example, if it were the case that it would be better for public health for people to eat less of a product that was a major business line for Unilever, would you support the Government in a campaign to reduce consumption of your own product, particularly when you said at the very beginning "we study behaviour in order to grow our business"? Would you ever embark on behaviour change to shrink your business?

Dr Richard Wright: I think the way that we try to approach the foods example is that we try to take the bad things out of the food.

Lord May of Oxford: You're not very successful.

Dr Richard Wright: One of the bits in terms of changing people's behaviour is that we need to keep the taste and we need to take the bad things out at the same time. There is no point having a product that doesn't taste good and nobody uses.

Q251 Lord Krebs: How do you take the bad things out of chocolate?

Dr Richard Wright: It is not my particular formulation or expertise, but there is an attempt within Unilever to take out the salt, the sugar and the fat, and we have taken a huge amount of these things out.

Lord Krebs: You take the sugar and fat out of chocolate and you haven't got a lot left.

Rory Sutherland: In life or in chocolate arguably.

Dr Richard Wright: I think it is about balanced eating. It is not just a balance thing, but it is about balance and healthy choices and that is what we would try and do. We would try and make many of our products the healthy choice.

Q252 Lord Krebs: If I generalise out, and maybe the others would like to come in, given that the industry, whether it is the tobacco industry, the alcohol industry or the food industry is often selling things which if consumed to excess—in the case of cigarettes consuming one is consuming to excess—are bad for health, is it plausible to expect those

industries to partner with Government to improve the public's health and thereby sacrifice their own profit? It just doesn't seem to stack up to me, but maybe you can convince me otherwise.

Dr Richard Wright: We worked with the FSA on margarine because it has fewer saturated fats. I don't know of a Unilever example where you would say that's a real problem.

Rory Sutherland: I would argue that if you look at loss aversion and some fairly good stuff on behavioural change, one of the things that you will find is that a lot of attempted behavioural changes failed because they consisted of the message "don't do this". They took something that someone enjoyed immensely and they told them not to do it. Now, where you can partner with the private sector is another message; remember first of all the private sector is competitive and actually every single person has a competitor who is looking to gain advantage and share against the other. Now, the message "Do this rather than doing that" is a much more effective message in terms of driving behavioural change rather than simply demanding that you give something up completely. There, of course, you can partner with whoever is manufacturing the preferable alternative. One of the things to remember about the roles of brands here is that nearly all consumer exchanges are asymmetric. You pay the money up front and you only discover whether the thing you bought is any good either hours, or days, or weeks or months later. In the case of a pension it is 25 years, in the case of a television it is probably three or four years. One of the very strong things that brands effectively do is provide people with a trust mark which says that "If I was planning to sell you a rubbish television I wouldn't have invested all this advertising money upfront". It is known as a "brand as bond theory". Patently, someone who has built a brand is playing the long game rather than the short game. That engenders trust in people. You have brands such as Boots and Marks & Spencer, which actually attain trusts levels that are up there with the police and doctors and so forth. For example, you had M&S or John Lewis branded loft insulation it would be a far more desirable consumer proposition than having someone from the Government going around and telling you to insulate your loft. It is well worth remembering that there are activities that can actually meld commercial and social objectives quite successfully and the powers of brands to create trust around the action shouldn't be underestimated.

Q253 Baroness O'Neill of Bengarve: In order to get robust evidence here you would need to compare not merely, as it were, one brand with another, or one advertising campaign with another, but the advertising campaign against the effectiveness of forms of regulation or fiscal disincentive, higher tax. Do you do any of that sort of work?

Rory Sutherland: It is an interesting debate because you may argue that in some cases they are complementary.

Q254 Baroness O'Neill of Bengarve: Do you do any work to find out where they are complementary?

Rory Sutherland: Yes, the COI has done some interesting work in looking at what you might call equivalent costs. I will give you an example. There is an advertising campaign that effectively discouraged people from having chip fat fires, which was so successful it roughly halved the incidence of this kind of fire. The problem you have there is that that campaign bizarrely only ran in one TV region and only ran once. The strange reason is that it is actually more fashionable for Government to spend the money on fire engines, firemen, or

treating third degree burns than it is to spend the money on advertising that discourages people from having fires in the first place. It is absolutely right that one of the intelligent measures for the success of any behavioural change is the cost of the alternative.

Q255 Baroness O'Neill of Bengarve: Do you do that sort of work?

Rory Sutherland: There is quite a bit in this book. In recent months the COI has also been working very hard to perfect exactly those measures which are what you might call the opportunity costs of not doing the advertising in other forms of Government cost.

Q256 Baroness O'Neill of Bengarve: Do you also measure the opportunity cost of not doing the regulation and the taxation?

Rory Sutherland: My philosophical point of view would be that in approaching a problem, the healthy way to do it is to start with smaller, gentler, interventions first and move up.

Baroness O'Neill of Bengarve: It is the question of the comparison that we are asking about.

Rory Sutherland: It is an interesting question. I am not an accountant but actually calculating the cost of legislation is an interesting one; it doesn't cost much to enact but patently it can impose enormous costs indirectly if I am fair in saying that. It seems a sensible exercise because I think there are two areas. Broadly speaking, if you look at the four areas in which you can solve problems of which the first two are legislation and taxation and financial disincentives, and the two other ones are technology and psychology, I would argue that the last two get too little attention and the first two generally get too much.

Q257 Earl of Selborne: Following up Lords Krebs' quick question, I think we just have to try and pin down the role of business not just in responsibility for something which is determined to be an adverse behaviour change, but that it might be expected to contribute towards the required behaviour change. Take binge drinking in a young population, which seems to be a recent social phenomenon driven no doubt by the attractiveness of the product but also behaviour change with people trying to consort with their peers. Does industry have a responsibility for such phenomena and what is the contribution that society should be expecting from the alcohol industry in this case?

Rory Sutherland: I would argue it is in the interests of the drinks industry to restrict this since actually, if you think about it, if you make the high street a completely undesirable no-go area it is generally bad for business, net. It is entirely in the interest of the drinks industry to promote responsible drinking unless you view them with an incredibly cynical view that it is sales at any price; that would be quite a cynical view to take. I think you are absolutely right that there are externalities of drink. Virtually any human activity has these externalities. You might argue that they were already priced in in terms of the duty applied on alcohol. What you could say however, is that binge drinking is a localised and very specific problem. Actually increasing the cost of all alcohol to address a problem that probably affects one age group one day a week seems to me a fairly crude instrument. It seems worthwhile looking at behavioural interventions that might be more contextual or timely, which would actually be microsurgery for the problem rather than open heart surgery. That would be my instinct. Now it may be that that fails. It is certainly true that

the relative cost of drink has fallen in terms of the disposable income of young people, but it would seem to me that you are punishing a lot of responsible drinkers unfairly if you simply use overall taxation as the single lever with which you seek to solve that problem.

Q258 Earl of Selborne: So just answering my question, what is industry's contribution to solving this issue?

Rory Sutherland: For example, an organisation called Drinkaware is looking at how you can use behavioural science to solve that very problem. It is in their interest to solve that. That is very much looking at a behavioural economics approach to the problem.

Lord May of Oxford: We are going to talk to them next.

Rory Sutherland: Good.

Q259 Lord Sutherland of Houndswood: I wanted to move the questioning a little bit from that to include the third sector, the voluntary sector, and the extent to which any of your organisations intersect with that sector. Are there good examples? You have given us an example of working with the Government on Change4Life, and on trying to reduce traffic accidents. Are there any good examples of working with the voluntary sector?

Tim Duffy: One example I have always been very impressed by is how Comic Relief has worked with business. I think there are some lessons there. It strikes me as brilliantly clever because it brings together mass awareness with a broadcast partner, in the shape of the BBC as you know; it adds distribution in the shape of a retailer, which is Sainsbury's where you can go and buy your red nose, and it obviously has the charitable cause courtesy of Richard Curtis and Comic Relief. The reason the brilliant combination of those three things works so well is that there is no internal conflict. There is a common cause and each partner is getting precisely what they want out of it. Sainsbury's has the commercial benefit, which is more footfall. The BBC gets viewing figures, and Comic Relief gets funding. Producing models that drive down internal conflict—and I know there is plenty of conflict—is interesting. In January, myself and Change4Life colleagues at the Department of Health are running a programme called the Great Swapathon where we are doing a similar thing. We are using a media partner and a retailer to provide discounts, I think up to £250 million worth of offers on healthy food, which people can get access to. I think it is a very clever model where you drive down that internal conflict.

Dr Richard Wright: We partner with a number of third-sector organisations: the World Heart Foundation, the FDI which is the World Dental Federation, and the Public-Private Partnership for Handwashing. I think there is a greater willingness to engage with business now because, as is sometimes acknowledged, Governments come in and when problems are acute and important, they do an intervention but then they will leave because they have a limited resource. Whereas business will come in if there is a profit to be made from handwashing, or cleaning teeth, then they will stay there and they will provide interventions in the long term. We partner very successfully with these organisations now and I think there has been a shift in the mindset of these organisations over the last few years.

Q260 Lord Sutherland of Houndswood: I want to give you an example for your own firm; there is no reason you should know about it. I do know that one of your research directors took a great interest in feeding appropriate for older age folks and has done and

encouraged in the public and private sector quite a lot of research into what would be appropriate and the relevant behaviour change. Now this is two steps back, this is not creating a behaviour change, but it is creating the conditions for what many would see as an appropriate behaviour change, which is providing food that is digestible and of the right calorific content and so forth.

Dr Richard Wright: I think we probably haven't emphasized enough, in my view, that actually we provide products, so we change people's world. We talk a lot about communication, but for instance if we want to be more sustainable in washing clothes we provide a concentrated product with adequate dosing. That leads to a more sustainable behaviour through products and the way you drive the work; someone was talking about cameras, they are there all the time and, unlike communication campaigns, they don't fade and go away, they are constant ways of changing behaviour. That is something to think about.

Lord Sutherland of Houndwood: The relevant research here is actually identifying in the end what kind of product will meet what is a particular need, but also create a market which will very much be a growing market.

Q261 Baroness Hilton of Eggardon: I wondered, talking about the context in which you do your advertising, how you control the media interest in what you are doing and also for example, as in relation to the unlicensed minicabs, how you cope with the fact that there may be notorious crimes; (the black cab driver who seduced his victims in various ways). How do you control for that sort of thing? And we were talking about fatal accidents; better surgical techniques is one of the reasons why we have fewer people killed on the road but we have more disabled people. How do you control for those sorts of factors in relation to the advertising campaigns that you launch?

Tim Duffy: It is a good question and it is very tough because they obviously have their own agenda. In the case of obesity the problem at the outset was people understanding what obesity was. Tabloid newspapers and certain television channels were running pictures of half tonne children and it became sensationalist and that was what people understood obesity to mean, so they could not understand that their child was either obese or at risk of obesity. Because of the media environment, reframing the issue so that people were able to understand the truth about the situation and not the misrepresentation was a very important phase of the work; that was a particularly important aspect of that model. Dispelling myths and countering prejudice when it comes from the media is usually an important part of what we do.

The Chairman: I am really sorry, we do have to stop. I thank you very much indeed for coming and giving us evidence. If there are other things that you would like to add to what you've said, because you will be seeing a transcript, please do send it to us. I think we would like your book please. I am not sure we will want one for every member, but we certainly would like one. Some members would certainly like a copy if that is possible. We have quite a few takers I'd say. Thank you very much indeed, it has been really valuable. If we have got other things we want to ask you we might send you the odd note if that is alright. Thank you very much indeed.

Supplementary written evidence from the Institute for Practitioners in Advertising (IPA) (BC 156)

SUMMARY

Why we are responding to this call for evidence

- 47) The Institute of Practitioners in Advertising (IPA) welcomes this opportunity to submit evidence on the use of behaviour change interventions to change travel-mode choice to reduce car use in towns and cities. We believe that new understanding drawn from academic research, particularly Behavioural Economics (BE), alters dramatically and broadens considerably the interventions available to policy makers to achieve this end. (For background on the IPA please see Appendix A).
- 48) Advertising³⁹⁸ and marketing communications are proven drivers of behaviour change. The general argument for advertising's importance was made in our initial submission of evidence to this enquiry.
- 49) We wish to demonstrate the same two broad points that were made in our initial submission of evidence: that advertising and marketing communications are a proven driver of behaviour change *and* that the skills and inventiveness necessary to conceive, design and execute novel, effective and efficient behaviour change interventions are abundantly available within advertising agencies.
- 50) We believe that behavioural change can be brought about by addressing correctly two questions: “What comparisons are people making?” and “What efforts are involved in making the change?” By changing how people compare car transport to other modes and by understanding the efforts (and sometimes rewards) involved in shifting mode of transport, we will be better able to influence behaviour. (This general approach is discussed in detail in our original submission paragraphs 16-20)
- 51) In particular we wish to emphasise the point that advertising is a remarkably cheap, quick and effective way of changing transport behaviour when compared with the often expensive and slow delivery of infrastructure. We feel this is of particular importance in light of point (g) on the call for evidence “Are current policy interventions addressing both psychological and environmental barriers to change?”. Improving the subjective experience of alternatives to the car in towns and cities can be more effective than changing the physical and objective experience (for example, a bus network that is easy to understand feels more reliable without having to add extra routes or buses).

Scope of our response

³⁹⁸ Throughout we use advertising in its broadest possible sense. Advertising and marketing communications includes TV commercials, radio commercials, press and magazine advertisements, posters, online display advertising, online search optimisation, websites, direct mail, leaflets, door drops, ambient media (e.g. beer mats, taxi cab interiors, pavement and road decals), events, sampling activity and a host of other established, emerging, improvised and one-off media vehicles. Whereas advertising agencies once only *filled* existing media spaces, they now routinely also *create* new media spaces to reach new or hard-to-reach audiences. Such innovation will be essential in creating behaviour change with Government campaigns.

- 52) This submission draws on case studies from the IPA Databank connected with Transport³⁹⁹ (for details of the IPA Databank, please see Appendix B).
- 53) The cases are of three kinds:
- a) Those that demonstrate the ability of advertising and marketing communications to change transport behaviour in general. For example, drink-driving and road safety campaigns aim to change behaviours in and around cars. This area has produced the most documentation.⁴⁰⁰ Although not directly about changing transport mode they demonstrate absolutely the role of advertising and marketing communications in changing when and how people drive – both of which will be essential in getting people to drive less in the future.
 - b) Those that relate specifically to the power of advertising to increase the use of alternate modes of transport to the car, specifically buses and trains. We also will highlight the crucial role advertising played in launching the London Congestion Charge Scheme, an intervention clearly designed to reduce the use of private cars. In our view advertising and marketing communications will always be essential in helping introduce such widespread interventions in behaviour.
 - c) Cases of campaigns that while not targeting transport directly will nonetheless have shifted transport-mode choice. For example, campaigns that highlight the usefulness of walking as a form of exercise will encourage people to walk when they would otherwise have taken a car, even if this was not an explicit aim.
- 54) Finally, we will make some comments about the future contribution of advertising and marketing communications and their evaluation in behaviour change interventions. Proving the effectiveness and efficiency of advertising and marketing interventions has to itself be cost-effect and achievable. This requires a pragmatism in evaluation that

³⁹⁹ There are around 20 candidate papers. We surveyed papers that dealt with public transport, changing driving behaviour and increasing use of bus and rail. We excluded campaigns for air travel or cars themselves. However, it should be noted that car manufacturers have run campaigns designed to change driving habits (e.g Honda's 'Live Every Mile') and have sponsored safety campaigns as part of CSR efforts (e.g. Network Q & Vauxhall). We fully expect similar activities to be submitted as IPA case studies in the future.

⁴⁰⁰ Other useful papers on Road Safety in the IPA Databank include *Department for Transport – Thinking Like a Brand: How a Brand Idea Drove Down Road Casualties* by Annabelle Watson & Clare Hutchinson (AMV BBDO) IPA Effectiveness Awards 2006; *Child Road Safety: For The Sake of the Children* by Sally Ford-Hutchinson (D'Arcy Macmanus Benton & Bowles) IPA Effectiveness Awards 1994; *Cycling Safety: Cyclists Should Be Seen But Not Hurt* by Giselle Okin with Fergus Adams a& Laurence Parks (WCRS) IPA Effectiveness Awards 2009, Gold Winner; *Road Safety – How a Short Sharp Burst Can Reduce Road Deaths* by David Lyle, Julie Anne Bailie, Fiona Rooney, David Martin, Robert Lyle, Valerie Ludlow (LyleBailie International) IPA Effectiveness Awards 2009; *Road Safety Authority (Republic of Ireland) and the Department of the Environment (Northern Ireland) – Road Safety Campaign: Pay Attention, or Pay the Price* by David Lyle, Julie Anne Bailie, Dawn McCartney, Robert Lyle and David Martin (LyleBailie International) IPA Effectiveness Awards 2007; *Department of the Environment (Northern Ireland) – Anti Drink Drive Campaign* (Lyle Bailie) IPA Effectiveness Awards 2006; *The Longer Term Effects of Road Safety Advertising* by Pauline Kerr, Dawn Reid, Robert Lyle, Julie Anne Bailie and David Lyle IPA Effectiveness Awards 2004, Bronze Winner; *Department of Environment (Northern Ireland) & Road Safety Authority (Republic of Ireland) – The Longer-Term Effects of Seatbelt Advertising 2001-2007* by David Lyle, Julie Anne Bailie, Dawn McCartney, Robert Lyle and David Martin IPA Effectiveness Awards 2008, Bronze Winner; *Seatbelts – 'Damage' Campaign: No Seatbelt, No Excuse – Helping to Reduce Road Deaths by 13% a year* by Dawn Reid, Pamela Baird, Julie Anne Bailie & David Lyle (McCann-Erickson Belfast) IPA Effectiveness Awards 2002, Bronze Winner; *Drinking and Driving Wrecks Lives: How Advertising Contributed to Social Change* by Lisa Morgan (Waldron Allen Henry & Thompson) IPA Effectiveness Awards 1988; *'Shame' Anti Drink Driving Campaign* by Dawn Reid, Pamela Baird, Julie Anne Bailie & David Lyle (McCann-Erickson Belfast) IPA Effectiveness Awards 2002; *Rear Seatbelts- Sudden Impact: How Can We Measure The Value of a Life?* By Vanella Jackson, Helen Scott & Naomi Barker (AMV BBDO) IPA Effectiveness Awards 2000.

the IPA and its members are experts in.⁴⁰¹

The Broad Influence on Transport

- 55) Road safety campaigns have done a huge amount to change driving behaviour in the UK. Road safety campaigns are not designed to change mode of transport but they prove how effective advertising and marketing communications can be in changing behaviour in and around cars.⁴⁰²
- 56) The case study 'Think! 2000-2008: How One Word Helped Save a Thousand Lives'⁴⁰³ documents the various strategies used to increase road safety through behaviour change driven by advertising and marketing communications. It is the most comprehensive study covering both an extended period of time, multiple campaigns and multiple parallel interventions in terms of legislation, regulation and enforcement. As a consequence of the *Think!* campaign 3,494 people are alive today who would have otherwise been killed on our roads.
- a) These strategies include clear examples of behavioural interventions. Increasing and reinforcing the social stigma of drink-driving uses social norms to reduce an undesirable behaviour. Both drink and drug driving campaigns emphasise personal consequences in terms of enforcement, shame and guilt. These increase the cost of drink driving by increasing the effort involved in dismissing the risks. It takes little effort for drivers to dismiss the chances of being detected as a low risk but dismissing the consequences of detection is far harder. They want to avoid injury, losing their license, liberty, job and self-respect – a very high cost and effort for them.⁴⁰⁴
 - b) We know these collective interventions have worked. 86% of drivers know the *Think!* logo. This effectively universal recognition means the *Think!* campaign is part of UK driving culture. 4 out of 10 drivers say they think of advertising associated with *Think!* when they see the logo. This increased 'mental availability' of road safety information helps make sure the dangers of driving – and the behaviours to avoid them – are part of normal driving. In other words, road safety has become a social norm influencing behaviour.
 - c) This has led to changes in behaviour: 79% of adults are wearing rear seatbelts in 2009, up 24% since 2000. 22% fewer drivers exceed 30mph speed limits. Drink

⁴⁰¹ In November 2009 the IPA partnered with the Government Communication Network and the COI to publish *Payback and Return on Marketing Investment (ROMI) in the Public Sector: How To Evaluate The Financial Effectiveness and Efficiency of Government Marketing Communication*. A copy of this publication was supplied alongside our original submission.

⁴⁰² Mode of transport change may nonetheless have resulted from Road Safety campaigns. For example, if people avoid drink driving they will go into town centres on foot, by taxi, or by public transport or car pool. This will reduce the overall number of car journeys taken. This side-effect has not been measured by any study we know. This is a good example of how important it is to consider indirect ways wider context of a decision may influence a target behaviour. For example, in the future increased enforcement of drink-driving should be regarded as part of an overall effort of behaviour change away from the private car.

⁴⁰³ *Think! 2000-2008: How One Word Helped Save a Thousand Lives* by Nick Docherty & Rebecca Harris (Leo Burnett) and Will Hodge & Jane Dorsett (AMV BBDO) IPA Effectiveness Awards 2010 Silver Winner.

⁴⁰⁴ For a full list of strategies involved see fig. 9 *ibid.*

driving casualties have fallen 35% between 2002 and 2008.⁴⁰⁵

- 57) Drink/drug driving and fatigue campaigns aim to change *when* people drive. Road Safety campaigns aim to change *how* people drive (wearing a seat belt, within the speed limit, at a distance from other drivers).
- 58) Reducing the number of cars in towns and cities will also involve changing when people drive (e.g. reducing traffic in rush-hour) and how people drive (encouraging car pooling and use of park and ride schemes). We believe that advertising and marketing communications can have a similar and essential role in bringing about these changes successfully.
- 59) The most extensive work on shifting transport modes has been carried out by Transport for London, London Transport and London Underground. Transport for London is in a unique place to study the interactions involved in transport mode shift and to influence behaviour at every possible level. Three case studies in the IPA Databank document the role of advertising in changing transport behaviour in the capital.
- 60) The 1992 case on Fare Evasion shows the importance of gathering wide ranging data to evaluate interventions and highlights the complexities of evaluating an intervention in its absence.⁴⁰⁶
 - a) The paper aims to separate changes in fare evasion levels driven by infrastructure changes (the introduction of barriers), increased enforcement and changes in attitude and behaviour. Surveys data track changes in *attitude* to fare evasion. However, the authors can do no more than observe that the period of the campaign coincided with an £18m decrease in lost revenue between 1983 and 1990.
 - b) This case is instructive in the difficulties of separating factors in public transport studies. Data on attitude and claimed behaviour is easier and cheaper to collect than hard behavioural data. Evaded fares are 'ghosts' in the system – journeys that do not exist. It is hard to know if they become paid-for journeys, the journeys are not made, or are transferred to another mode of transport.
 - c) However, the paper does show again the importance of social norms. 16-24 appear particularly likely to evade fares. They gain most from saving the fare and foster less socially responsible attitudes. Changes in attitude in this group prove to be highly volatile. Scores show they respond more to campaigns, but also revert to norms more speedily when communications stop.⁴⁰⁷ Run today the campaign may well choose to measure shifts in these social norms amongst sub-groups and look to push them beyond tipping points where the changes become more robust or even permanent. This is a prime example of a campaign that would be designed and evaluated differently in the light of increased behavioural understanding.

⁴⁰⁵ *Ibid*. These are claimed behaviours. For full details of the sources for these figures and the subtleties of sourcing consistent data see the full paper.

⁴⁰⁶ *London Transport Fare Evasion Campaign 1982-1990* by Ken Kemp & Frank Harris (Harris Kemp Advertising) IPA Effectiveness Awards 1992

⁴⁰⁷ *Ibid* Tables 2 and 4.

- 61) The 2008 case study for Cabwise shows the importance of timely information about transport modes being able to change behaviour – even when people are in states that incline them to take easier options.⁴⁰⁸
- a) Cabwise is an SMS Text phone service. Users text the Cabwise number and receive in return an text with the numbers for the nearest three registered cab firms in the area.
 - b) The aim of the campaign is to keep women out of unlicensed minicabs. In the three years before the introduction of Cabwise unlicensed minicab drivers committed 42 reported sexual assaults and rapes. In the year after the campaign this fell to 4.
 - c) Although women are aware of the risks of taking an unlicensed cab off the street they are likely to bend their own rules in practice, especially if the night is cold and wet and they are feeling tired or are under the influence of alcohol or drugs.
 - d) The Cabwise campaign uses both levers of a behaviour change campaign. It changes the comparison women are making so they do not compare unlicensed cabs with licensed cabs, but with a stranger's car. It also reduces the effort needed to make the right decision by making numbers available in a simple, effortless and timely fashion. Promoting the service with advertising doubled its usage after the campaign period.⁴⁰⁹
 - e) Although Cabwise did not have travel mode change as an aim, it shows the power of advertising and marketing to establish a service designed to change behaviour around transport. We hope it is clear that similar schemes that made information about general public transport easily available would change the travel culture in cities. (This is further discussed in the Arriva buses case study below, para 18, 18a & 18b).
- 62) The introduction of London's Congestion Charging Scheme in 2003 is a revealing example of the essential role of advertising and marketing communications in supporting a then novel and unique large-scale infrastructure intervention designed to alter very long-established driving behaviour.⁴¹⁰
- a) Success of the scheme demanded widespread understanding of what the scheme was and how it would work. No system could cope with Londoners learning 'on the hoof' on the day of launch. What is more, even quite small total levels of confusion and non-compliance early on risked starting a culture of evasion that meant the scheme would never flourish.⁴¹¹

⁴⁰⁸ Transport for London – Cabwise: Creating a Brand to Help Prevent Rapes by Giselle Okin, Victoria Sangster, Robert Thurner, Fergus Adam, Miranda Leedham, Stuart Bowden, Jason Cross and Priya Smart (WCRS/MEC/Incentivated) Bronze Winner, IPA Effectiveness Awards 2008

⁴⁰⁹ *Ibid*, figure 3.

⁴¹⁰ Central London Congestion Charging Scheme – Making Sure It Worked from Day One by Sue Garrard and Chris Baker (TBWA\London and Fishburn Hedges) Gold Winner, IPA Effectiveness Awards 2004

⁴¹¹ See paras 36-39 in our original submission about the role of advertising and marketing communications to create fast and robust behaviour change that could not be achieved by infrastructure or 'nudges' alone.

- b) The scheme had also attracted widespread negative press coverage in advance of its launch.⁴¹² Research showed that the public echoed and repeated these negative stories. With unpaid for coverage inaccurate and word-of-mouth networks spreading half-truths and untruths, paid-for-communications provided a controllable and accurate channel for information in this climate.
- c) The campaign needed to stimulate action (behaviour change) amongst London's drivers and deliberately target inaction (behaviour continuity) amongst non-drivers (who needed to do nothing) and automatically exempt groups.
- d) It also needed to launch SMS Messaging as a payment channel, at the time an innovative, new and unfamiliar way to pay. However, as the easiest and most convenient way for drivers to comply, text payment fulfilled the rules of good behavioural design – it removed as many barriers to payment compliance as possible and compared the payment to an act most mobile phone owners already did many times a day.
- e) Finally it needed to communicate incentives (when entry is free; behaviours that lead to exemption) and also the disincentives of fines and enforcement should drivers not pay.
- f) Traffic delays in the charging zone reduced by about 30% (at the high end of expectations). About 60,000 fewer car movements per day (a reduction of about 30%) came into the charging zone. TfL estimated that 20-30% of these had diverted around the zone, 50-60% represent transfers to public transport and 15-25% other changes in travel patterns (car share, motorcycle, pedal cycle, travel outside charging hours).
- g) Lack of counter-factuals made conventional evaluation impossible (no advertised and non-advertised periods to compare; no test or control groups; no basis for econometric analysis; no competitive benchmark; no meaningful international comparisons). However, based on the risks of running a less informed launch with resultant higher non-compliance, advertising and marketing communications were shown to have made a decisive contribution to the success of establishing this intervention as the new 'normal' way to drive in London.

Shifting behaviour between modes

- 63) The IPA Database has three case studies that show how advertising and marketing communications have increased usage of alternative modes to the car successfully.
- 64) The Arriva bus case study⁴¹³ is particularly revealing from a behavioural point of view. The initial phase of the campaign attempted to draw people to buses by increasing favourable attitudes towards bus travel – a classic example of attempting to change attitudes to change behaviours. This was shown to have little impact on bus travel

⁴¹² Even in the week before launch substantial inaccuracies were being reported in newspapers including *The Daily Telegraph*, *The Independent* and *The Observer*. (*ibid*)

⁴¹³ *Arriva Buses – Getting Bums on Seats. How Arriva Buses Bucked The Trend of Declining Passenger Numbers* by Mike Rayner & Nicolas Simpson (Cogent Elliott) IPA Effectiveness Awards 2005, Bronze Winner.

with Arriva.

- a) However, the second phase of the campaign switched to distributing route information and maps of stops direct to households in carefully targeted ‘travel corridors’. This behavioural intervention took the bus network into people’s homes. It allowed them to make an informed decision about taking the bus before they left the house and at the same time (and ideally before) they considered using the car for the same journey.
 - b) Results showed that while corridors without marketing continued to show a decline in bus journeys, those in marketed corridors all increased, some by up to 3.5%.⁴¹⁴ Although the data does not reveal where these journeys came from (whether they replaced car journeys or where ‘new’ journeys) it is reasonable to assume that many did.
- 65) Translink Metro in Belfast re-launched their bus service under a new name (Metro was formerly called Citybus) and new livery in February 2005. In the following 12 month period an extra 2 million journeys were generated (a 10% increase) in a city with rising car ownership, plentiful and cheap parking, a unique taxi cab culture and a rush hour that rarely lasts more than 45 minutes. Producing a more visible – and therefore easier to access – service was behind this success supported by a campaign with the message ‘Leave the car behind’. While mode shift was explicit in the campaign’s message, evidence was not available about which modes the new bus journeys replaced. However, this case demonstrates that challenging reasons for using cars can contribute to changing behaviour.⁴¹⁵
- 66) The First Scotrail case study shows how correctly targeting and segmenting audiences can increase greatly the use of a mode of transport, in this case, rail. Different audiences are better suited targets for increased rail usage. By working to develop a better database for First Scotrail and developing more relevant messages for each segment, First Scotrail was able to increase patronage. The creative work used the basic behavioural tool of reframing rail so that it appeared as a more attractive alternative to the car. This showed a 315% increase on ROMI allowing budgets to reach the right people - people more likely to change their behaviour.⁴¹⁶
- 67) These three campaigns, the London Congestion Charge and Cabwise all show the important role of technology. The intelligent use of technology makes schemes like the Barclays Cycle Hire Scheme in London (popularly ‘Boris Bikes’) possible. Train and bus rides are considerably less stressful now that accurate information is available about when the next service will arrive. We believe that advertising agencies will have a crucial role in helping make the most of these technological advances to change the ‘felt’ experience of transport over more typical ‘hard’ objectives like faster journey

⁴¹⁴ Ibid. Figure 20

⁴¹⁵ Translink Metro – Driven: A Story of Success by Brian Scott (Navigator Blue) IPA Effectiveness Awards 2007. See also Filling London’s Empty Bus Seats by Giving Everyone in London Another Car by Verra Budimlija APG Awards 2005 for discussion of a similar message and its use in London. (Account Planning Group (APG) papers are designed discuss strategic ideas that have been successful without having to prove that success with the rigour demanding by IPA Effectiveness Awards entries).

⁴¹⁶ First Scotrail - From Tiny Acorns Great Oaks May Grow: A Story of How Customer Insight Led to Improved Marketing Payback for First Scotrail by Andy Littlewood and Fiona Booth (Feather Brooksbank) IPA Effectiveness Awards 2007.

Non-transport campaigns that change transport behaviour

- 68) When producing behaviourally inspired communications we have learned it is important not just to make the default option less attractive but to increase the appeal of the alternatives. It is absolutely clear that initiatives only designed to make car travel more difficult (tax levies, tolls, congestion charges, pedestrianisation of town centres, etc.) need to be accompanied by initiatives that improve alternatives (increased public transport provision, better information about networks, etc).

However, there are further initiatives that will have useful effects on car usage even if this is not their direct aim nor are the campaigns initiated by transport organisations or Ministries.

- 69) Inspiration may come from an unexpected source. For example, the Congestion Charge scheme found models used to advertise privatisations in the 1980s – for example in the British Gas '*Tell Sid*' campaign - to be useful indicators of how widespread structural behavioural change could be communicated.⁴¹⁷
- 70) The Health Executive Board of Scotland campaign '*Gavin Hastings Really Does Walk on Water*' promoted physical exercise by pointing out that walking a mile uses as many calories as running a mile. Not only does this re-frame walking as legitimate exercise, it will inevitably encourage people to walk more often which must replace some car journeys.⁴¹⁸
- 71) The '*Change4Life*' Campaign also contained many elements that encouraged walking, especially around walking and cycling to school. Getting kids out of cars will reduce the number of cars on the school run. While the campaigns direct aim was to reduce child obesity, it will also have reduced the number of car journeys in our towns and cities.⁴¹⁹
- 72) These are both examples of how behaviour change is driven by a change in context – a context that is often not directly or obviously related to the immediate focus of a campaign.

CONCLUSIONS

- 73) We have shown in this evidence the decisive role that advertising and communications can play in driving behaviour change around transport. This includes changing when and how people drive, their choice of modes of transport, the introduction of infrastructure schemes to change transport behaviour and providing alternatives to the use of the car for non-transport reasons.

⁴¹⁷ See *British Gas Flotation: How Advertising Helped Extend Popular Share Ownership* by Alison Turner (Young & Rubicam) IPA Effectiveness Awards 1988

⁴¹⁸ See 'Gaving Hastings really does walk on water' – How HEBS used advertising to increase physical activity in Scotland' The Bridge 1998. This campaign changed the context of exercise by pointing out that walking a mile uses as many calories as running a mile. It is summarised in *How Public Sector Advertising Works* Ed. Judy Lannon (2008), pp 17-18.

⁴¹⁹ Department of Health – *Change4Life* by Richard Storey (M&C Saatchi) IPA Effectiveness Awards 2010

- 74) We hope to have shown also that advertising and marketing communications will be an essential component of any behaviour change intervention that aims to establish different norms around travel choices and bring about widespread and rapid change in transport behaviour. All of these campaigns have delivered results far faster and less expensively than is possible by building new railways and trams.
- 75) The UK private car fleet continues to grow. This creates a natural bias towards people using their cars as a primary transport mode. What is more the UK's car owners are serviced by a whole culture of pro-car voices in both industry and media from motoring supplements to *Top Gear*. Advertising and marketing communications can create the alternative voice for non-car use which would otherwise be small in marginal in comparison to a *status quo* dominated by cars.
- 76) We note the lack of case studies directly pertaining to mode of transport change. This does not tell us anything about advertising's role. Instead, it reflects that mode of transport change is a problem larger than any one organisation can take on (even TfL, despite their unique powers and reach).
- 77) We also note the level of proof offered. We believe IPA case studies look to prove the contribution of advertising and marketing communications on the balance of probabilities, and beyond the reasonable doubt of two expert panels of judges, but clearly nothing is absolute. We urge that this is a level of evaluation that is appropriate to cost-effective measurement of campaigns.
- 78) We would support any work that can coordinate efforts to bring about common ends so that campaigns can work harder for the public. We support the Cabinet Office's work in building partnerships across interests to make better interventions and better evaluations possible.

January 2011

Drinkaware, Groundwork and Swanswell

Written evidence from Drinkaware (BC 98)

Drinkaware welcomes this opportunity to respond to this inquiry. Drinkaware is an independent, UK-wide charity, which aims to equip people with the knowledge they need to make informed decisions about how much alcohol they drink. Drinkaware is entirely funded by voluntary donations from across the drinks industry, but operates completely independently from it. Our campaigns are designed on an evidence-based approach, and our work is informed by a panel of experts from across public health and industry. This includes our Chief Medical Adviser, Professor Paul Wallace. Drinkaware's core value and purpose is to reduce alcohol consumption and the associated health and social problems. We do this by giving people the facts about alcohol, thereby helping people make better choices about their health.

Summary of views

Drinkaware believes that behaviour change interventions can have a significant and positive effect and should be a central dynamic to achieving policy goals and meeting societal challenges. By using a range of behaviour change interventions Drinkaware aims to help people to make better choices about their alcohol consumption. As with all efforts to influence behaviour change, it takes time. But by using a methodical, patient and robust approach, previous campaigns, such as those around smoking and seat belts show that this approach can and does work.

There is considerable understanding about behaviour change interventions. However, too often these are not shared between sectors or within government departments. Drinkaware conducts a considerable body of research into consumer behaviour which we use to inform and shape our campaigns. There is an opportunity to increase the sharing of research across government departments and NGOs.

In our experience, the key to successful behaviour change programmes is to really understand the audience you are trying to influence. Drinkaware utilises accurate consumer insight and understanding. This is something we are well placed to do given our partnership with the private sector and public health community. We take this insight and use it to target our resources to specific audiences. By doing so, we have already begun to deliver shifts in attitude and behaviour with regards alcohol.

Research and Development

Q.I What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?

- I.I A considerable amount is known about how to influence behaviour, but this information and understanding is often contained in different disciplinary silos. For example, the recent focus on the concept of 'nudging' is derived from the applied fields of behavioural psychology and social psychology. In addition, there are many

other forms of evidence and practical understanding that can be applied to this topic, such as the Communications theory⁴²⁰.

- 1.2 Knowledge from the fields of sociology, biology, neural science and other applied fields such as social marketing, design, management process reengineering and community empowerment all represent rich fields of research and understanding. Considerable understanding about behavior influence resides in the NGO and private sector, as well as the academic and public sector. However this knowledge and expertise is not often shared.
- 1.3 To successfully influence behaviour we need to recognise its dynamic and multi-causal nature. Attitudes and behaviour varies over time and in different contexts – we need to ensure policy and interventions are tailored to different contexts and avoid a ‘one-size-fits-all’ approach. Working in a more coordinated way will assist in creating supporting interventions that reinforce behavioural objectives.
- 1.4 Drinkaware is seeking to be exemplars in behaviour change planning and implementation. Drinkaware’s programmes of activity are built on behavioral theory, evidence reviews, target audience insight and segmentation. Following this, an appropriate mix of interventions is chosen and it is assured that the programme will be sustained over time and subject to ongoing evaluation.
- 1.5 For example, we have programmes ranging from targeting young adults on overseas holidays to the parents of teenagers who go to UK seaside towns such as Newquay. Our interventions range from training holiday reps to working with local police forces to enforce the law on bar crawls. All our interventions are research driven.

Q.2 What are the policy implications of recent developments in research on behaviour change?

- 2.1 The policy implications of the emerging evidence from a range of disciplines related to behaviour change are profound for social policy and civic society in general. Whilst it will not be possible to build entirely predictive modes of intervention, it is increasingly possible to develop social change interventions that are highly effective in generating behaviour change. This increased understanding means that it is now possible to set out with some confidence the criteria that define what good practice looks like. In addition to measuring effectiveness, the recent developments in research mean that it is also possible to begin the process of overlaying data focused on cost benefit and return on investment.
- 2.2 Awareness raising, information, education and behavioural approaches have a key part to play in any comprehensive strategy. Drinkaware uses a range of interventions, which include appropriate and evidence-based devices, when developing any programme of activity that looks to effect positive behaviour change in relation to alcohol consumption. This approach has recently been endorsed by the Joseph Rowntree Foundation’s review on tackling alcohol harm:

⁴²⁰ COI, Communications and Behaviour report, 2009.

“Successful initiatives often involve multiple approaches, such as awareness-raising, education, legislation and continued support for behaviour change. Changing behaviour often means changing social norms – as well as providing support for not engaging in risky behaviour. Changing the way the public sees a problem can increase buy-in and also encourage greater self-reflection”⁴²¹

- 2.3 An element of this approach is to provide information, support, and encouragement to people to make sensible individual and socially beneficial decisions and choices. Choices that will both enhance their lives and the lives of the rest of the community. The promotion of individual choice and responsibility has been a key part of government policy over recent years⁴²² and behaviour change is now a key plank of government policy^{423 424}.

Q.3 Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

- 3.1 Considerable research capacity relating to behaviour exists across: academic institutions; public service providers; NGO's; and the private sector. The benefits of this capacity would be increased if more research were shared on a more comprehensive basis.
- 3.2 The private sector also has extensive investment in customer and market research much of which could be of huge value to public sector efforts. While commercial sensitivities may exist, there are opportunities for stronger partnership between the public and private sectors which will have positive impact on interventions and outcomes.

Translation

Q.4 Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

- 4.1 Drinkaware would like to see a more coordinated approach for gathering and disseminating understanding about how to assist behaviour change across government. Drinkaware would be willing to act as the central repository for understanding about alcohol harm reduction and prevention. In doing so, we would make publicly available all the research, insight and evaluations of Drinkaware's intervention programmes in order to assist with the accrual of knowledge about effective practice.

⁴²¹ Tackling alcohol harm: lessons from other fields Martine Stead, Deputy Director, Institute for Social Marketing at the University of Stirling and The Open University

⁴²² Kelly, G., Mulgan, G. and Muers, S. (2002). *Creating Public Value. An Analytical Framework for Public Sector Reform*. London: Prime Minister's Strategy Unit, Cabinet Office.

⁴²³ Strategy Unit (2008). *Cultural Change: A Policy Framework*. London: Cabinet Office.

⁴²⁴ SMF (2008). *Creatures of Habit: The Art of Behaviour Change*. London: Social Market Foundation.

- 4.2 The Central Office of Information (COI) is well placed as advisor to government departments and it could do more to capture, coordinate and spread good practice or make links between departments working on similar issues.

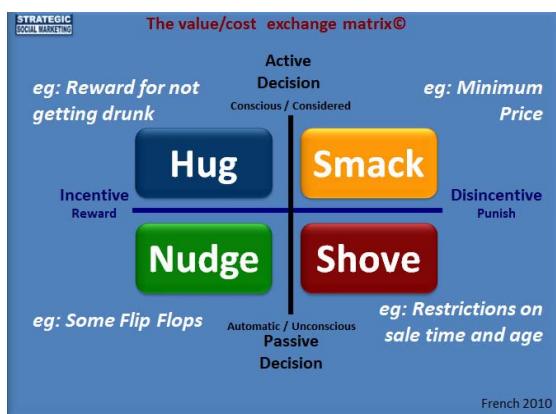
Policy design and evaluation

Q.5 What should be classified as a behaviour change intervention?

- 5.1 We would suggest that any intervention that seeks to reinforce a positive social behaviour or modify a socially undesirable behavior should be classified as a behavior change intervention. Some interventions are not focused at changing behaviour but rather aim to maintain an already positive behavior. For example helping children to remain nonsmokers. We believe these should be classed as a behavior intervention.

Q.6 How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

- 6.1 Experience and evidence indicates that the more integrated the approach the more impact will be delivered.
- 6.2 There will be a need for a mix of intervention forms. These forms of intervention include a mix of emphasis on conscious active choice making and passive ‘mindless choosing’; as well as a mixture of positive reward strategy. Also in some circumstances the need for central regulation or disincentives. These forms of intervention are depicted below.



Q.7 Should behaviour change interventions be used in isolation or in combination with other policy interventions?

- 7.1 Drinkaware believes that alcohol awareness and education need to work within a coordinated strategy including actions in the fields of control support and design. In addition, we need to ensure that the private, public and NGO sector work more effectively to develop more coordinated and sustained strategies.

- 7.2 For example, our recent work in Newquay demonstrates the value of a coordinated approach. As the largest tourist destination in Cornwall, Newquay is the focus of a large influx of post-GCSE students arriving to celebrate the end of the exams. After successive years of alcohol related anti-social behaviour, Newquay Safe was formed – a multi agency campaign to promote responsible drinking. Drinkaware was part of this campaign, and our work focused both on educating parents and connecting directly with 16-17 year olds.
- 7.3 Our work complimented the work of the local council, local police and Home Office to make Newquay a safe environment for youngsters and to lighten the burden on local residents. This led directly to a significant increase in awareness among parents of the problems of teenage drinking (12%) and an increase in awareness of the problems in Newquay (also 12%).
- 7.4 As a result there was a 40% reduction in unaccompanied young people visiting Newquay.

Q.9 Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

- 9.1 The increasing appreciation of the potential of social marketing methods and approaches is one area where some of the tools of the private sector are beginning to be better understood and harnessed within the public sector. While there is more to social marketing than just commercial marketing methods, when approached strategically (strategic social marketing) it is increasingly demonstrating that it can harness the best of both public and private sector efforts. There remains a need to increase the collective understanding of the methodology and benefits of social marketing (see Annex I).

Ethical considerations

Q.13 When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

- 13.1 The financial and social impact of alcohol misuse means that there is clearly a need for the state to intervene, but to do so in a coordinated manner – working with commercial and voluntary sector partners.
- 13.2 In our experience the most effective behavior change strategies involve encouraging rather than prohibiting. Our research shows that a message that is pitched in a manner that goes with the grain of human nature is more likely to get through. Frequently, such an approach is more likely to succeed if done by the commercial and

voluntary sectors – indeed we note that the new government recognises the value of this approach.

- 13.3 For example, we recently worked with Club 18-30 to encourage responsible drinking among young adults abroad. Aware that a strict message of prohibition would not be effective, we instead encouraged the holiday reps to be the messengers. We trained all 180 reps to communicate sensible drinking messages, as well as using light hearted creative materials: ‘why waste your week being wasted?’ Our target audience was more likely to adopt the sensible drinking tips from their reps and creative advertising rather than Foreign Office information to travellers.
- 13.4 The campaign evaluation shows that, among a group of people who consider getting drunk an essential part of their holiday, many claimed to have seen the campaign and up to a third claimed to have adopted the tips. Only 16% said they would reject the message.

Q.14 Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

- 14.1 It is vital to include target audiences in the design, development, testing, implementation and evaluation of behavioural change interventions. There is good evidence to suggest that co-development and co-delivery enhance not only the ownership of interventions but also their impact in communities. As a matter of good practice target audiences should be fully engaged in the development and delivery of interventions.
- 14.2 For example, for our recent ‘why let good times go bad?’ campaign, we conducted extensive research into our 18-24 year old target audience and identified a specific subset to focus on; so-called ‘irresponsible shamefuls’. Through qualitative research, we determined that there was a sub group who acknowledged they drunk too much and misbehaved, but felt regret about their actions. This enabled us to craft a campaign message that appealed to that regret in a bid to ‘nudge’ them into changing their behaviour. We believe such a targeted approach is the most effective way to deliver effective behaviour change campaigns.

International comparisons

Q.15 What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?

- 15.1 There are many lessons to be learnt from other countries, some of these examples from the health sector are summarised in ‘It’s our health’⁴²⁵. Behavioral interventions

⁴²⁵ It's Our Health, French J and Mayo E, National Consumer Council, 2006.

can be transferable. However programmes need to be developed based on insight and research with the specific target audience. It is possible to learn from general principles from other countries and possibly specific forms of intervention, but there will also ways be a need to customise interventions.

October 2010

ANNEX I: Social marketing – 8 point National Criteria

Criteria	What to look for
I. CUSTOMER ORIENTATION <i>'Customer in the round'</i> Develops a robust understanding of the audience, based on good market and consumer research, combining data from different sources	<ul style="list-style-type: none"> • A broad and robust understanding of the customer is developed, which focuses on understanding their lives in the round, avoiding potential to only focus on a single aspect or features • Formative consumer / market research used to identify audience characteristics and needs, incorporating key stakeholder understanding • Range of different research analysis, combining data (using synthesis and fusion approaches) and where possible drawing from public and commercial sector sources, to inform understanding of people's everyday lives
2. BEHAVIOUR Has a clear focus on behaviour, based on a strong behavioural analysis, with specific behaviour goals	<ul style="list-style-type: none"> • A broad and robust behavioural analysis undertaken to gather a rounded picture of current behavioural patterns and trends, including for both <ul style="list-style-type: none"> <i>the 'problem' behaviour</i> <i>the 'desired' behaviour</i> • Intervention clearly focused on specific behaviours <i>ie not just focused on information, knowledge, attitudes and beliefs</i> • Specific actionable and measurable behavioural goals and key indicators have been established in relation to a specific 'social good' • Intervention seeks to consider and address four key behavioural domains: <i>1: formation / establishment of behaviour; 2: maintenance / reinforcement;</i> <i>3: behavioural change; 4: behavioural controls (based on ethical principles)</i>
3. THEORY Is behavioural theory-based and informed. Drawing from an integrated theory framework	<ul style="list-style-type: none"> • Theory is used transparently to inform and guide development, and theoretical assumptions tested as part of the process • An open integrated theory framework is used that avoids tendency to simply apply the same preferred theory to every given situation • Takes into account behavioural theory across four primary domains: <i>1: bio-physical; 2: psychological; 3: social; 4: environmental / ecological</i>

<p>4. INSIGHT Based on developing a deeper ‘insight’ approach – focusing on what ‘moves and motivates’</p>	<ul style="list-style-type: none"> Focus is clearly on gaining a deep understanding and insight into what moves and motivates the customer Drills down from a wider understanding of the customer to focus on identifying key factors and issues relevant to positively influencing particular behaviour Approach based on identifying and developing ‘actionable insights’ using considered judgement, rather than just generating data and intelligence
<p>5. EXCHANGE Incorporates an ‘exchange’ analysis. Understanding what the person has to give to get the benefits proposed</p>	<ul style="list-style-type: none"> Clear analysis of the full cost to the consumer in achieving the proposed benefit (financial, physical, social, time spent, etc.) Analysis of the perceived / actual costs versus perceived / actual benefits Incentives, recognition, reward, and disincentives are considered and tailored according to specific audiences, based on what they value
<p>6. COMPETITION Incorporates a ‘competition’ analysis to understand what competes for the time and attention of the audience</p>	<ul style="list-style-type: none"> Both internal & external competition considered and addressed <ul style="list-style-type: none"> <i>Internal</i> eg psychological factors, pleasure, desire, risk taking, addiction etc <i>External</i> eg wider influences / influencers competing for audience’s attention and time, promoting or reinforcing alternative or counter behaviours Strategies aim to minimise potential impact of competition by considering positive and problematic external influences & influencers Factors competing for the time and attention of a given audience considered
<p>7. SEGMENTATION Uses a developed segmentation approach (not just targeting). Avoiding blanket approaches</p>	<ul style="list-style-type: none"> Traditional demographic or epidemiological targeting used, but not relied on exclusively Deeper segmented approaches that focus on what ‘moves and motivates’ the relevant audience, drawing on greater use of psychographic data Interventions directly tailored to specific audience segments rather than reliance on ‘blanket’ approaches Future lifestyle trends considered and addressed
<p>8. METHODS MIX Identifies an appropriate ‘mix of methods’</p> <p>‘Intervention mix’ = Strategic SM ‘Marketing mix’ = Operational SM</p>	<ul style="list-style-type: none"> Range of methods used to establish an appropriate mix of methods Avoids reliance on single methods or approaches used in isolation Methods and approaches developed, taking full account of any other interventions in order to achieve synergy and enhance the overall impact Five primary strategic intervention domains considered: <ul style="list-style-type: none"> 1: inform / encourage; 2: educate / skill 3: support / service; 4: design / adjust environment; 5: control / regulate

French, Blair-Stevens (2006 updated 2009) Adapted from 6 point criteria by Andreasen (2002)

Written evidence from Swanswell (BC 111)

A. Summary

A1 About Swanswell

- A1.1 Swanswell is a national charity that helps people overcome drug, alcohol and other problem behaviour. Our core competence, developed through **41 years'** experience, is behaviour change, particularly addictive behaviour.
- A1.2 Swanswell is delighted to provide evidence to the House of Lords Science and Technology Committee Behaviour Change Enquiry. Our evidence is summarised in section A.2 below. Section B provides further information about Swanswell to provide a context for our evidence. Section C provides our evidence in full, including illustration drawn from research evidence, our own validated service delivery and development programmes and our extensive experience of interaction with the statutory sector in the delivery of behaviour change programmes.
- A1.3 Swanswell is able to provide further illustrative evidence if you would like to hear more at an oral hearing. We are also happy to invite committee members to visit Swanswell to experience our work and hear at first hand from our service users.

A2 Our Evidence in Summary

Research and Development

- A2.1 *What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?*

- A2.1.1 In summary, we know that:

- Brief interventions are effective in changing behaviour.
- Motivation relies on engagement and answering the “what’s in it for me?” question.
- Structured interventions work well changing offending behaviour.

- A2.2 *What are the policy implications of recent developments in research on behaviour change?*

- A2.2.1 Nudges in the “right” direction are significantly outplayed by nudges towards unhealthy choices. We therefore believe that the policy implications of research findings encouraging the “nudge” approach to behaviour change are that either the investment in good nudges has to balance potentially opposing messages, or the power of the commercial and retail sectors has to be mobilised into the “nudge” campaigns by promoting healthy choices.

- A2.2.2 A further policy implication of “nudge” is to embed learning creatively into groups who are already engaged for other purposes. This – in turn – requires greater joining up of initiatives across government.

A2.3 Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

A2.3.1 The Third Sector has a lot of research capability which is underfunded or excluded from certain funding streams. This inhibits the evaluation of behaviour change interventions developed in the Third Sector.

Translation

A2.4 Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

A2.4.1 We are aware that regionalisation of statutory sector commissioning inhibits sharing of learning and good practice which, in turn, gives rise to duplication of developments rather than building upon those that are already known to work.

A2.4.2 The absence of shared practice and larger scale research capacity works against the creation of clear policy interventions so, building upon the example given above, there is no policy imperative to embed hospital liaison into alcohol treatment services.

A2.4.3 What is not in place is the mapping across from the Third Sector to policy interventions.

Policy Design and Evaluation

General

A2.5 What should be classified as a behaviour change intervention?

A2.6 How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

A2.7 Should behaviour change interventions be used in isolation or in combination with other policy interventions?

A2.7.1 Behaviour change interventions work best when they are systemic rather than specific. Joining up behaviour change interventions is therefore essential for sustained success.

A2.7.2 Active involvement of families and carers in the treatment of substance misusers has a significant impact on positive outcomes for behaviour change.

Practical application

A2.8 Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

A2.8.1 In the drug treatment field, publicly funded behaviour change interventions are subject to significant scrutiny via the National Treatment Agency (NTA). Research

published via the NTA and independently shows them to have been relatively successful in reaching their objectives.

A2.8.2 Lessons learnt through evaluation of behaviour change interventions take a long time to translate into changed practice within an approved framework and even longer to translate into commissioned practice. So the effectiveness of evaluation is compromised by lack of pace and the success of interventions is compromised by lack of flexibility to encompass new evidence rapidly.

A2.9 *Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?*

A2.9.1 In our experience, within government lessons are learnt very slowly and enacted even more slowly.

A2.9.2 Effective services using well evidenced methods delivered in the Third Sector are viewed with scepticism by the statutory sector no matter how much of an evidence base is provided.

A2.10 *What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?*

A2.10.1 What we experience is a short term approach to behaviour change intervention development, lack of funding, and absence of clear and effective mechanisms through which results can be shared.

Cross-government coordination

A2.11 *What mechanisms exist within government to coordinate and implement cross departmental behaviour change policy interventions?*

A2.11.1 We are not aware that any mechanisms exist.

A2.12 *What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?*

A2.12.1 There are few mechanisms for broader dissemination across the public sector and there is very little support from central/local government to try to cascade learning.

A2.12.2 We also challenge the implicit assumption in the term “cascade” that learning has to be “top down”.

Ethical considerations

A2.13 *When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition*

and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

A2.13.1 There has to be a balance of state, commercial and voluntary sector intervention. For example, prosecution for certain offences related to drug/alcohol misuse is important if society is to be protected from the consequences of offending behaviour.

A2.13.2 State intervention is appropriate to ensure that messages which are designed to encourage indulgence in particular, potentially harmful, behaviours are balanced by encouragement to adopt healthy behaviour.

A2.13.3 Ethically, interventions which produce an outcome which is more damaging than the behaviour which they seek to change are unacceptable.

A2.13.4 Where addictive behaviour is concerned, there is an ethical imperative not to replace one addiction with another – for example, transferring from drink to drugs or vice versa.

A2.14 *Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?*

A2.14.1 People who have not experienced a particular problem are unlikely to engage with consultations about behaviour change programmes and – if they do – their input is likely to be coloured by stereotypical views of those exhibiting the problem behaviour. So public involvement may not provide the best route forward.

A2.14.2 It is important to understand what works and what doesn't work by seeking service users' views and involving them in the development.

A2.14.3 Pilots are important so that we can learn more easily what does and doesn't work and seek appropriate input from service users.

International comparisons

A2.15 *What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies*

A2.15.1 Many countries provide excellent examples of best practice – we provide examples from Australia, USA and Europe.

A2.15.2 In our experience, models for behaviour change are generally transferrable.

Tackling obesity

A2.16. The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally,

A2.16.1 Our methods – particularly structured brief interventions - are transferrable into areas of behaviour change beyond our traditional expertise in drug and alcohol misuse. We have successfully achieved this transfer into violence prevention and, more recently, alleviation of sexual dysfunction.

C Our Evidence in Full

Research and Development

C1. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?

C1.1 Your inquiry has, no doubt, had access to extensive literature reviews setting out the body of research evidence underpinning behaviour change methods and processes.

C1.2 Swanswell would like to draw your attention to the National Treatment Agency (NTA) “Review of the effectiveness of treatment for alcohol problems”¹ published in November 2006 and available at
http://www.nta.nhs.uk/uploads/nta_review_of_the_effectiveness_of_treatment_for_alcohol_problems_fullreport_2006_alcohol2.pdf

C1.3 This research built upon a “Mesa Grande” project which summarised the results of 381 trials of treatment outcome published before 2001 to provide accessible information on the effectiveness of alcohol treatment. The research identifies Brief Intervention, Motivational Enhancement and Cognitive Behavioural Therapies as of particular merit, but it is also notable that therapist characteristics account for up to 50% of treatment outcomes. Treatment fidelity and competent delivery are also recognised as important elements

C1.4 Swanswell works with behaviour change, especially in the context of drug and alcohol misuse (addictive behaviour). We have applied the findings from research evidence, including that cited above, to develop new interventions which provide the basis of our evidence to this inquiry. In summary, we know that:

C1.5 Brief interventions are effective in changing behaviour.

C1.5.1 Every year, around 360,000 incidents of domestic violence are linked to alcohol misuse², and each incident costs the UK economy an estimated £9,000. Since 2008 Swanswell has developed and piloted a 6 week brief intervention programme for alcohol related domestic violence offenders. It focuses on reducing the offenders' drinking and encouraging offenders to make different choices after examining with them their thinking, behaviour and actions. This brief intervention pilot achieved 73% zero-reoffending rate.

C1.6 Motivation relies on engagement and answering the “whats in it for me?” question.

C1.6.1 In 2010 we piloted a 3 day workshop with a cohort of 5 female drug users combining practical interventions focusing on hair, beauty and fashion. The service users were encouraged to participate in the workshops through the “hair and beauty” theme, which proved to be a powerful engagement tool. None of the service users dropped out and all attended all 3 days, which is a notable achievement given the chaotic nature of the service user group.

C1.6.2 The workshops included exercises through which the women explored their self esteem and confidence in a safe and encouraging environment. The evaluation of the workshop and follow up session with the women highlighted increased motivation through self belief that life change goals were achievable. It resulted in significant, sustained positive action by all 5 participants, e.g.:

- beginning a methadone detox after being on a maintenance script for 12 years,
- enrolling on a course to get back into the workplace,
- becoming drug free because she believed it was possible.

“I’ve learnt that it’s not hard to actually get up and try something new”. – Mandy, Swanswell service user

C1.6.3 In 2008-10 Swanswell also trialled alcohol awareness self-help groups, to encourage people, who may not have identified themselves as problem drinkers, to moderate their drinking. This trial did not achieve its objective. Our findings show that people are not motivated to attend groups or raise their awareness of something that they do not consider to be a problem. Where we achieved some success in this trial, it happened by making the alcohol awareness messages subsidiary to the achievement of specific goals with which existing groups are already engaged – such as working with football teams to improve their performance on the pitch.

C1.7 Structured interventions work well changing offending behaviour.

C1.7.1 We have developed and piloted 12 week structured intervention programme designed to help offenders make the connection between their drug use and their offending behaviour. It helps them to recognise triggers and deal with them differently. It achieved a retention rate on the programme of **67%** (compared to DIP attendance rate of 36%). The first cohort on the programme included **30% Prolific and Priority Offenders**. Our programme achieved a **71% reduction in rates of drug use and associated drug-related offending**.

C2. *What are the policy implications of recent developments in research on behaviour change?*

C2.1 Recent research identifies that encouragement to make the right/healthy decision for one’s own wellbeing works, rather than defining or prohibiting the things that aren’t good for the individual. This, in turn, generates the concept that that people can be “nudged” in the right direction.

C2.2 However, if small nudges towards healthier lifestyles through behaviour change are to be effective they have to be in balance with the array of promotional messages

which reinforce, for the individual, previous unhealthy choices. We draw the following example from our experience of alcohol awareness campaigns in comparison with the marketing and promotion of alcohol.

- C2.3 The Institute of Alcohol Studies factsheet “Alcohol and Advertising”³ available at <http://www.ias.org.uk/resources/factsheets/advertising.pdf> identifies that in 2004 **over £200million** was spent on alcohol advertising. Extrapolating spend on other promotional activity such as link ups with sporting events produced an estimated UK expenditure of **over £800million**. Contemporary increases in internet-based promotion may well have increased the reach of advertising at lower cost.
- C2.4 The House of Commons Health Select Committee⁴ identified that Government spending in 2009/10 on alcohol information and education campaigns was **£17.6m**. This amounts to **less than 2%** of the prudently estimated spend on alcohol promotion.
- C2.5 From this, we conclude that the nudges in the “right” direction are significantly outplayed by nudges towards unhealthy choices. We therefore believe that the policy implications of research findings encouraging the “nudge” approach to behaviour change are that either the investment in good nudges has to balance potentially opposing messages, or the power of the commercial and retail sectors has to be mobilised into the “nudge” campaigns by promoting healthy choices.
- C2.6 We also know, from our piloting of alcohol awareness groups which was referenced in our answer to question 1 above, that people have to be engaged before they can be nudged. We know that it is difficult to encourage people to engage if they do not see what’s in it for them. An alternative is to engage people where they are a “captive audience” and mobilise peer groups in support of behaviour change.
- C2.7 Swanswell carried out a consultation in March 2010, asking young adults in alcohol and drug treatment, with experience of using drugs and/or alcohol when they were under 18 years old, what support would have helped them to change their behaviour. **54%** thought their substance misuse became problematic when they were under 18. They told us that if they had had someone in their peer group with whom they could check out their drinking or drug use they might have changed their behaviour at an earlier time in their lives before they became dependent. One person said:
- ‘Services should use some of the young people affected by drugs as role models and sources of information for the kids just beginning to get involved in drugs. Be there for people so they know they are not alone.’*
- C2.8 We have used this research to inform our work with young people and we are currently developing a screening tool that will engage young people, together with a peer support model.
- C2.9 A further policy implication of “nudge” is therefore to embed learning creatively into groups who are already engaged for other purposes. This – in turn – requires greater joining up of initiatives across government.

C2.10 An example of where such a policy initiative could change behaviour on a large scale is the inclusion of alcohol awareness into training for learner drivers. Swanswell works in the criminal justice system with people convicted of drink-driving. We deliver an accredited Drink Impaired Drivers' (DIDs) programme which has run for over 100 cohorts with over **850** people completing the course successfully, learning how to change their drinking behaviour when driving. Many offenders tell us that, if they had known when they started driving what they learn on a Drink Impaired Drivers (DIDs) course, they would not have offended.

C2.11 We know that driving lessons attract a high proportion of young people and that young people are disproportionately inclined to use alcohol irresponsibly. We also know that learner drivers are motivated to learn because they want their license. And they pay for their lessons themselves, so there is no cost to the state. Therefore including alcohol awareness in driver training programmes has the potential to change the behaviour of people at risk of alcohol misuse at no cost to the taxpayer. But this requires government departments of Heath, Transport and Justice to join up their thinking.

C3. *Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?*

C3.1 Within the Third Sector, there is a significant amount of small-scale research being undertaken and pilots developed but little opportunity to convert small scale pilots into larger trials from which evidence based practice can be disseminated. This silo effect gives rise to duplication and slows down change. The Third Sector has a lot of research capability which is underfunded or excluded from certain funding streams despite its creativity and cost effective approach. This inhibits the evaluation of behaviour change interventions developed in the Third Sector.

Translation

C4. *Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?*

C4.1 We are aware that regionalisation of statutory sector commissioning inhibits sharing of learning and good practice which, in turn, gives rise to duplication of developments rather than building upon those that are already known to work. For example, the Alcohol Concern HubCAPP⁵ (hub of commissioned policies and practice) which can be found at <http://www.hubcapp.org.uk/home.htm> includes reference to Swanswell's Hospital Liaison Service through which we have achieved an **80% non-readmission rate**. It also includes reference to several other, more recently developed and similar services none of which have, to our knowledge, referenced the learning that we generated and would have been delighted to share.

C4.2 The absence of shared practice and larger scale research capacity works against the creation of clear policy interventions so, building upon the example given above, there is no policy imperative to embed hospital liaison into alcohol treatment services.

- C4.3 We also note that this question itself excludes the Third Sector. A great deal of innovative work in research is undertaken in this sector and it is the sector where there is more opportunity and ability to translate research developments into behaviour change models quickly, effectively and efficiently. The sector, historically, is underfunded and unrecognised although this is beginning to change. However, what is not in place is the mapping across from the Third Sector to policy interventions

Policy Design and Evaluation

General

- C5. *What should be classified as a behaviour change intervention?*
- C6. *How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?*
- C7. *Should behaviour change interventions be used in isolation or in combination with other policy interventions?*
- C7.1 Swanswell's experience supports research evidence that behaviour change interventions work best when they are systemic rather than specific. A systemic approach has to encompass both what the service user changes and who is involved in those changes.
- C7.2 For example, at Swanswell we join up Supporting People services, which address practical requirements such as finance, housing, nutrition and hygiene, with treatment services for drug and alcohol misuse. Our service users often express appreciation for the practical support that they have received, telling us it has enabled them to make changes to their behaviour, because what they have changed is broader than just changing their drug and alcohol use.
- C7.3 Research tells us that the active involvement of families and carers in the treatment of substance misusers has a significant impact on positive outcomes for behaviour change. We deliver carers services in the treatment service in Barnsley so we know that carers want advice, guidance and to be involved to facilitate behaviour change which can impact severely on family life and wellbeing of all. Our experience shows that involving families and carers in treatment works in changing addictive behaviours quicker and more effectively in the long term. For every person with a drug and/or alcohol problem, there is usually at least one carer. It's estimated that carers looking after those with a drug and/or alcohol problem save the NHS and other state services £3,935 a year for each user⁶.

Practical application

- C8. *Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?*
- C8.1 In the drug treatment field, publicly funded behaviour change interventions are subject to significant scrutiny via the National Treatment Agency (NTA). Research

published via the NTA and independently shows them to have been relatively successful in reaching their objectives.

- C8.2 However, in our experience, lessons learnt through evaluation of behaviour change interventions take a long time to translate into changed practice within an approved framework and even longer to translate into commissioned practice. So we find that commissioned practice can fall behind the curve of best practice. An example of this is the criticism of drug treatment strategy towards harm reduction which measures success by counting the number of people in treatment and, therefore, works against practice which seeks to achieve recovery and exit from treatment.
- C8.3 So the effectiveness of evaluation is compromised by lack of pace and the success of interventions is compromised by lack of flexibility to encompass new evidence rapidly.
- C8.4 At Swanswell, we often don't wait for the new framework, having gone ahead with our own evaluation of what works and doesn't in order to use up to date best practice with our own service users.
- C9. *Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?*
- C9.1 In our experience, within government lessons are learnt very slowly and enacted even more slowly. We do not experience government as having the capacity to assimilate practical learning from behaviour change interventions or to disseminate it effectively so that it informs service design. Our response to question four above, concerning dissemination of learning about hospital liaison services, provides a good example of how regionally-based services do not have mechanisms for sharing practice and therefore repeat learning rather than building upon it.
- C9.2 We welcome the opportunity to provide evidence to this inquiry as a Third Sector organisation can show within our submission that our sector holds a body of knowledge about what works and doesn't work when achieving behaviour change. We are also used to translating what we have learnt into actions much quicker so that the impetus isn't lost – a lesson national and local government could use. However, what we have learnt is that effective services using well evidenced methods delivered in the Third Sector are viewed with scepticism by the statutory sector no matter how much of an evidence base is provided. For example, we recently bid to deliver a drug treatment service in the North of England based on our shared care services in Birmingham. Our bid was rejected largely because the commissioners could not envisage that what we achieve in Birmingham was possible at all, or translatable into their locality. Subsequently we hosted a visit for the NTA Regional Manager who emailed on his way home to say:

"It's not often I say this but I am genuinely impressed and enthused by what I have seen and heard today. I'm still gobsmacked at how you have managed to develop such a vibrant and active shared care system"

C9.3 Although we were delighted to receive his comments, they add to our frustration that good practice from the Third Sector is not readily believed or embraced. As far as we know, none of the practice that so impressed the NTA Manager has, to date, been adopted in his region, although we have offered to help them to do so.

C10. *What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?*

C10.1 What we experience is a short term approach to behaviour change intervention development. In Warwickshire, for example, when we developed the alcohol-related domestic violence intervention referenced in our response to question one above, we were given a year's funding by the local authority at short notice and developed a well evaluated brief intervention for domestic violence offenders which elicited a **73% non recidivism rate**. It works well but we were unable to progress to a bigger trial of the intervention through lack of funding and absence of clear and effective mechanisms through which the results can be shared outside Warwickshire, even though the benefit and cost saving of the intervention was stark and evidenced - for every £1 spent on our alcohol and domestic abuse programme, the nation saves at least £9. There has to be a longer term approach to developments and better support for implementation and evaluation, otherwise we lose the progress made.

Cross-government coordination

C11. *What mechanisms exist within government to coordinate and implement cross departmental behaviour change policy interventions?*

C11.1 We are not aware that any mechanisms exist. What we have experienced when we approached the then Transport Minister with the idea to integrate an alcohol awareness programme in the driving theory test in the UK, referenced in our response to question two above, was that we were simply passed from one department to another. Because our idea did not fit within a single policy area, we experienced a lack of capacity to engage with the idea within each Department, so no one was able to follow it up with us despite our repeated attempts to do so.

C12. *What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?*

C12.1 In our experience there are few mechanisms for broader dissemination across the public sector, as our response to question nine concerning our experience with commissioners in the North of England evidences. We also find that there is very little support from central/local government to try to cascade learning. For example, we understand that the Alcohol Concern HubCAPP facility, referenced in our response to question four, has had funding withdrawn and will cease.

C12.2 We also challenge the implicit assumption in the term "cascade" that learning has to be "top down". From our experience there are very many grass roots, community-

based and Third Sector organisations, like Swanswell, which are able to develop best practice and deliver significant outcomes.

Ethical considerations

- C13. *When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?*
- C13.1 What we have learnt from our experience of the need for a systemic approach, as referenced in our response to question seven above, is that there has to be a balance of state, commercial and voluntary sector intervention. For example, prosecution for certain offences related to drug/alcohol misuse is important if society is to be protected from the consequences of offending behaviour. Mandatory attendance on Swanswell's behaviour change programme by offenders has been shown to work well in changing offending behaviour and this has been recognised by the police and probation services where we deliver this. It gets over the need to answer the "what's in it for me" question which we referenced in our response to question one above by providing a clear and unequivocal consequence of a failure to engage.
- C13.2 Our response to question two above, concerning the promotion of alcohol by the drinks industry, provides a further example of where state intervention is appropriate to ensure that messages which are designed to encourage indulgence in particular, potentially harmful, behaviours are balanced by encouragement to adopt healthy behaviour. The regulation of sales and advertising, or unit pricing of alcohol, is an example of where the state and the commercial sector can work together to create a behaviour change. But we shouldn't kid ourselves that commercial interests are benign so we also have to answer the "what's in it for me?" question for the commercial sector if they are to engage wholeheartedly.
- C13.3 Ethically, interventions which produce an outcome which is more damaging than the behaviour which they seek to change are unacceptable. Where addictive behaviour is concerned, there is an ethical imperative not to replace one addiction with another – for example, transferring from drink to drugs or vice versa. We are also aware that some of our service users are desperate for change and therefore vulnerable to suggestions that specific belief systems will produce the results they seek.
- C14. *Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?*
- C14.1 In our experience, which comes primarily from work with addictive behaviours, people who have not experienced a particular problem are unlikely to engage with consultations about behaviour change programmes and – if they do – their input is likely to be coloured by stereotypical views of those exhibiting the problem behaviour. So public involvement may not provide the best route forward.

- C14.2 But we also know, from our own development programmes, that very good ideas come from people who are living with problem behaviour or who have already taken steps to overcome it. So it is important to understand what works and what doesn't work by seeking service users' views and involving them in the development. For example, at Swanswell, we have started to run a form of Dragon's Den which we call Debbie's Den (Debbie Bannigan is our Chief Executive) where service users can pitch their ideas for service developments.
- C14.3 Pilots are important so that we can learn more easily what does and doesn't work and seek appropriate input from service users. Swanswell has adopted a service development model which incorporates, within an action research methodology, a small scale pilot to work out how to deliver an intervention and to obtain initial evidence of outcomes. From this we can decide whether the intervention is worth further examination, what should be trialled and how the trial should be evaluated.

International comparisons

- C15. *What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies*
- C15.1 It is important that we know and take into account the lessons learnt in the behaviour change field in other parts of the world. Much of the current treatment models in the UK came from practice development in Australia. We are currently developing an intervention for people with alcohol related brain injury in the UK and we have used some of the innovative practice which has come from criminal justice services in Australia. The USA is developing models of groupwork practice using new media and there are organisations such as EATA which disseminates current European research and best practice in treatment, so we know that many countries provide excellent examples of best practice.
- C15.2 In our experience, which includes working within multi-cultural communities of Birmingham, models for behaviour change are generally transferrable provided that, as noted in the National Treatment Agency (NTA) "Review of the effectiveness of treatment for alcohol problems" cited in our response to question one above, we recognise that communities tend to segment according to particular faith allegiances.

Tackling obesity

- C16. *The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally, in order to examine:*
- a) the latest developments in the evidence-base in relation to changing eating and physical activity behaviour;*
 - b) who are the most effective agents for the delivery of behaviour interventions to tackle obesity;*
 - c) how current behaviour change interventions tackle obesity and what use is made of available scientific evidence;*
 - d) whether such interventions are appropriately designed and evaluated; and*
 - e) what lessons have been learnt and applied as a result of the evaluation process.*

- C16.1 Swanswell does not have direct experience of behaviour change relating to obesity. However, we know that our methods – particularly structured brief interventions - are transferrable into areas of behaviour change beyond our traditional expertise in drug and alcohol misuse because we have successfully achieved this transfer into violence prevention and, more recently, alleviation of sexual dysfunction.

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October 2010

Oral Evidence, 7 December 2010, Q262-282

Evidence Session No.7. Heard in Public.

Members present:

Lord Crickhowell
Baroness Hilton of Eggardon
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Baroness Perry of Southwark
Earl of Selborne
Lord Warner

Examination of Witnesses

Witnesses: **Mr Chris Sorek** [Chief Executive, Drinkaware] **Mr Tony Hawkhead** [Chief Executive, Groundwork] and **Ms Debbie Bannigan** [Chief Executive, Swanswell].

Q262 The Chairman: Welcome and thank you very much for coming. I know that some of you were listening to the session before. I will also say both for the benefit of the three of you who are witnesses and for members of the public, some members of the Committee will have to leave before the end. It is nothing personal, it's that they have got another meeting to go, so please don't be worried by that. Just so that everybody is aware, in case you didn't hear it at the beginning of the first session, the session is being webcast. You will get a transcript of everything that's been said. You get a chance to correct that and also, if you have other things you wish to add, please do at that point; we may also have some other things we wish to add. We are going to try and finish by five to six so can I please ask you to be as short in your answers as possible? I'm going to start but before I do, would each of you introduce yourselves for the record and if you would like to make a short opening statement, choose that as the time to do so. So please do start.

Chris Sorek: My name is Chris Sorek, I'm the Chief Executive of Drinkaware. Should I do my short statement now?

The Chairman: Yes, please.

Chris Sorek: Okay, fine. Drinkaware, if you know it, is an independent alcohol awareness charity that gives consumers information and advice that can ultimately change their drinking behaviour. We were established in 2007. We have a unique governance model, with half of our board being from industry and the other half from the public health community. We have three independents that make sure that nobody has a majority rule over anybody else. We are wholly funded by voluntary donations from the industry. Basically when they provide us that money, it's kind of like going into a blind trust so the minute they give us the

money, they no longer have any control over it. Based on our MoU, we have a remit to only do information and education. We are not allowed to do lobbying or have any position on policy. That basically enables us to remain the consumers' choice for unbiased factual information about alcohol because we have no axe to grind. All of our work is validated by a six member independent medical advisory board. It revolves around three key areas, campaigns that seek to change behaviour among three target audiences: adults, young adults and under 18s; a robust research programme to fill the gaps in knowledge about alcohol that's carried out primarily through the AERC, the Alcohol Education Research Council; and a grants programme that supports local activities. We recognise that behaviour change takes time and that one solution does not fit all. We base each of our campaigns on consumer insight, testing messages and approaches to ensure that they will resonate with the audience and encourage behaviour change. After each campaign, we then evaluate our activity and apply learnings for future work. Initial results from only two years of working in full operation show that by integrating our efforts with Government, industry and the public health community, behaviour change social marketing does work and can help start solving some of the problems with alcohol in the UK. Thank you.

Debbie Bannigan: My name is Debbie Bannigan. I am the Chief Executive of Swanswell. For over 40 years, we've been helping people to change their behaviour and be happy, primarily in the areas of alcohol misuse, drug misuse and violent and criminal behaviour associated with those activities. Now, I have had the opportunity to read though some of the transcripts of your earlier evidence and I will say that the perspective that I bring to this evidence from Swanswell is perhaps much more practical and pragmatic and experience-based than that you've had the opportunity to receive before. We don't have the resources to do the in-depth research that perhaps some of your other witnesses have offered to you but we do work very hard to do the best we possibly can and to evaluate as objectively as we possibly can. I hope that that evidence based on real people's real experience will add value to your job as a Sub-Committee in your Inquiry on Behaviour Change. As my team back at home have told me, I'm here to "keep it real" for you.

Tony Hawkhead: I am Tony Hawkhead, I am Chief Executive of Groundwork. Groundwork is a strange construction in that it's a federation of 37 smaller charities. Collectively this year, we will spend around £140 million on a whole range of environmental projects, from greenspace to a set of work around unemployment. We are the largest provider of the Future Jobs Fund and we are heavily involved in negotiations on the Work Programme. We specialise in, at the moment, a whole range of work also around fuel poverty and energy improvements, particularly in the poorest households, and we do quite a lot of work with young people as well. I guess why we're here today is, a bit like Debbie, we're more of a do tank than a think tank; Groundwork's work is very much around the view that what we do is important but how we do it is equally important, and the how is about how we persuade people that taking on simpler projects in relatively short time scales where real change results, often in communities that have not seen that happen before, can persuade those communities to take on more complex changes to their own communities with a greater degree of certainty and confidence.

Q263 The Chairman: Thank you very much indeed. I'm going to start the questioning and then hand over to other members of the Committee. I would like it if each of you could give one example of perhaps a successful campaign that you have run or a successful intervention that you have established to change behaviour either on your own or with other organisations, and if you could give us an example of what the Government might

learn from something you've done, that would be even better. Would you like to start Mr Sorek?

Chris Sorek: I think we'd start with talking about the underground work that we did at Newquay this last summer. Basically we started off with a media partnership with *The Guardian* earlier in the year to start reaching out to parents of 16 and 17 year olds to start talking to them and sensitising them about the issues around proxy purchasing, but also adults and parents being the biggest dealers of alcohol to young people. That culminated in the Newquay event where in 2009, if you remember, they set up the Newquay Safe Partnership, which is basically the Cornwall local authority along with the police coming in and trying to figure out what happened the year previously when two young people were killed falling off the cliffs and another one was seriously injured. The Home Office asked us to come in because of the work that we had done and the track record that we have working with 16 and 17 year olds and addressing those 16 and 17 year olds with messages that seemed to work. Along with the Newquay Safe Partnership, we developed an integrated approach that brought the entire community together. That means everybody from the hoteliers to restauranteurs to people that were basically in government, as well as third sector like ourselves. In the end, more than 30 partners delivered more than 40 different projects over the summer in Newquay. What were the results? The results show there were no deaths or injuries this year. More importantly anti-social behaviour was down by 19%. There was a 43% reduction in crime for 16 and 17 year olds. So we saw massive decreases there. We also saw a £258,000 saving in the money that would have been spent in policing and other activities in Newquay during the summertime. So why did it work? Well there was consensus built in the community about what needed to be done. There was also a very sophisticated project management team that was put together within the community; it came from the community. It's kind of a big society approach that started the work before there was a big society approach that was even discussed. There was an enforcement of current regulations. There was high profile policing. There was an enhanced local capacity, supported by the local authorities and a media liaison of communications that we assisted with to ensure that the message got out to both parents and to schools before the GCSE students came to Newquay. There are about 1,500 students who come in: an influx of 1,500-2,500 students who come in every week during the summertime once their GCSEs were finished. We learned a lot of lessons from it. An integrated approach works best. The second thing that we learned is that this is a potentially replicable model that could be used in other end of the line communities. As a matter of fact, in a meeting that I had late last month with Theresa May, she basically said "can you take this elsewhere?" and the answer to that is "yes, we can". It's a replicable model that we potentially can take and offer to other communities out there. We are going to be having a House of Commons event, announcing the results of the Newquay programme, on 14 December. We also think that we shouldn't have invested so much capital and some of the money that we spent on some of the infrastructure that we built up for that. We actually could have done a much better job by reaching into the community, into the 16 and 17 year olds, using probably more along the lines of more social media, probably reaching them in a different way, through things that were happening on the street and through other avenues, either if that was going to be channels such as businesses or hoteliers or other events that could have been put on for them during that period of time. Overall, it was a very good programme, it worked well, it showed the right kind of results and it brought the community together in a way that no other project that we've ever worked on in the past has.

Q264 The Chairman: And you are arguing that the Government can learn from it?

Chris Sorek: The Government can learn from it. I really do think it can because it gives an opportunity to show what a local community can do when given the right opportunity. They started off with only £20,000 to get the job done and they brought it together at that size so they can do it and Government can learn from that kind of experience.

Q265 Lord Krebs: Two very quick questions, if I may. Number 1: was another measure of outcome that alcohol sales fell in Newquay? They should have done if the campaign had been effective. Number 2: are you able to attribute the relative importance to high-profile policing enforcement versus information and education?

Chris Sorek: In terms of the total approach; first of all, in alcohol sales, did they go down? The answer to that is I can't answer that specifically.

Q266 Lord Krebs: You ought to be able to find out. That would be a very good measure.

Chris Sorek: Absolutely. With 16 and 17 year olds being prohibited from being able to get alcohol, we did find that the police confiscated quite a bit of alcohol coming into Newquay from parents or students who were bringing it in, so we do know that. When it comes down to the other point, was it just policing or enforcement of regulations, I would say that it is an integrated approach. Students that were going down there needed that kind of policing for it to be able to keep control of certain situations but by the same token, the students need to have some other place to go to, something else to do and that is one of the reasons why the Exodus programme that was done by Newquay Safe as well as the programme that we did on Fistral Beach worked so well I think.

Q267 The Chairman: But you can't disaggregate the results?

Chris Sorek: No, you can't. They have to work together. There's a relationship.

Q268 Lord Krebs: So it is as much shove as a nudge?

Chris Sorek: In some respects, it is; in some respects in this case, it might be a little bit more than that way because I think the nudging is helping because it turns out, with that 43% reduction that we saw in crime, that nudging is moving it in that direction.

Debbie Bannigan: I'd like to tell you a little bit more about our alcohol-related domestic violence project, which I outlined in the written evidence. When I joined Swanswell—

Q269 The Chairman: Can you speak up? This is a terrible room.

Debbie Bannigan: I'll do my best. When I joined Swanswell three years ago, this project was in its early stages of a pilot. It very quickly produced some very compelling evidence. The things that we knew were that it was believed to be very difficult to co-work alcohol and domestic violence. The received wisdom was that you had to get the service user or client dry, resolve their alcohol problem, before you could start to address the violent behaviour. There was also a received wisdom that you had to work with the antecedent

experience of the client in order to resolve the behaviour, so it tended to be quite a long process. Interventions numbering 20 or 30 sessions were not unusual. What had happened was that our commissioners in Warwickshire had had a small amount of money and had identified as a problem repeat offending with domestic violence, particularly alcohol related domestic violence, and they asked us as their provider if we could do something about it. So we were given the chance to be quite experimental and we constructed a six-session, highly structured intervention because we had to do it very cost-effectively. That works systemically and in a solutions-focused way with the behaviour that is presenting now, which is a combination of alcohol use and domestic violence. We piloted this very small scale and achieved a 72% zero reoffending rate amongst the people that we work with and these were people who had been referred to us because they had become known by the police, had spent time in the cells as a result of their behaviour. This was very compelling so our commissioners were prepared to ask us to do this for a little while longer and to roll it out amongst a larger population, again quite tiny in research terms. I am pleased to say that longitudinally, we have continued to achieve those results with this programme. So in terms of the learning from it, I think there's a learning that different experimental approaches that don't go with the grain of the beliefs behind other programmes can be worth doing but also that where they are worth doing and they achieve results, we need the resource, the capacity or the network to be able to tell other people about them. I am pretty certain there are commissioners in other parts of the country who are still trying to solve this problem or are struggling to sustain people in treatment for alcohol-related domestic violence and don't know about what we are doing and what we have achieved in Warwickshire.

Q270 The Chairman: So what you are saying is it's not necessarily that you would want to scale what you do, but that actually what you are doing needs to be disseminated more widely. Is that what you're saying? That could influence, if you like, public policy in that public commissioners would buy those services. Is that the argument you're making?

Debbie Bannigan: The argument that I'm making is that we have created something that has produced compelling results. They're not sufficiently large scale to be what anyone would consider evidence-based practice at this stage. We don't need to deliver that in other areas but what we would like is for other people in other areas to deliver what we deliver under a structured research programme, so that we can develop that evidence-based practice and because it's a structured intervention, it's incredibly trainable, incredibly learnable. Actually from a very practical point of view, it is much better for an existing service in an existing area that already has the networks available to them that are so key to this sort of programme to take on board new practice than for us, as Swanswell, to try to parachute in with one intervention and then try to network into the other things that already exist. So yes, it is about dissemination and it's also about capacity building and learning, so that other organisations can take hold of what we have done and build on it and the research community can join in and start to create the evidence base that we need objectively and systematically.

Tony Hawkhead: You were talking earlier about partnerships with the private sector. I'm going to single out a partnership we have with Marks & Spencer, which is called the Greener Living Spaces project. If you go to get some food from a Marks & Spencer food hall and you want a plastic bag, you have to pay 5p for it. We get the profit from that and we use it to carry out greenspace projects right across England, Wales, Scotland and Northern Ireland. The impact of that, as far as Marks & Spencer is concerned, is that it's reduced their food

bag usage by 80%. The comparative figure on a voluntary base in other supermarkets is 50% so there is obviously a pretty direct correlation there. More important I think from the M&S point of view is that they are worried, as you would expect, that they would meet quite a lot of customer resistance. We would argue, as would they, that having a clear no benefit—in other words that they were not keeping the profit; it was going to a charity that was doing good work—greatly reduced customer resistance. The evidence for that is very clear. They have done customer surveys that indicate that customer resistance, such as it was, has gradually reduced over a period of time, low as it was to start with. So that is stage 1. Stage 2, and this is where I would agree with Debbie, is that M&S have paid for us to carry out empirical research as we've been doing the projects going forward. So in other words, we've haven't just been trying to do the greenspace projects, we have been trying to see the impact on the behaviours, of the communities where we are working, of working together on greenspace projects and, to go back to my introduction, our experience is that greenspace projects are a brilliant way of engaging people in poorer communities because they are very straightforward, they are very immediate and they are relatively quick. You can see the results immediately. We've done some pilot work and it is very expensive, looking at whether people feel safe; whether they got to know a wide range of people; whether they felt they were making a difference in their community; whether they were making healthier lifestyle choices; whether they were making greener choices, and we use that broad category; or whether they were trying to learn and try out new activities. The early results are that 68% of those people involved in those projects felt more involved in their local community. 86% made greener choices in their lives. 57% of the lot are greener. 32% felt a lot safer, it is probably a bit more removed, or felt safe. 85%, critically, had more contact with their local neighbours. 62% felt happier living where they did and 42%, again a bit more removed, felt they were having greater thinking about their healthier lifestyles. So you are already beginning to see some broader evidence. If there's a lesson for the Government in that, it's that what can seem like a relatively straightforward simple project can have multiple benefits and we can make mistakes by trying to silo things into "that is a greenspace project and it has no other benefit".

Q271 Lord May of Oxford: Just a quick follow up in that I have heard and read that the initial success of the plastic bags thing is beginning to fade. That would be my observation in our own supermarket. If so, what would you learn from that?

Tony Hawkhead: It's difficult to answer that question because I certainly hadn't understood that it had begun to fade. Certainly I can only tell you that our income from those bags has risen slightly, therefore that might imply that there's been a small increase but it is small and therefore I think that the balance is still towards 80%.

Lord Krebs: I thought the most interesting bit of the plastic bag story in some ways is that with no financial penalty, simply persuasion, the reduction is 50%. If you add a penalty of 5p, the reduction in use is 80%, indicating to me that to achieve that aspect of behaviour change, you need something more than nudge or influence. You need actual penalties.

Lord May of Oxford: It is interesting too because Sainsbury doesn't have a 5p, it has a less reward, and that's the one where I observe it going back it down.

The Chairman: It is very interesting and whether then, there is an added thing that I don't think we do know, which is that the money does not go to Marks and Spencer, it goes to you. Is that a further nudge? That I think we don't know.

Q272 Earl of Selborne: I heard Ms Bannigan describe her organisation as practical and pragmatic and not into depth research, and Mr Hawkhead has said it's more of a do tank than a think tank. Of course, if you have read our written and oral evidence, you'll see that we have a number of academics generating experimental evidence on behavioural change. Do you see any of this research, admittedly from a wide range of academics some coming from quite different directions, as relevant to your organisations?

Debbie Bannigan: We draw extensively on existing research bases. When we are seeking to address a problem, our starting point is to review existing literature and to look to see what is already known about the problem, in particular to see whether there are solutions that have already been invented elsewhere that are perhaps adaptable to our circumstances or transferable from one particular set of circumstances and one particular behaviour into another. An example of that that I can give to you is that we are currently looking to develop community-based detox and rehab towards recovery for people who have issues with drug misuse. I'm sure you're aware that there is a considerable strategy towards recovery now, rather than keeping people on methadone maintenance prescriptions. What we have done is have a look at what has happened not only in our own sector but also elsewhere and we've drawn on models that have already been developed within the mental health sector to inform our own models, so that we are piloting something against a background of known research and known evidence. We work quite closely with the academic community where we can. We have a very strong research relationship with the University of Reading, for example, and we're building a research relationship with the University of Coventry around our alcohol-related brain injury work. So we rely on their evidence. We rely on their research. We have very limited resources through which to access that research or to develop our own trials and evidence bases in response to the academic research that we have access to.

Q273 Earl of Selborne: Do you think there are going to be opportunities to scale up some of this interesting work that you've done? You've shown us some pragmatic results. I particularly refer to Drinkaware. You have described the project in Newquay dealing with an age group rather younger than most, GSCE leavers. I referred earlier to binge drinking, which as a social phenomenon seems to have been taking off, a slightly older age group I would imagine mostly. Are there any opportunities from your successful indication as to how you address something of a larger national scale and do you see an opportunity for you to contribute to behaviour change in this way?

Chris Sorek: Yes, I think so. In terms of the area that you are talking about, we are in the second year of a five-year campaign on binge drinking. It's called "Why let good times go bad". On the 'Why let good times go bad'. After doing the research and getting the insight into what the target market of 18-24 years old are doing, we try to find out what is going to motivate them to stop drinking or to find out what will help us to cope with that with over-drinking. It was interesting to find out that working with industry and getting an agreement with industry, it came up with a five-year plan, which is getting £20 million per year. £5 million of that is basically rate card value and another £15 million is basically in kind support from industry to carry this message even further. Basically our objectives are to encourage young people to watch what they're doing and to have a good night out but also to promote tips that will make them change their behaviour. I will give you some examples. This one worked best, "Get watered, not slaughtered". It was recognised by 54% of people. These are all ones that change behaviour so these are the types of slogans that seem to work with that target of audience. Then we had, "Don't let your night turn ugly", which

Q274 Baroness Perry of Southwark: Following on on that, we know how important peer pressure is, particularly for young people. Is it your experience—any of you in the work that you do—that it is more effective to work with the whole group of young people rather than trying to target individuals, because no matter how much an individual may wish to change her or his behaviour, if the rest of the group is carrying on the same, it is going to be that much harder?

Debbie Bannigan: I will offer you some evidence on that point. We did research recently with a group of adults who have had issues with alcohol or drug misuse for many years. We asked them to look back and answer the question “what was the time when you first had a problem, what was the time when you first recognised you had a problem?” and then to discuss with us through the research what the things were that influenced them and what the things were that could have influenced them to seek help earlier. Peer group support and pressure were very much in evidence within those responses. Now, we work not only with the person who presents with the problem but with their family, social network and carers and we know that working with that group and working very systemically with the things that are going on around that individual can make a huge difference. If you work with just the individual, you miss the opportunity for the people within their network either to be supportive and helpful or actually to sabotage the change that they want to make, because we think of peer groups as perhaps being supportive, as perhaps being people who might want to help us to change, but often there is a benefit to the carer or the family member or the social group to having that person remain how they are. It's familiar; it's what they are used to. So for example, we are working with a group of carers up in Barnsley and we're providing them with the emotional support and also the practical skills to be able to challenge behaviour appropriately and to spot their own collusive behaviour when they are allowing people or even supporting people with behaviours that are

unhealthy. So I would certainly support the need for the interventions and the messages and all of the behaviour change initiatives to think beyond the individual whose behaviour you want to change and into the family, workplace, societal community influences that also need to be changed.

Tony Hawkhead: Can I just add one thing to that, which is that I think that there is a very important issue here around labelling? We had a very big project called the Young People Friendly Neighbourhoods where we had the chance to actually choose whether to work with small groups or even individuals and much larger groups, which were much more mixed. If you try to work with individuals or small groups who present particular difficulties, you immediately have a label, either by implication or explicitly. If you take one step back from that, any authority figure in that person's life, like a parent, is unlikely to want them to take part in such a group, because they are already stigmatised and labelled. The best way of getting that kind of behaviour change is to involve a much larger group. All of our experience, and I think it is what you are saying, is that the better behaviour almost invariably wins out over the worst behaviour. It is a remarkable thing that people who behave badly do not want to behave badly in a minority when the majority want to behave differently.

Chris Sorek: If I could just add to that, the social norming suggests that in this country you are taking a look at the fact that a lot of people think that binge drinkers are 18 to 24-year-olds, when, in fact, they really are not a majority. There is not a majority of 18 to 24-year-olds that are binging; it is considerably less. There are quite a number that are doing that, and we recognise that. Through social norming—to your point about the group, and to the point that was made earlier—it does work: it is when you get the group to start moving in a direction, it is kind of getting them going in that you have to start the momentum; once you do it will start going in that direction. We are doing some work with the Welsh Assembly right now in three universities in Wales, to take a look at social norming, and does it work as it goes forward. If it does, maybe we could take that to other places and other universities around the country.

Q275 Lord Krebs: Very briefly, you said that this campaign was funded to the tune of £20 million.

Chris Sorek: Yes.

Lord Krebs: How does that compare with the amount of money spent by the alcohol industry on promoting drinking?

Chris Sorek: To be honest with you I do not know the exact number.

Lord Krebs: Would it be possible to find that out?

Chris Sorek: I am sure it is: they could find that out.

Debbie Bannigan: If it is helpful, we actually came across a figure of £800 million, which I quote in our evidence. That is not just on advertising, that is general promotion, and it came from some published research in 2004. My guess is that with the emergence of new technology, new media, the actual cost may have gone down but the reach may have increased considerably.

Q276 Lord May of Oxford: We heard earlier the feeling that it was unfair to think of cost as a mechanism, when in fact my understanding is the thing that drove the cost down was an appreciation that by selling more at a cheaper price you could actually end up with more money. We were given an argument that it would be unfair on non-binge drinkers to have to pay more when they were used to paying less, and therefore price mechanism would not be a good idea. I wondered what your opinion of that was.

Chris Sorek: In terms of a pricing mechanism I can only say that, from my policy remit and from our memorandum of understanding, we do not have a position on that, because we just provide education and information to consumers. I think Debbie or Tony might have a different view on that.

Debbie Bannigan: In terms of alcohol pricing, this is a debate that we have certainly rehearsed within Swanswell. There are a number of things that strike me and my colleagues as being slightly curious: one is that the demand to set a minimum price seems to advantage the off-licence sellers, who have, over the past few years, got into price wars. The argument that they advance is that this will be a benefit to high risk drinkers. My advice to those that advance those arguments is that they need not worry about my high risk drinkers, because my high risk drinkers are not going to the supermarkets to buy their alcohol. A supermarket retail transaction is far too sophisticated for what they need in that moment; they will be going to their 7-11. Also price will not affect their buying habits: they will not eat, they will not pay their rent, they will not do a whole range of other things, and, if it comes to it, they will steal the alcohol in order to drink it when they are at that extreme end. That is the group that is painted as those that will be advantaged by minimum pricing, so I think we can move them out of the way. The people that we talk about are the responsible drinkers. My concern about lower priced alcohol is that responsible drinkers are potentially on a road to becoming more habitual drinkers: nobody drops to earth as a high risk drinker, they all start somewhere. Easy access to low price alcohol that becomes a part of our everyday routine—the moment when we are standing cooking the ravioli with a glass of wine in our hand every evening—starts to lead to the bottle being drunk, two bottles being drunk, maybe trying something else, and so on. I think that there are issues around pricing, but I am much more concerned about the mix of pricing and promotion, and then you can add the other Ps, placement and product that we learn on day 1 in business school. The example that I give you is, during the World Cup this year it was really hard to walk into a supermarket without falling into a stack of lager, carrying the flag, and telling us the message that if we were going to enjoy the sport we really needed to take quite a lot of lager home with us at that time. The product was being placed and promoted very—

Lord May of Oxford: Given the results you needed to be pissed.

Lord Crickhowell: Australia are going to need it now.

Debbie Bannigan: The placement and promotion was not subtle on those occasions, but there is a lot of growing subtle placement of alcohol that is a very important part of being a sophisticated, normal, grown-up person. I think if we start to look at price on its own we are missing the shove—it is not a nudge—in the other direction to buy more actually at higher margin. Those people who are buying that type of alcohol are probably not watching the pennies at that point, so I think it is a broader issue.

Chris Sorek: Could I just add to that: what Debbie touched on is also the point of demand, and it is really a critical issue. This is not just a supply side issue, this is a demand issue. We need to address the demand, and that is behavioural change: that is not changing the price,

or the promotion, or the place; that is changing the behaviour of the individual. That is clearly where behavioural change is supposed to be playing that role.

The Chairman: One could argue both ways, but anyway.

Q277 Lord Crickhowell: The question I am supposed to primarily address to you is evaluation, and, in a sense, you have already talked about evaluating as you go on, and the limit of resources. I wanted to take you into a slightly different area, which Lord Selborne just touched on. I declare an interest right at the start that I have a daughter who has given evidence and who runs a highly successful change management company dealing with large commercial organisations and a lot of smaller groups of the kind that you deal with. One of the problems that I have had in the whole of our inquiry is we tend to deal with great sweeping concepts: we talk about advertising for huge groups, and policy by great departments who want to change the world and everyone that comes within their vast areas of responsibility. What has interested me about the evidence that we have had today is that you are dealing with quite small groups of people: we started with Newquay, and a very interesting exercise in which you then went out and started trying to influence the schools from which the pupils go to Newquay. We heard about the domestic violence programme in relatively small groups. It seems to me that there is something we have not been addressing enough in our inquiry so far, which is how far we can go by concentrating on training: firstly, discovering certain things work, and then training the trainers as we expand out into much wider areas. It is not just a question of telling people that you have a programme that actually works and letting them know about it. It seems to me that what is important is that you have a programme that you train trainers, who go out into the schools, or go into the social groups that you are working in, and I wonder if we ought not—instead of nudging on the vast scale, or doing these great programmes in which we advertise on a large scale—to be doing more by actually building on the experience of organisations like yours, and going out and training the people in the places where you can have real effect. Would you like to comment?

Debbie Bannigan: I would absolutely love to comment on that, because that is something that we have been trying very hard to do. We want to share; it is part of our ethos that we join up with other organisations. What we found is that it is incredibly hard to share what we know and the experience that we have. Part of the reason for that is that the process of commissioning segments decision making into regions, and the Public Health White Paper may even segment it further down into local authority areas. Consequently, the commissioners think of the things they want to do and commission them, rather than necessarily have space to listen to new initiatives that have happened in another part of the country or another area, and find space for them within their budgets and their overall programmes. Another route that we are taking is to look for research funding, so that we can create what you might call a clinical trial of the things that we have established and work with partner organisations to try them in other areas, and gain that research-based evidence in order to help those interventions that other people commission become business as usual. You are absolutely right, there is a disconnection there, and we have found it incredibly difficult to bridge that gap between having compelling evidence on a small scale and finding a way in which we can grow the intervention and make it available to more people.

Q278 Lord Crickhowell: Mr Sorek, I take your point up particularly too: you talked about the experience you had had of moving into the schools and moving into the Welsh universities, which I had a particular interest in. Surely what you have to do there is actually train people to expand into those areas, take your experience and train the people so that it does spread into a much wider circle. Is that what you are now doing?

Chris Sorek: Exactly, that is what we are starting right now within the Welsh universities. On your point about taking it and finding a model: what we did in Newquay could be replicated in other places, and we would like to have in 2011 a residence session, where we will bring four, or five, or six different communities into residence for two or three days, and have them work through their own programme so they can then implement that programme in their own communities. It is basically taking it and making a replica model to take it someplace else. To Debbie's point about the sharing of information, we could not agree more; there are so many places, there are so many different, great opportunities for sharing information. I know that, for example, on our website we have a section for professionals, and it is one of the most used parts of it, but what we could potentially do is literally give that push so that people could come to one place and download the kind of information that Debbie is talking about, because that should be available to everybody in a very transparent way.

The Chairman: I'm really sorry, but can we move on? Otherwise we're going to run out of time.

Q279 Lord Warner: The question to start with is how important is it for Government to work in partnership with the third sector when seeking to change behaviour, and I am sure you will tell us it is very important. In answering that, could you try to identify some of the different roles that you see for those three sectors, Government, business, and the third sector, and give us a sense of when you think it is best for the third sector itself to deliver messages about changing behaviour?

Debbie Bannigan: I heard one of your earlier witnesses say that the best partnerships happen where there is an absence of conflict, and I absolutely agree with that. Where we have added most value to a partnership and achieved most value from a partnership is where there has been a clear "what is in it for me" for everybody that is involved, and there has not been any conflict of boundaries around that. Having been in the voluntary sector and in the statutory sector for more years than I want to count right now, what I know is that the statutory sector has a natural ebb and flow into certain social issues, whereas the voluntary sector is there for the long haul. If I take alcohol misuse as an issue, when Swanswell started in Coventry 42 years ago, the statutory sector wasn't really interested in alcohol misuse on any sort of scale. Fortunately, someone in Coventry was, and they established Swanswell, and we have been there. In recent years, the statutory sector has started to take more of an interest, to offer more services directly and to commission more third sector services. That is not a bad thing, because we hope that that adds more resource and allows a sharing of knowledge and resource. What we would advocate, as a third sector organisation, is that when the statutory sector takes an interest in something it doesn't automatically assume that it needs to take over; that it is actually prepared to acknowledge the longevity of expertise within the voluntary sector that perhaps it tends to overlook at the moment; and that, when drawing partnerships together, the partnerships are put on an equal footing, where each partner is recognised as having something of value, and there is not a power play going on that there are the big boys and the little boys, and

the little boys only get the crumbs off the table. Bear in mind, many of the organisations that work in our sector are small, single issue, local organisations; they don't have huge turnover, they don't have huge resources, but they do remarkable work and have done so for a long time, and will continue to do so for a long time, provided they are not put out of business by other initiatives.

Tony Hawkhead: Can I give you one specific example where I think you can see the role for all three sectors going forward? That is the Government's Green Deal. This is probably the most ambitious programme that the Government has got alongside the work programme in terms of domestic policy, and it is about transforming our behaviour on use of energy; let's leave aside climate change. The role for the Government in that is quite clearly setting a framework and creating a clear vision for how the Green Deal will work: negotiating with private financiers, setting out the legislation. Business's role, let us take British Gas, for example, will be quite clearly to install the home insulation, and there will be a need to retrofit around 40 million homes, and probably to lead on some of the behaviour change work because they will be in there with those households that are most able to grip and grasp the opportunities that provides. Without the behaviour change you could insulate every home in the country and you will not reduce carbon use, you will not reduce fuel use, it is a huge issue here. Where the third sector can come in there is the whole area around fuel poverty. The Green Deal will not work for fuel poverty, we will need to use the levy on our fuel bills to try and deal with that. We also know, from all the work we have done on our Green Doctor programme, that the poor households, often more chaotic, find it extremely difficult to focus on issues around saving energy. What they want to know is, am I going to be able to pay my fuel bill and feed my children at the same time? That is where the trusting relationship that the third sector has uniquely in poorer communities can make the difference, so you can create a really complete package of an approach to something very important.

Q280 Lord Warner: Is there a general point there about lower income groups finding it easier to take messages from the third sector? You were talking about that particular campaign, but is there a general point that can be made?

Tony Hawkhead: Our strong argument would be yes; in the communities we work with the statutory agencies, even local government, is generally mistrusted, and those organisations like ours who basically use volunteers, and recruit from local communities, are much more likely to be trusted, because we are "of them" if you like. I do not mean that in a patronising way.

Debbie Bannigan: There is a point to add there about choice; a lot of the people that we work with do not have a choice about where they get the services from that we provide. They cannot book themselves into the Priory or elsewhere for an expensive detox, but addiction doesn't know any discrimination and consequently we also work with people who have relatively high incomes and who are equally as content to take services from us as they would be from elsewhere.

Q281 Lord May of Oxford: My question builds on the previous one, which is, can you provide examples of successful integrated partnership working between third sector and government, or third sector and business? If I may, very quickly, I will give you a counter example that has been of concern for me for some time, which is sexual health; we did such a great job but now the incidence of HIV has increased markedly among all groups:

heterosexuals, homosexuals, drug users. The Department of Health spent £400 million on this, and gave less than 1% of it to the voluntary sector, who, in my opinion, would have been the most influential sector in delivering the sort of things you wanted to do. I wonder if you could give me some counter-examples where the Government has not spent its money on itself?

Debbie Bannigan: I can give you an example of a partnership between Swanswell and a private sector organisation that doesn't include a significant amount of statutory sector involvement, and that is our partnership with Netmums, and I don't know whether any of you are Netmums, because Netmums includes both mums and dads. It is an online social networking site, and within the online social networking site there are virtual coffee houses, where people go to have a chat, and they chat about which pushchair to use, and they chat about which nursery to get their kids into, and where to go on holiday, the sort of things that mums chat about. There is within that virtual coffee house a particular forum about alcohol, drugs and addiction. Netmums approached us to provide some professional insight into the exchanges that were happening between mums, because they were concerned that some of the advice that mums were giving to mums may not have been all that they needed to know. We offer only four hours a week on to that site, and they pay us to do so; that is under contract to Netmums. We know that in the first year of doing that our postings were viewed by over 130,000 people. Netmums have statistics, which I can share with you, that show by far a majority of those people indicated that they had learned something from those postings, and that they would change their behaviour as a result. I think that is pretty compelling, albeit small scale. One of the things that we are now aiming to do is to talk with people like Drinkaware, and other potential funders, to say "can we take this sort of intervention to more social networking sites?" There is a whole virtual world out there of people chatting away about all sorts of things, feeling very safe, feeling quite anonymous, feeling quite able to disclose what is going on for them, and being very receptive to the sort of advice that we can give.

The Chairman: It would be very useful if you could give us some of the data on that.

Q282 Lord May of Oxford: Any examples with the Government as distinct to private sector?

Chris Sorek: In terms of working directly with the Government?

Lord May of Oxford: Yes, or anything.

Chris Sorek: In the work that we did, especially around the Newquay campaign that we mentioned earlier, basically the Home Office, police, and local authority were the ones that pulled everything together; everything else was then bolted along with it, and then came together as Newquay Safe. That is one way of taking a look at it. There are others; for example, even on the "Why let the good times go bad" the initial concept came from Number 10, where they were looking to try and figure out some way to attack binge drinking, and that was the way that it started off. It was basically Home Office KPIs combined with industry and the third sector that made this thing come alive. It can work. It is a question of how you want to pull that together.

Lord May of Oxford: If you think of any other examples, if you could give us a short note.

Chris Sorek: Absolutely.

Debbie Bannigan: We have a lot of examples of where we work in partnership with the criminal justice system, local authorities, and so on. Many of them are in the evidence, and I can certainly provide you with more of those: it is our business as usual.

The Chairman: It would be really helpful to have some instances from all of you where that is possible, to show both where it works well, and where it works less well. That would be very helpful. I'm really sorry, we do have to end the session, because we are completely running out of time. Can I thank you hugely for coming and giving evidence to us? It was really helpful. You will get the transcript, you get a chance to correct anything if you think it is wrong, you get the chance to add to it, but there are the very specific things we've asked you that we would be really very grateful for.

Debbie Bannigan: I do have one piece of evidence that I would like to leave with you, which is actually a piece of evidence from one of our clients—one of our service users—that I have on DVD. When we are talking about taking it to a human level, the voice of the people whose behaviour has been changed can be incredibly compelling, and please feel free to take an open invitation from me to come to Swanswell and see what we do, and meet our clients any time to suit you.

The Chairman: Thank you very much indeed. Committee, just to warn you that we meet as usual next Tuesday at 3.45, single session.

Supplementary written evidence from Drinkaware (BC 154)

Drinkaware welcomes this opportunity to provide further information to the House of Lords Science and Technology Sub-Committee inquiry into the effectiveness of behaviour change interventions in achieving government policy goals and helping to meet societal challenges.

Following the oral evidence provided by Drinkaware Chief Executive Chris Sorek on Tuesday 7th December 2010, this memorandum provides further information on those areas in which the Committee requested clarification during the session.

About Drinkaware

Drinkaware is an independent, UK-wide charity, which aims to equip people with the knowledge they need to make informed decisions about how much alcohol they drink. Drinkaware is entirely funded by voluntary donations from across the drinks industry but operates completely independently from it. Our campaigns are designed on an evidence-based approach, and our work is scrutinised by a panel of experts from across public health, including our Chief Medical Adviser, Professor Paul Wallace. Drinkaware's core value and purpose is to reduce alcohol consumption and the associated health problems. We do this by giving people the facts about alcohol, thereby helping people make better choices about their health.

Additional information

During the session Lord Krebs asked whether Drinkaware could obtain statistics about alcohol sales in Newquay. We have since been in contact with the Newquay Safe Team and have been advised that these figures will be very difficult to obtain. We are informed that reliable data for 2010 sales is not easily obtained as the disclosure of data by retailers and licensed premises is commercially sensitive. Nonetheless, Drinkaware's partnership initiative in Newquay reached 4,500 students and recent evaluation showed that drink related anti-social behaviour reduced by 19%. Further details can be obtained from our website at: <http://www.drinkaware.co.uk/media/press-releases/2010-press-releases>.

A link to copies of the *Why Let Good Times Go Bad?* campaign material is also available via our website: <http://www.drinkaware.co.uk/campaigns/2010/why-let-good-times-go-bad/why-let-good-times-go-bad-posters>. Chris Sorek showed some of the materials used during the evidence session and we hope these are useful reference for the Committee. Launched in 2009, the £100 million *Why Let Good Times Go Bad?* media campaign targets irresponsible drinking amongst young adults and is intended to run for five years. An independent evaluation of the 2010 activity showed 70% of the target audience were more likely to consider drinking differently in the future as a result of the campaign activity. A copy of the campaign's evaluation is attached for reference.

During the oral evidence session with Drinkaware, the Committee asked how much industry spends on advertising. Unfortunately this is not information that Drinkaware collates or has access to and it will be necessary for the Committee to approach the drinks industry for any data on advertising spend.

Lord May also asked whether Drinkaware could submit further examples which demonstrated successful partnership working with government. Drinkaware has worked with the Government on a number of initiatives. Most recently, Drinkaware has partnered with the National Union of Students (NUS) and the Home Office to address alcohol misuse amongst students. The bodies involved in the initiative combined their expertise to produce official guidance to reduce alcohol related harm and public nuisance caused by 'bar crawls' across the UK. The guidance for enforcement officers will be distributed to local licensing authorities and the police, whilst student unions will also be advised on their rights to refuse 'bar crawls' in their areas and keep students safe. The work with the NUS and the Home Office is intended to address the issue from a fresh angle. It did not require introducing new legislation or committing vast resources, which saved both time and money.

In addition, Drinkaware worked with the Department for Education (formerly the Department for Children, Schools and Families) to produce guidance for parents in relation to alcohol. The *Your kids and alcohol* leaflet included the Chief Medical Officer's guidance on underage drinking, outlined how alcohol education may be covered in schools and provided tips on talking to children about alcohol. The guidance is currently being reviewed and we intend to re-launch the leaflet, however a copy of the current leaflet is available via the following link: http://www.drinkaware.co.uk/_data/assets/pdf_file/0007/21958/Your-Kids-and-alcohol-leaflet_Jan09.pdf.

February 2011

Department of Energy and Climate Change, Department for Environment, Food and Rural Affairs and the Growing Against Gangs Foundation

Oral Evidence, 14 December 2010, Q283-329

Evidence Session No.8. Heard in Public.

Members present:

Lord Alderdice
Lord Crickhowell
Baroness Hilton of Eggardon
Lord Krebs
Baroness Neuberger (Chairman)
Lord May of Oxford
Baroness O'Neill of Bengarve
Earl of Selborne
Lord Sutherland of Houndwood
Lord Warner

Examination of Witnesses

Witnesses: Ms Liz Owen [Head of Customer Insight, Department of Energy and Climate Change] Ms Sara Eppel [Head of Sustainable Products and Consumers, Defra] and Mr Nick Mason [Chair of the Growing Against Gangs Foundation].

Q283 The Chairman: Welcome. It's very nice to see you. I'm going to give some explanation because it's going to be a slightly different evidence session from usual. In a moment, I'm going to ask you to introduce yourselves for the record. Then the first witness will answer the initial question, followed by supplementary questioning from Members of the Committee. We will then move on to the next witness and repeat the process. It will be roughly around a quarter of an hour of further questioning, something of that order. It's quite likely we're going to be interrupted by a vote. We will reconvene but it can take quite a long time here in the House of Lords for a vote. The proceedings are being webcast. The Committee needs to remember not to make sotto voce asides, because they get picked up, and you should also know that everything will get picked up. The only other thing to say to you is that some Members of the Committee will have to leave when the House begins to debate higher education. If you see Members drift out, it's not personal; it is that people are going into the businesses of the House. Otherwise, Members of the Committee, if you've got any new interests, please tell us what they are. Members of the public—we have a few—there's a note for you if you want to have a look at that. The first thing, going across the table, could you witnesses introduce themselves for the record?

Nick Mason: I'm Nick Mason. I'm Chair and co-lead of a programme called Growing Against Gangs, which is a partnership programme with the Metropolitan Police Service.

Sara Eppel: I'm Sara Eppel. I'm Head of Sustainable Products and Consumers in Defra.

The Chairman: You're going to have to speak up; this is an awful room. You're going to have to throw your voice as much as you can.

Liz Owen: I'm Liz Owen. I'm Head of Customer Insight at the Department of Energy and Climate Change.

Q284 The Chairman: What we're going to do is, as I said, give each of you a turn. I'm going to start with you, Sara, but just so that you're aware, if one of you says something and another of you wants to intervene, do please indicate. I assure you, the Committee will not feel at all chary about getting in there either. Sara, could you start in relation to your own area on how your policies and programmes have been designed, implemented and, indeed, evaluated in the light of evidence and theory about behaviour change?

Sara Eppel: Thank you very much. Good afternoon to all the Members.

The Chairman: Sorry; I know I'm going to be nagging, but you need to really speak up.

Sara Eppel: I'll sit forward. I've concentrated mostly on waste, because I gather that is an area of interest. My area of focus in the department is on sustainable consumption and production, so we do cover wider than waste, but I've focused on waste because you did some specific questions on that. In terms of the waste policy, I should remind you that the current waste policies come from the 2007 Waste Strategy. At the time of the development of the strategy, we didn't have a behavioural insights team within Defra. At the time of the formulation of that, there was no specific support for the policy teams on behavioural understanding. However, since then, Defra's knowledge and expertise in this area has considerably increased, and we're going through a very different process at the moment for the 2011 Waste Review, where the behavioural insight team is working very closely with the policy development team. The thing I was going to focus on to give you some specific examples was particularly work carried out by WRAP, and WRAP is our delivery body, so really it's about implementation of waste policy at a local level. I was going to concentrate on Love Food Hate Waste, which was a campaign that has been run since 2005. It really started, I suppose, with the Prime Minister's Strategy Unit report, Waste Not, Want Not, in 2002, which identified a low level of awareness about recycling but also about household waste prevention. Packaging was seen as a big problem, hence there was a lot of work focusing on that, which eventually turned into the Courtauld agreement. Also, there was a good deal of evidence started at that stage to look at food waste and the carbon impacts of food waste, and that was very much in the basic information that went into the 2007 strategy as well, so much higher awareness of biodegradable waste in the landfill, and the impacts that could have on our carbon emissions. Defra, local authorities, waste NGOs worked together to design, first of all, the Recycle Now campaign, which I can talk more about but I'll just mention briefly, because that was the first campaign that WRAP worked on. That was launched in 2004 and it aimed to increase public perception of recycling from a 2004 baseline. At the time the baseline was taken, there was an awareness that there were 45% of English people who were committed recyclers; it's now at about 74%, so it's largely seen by us and by WRAP as being quite a successful campaign. On the Love Food Hate Waste campaign, from 2005 a huge amount of in-depth consumer and technical research was done. It was really looking at how and why people waste food in the home. It's quite a complex area. People cook and shop in a very habitual way, so there are some very deeply ingrained habits that you're trying to change. People have a very low

understanding of what they're wasting. They don't realise the quantity that they're wasting, and they certainly don't understand the impacts of it. When the campaign was launched in 2007, the evidence basically originated from the behaviour change models that we have been using for some years. This would be Defra's own Four Es model, covering: enabling, engaging, exemplifying and encouraging change. The Government Social Research Network did a behaviour change knowledge review, and that information is a foundation stone for much of our work. The Sustainable Consumption Roundtable did a report *I Will If You Will*, which also had some very interesting insights on using the role of business consumers and Government as a triangle of change. Defra itself had, by that stage, published the framework for pro-environmental behaviours, which brought a lot of this together. The programme of research that was commissioned for Love Food Hate Waste was focus-group research, which involved food management diaries by individuals; small-scale ethnographic studies. It was really trying to capture people's actions, so what they were actually doing and what they were thinking. The second larger-scale evidence was a household food waste compositional analysis and kitchen diaries, basically looking into the bins to find out what the common composition of a bin was. There was also qualitative and quantitative research to examine peoples' motivations, to understand whether people are motivated to reduce waste as a result of financial pressures or environmental interests, but also to understand barriers to change, attitudes to different messages and whether people are interested to hear from local authorities or from retailers or who would be the intermediary. Then messages were tested and refined using qualitative and quantitative research. That was much of the research and evidence done before the campaign launched. Who was involved? It was a very widespread campaign. It included local authorities, the food industry, key trade associations like the BRC and the Food and Drinks Federation, the Food Standards Agency, the Department of Health and other Government Departments to make sure we had a good food safety message as well as food health message linked to food waste. Since the launch, there has been a wider range of partners that have been involved. People got on board as it was happening. The evidence also gave very good insights into public awareness. There was very, very low public awareness about the amount of food wasted. It gave us insights into the stated motivation. For most people, reducing food waste was not environmental; it was economic or just having an efficient kitchen. The campaign focused very much on the people who were unaware of the implications and the impacts of their waste but were very confident in the kitchen. Initially there was a focus on quite a small segment of society to raise awareness. Once WRAP felt the campaign was going well in that quarter, the second broader audience, of which there are about 15 million households, were focused on; these were people who were more concerned about the costs of food waste, just buying badly and not managing their food properly. The technical programme that was done alongside was with the food industry, and that was very much about modifying food products and retail practices, so establishing complementary campaigns with the retailers, helping consumers buy the right amount of food—changing pack sizes, promotions for smaller portions—giving very clear advice about how to store food, clearer on-the-pack guidance and more consistent date labelling. We found there was a lot of confusion about date labelling. How are the policies being evaluated? In the first two years of the campaign a metric was developed based on the segmentation that WRAP had been using for Recycle Now, which was about understanding and commitment. That was then applied to people's commitment to dealing with food waste. The evaluation of the effectiveness of the campaign was done through a range of channels: how much awareness was raised, how much people had understood the message, heard it, etc. Then there was qualitative and quantitative research to test and refine the more tailored messages. A new

method has now been developed, which looks much more at multiple points in the chain, so how people understand things. Now this has been developed into measuring quantities of food waste in the waste stream, seeing if the waste stream has gone down over the last three years. Tracking claimed behaviour, so asking people, "Do you do x? Do you put your fruit in the fridge after a couple of days or don't you?" Some of that is useful just to understand if people even understand that that makes a difference. We are also tracking changes in the retail environment, to really understand if people are buying different sized portions and so on. That's now being developed into a model that WRAP is now using. Since launching in 2007, food waste arisings have been reduced by over 380,000 tonnes a year, saving consumers more than £860 million a year and preventing more than 1.6 million tonnes of carbon dioxide. We feel it's been quite a successful campaign. We feel that, in terms of the lessons we've learnt, it's a very complex issue; we shouldn't underestimate how complicated it is. We have to break it down very precisely into what we're trying to change, who we're targeting and how we're targeting them. Some issues are best tackled through structural or technical changes; it's not all about persuading people to do things differently. Sometimes you need to get practices to be changed by retailers or by food manufacturers. Engagement with partners very early on in the stage of a process is absolutely critical to get people on board, so it's a very holistic approach. It's not always possible to be sure that what people say is in fact what they do, so don't depend on it. You need to have much more quantitative evaluation as well. That was all I was going to say on Love Food Hate Waste.

Q285 The Chairman: Right, we have about one minute if you're able to make one more point, but that's it and then I'm going to hand over to Lord Krebs.

Sara Eppel: I'll wait for your questions.

Q286 Lord Krebs: Thank you very much for that very helpful overview. Can I just start by getting absolutely clear what the numbers are and what the scale of them means? In the WRAP submission, they say in the October 2008 evaluation they delivered 110,000 tonnes of reduction in household food waste, exceeding their target by 10%. Later on they say, between 2005 and 2009 we'd reduced food waste by 155,000 tonnes per year. I just first of all want to be absolutely clear what is the number we're talking about.

Sara Eppel: This number—that food waste arisings have been reduced by over 380,000 tonnes a year—is from WRAP.

Q287 Lord Krebs: That's not what they've written in paragraph 36 of their submission. Who's right, WRAP or VWRAP?

Sara Eppel: I'll have to go back. I know they have recently updated their numbers.

The Chairman: What date was that? It would have been recent.

Lord Krebs: Very recently.

Sara Eppel: I think they haven't yet published their latest evaluation.

Lord Krebs: 8 October 2010.

Sara Eppel: It could well be that their latest evaluation is actually since then, because I know it isn't published.

Q288 Lord Krebs: It's doubled since October?

Sara Eppel: It doesn't sound likely.

Lord Krebs: I'd like to get that clear.

Sara Eppel: I think we'd better. Yes, I'll take it back to them and clarify it. In fact, I spoke to them about this number this morning and they confirmed this figure. I'll take it back to them and get them to clarify the difference between what they submitted to you and what I have⁴²⁶.

Q289 Lord Krebs: Well, let's split the difference and say that it's around 200,000 tonnes per year. Then I ask: is that a big or a small number? As I understand it, this is 200,000 out of about 8 million, so we're somewhere around two-and-a-bit per cent of food waste that has been cut. It was a very modest target, in other words, to cut waste by a couple of per cent, still leaving 98% of the problem untackled. Is that right? Have I got that correct?

Sara Eppel: I would have to check on the numbers because obviously we still have this discrepancy.

Lord Krebs: I'm reading the 8 million from them, but you agree 200,000 over 8 million is about 2%.

Sara Eppel: There are a couple of issues. One is, in terms of food waste, some food is going to be wasted anyway because it isn't edible. That's why, to be honest, changing behaviour within a kitchen isn't going to deliver you everything. There is still going to be residual waste from the food.

Lord Krebs: WRAP says, "An estimated 8.3 million tonnes of household food waste ... is produced each year ... most of which could have been eaten".

Sara Eppel: Yes, it's a big challenge.

Lord Krebs: I just wanted to scale it. We have seen behaviour change, which is great. The numbers are still under dispute. Whether WRAP is right or WRAP is right, whoever is right it's in the order of a 2% to 3% reduction in waste over a five-year period.

Q290 Lord May of Oxford: Let me just ask you: if we had just asked you, rather than coming at it this way, what was the percentage reduction, what would you have said?

Sara Eppel: I wouldn't have been able to answer, because I don't do waste policy. I cover behaviour change.

Lord May of Oxford: Would you have not felt you had been poorly briefed if you didn't have at your command such a crucial figure in discussing it, because you discussed the

⁴²⁶ Evaluation of the campaign in 2009 revealed savings of 380,000 tonnes, as I reported. This is made up of 110,000 tonnes evaluated in 2008, plus 270,000 tonnes in 2009 i.e. 380,000 tonnes overall. This is consistent with WRAP's written submission to the Committee (paragraph 34 and 36). I should add that a 2010 evaluation is underway and new figures to assess the cumulative effect will be available shortly.

process at huge length, and yet you weren't briefed on the essential measure of what's happened?

Q291 Lord Krebs: If we could resolve that—if you could write to us and say what is the number and the percentage reduction of avoidable waste and confirm or disconfirm that it's around 2%—I was then going to ask, which I think Lord May has anticipated, would that be considered by you as a good outcome of a behaviour change intervention, a 2% shift in population behaviour?

Sara Eppel: I would consider it a start.

Q292 Lord Krebs: Where would you like to be?

Sara Eppel: To get behaviour change it isn't usually achievable in a major way just with one public awareness campaign. It does involve complicated interventions, as I've said. Now, we have got the retailers on board and that is all very helpful. If you wanted to do something that is really radical and is really going to make a big difference, we're probably going to have to do things that are more demanding and more hard-hitting.

Q293 Lord Krebs: Such as?

Sara Eppel: I wouldn't like to speculate what they are in terms of food waste. Certainly in other areas, often we've had to regulate to make serious change, in fact.

Lord Krebs: Your job is food waste.

Sara Eppel: No, my job is behaviour change.

Q294 Lord Krebs: It seems funny that a department has a policy or a group that does behaviour change and doesn't connect up with all the other levers that you might have to change to change the outcome. Because it's not your specific remit, you're not interested in whether other instruments that Government might deploy could change the outcome?

Sara Eppel: In terms of policy development, we bring all the policy instruments together and look at them methodically. We will look at what is available to us which ranges through: legislation, or it could be, regulation (which is secondary legislation). We look at fiscal instruments. We would do analysis if we can on fiscal opportunities, if the Treasury will work with us on that. We will look at what we could do in terms of partnership working with industry, which would involve voluntary agreements, quite likely. Certainly then we will also look at behaviour change. Now at the moment, we're giving a much bigger priority to looking at whether behaviour change can contribute, because the Government is less willing to do regulation, and that is a stated objective. That's relatively new. Previously, we'd probably have looked at regulation more methodically, as well as legislation, and the fiscal.

Q295 Lord Krebs: You mention that you had attacked the pipeline at different points, so you brought the retailers on board as well as the individual householder in the kitchen. I can remember, when I was head of the Food Standards Agency, being told by one of the

major food retailers that the most powerful single promotion tool is what's called a BOGOF—"buy one, get one free". I go into three of the major supermarkets in Oxford on a regular basis; they are still doing "buy one, get one free" as though there's no tomorrow, and particularly on highly degradable goods like fruit and vegetables. Have you succeeded in persuading the supermarkets they ought to stop trying to get us to buy two lettuces when we really only need one and having to throw the second or most of the second one away; to stop us buying two pineapples when we really only wanted one? I've not seen any sign of it, so can you tell us what the change in the supermarkets has been?

Sara Eppel: There was a change; there was a significant change about a year ago, and many of the supermarkets signed up to alternatives, such as "buy one, get one later".

Q296 Lord Krebs: Which supermarket signed up to that, because the three I'm thinking of certainly haven't?

Lord May of Oxford: I can tell you: Tesco.

Sara Eppel: Yes, Tesco.

Lord May of Oxford: Can I declare an interest because I was associated with it?

Lord Krebs: Can I just say that, contrary to what Lord May has said, I went into Tesco earlier this week, and they were doing "buy one, get one free".

Sara Eppel: I recognise your scepticism; I absolutely agree.

Baroness Hilton of Eggardon: As did I.

Lord May of Oxford: They're supposed not to. They're supposed to do "buy one, get one free later".

The Chairman: Can I get a bit of a grip of this Committee please? Do you want to carry on very briefly Lord Krebs and then I'm going to hand to Lord Warner?

Q297 Lord Krebs: Very briefly, I just wanted to switch to one other area, which is about plastic bag use. We've been told in one of the earlier evidence sessions that Marks & Spencer, which has introduced the policy of charging for plastic bags, has seen the use of plastic bags by customers going down to the tune of 80%. I believe in the Republic of Ireland where there's a mandatory charge it's gone down by 90%. In the companies that have chosen a voluntary approach, it's gone down by a much smaller figure, I believe in the region of 40%. Does this not speak to the notion that, in order to get people en masse to change their behaviour very significantly, you really need an instrument that's more coercive than simply an advertising, marketing or, in your sense, behaviour change initiative?

Sara Eppel: Yes, I think I'd probably agree with that conclusion. Clearly the evidence is there in many other areas too, not just in plastic bags. Certainly in energy usage products for instance, which is my policy area, behaviour change, giving information and encouraging people to choose an A-rated product worked for about 7% of the population for about five years. Regulation then came in, which had incentives and so on. Uptake of A-rated products transformed to 80% in two years. I absolutely agree: if you want something done significantly, and you want something done quite fast, influencing behaviour may not be your answer, but it might be the answer that is as part of the package of measures that you're presenting to the householder. If you package it in a way that involves the other players,

Q298 Lord Warner: I wanted to ask you a more general question about your wider responsibilities for behaviour change, not just on waste. What do you say to policymakers, when they're coming to you with a problem, about what levels of success are likely to be achieved with a behavioural change intervention against some of the other shots in the locker that there may be? I have no sense of what you think would be a success in terms of behavioural change as part of the whole. What sort of advice do you give them on that?

Sara Eppel: I can take you through the sort of meeting I had this morning on the water White Paper. The policy team will present to me what the issues are, the complications and the current evidence base, and what they're trying to get; what outcome they're looking for. What I will then do with them is work through our triangle of change and the behaviour change diamond, the Four Es, and go through: to what extent are we enabling people to do what you want them to do? To what extent are we encouraging them through legislation or regulation? To what extent are we exemplifying ourselves in government or at local authority level or with businesses? To what extent are we engaging properly with the right people? All of those would be the questions that I would be asking them, and we would be mapping out the answers, basically. We would then work with them on who their stakeholders are, who would be the trusted intermediaries if we wanted to put messages through to people. Basically, we will work through that together. In terms of what is the level of success that you're going to have with taking this approach, I think there are two parts to this. First, what are your chances of success of getting something that is perhaps a regulation, legislation or something that might be much harder and faster and would deliver you the results? In short, the answer might be "that's off the agenda", at which point everybody is looking for, "How can I get a whole package of measures that isn't just me focusing on legislation?". To be honest, we don't think that this Government is going to be very keen on us bringing forward too much legislation. We can, though, work—and I am, with our fiscal team, our economists—on whether we can have a package of fiscal incentives, which are transforming the green agenda, for example. The level of success that we're going to have will of course depend on politics. We don't make those final decisions; we help with the analysis and we do the work around it. At the end of the day, those decisions will be made by our Secretary of State.

Q299 Lord Warner: Do you actually bring out to the policymakers that a behavioural change programme might actually only deliver you 2%, 3% or 4%, or do they go away thinking, "Well, actually we might get a 20% change in this"? I'm trying to understand whether there are informed decisions being taken on the use of behavioural change in particular areas.

Sara Eppel: I don't speak up its success. I don't present it as: "This is transformational; it's going to change the world for you". But the evidence in my own area is that influencing behaviour does help. You often need some behavioural intervention to make your policy easier to implement, but you may also end up going for the much harder and faster policies, at the end of the day, if that is what is needed.

Q300 The Chairman: We are going to have to stop this bit now. I'm sorry, everybody. Because we are expecting votes, I'm going to be quite tight on time. There's one question that I do want all of you to answer and I'll just ask you to reply very briefly: do you build evaluation in at the outset of the design of any of this?

Sara Eppel: I absolutely do. It's been a weakness in the past, I have to say. I joined the department 18 months ago, there was a set of pilot projects that had been going on for three years, and the first question I asked was, "Could I see the evaluation of them?". It was insufficiently informative for me to use it as evidence for any further projects of that nature, so basically it was useless to me. Since then, I've said, "We must have the evaluation in the projects otherwise we don't do the projects".

Q301 The Chairman: Thank you very much indeed. I'm now going to hand over to Liz Owen. If you'd like to make your initial set of answers, for not more than 10 minutes and then, if you could, take the evaluation point on board. For those Members of the Committee who haven't had the chance for questions, I'm sorry, but you can see why.

Liz Owen: Hi everybody. Just to give you a little bit of a sense of my role within DECC, I'm Head of Customer Insight; I've been in my role for six months and it's my first role as a civil servant. In fact, today is my six-month anniversary in the role. My area is a relatively new area within DECC. The department was created just over two years ago, and many of the people who understand people, in the broader sense of that term, were left behind in the predecessor department, so we've been trying to build capacity in our department over the last few months. I think that's helpful probably just to set the scene.

The Chairman: I'm really sorry; you're going to have to speak up. It is a problem in here.

Liz Owen: I'm based in the part of the department that is responsible for energy efficiency and consumers, and leading on the Green Deal policy development. That's what I've mainly been involved with in my first six months, so I thought that would be a sensible place to start, and it was one of the key policies I was perhaps asked to talk about. As you know, the Green Deal is a Coalition programme commitment on household energy efficiency, and is included in the Energy Bill that was introduced last week. You'll all be aware that we have very challenging carbon emissions reduction targets. About a quarter of the carbon emissions in the UK come from our homes, and our economic analysis suggests that there's quite a lot of cost-effective abatement potential in the household sector. That's really the rationale for the Green Deal, which aims to really drive change in this area. The Green Deal is an innovative policy designed to establish a framework to enable private firms to offer consumers energy efficiency improvements in their properties at no upfront cost. It's a market mechanism funded by private capital, which Government thinks will deliver more to consumers than a conventional Government programme could. The core element, which I'll come back to but just to give you an overview on this, is an innovative financing mechanism that enables households and businesses to pay back through their energy bills and to allow the financial obligation for the work to move on to the next bill-payer. In other words, the occupant of the property is only paying the charge while they're enjoying the benefits. In that way, it's not a conventional loan, because the bill-payer is never liable for the full capital cost, just the cost of the charge while they're occupying the property. To go back a little bit and talk about, first of all, our evidence base: we have quite a lot of customer research conducted within DECC; some of our historical evidence base that sits within Defra; and the Energy Saving Trust and Carbon Trust, two of DECC's arm's-length bodies, have done quite a lot of work in this area. This tells us that there are quite a lot of

barriers in the market in terms of energy efficiency improvements to properties. There's a set of practical barriers, including: the upfront cost, which is off-putting; the payback time for some measures, which can be quite long and longer than the average tenure in the household sector, which is about seven years. Also there are some other practical issues around the household factor of planning, installation and having the installation carried out. Our evidence also suggests there are substantial inertia problems in this market and lack of awareness of the benefits of home energy efficiency. A lot of people have simply never thought about it; it's just not on their radar, not on their agenda. They might be unaware of the options. They may not know how their property was constructed, and so therefore what the right measures are to take. They may not know what measures are already installed in their property. Building on the knowledge of the barriers, the Green Deal is structured around customer needs in six stages, and I'm going to focus on the first four of these, which are about unlocking consumer demand, having an accredited assessment, having access to finance at no upfront cost and accredited installation. The final two stages are repayments and when people move property, but I won't touch so much on those as they're not so directly related to the behaviour change challenge. First of all in terms of customer demand, as I said the policy is designed to create a framework to encourage trusted brands and other organisations to deliver directly to consumers and to businesses. This could be local builders; it could be home improvement stores; it could be local councils; it could be energy companies. There are many options and the Government's aim is to create a flexible framework to enable as many players as possible to enter the market and create a vibrant market. It's really built on the behavioural insight that the messenger really matters; that the person from whom you receive that communication really makes a difference. The department's also exploring what other steps Government could take to drive demand, bearing in mind that the Green Deal is a market mechanism. We've run an initial idea generation workshop to come up with ideas here, with stakeholders from across Government, using the MINDSPACE principles developed by the Cabinet Office, and we'll be doing the same with external stakeholders. There's a lot of work still to do here. The second stage is about having an accredited assessment of your property. In order to access the Green Deal finance, the ability to put this charge on to your energy bill, the customer will need to have their property assessed by an accredited adviser, who will advise on the opportunities for energy efficiency improvements. This is designed to address some of the hassle factor and uncertainty issues that we know exist in the market. Our impact assessment points up the lack of trusted information, which is a market failure that this policy is designed to try to address. The third element, which I've already mentioned briefly, is the new finance mechanism to enable customers to access finance for energy efficiency improvements to their property at no upfront cost, offering the opportunity to repay through energy bills, which is part of what the primary legislation is designed to achieve. Again, this avoids the hyperbolic discounting that can apply to energy efficiency improvements at the moment, where consumers don't value future savings in the same way as they value current spending. This basically aligns spending with the savings they should make on their energy bill. It gets around that issue.

The Chairman: One more minute.

Liz Owen: Okay, I'll skip over that in fact. I've talked a bit about some of the evidence that has been used to base the policy on. It's still at the early stages of development and there is more work for us to do in this area. Just to say a note on evaluation, as I know you're very interested in it, obviously this policy is at an early stage, but we have begun to consider evaluation at this stage. We're at the point of considering the key metrics and the

methodologies that we might use, in order that we can build them into the monitoring requirements for the policy. I should also say we have also been evaluating a number of other programmes in this area to enable us also to learn from those in the development of this new policy.

Q302 Lord May of Oxford: Thank you very much. That was a very interesting exposition on the cost and bother of installing these things, and I resonate with it, because we've been thinking about it and we're sort of deterred by the cost and bother. The real point is: let's assume that there is just some magical process that you can snap your fingers and there—the house is fully equipped with meters. We have evidence that criticises on the grounds that much of the current information-gathering/conveying meters on the market aren't particularly helpful, and that there has been very little in the way of robust evaluation on it. I just wonder if you would say, very briefly, a little bit about the pilot schemes you've had and what light they did shine on how helpful people found them and what effect they had.

Liz Owen: You mentioned metering there. Are you talking about metering and energy bill information or about insulation and installing energy insulation?

Lord May of Oxford: Supposing they're there, supposing you've got them installed, which after all is the main point. I do regard as interesting but secondary the behaviour of persuading people to put them in.

Liz Owen: This is smart meters.

Lord May of Oxford: Yes.

Liz Owen: Okay, sorry, that's a different policy area.

Q303 Lord May of Oxford: Now you've got smart meters, to what extent are they designed in such a way as to promote the behaviour they're supposed to induce and what evidence is there that they work?

Liz Owen: I'm just going to check. This is a policy area I'm less familiar with, but I'm going to check my notes. There's a lot of evidence around smart meters, and I think it would be fair to say that we're including the Energy Demand Research Project, which we've been co-funding with industry. We're expecting a report on that in the new year. There's a lot to do in terms of looking at the evidence there.

Q304 Lord May of Oxford: Are you familiar with the evidence from California that we've seen, which suggests the introduction of smart meters actually increases the use of electricity?

Liz Owen: I know there's a lot of international evidence. Ofgem, which has been managing the Smart Metering Programme to this point, has commissioned an evidence review to include international evidence, so we will be absolutely looking at all of that.

Q305 Lord Alderdice: In your description—and, as Lord May has said, a very clear description—of how you were enabling people to access, for example, the use of energy from sunlight by putting in equipment, you clearly described that, but it doesn't seem to me

that it's got anything to do with behaviour change. It's simply selling a product in a normal and imaginative way. Meters give people immediate feedback on their behaviour, whether they've turned lights on and off, whether they use this and this and this.

Lord May of Oxford: Selling a product is behaviour change, isn't it?

Lord Alderdice: No, it's not actually changing the behaviour. All it's doing is getting a person to purchase in this way, rather than that. It doesn't alter what they do on a daily basis. As soon as the equipment is in, that's it; they don't change anything else subsequently, whereas meters, actually on a daily basis, affect whether you turn the lights on and off.

Lord May of Oxford: Do they? There's no evidence.

Lord Alderdice: What was being described here was nothing to do with smart meters. What was being described here was putting in pieces of equipment that were not meters. What I'm wondering is what is it that makes you define something within this rubric of behaviour change. It seems to me that everything is becoming behaviour change, which means it doesn't mean anything particular at all. Why did you choose that as your example of behaviour change, rather than, for example, meters, which actually is a device for changing people's daily behaviour?

Liz Owen: I think it's one of those areas where the terminology is used in many different ways by many different people. That's certainly true.

The Chairman: That's what we're beginning to find.

Liz Owen: I think that I've described a programme that's designed to encourage a one-off behaviour in a market where the behaviour we're talking about, which is improving the fabric of your building, is not happening enough, even though the rational economics say that it should be. I guess in that sense, it is a candidate area for considering the application of behavioural theory in order to understand why those changes, those one-off behaviours, are perhaps not happening as often, as frequently or in the volume that we think they could or should be and, therefore, how best we might go about encouraging that. The behaviours you're talking about, in terms of the habitual, continual behaviours in the home are, you're right, a different category. You're right that the Smart Metering Programme is much more likely to have an impact on those behaviours, but again the Energy Demand Research project has been trialling a variety of different interventions. There's a lot of international evidence; the picture's still very much emerging around the best way to deliver the Smart Metering Programme to deliver the customer benefits. Work is under way on a customer engagement strategy with that objective at the moment. It's very much work in progress.

Q306 Lord Sutherland of Houndwood: I wanted to ask a bit further about behaviour change in relation to using social norms. That can take a variety of forms; for example, I get very distressed when I walk past a building site and see the lights on all night, although no work is going on, and every floor likewise in empty buildings that may be public buildings. One of the ways of affecting that is to mobilise the population to draw to whoever's attention that it would make a difference, but another is simply trying to let folks in the wider population know what the norms are for the use of energy and consumption for a house like that. Can you tell us anything about whether that's being done, whether it's effective and whether it's providing any hard evidence?

Liz Owen: Certainly. There is another Coalition programme and commitment that relates to that. The intention is to provide normative comparisons on people's energy bills about

how their energy use compares. If you'd like me to, I can ask the policy team to provide some evidence to you on that policy.

Q307 Lord Sutherland of Houndwood: It would be very useful to know whether it's working.

Liz Owen: It hasn't begun yet in the UK. It was a Coalition programme and commitment, which we're currently working on the development for.

Q308 Lord Sutherland of Houndwood: Here's a challenge to them: you could perhaps ask them to put an estimate on what effect it will have, and then we'll know whether their forward planning is any good.

Liz Owen: I do believe that the impact assessment will need to do that, but it's at a fairly early stage of development at the moment.

Q309 Lord Sutherland of Houndwood: There is a suggestion that there's more evidence overseas than we're taking account of in terms of what's happened there. Again, is this being thoroughly researched systematically?

Liz Owen: Yes, we are in the middle of a programme of research on that particular policy at the moment. I know that the policy team has been looking at international evidence.

Q310 Lord Sutherland of Houndwood: You don't know where they go; which areas of the international community provide the most useful evidence?

Liz Owen: I know that they have been talking to people in California, as I think that's one of the most developed, but I'm sure there are others too.

Q311 Lord May of Oxford: This is a follow-up on the same question, because there are certain studies and anecdotes. I was giving the prizes the other day for a foundation that is trying to encourage responsible use or sustainable use of things in schools, and they just had a prize each week for the best class. There was a group of the school kids themselves, a sort of little fascist inspection gang, which went around grading people, and it had a huge effect. I just wonder whether, in going on beyond the process-driven aspects, which are a necessary and sensible part of Civil Service operations, although sometimes to the exclusion of other things, it wouldn't be useful to think of things that some of the local councils have done for getting houses insulated. You subsidise two people to do it in the street and everybody wants it. Behaviour change should first of all facilitate putting in, for example, smart meters, but then have some sort of recognition of the people who did best in driving things down. Against that, some of the evidence we've had suggests that it just has no effect on individuals unless they're given something that puts a sense of a social norm conspicuously in front of them.

Liz Owen: There are probably two projects or pilots I should tell you about, which are designed to explore that area. The first is an action research project called the Low Carbon Communities Challenge, which DECC funds, which is designed to test exactly this kind of community-based approach. We have 22 test-bed communities that have received capital

grants for low-carbon technology. Their aim is to achieve change, carbon reduction, within their community. That's running at the moment; we're evaluating that. We'll certainly be using the learning from that within the department. There's a second project called the Community Energy Saving Programme. We put an obligation onto the energy companies to deliver carbon savings, but we've asked them to target specific areas and incentivise a street-by-street approach, partly with the aim of exploring this community delivery, social norms aspect. Again, that programme's being evaluated at the moment; it runs until 2012. We anticipate there being a very good level of learning about how that works, when you try to address things on a community level in perhaps a more visible way.

Q312 The Chairman: One last question for you, and then I think we want to move on. In the written evidence that we've had, it was suggested that although evidence now shows that information alone isn't enough to change energy behaviours, almost half the existing interventions in this area have information as their main component, and the majority rely on the individual taking some kind of proactive approach to find that information at all. Is that a fair criticism do you think?

Liz Owen: I think it's hard for me to answer that question, because I've only been in the department for six months. I would say it's very definitely changing. The set of policies we're working on now are absolutely based on a much more activist approach to behaviour change. The Green Deal is designed to encourage a whole market to emerge to engage with consumers in the way that they do on other products and services, which we all know is not information-based; that's not how we're sold things most often. We're very much moving on.

Q313 The Chairman: The view that you're taking is that it may have been true in the past, but you don't really want to comment on that, but DECC now is taking a different view.

Liz Owen: Yes.

Q314 The Chairman: Thank you very much indeed. I'm now going to hand over to Nick Mason. If you would, could you please go through the initial question, which you've heard, for not more than 10 minutes?

Nick Mason: Thank you. It's a privilege to be asked to appear in front of this Committee to talk about a project that we started developing just over three years ago in a small wooden shed on Vauxhall City Farm.

The Chairman: I'm going to say the same thing: we can't hear you very well.

Nick Mason: Thank you very much.

The Chairman: I'm really sorry. You kind of have to project in here.

Nick Mason: I'll bellow. I'll repeat myself, if I may. It's a privilege to appear in front of this Committee to talk about a project that went into development some three years ago in a small wooden shed on Vauxhall City Farm. We've moved on a little, I think. I'm Nick Mason. I am Chair and co-lead of the Growing Against Gangs programme, which is a primary intervention for youth crime prevention and has been developed in partnership with officers in the Metropolitan Police Service. The reason we started to develop the

project was because of the peak, the spike, in serious youth violence and teenage homicides, principally in London. Even in this year, 2010, we've had 17 teenage homicides in London since the beginning of the year. Approximately 25% of all offences committed in London comprise violent crime. About 50% of the victims are under 30 years of age. Some 66% of recorded offenders are under 30, and some 33% are under 20 years. Those are official statistics from the Metropolitan Police Service. We felt the need to address the issues of stopping young people being attracted towards gang affiliation. We conducted extensive research with a number of schools, principally in Lambeth, and we surveyed over 650 young people in years five and six, the last two years of primary school, most of whom self-identified as having concerns around bullying, awareness of gangs and transition from primary school to secondary school. We therefore set about developing with school practitioners, academics and proactive police officers a seven-session educational curriculum, which is universally targeted at young people, who are most vulnerable in transition years six and seven. The programme is designed to address and challenge the attitudes, values and beliefs that support gang affiliation, serious youth violence and other offending behaviour. The project is a result of some innovative problem-solving work with local Safer Neighbourhood officers, proactive units, Territorial Support Group officers, Firearms Command, leading academics and a number of significant schools in south London. It's now developed into an umbrella programme which aims to bring together a range of single impactive messages from various specialist units across the Met, such as the Homicide Command, Firearms Command, Counter Terrorism Command, Sexual Offences Command and Territorial Support Group. In considering how we needed to develop this programme, we were able to draw on extensive academic knowledge from a leading gang researcher at the University of Oxford, who has conducted ethnographic surveying of young people in south London over the last three years. He's interviewed over 200 individuals. We've also considered significant evidence from proactive police officers dealing with gangs and serious youth violence. We looked at length at the Gang Resistance Education and Training programme in the United States, which is being delivered to 3.9 million young people and is massively federally funded and heavily evaluated. Most of the learning outcomes from that evidence-taking inform the curriculum development. We have the benefit of an academic committee supporting us, and the Growing Against Gangs programme is very much evidence based. It's been adapted from the US GREAT programme in collaboration with academics. It's built upon some very extensive academic research into the push and pull factors, which draw young people towards gang affiliation and involvement in violence. It comprises seven sessions. The first session is on myths and realities, and the purpose of this session is to reduce the number of young people joining gangs. It's about informed decision-making by young people as they hit their mid-teens. We consider the year six and seven age groups absolutely critical in terms of education. The programme empowers and enables young people to make informed decisions, and it also encourages positive peer pressure. The follow-up sessions are around weapons choices and consequences, and this is supported by the Firearms Command with some impactive educational preventative material around choices and consequences in becoming involved with firearms. It's also supported now on a national basis by the Association of Surgeons of Great Britain and Ireland, which is becoming involved in early years peer group education programmes. We are taking surgeons into classrooms to talk to young people about the physical and psychological impact of wounding. We formed a steering group with police officers, the corporate youth strategy programme manager from the Metropolitan Police and a number of academics. From that, we formed subgroups covering education and training practitioners, communication and marketing. Key to all this was the involvement of young

people, teachers and schools in helping us to develop the curriculum. Evaluation was included from the very beginning, on the basis of starting with the end in mind. That has been built into the curriculum design, making it dynamic and interactive. Young people have been involved in facilitating and voicing their views and experiences throughout. We have a self-assessment pro forma as a diagnostic assessment, and the facilitators of the programme are also subject to assessments to maintain minimum standards. We survey young people post-delivery of the programme. With some of the schools we're now working with, they're prepared to develop longitudinal evaluation, so that we can track young people over the next three or four years. This programme was built very much as a bottom-up approach with practitioners, and we felt that that provides it with an integrity that might not have been achieved if the programme was imposed from a centrally placed and strategic position. We feel that buy-in from frontline practitioners would not have been as effective if they'd been excluded from the curriculum design and the delivery process. We feel that the integration of many single-message sources into a coordinated and comprehensive package demonstrates major efficiencies for the police in terms of cost savings and, indeed, for the schools. Feedback from the programme has been positive; it's very much in its early stages. The programme only went into full-scale delivery about 18 months ago. Certainly the evaluations from young people are showing that at least 80% of them are recognising the impactive educational messages that they're receiving; 66% are positively identifying increased confidence in the police; and 96% are rating the programme as either excellent or good in terms of an educational process.

The Chairman: About 30 seconds.

Nick Mason: I think I'll take questions.

The Chairman: Thank you very much indeed.

Lord Crickhowell: We're fairly likely to have a vote at almost any moment, so we may be interrupted.

Q315 Baroness Hilton of Eggardon: Clearly you're not responsible for Government policy on this issue, but I do wonder whether an earlier and a broader intervention might be more effective. You don't actually say whether the number of gangs has diminished or whether membership has diminished. I know it's only been running for 18 months, but that's obviously an important part of your evaluation. There have been other projects elsewhere, in Scotland for instance, that have taken a totally different approach to this and I wondered what you thought of those, and whether you thought that might be more effective.

Nick Mason: Part of the work that's being done in Scotland involves Medics Against Violence, where health professionals are going into schools, talking to young people about violence. We ran a national conference with the Association of Surgeons and the Metropolitan Police in mid-November and, from that, we have now developed an education programme to take into schools. The Scottish approach is very much geographic based; it does involve significant enforcement work as well. With our programme, we've focused very much on early intervention/education at years six and seven. I believe there's significant merit probably for lowering the age bar, but at the moment we don't have the facilities to do that.

Q316 Baroness Hilton of Eggardon: That seems rather late to me, years six and seven.

Nick Mason: We were guided in that by the academic research, both in the UK and from the US, and from the feedback that we were given by a significant number of primary school and secondary school principals in London.

Q317 Lord Warner: Can you tell us a bit more about some of the results? I'm trying to get a feel of what's emerging from this. What do some of the kids say about this? What's your yardstick of success? In the early stages, what are you looking for coming out of this?

Nick Mason: The programme is very much in its early stages, and I suspect it's not until we've passed four or five years of delivery that we will be able to come up with meaningful academic data. There is post-programme delivery attitudinal surveying of young people, and the results of that are currently being evaluated. We fortunately do have fairly good academic support and access to some of the researchers from the University of Oxford, University of Cambridge and New York University, who have been assisting us in developing the evaluation protocols. We are closely allied to the US programme, which has been running now for about 12 or 15 years. The results from that programme in particular are showing; when they compare the control group of the young people who go through the actual programme, there are more positive attitudes shown towards police, less positive attitudes about gangs, more use of refusal skills, more resistance to negative peer pressure, lower rates of gang membership and lower rates of self-reported delinquency. In so far as the programme in London is concerned, it is too early for us to be able to measure reductions in gang membership at this stage, but we're fairly confident, taking a four or five-year view, that we may well start to make a dent in the numbers.

Q318 Lord Warner: Sorry, numbers doing what?

Nick Mason: Numbers becoming involved in gangs and youth violence.

Q319 Lord Warner: Is there any evidence from the police that, during the 18 months that you've been operating, violent, often youth-upon-youth, crime involving guns or knives has changed?

Nick Mason: I don't have any evidence at this stage, no.

Q320 Lord Alderdice: Young people, particularly young boys and young men, getting together and forming bands of what some social anthropologists call 'fictive kin', people with whom they're very close, is wholly normal behaviour. The question I would have is: when you're trying to discourage them from this kind of peer group behaviour, what alternative models of group or, if you like, gang behaviour are you offering them? I wasn't clear from the description, because it's not a matter of getting young people not to get together.

Nick Mason: Exactly, and I think one perhaps key message, which I believe has come from the Home Office, is that 99% of young people lead entirely blame-free lives and are not involved in any form of offending. During delivery of the programme, we clearly draw a distinction between gangs and peer groups, because peer groups can be very positive things. As part of the last stage of the programme, we talk about positive activities and attainable goal-setting, which involves signposting young people towards positive group activities,

whether it's the police cadets, army cadets, scouts or other organisations that involve bringing young people to work positively together as groups. It's the nature of the activities that a gang is involved in that we draw attention to—the offending behaviour. Many groups are not involved in any form of antisocial behaviour.

Q321 Lord Alderdice: I understand that. What I just wanted to be clear about is: what are the alternatives that you are guiding them to? The ones you mentioned are very good, but fairly much minority interests—cadets, scouts and things of that type. I wonder if there are other things.

Nick Mason: The signposting session at the end of the programme is aimed to be supported by local authority and local police teams identifying positive activities for young people in the immediate area.

The Chairman: We're going to have to stop now, because we've got a Division that you can now hear. Many people will be going off to vote, so we will resume when people come back to the table. We've probably got about another seven or eight minutes left for taking evidence.

Sitting suspended for a Division in the House.

On resuming—

The Chairman: Ladies and gentleman, we're going to continue. I'm going to hand over, and I've just said to Nick Mason that we're going to do about five more minutes with Nick Mason, and then a couple of more general issues.

Q322 Lord Crickhowell: I want to pick up on what seems to be an interesting set of contradictions in some of the papers we've got in front of us. On the one hand, we have the Home Office telling us that the strategies dealing with knife crime and gun crime are formulated at the local level, and local initiatives in the voluntary or community sector are possibly funded by the Home Office but without Home Office involvement. Then we have you basing your work on the GREAT programme, heavily financed, covering huge numbers in the United States, and on the World Health Organization report and the Centre for Crime and Justice Studies, looking at the international examples, taking in the need for a multifaceted public health early interventions approach with children and so on that you've been describing very vividly. I just want to that pick up. Yours is a small project. You described it as starting in a wooden hut, but if we're going to achieve anything it seems to me we can't do it unless there's a pretty substantial lead given and encouragement from both the Home Office and the Government. Would you comment on that apparent contradiction?

Nick Mason: Yes. I recognise that there is a significant number of local projects all over the country which are doing sterling work towards trying to reduce youth gang affiliation and youth violence. I do feel there is certainly a need for a clearer steer from Government and I suspect there needs to be a clearer indication of where the funding is going to come from to enable some of these local projects to survive. At a local level, the problems we face, for example, in Lambeth, Southwark and Lewisham are entirely different from the problems that are faced in leafy suburbs like Richmond upon Thames, Bromley and other such boroughs. It very much depends on what the local problems are and developing what is a good local solution for those local problems. It relies on local knowledge of schools and

Q323 Lord Crickhowell: How far are you able to share knowledge with some other groups without the coordinating help of the Home Office?

Nick Mason: We have been very busy networking and we have had some help with the Home Office. It was through our contacts with the Home Office in the Tackling Knives Action Programme that we were asked to work with the Association of Surgeons of Great Britain and Ireland to develop a national educational model for surgeons to take into schools. We've been working with other London boroughs: the programme started in Lambeth; it's now gone into delivery in Wandsworth; it's scheduled for delivery into Southwark, into Lewisham and there are six other boroughs showing significant interest. The delivery of the programme in each of those boroughs will depend on how that local borough wants the programme delivered. They will choose the schools into which it goes; they will work out how it's going to be funded on a local level. We're aiming to try to set the best-practice benchmark for the early preventative education messages across London.

Q324 Lord Crickhowell: You say you're setting the best benchmark, but even if the initiatives are local, the benchmarks, evaluation and some guidance surely have got to come from somewhere if we're going to have an effective effort at local level with local police forces. If you're all doing your own thing, it seems to me it's not going to be as effective as it otherwise should be.

Nick Mason: I think the current economic climate is going to drive us ever more necessarily towards more of a join-up. It's more efficient. We need to be better coordinated. There is an ever-decreasing fund of money to be spent on preventative activities, and we are very keen on putting firmly across the message around the cost effectiveness of prevention. There was a study in Hackney some short time ago that showed that £7,000 spent on a family intervention project had probably saved £74,000. The Growing Against Gangs programme has a core cost of £1 per young person, per session, and if we stop just one young person going out and using a knife in inappropriate circumstances, you could save £150,000 from the costs of the criminal justice system and anywhere between £30,000 and £150,000 from the National Health Service in stitching up the victim.

Q325 Lord Crickhowell: My final question is: you seem to me to have done rather good work, basing your efforts on academic research. This really does seem to have been a behaviour change initiative rather than a taxation or policy initiative of a different kind. You've also learnt from overseas experience. Do you think that other initiatives are as well based, as well researched, or do you think the quality—as you look around the country you must have seen other initiatives—needs that pick up?

Nick Mason: Yes. I think there are a very large number of programmes out there that have had the advantages of a proper foundation, either academic or research based. We're fairly keen to share good practice. I do feel that a lot of initiatives would probably benefit more from support, from access to academic research, access to the facilities to carry out proper evaluations. We were talking in the break: it's not just a question of measuring the footfall

of young people who go through programmes; it's a question of measuring the effectiveness of those programmes.

Q326 Lord Warner: I don't know whether you've seen—the Committee has—this European report on preventing violence and knife crime among young people. Glancing through it, there's a very interesting table in it, which shows the age-standardised mortality rates among young people aged 10 to 29 years, for all causes of homicide and from sharp implements. It's across selected countries across the WHO European region from 2004 to 2006. Right at the bottom, with a very low rate, is the United Kingdom, with only the Czech Republic, Austria and Germany with lower, and not significantly lower, rates. Do you think there may be a problem in your programme showing any significant improvement in what is in fact a very low figure of 0.58 per 100,000 population? That's a pretty low figure, so any small variation would be within the normal annual variation. I'm wondering whether you think you might struggle a bit at the end of the process, with such a low figure, showing much impact.

Nick Mason: These are the homicide rates.

Lord Warner: And with sharp implements.

Nick Mason: I certainly accept that homicide rates in the United Kingdom among those in their teenage years are, happily, very low compared with other countries. If we ignore the homicide figures and we look at the offences of serious youth violence and lesser violence, those figures are very significant. Unfortunately, I don't have any official statistics in front of me, but there may be something like 30,000 offences of violence in London every year, on average. We did some work with the Royal London Hospital recently; they had over 600 trauma call admissions for stab wounds in the course of 12 months, with the youngest of those victims being 12. Fortunately, the majority of those trauma call admissions survived. We're aiming to tackle violence, clearly homicide as well, but there's also gang affiliation. There was a conference at a leading secondary school in south London in the course of the last month, where the school identified that 4% of their young people were gang involved; 10% were on the periphery; and they regarded the remaining 86% of the school population as being potentially at risk of becoming victims.

Q327 Lord May of Oxford: If you have a similar graph to this that has not just homicide but also hospitalising injuries, would it look similar, do you know?

Nick Mason: One of the problems is there isn't a tie-up at the moment with the statistics between hospital admissions and recorded crime. There's a significant risk there.

Q328 Lord May of Oxford: I guess what I'm saying is: would we still be at the bottom of the league table or may it be just that our knife crime is committed by people who are less competent, as it were?

Nick Mason: I would suspect we'd be very much in the lower part of the league table, yes.

Q329 The Chairman: One last question, which is in fact for Sara and Liz, and that is because, I think, Nick, you've probably answered it. This is a question about use of expertise, and both internal and external expertise in designing behaviour-change-type

courses and interventions. What I want from both of you very quickly is: how did you ensure you'd got access to relevant literature and behavioural insights relevant to your policy areas? How did that work for the formation of policy and, indeed, for the design of evaluation? You've got one minute each.

Liz Owen: I think it's probably easiest if I talk about what we're doing, as this was a Coalition programme commitment. We are actively engaging with external experts through a series of workshops to bring their thoughts and views into this process. I think it's fair to say that this is an area where we know there is more to do for us, as a department.

Sara Eppel: In terms of academic input, two routes: first, we fund with the ESRC two research groups, the Sustainable Living Research Group and the Sustainable Practices Research Group, the first led by Surrey University, the second, by Manchester University. Each of those has other universities inputting into them, so in fact probably covering about five or six different universities. That launched about six months ago. Before that, mostly the work would be evolved around a particular question. For example, we did a synthesis review on household waste prevention, where it would be gathering in all the literature that was available. For that one it was 800 different sources of information, and a similar exercise is done to answer specific questions. In terms of internal expertise, my team is multidisciplinary, so we cover policy, marketing, social research, and there's a network of social researchers in Defra and a wider Government social research network, which they're involved in. Similarly, on the communications side; the marketing team is part of the communications network.

The Chairman: Thank you very much indeed. We've got to finish. Thank you very much indeed, all three of you, for coming to give evidence to us. First of all, let me say that you will get a transcript, and you get a chance to look at it and see whether you have anything that you want to correct, and please feel free also, to add anything you particularly want to add. You've mentioned some things that you might submit to us, but we would particularly like something from you. If you've got assessments that support your policies and evaluation documents that you'd be willing to share with this Committee, we'd be enormously grateful for them. That would be very, very helpful to us. You probably have about 10 days until the transcript arrives. Any additional matters that you want to add to the ones that we'd like, we'd be delighted to receive. Anything else you submit is published alongside the evidence in due course. Thank you very much to all of you for coming, and thank you to the Committee.

Dr Melvyn Hillsdon, Dr Ian Campbell and Professor Theresa Marteau

Written evidence from Professor Theresa Marteau and Laura Haynes, King's College London (BC 110)

Key messages

Behaviour change has recently become a major policy focus. Cross-department coordination it is now vital if we are to successfully tackle some of the biggest challenges facing the UK this century which arise from our behaviour, including so-called life-style diseases, under-saving for retirement and sustainable living.

Efforts across government, academia and research funders (public and charitable sectors) need to be coordinated to ensure that policies designed to effect behavioural change are evidence-based and well evaluated in order to further our understanding of “what works”.

Greater investment needs to be made in policy-related research on behaviour change, both at the primary level and in evidence synthesis.

Smarter systems within government need to be developed to incorporate expertise in behavioural science and economics into policy. Such systems should enable policy makers to easily identify research evidence and individuals with expertise to contribute to a policy area. Moreover, a culture of systematic, rigorous evaluation should be instilled within government: it is only by sharing successes and failures in behavioural interventions that we will develop models of best practice.

We have an exceptionally able civil service, which should be encouraged to develop novel policy ideas in domains for which the behavioural evidence base is thin. The ability of analysts and behavioural scientists including economists to look to established behavioural principles to do this should be supported. Whether policy solutions developed in this manner are actually implemented depends, of course, on many factors. The gap between evidence and policy across-government is a broader issue that might merit a future House of Lords inquiry.

Research and Development

I. What is known about how behaviour can be influenced?

Beginning with William James, the psychological literature has outlined two broad routes to changing people's behaviour. Interventions may be aimed at the individual (e.g. as outlined in cognitive behavioural therapy) or may alter the environment in order to shape behaviour (e.g. as outlined in learning theory).

2. What are the policy implications of recent developments in research on behaviour change?

Recent work by behavioural economists (e.g. *Nudge*) has highlighted to policy makers the powerful role of the environment in shaping behaviour. This approach was neglected by some psychologists in the second half of the 20th century; the so-called cognitive revolution in our science was in part a backlash against the worst excesses of behaviourism. Publications such as MINDSPACE are an attempt to consider the policy implications of behavioural economic inspired interventions. However, much of what is understood about the influence of messengers, norms, salience, priming, affect and ego (M, N S, P, A, E of the mnemonic title) is due to decades of research by social and cognitive psychologists.

The academic literature on behavioural economics and the literature on behaviour change in health contexts exist largely in isolation from each other. The central theme of *Nudge*, the role of “choice architecture”, reflects decades of research by psychologists on changing environments (physical, social and legal) to change behaviour. The approaches of economists and psychologists are also quite distinct. While behavioural economists tend to adopt a descriptive approach to the influence of the environment on “revealed preferences”, psychologists seek to understand the complex motivational determinants of behaviour, a critical ingredient in intervention design to minimise unintended consequences.

Crucially, many interventions inspired by both behavioural economics and other behavioural sciences including psychology, await rigorous evaluation. The size of any potential effect should be estimated in order to inform future policy decisions. The acceptability of behavioural interventions to the wider public should also be the subject of scientific inquiry (see *our response to Question 13, below*).

In sum, behavioural economists have been extremely successful (and far more so than psychologists) in highlighting to policy makers the potential behaviour change gains from going beyond information-based campaigns, which rarely effect significant behavioural change, to alter “choice architecture” with its potential to be far more effective.

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions?

There is a small group of internationally recognised experts in the UK in this field, but too few to meet the research needs and policy demand.

4. Is there sufficient funding for the evaluation of behaviour change interventions?

At the academic level and for health-related interventions, the development of NIHR and the National Prevention Research Initiative means that there is probably now as much money as there is capacity to develop and evaluate interventions. Capacity needs to be built, particularly at the post-doctoral level in order to provide opportunities for our brightest doctoral students to continue in this field. As capacity develops, the proportion of the UK research spend on behavioural means of prevention (currently estimated as 0.5% of the money spent by the UK Government and Charities; *UK Clinical Research Collaboration UK Health Research Analysis 2006*) should clearly be increased.

Translation

Effective translation demands two things: evidence must be commissioned that has potential policy relevance; evidence must be synthesised in a form that is useful to policy makers. The current system is far from perfect on both these counts, although the fact that these issues are now being considered signals raised awareness with the potential for improvement.

5. What should be classified as a behaviour change intervention?

A behaviour change intervention can be defined as any intervention designed with the explicit aim of changing behaviour. This definition includes legislation, regulation, taxation, pricing policies, changing defaults, provision of services for behaviour change, and information dissemination.

- 6. How should different levels of intervention and different types of intervention interact to achieve policy goals more effectively?**
- 7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?**

It is widely accepted that behavioural change is more likely to be effective if interventions are made on multiple fronts

(<http://www.nice.org.uk/media/0E6/62/SpecialReportHealthSystemsAndHealthRelatedBehaviourChange.pdf>) for example, tobacco control policies. A key question is how little one can intervene to get the most effect - evaluations should seek to quantify effect size. The psychological approach to accounting for independent influences on variance in behavioural outcomes is likely to be crucial here.

Practical application

- 8. Have publicly funded behaviour change interventions used both evidence-based and subject to effective evaluation? How successful have the evaluations been?**

Intervention designs are often not sufficiently grounded in either behavioural theory or the existing evidence base. Numerous interventions appeal to the “Theory of Planned Behaviour”, for example, which has little relevance to behaviours that are not intention-led but instead are habitual and context-bound. One reason why this occurs may be a failure of policy makers to consult experts. It is not enough for government departments to simply employ researchers with exposure to social science at university level: individuals with expertise in the specific behaviour domain of interest must be consulted.

With respect to evaluation, we have the impression that government lacks a strong culture of evaluation – many major initiatives are poorly evaluated, if at all. This impression was reinforced by the recent experience of one of us (Theresa Marteau) in advising an internal review by the Central Office of Information on social marketing activity within the Department of Health. There appears to be widespread failure to use objective outcome measures and to isolate causal effects of interventions.

Cross government coordination

- 11. What mechanisms exist within government to coordinate and implement cross-departmental behavioural change policy interventions?**

Aside from expertise within each government departments (comprising civil servants and their access to research groups within and outside of government) the main group with a cross-government co-ordination brief regarding behaviour change policy interventions seems to be the Government Social Research (GSR) service. From their website, their remit is to “provide government with objective, reliable, relevant and timely social research; support the development, implementation, review and evaluation of policy and delivery; ensure policy debate is informed by the best research evidence and thinking from the social sciences.” However, in practice, we have the impression that GSR is not particularly effective in achieving these goals. While it offers a network and support for social scientists, it does not appear to have driven forward evidence-based design or rigorous evaluation in government interventions.

GSR is soon to be merged with the Government Economic Service, a welcome development given the relevance of both the social and behavioural sciences, including economics to behaviour change, and the divide that exists between these fields. Also to be welcomed is the recent setting up of a Behavioural Insight Team within the Cabinet Office. The team, however, is not yet sufficiently resourced to fulfil its potential and lacks expertise in some core aspects of behaviour change interventions and evaluation.

It is worth noting that government employs neither a Chief Behavioural Scientist nor a National Director for Behaviour Change. Although these roles would be limited in what they could achieve, their presence would demonstrate a commitment to behavioural science as an important element of sound policy.

Ethical considerations

13. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

Justification of state intervention and the nature of the intervention will depend upon the nature of the problem, the effectiveness of the solution and political considerations. In an ongoing programme of research (funded by the Wellcome Trust), using experimental methods (discrete choice experiments) to examine acceptability of using financial incentives to change behaviour, we have good evidence that people are prepared to trade-off negative attitudes for effectiveness (ie if it works, it is more acceptable). A minority are unprepared to trade, holding what have been termed *sacred* or *protected values*. More work of this nature is needed to move beyond survey responses to understand more fully when and for whom different interventions are acceptable. Two recent reports involving behaviour change concluded that the public are not as negative towards state intervention as is often assumed (OECD, 2010:

http://www.oecd.org/document/31/0,3343,en_2649_33929_45999775_1_1_1_37407,00.html; Faculty of Public Health, 2010 <http://www.fph.org.uk/uploads/Healthy%20nudges%20-%20final%20final.pdf>

A variant on the question posed by this Inquiry concerns when it is appropriate for the state not to intervene when weight of evidence suggests significant population benefit would not

be achieved as a result. A current example concerns the use of minimum pricing per unit of alcohol and access restrictions to reduce consumption of alcohol. A recent House of Commons Health Committee report on alcohol observed that recent governments had adopted the least effective interventions (information-based) to the neglect of policies for which there exists a considerable weight of evidence for benefiting population health including reducing health inequalities.

<http://www.publications.parliament.uk/pa/cm200910/cmselect/cmhealth/151/15102.htm>

Another health-related example concerns tobacco control policies of removing displays of cigarettes in shops. This has the potential to reduce sales, especially to children, but may adversely affect industry, in particular small shops. How should the state balance the trade-off between population health and industry?

Another example includes criminal justice policies in relation to management of offenders. The evidence suggests better outcomes from alternatives to custodial sentencing, to meet the complex social, psychological and health needs of the majority of those currently in our prisons, as outlined in the Corston Report, amongst others

<http://www.justice.gov.uk/publications/corston-report.htm>

International comparisons

15. What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behaviour change interventions generally transferable between different societies?

All the behaviours the UK government is minded to change are targets for change in other countries, low, middle and high income. Evidence synthesis is rarely confined to single countries. Where possible, country and other aspects of cultural, social, and economic context are important effect modifiers. For example, some cultural groups appear to differ in their responsiveness to some behavioural levers, as well as their acceptance of state intervention to effect change. These factors need to be considered both in the analysis of evidence in reviews and in judging their relevance to any particular context, something on which there is a body of expertise amongst policy analysts. The UK could also learn from international experiences in the roll out of interventions. For example, the introduction of smart meters by some energy companies in California led to an increase in energy consumption, which should be a cautionary tale for DECC and OFGEM's planned rollout from 2012.

Tackling obesity

16. The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity in the United Kingdom or internationally.

As befits the subject, the literature on this is vast. The questions raised by the Committee are precisely those to which individuals charged with drafting policy would want to know the answers. At present there is no one central resource within government for this information. Given the international scale of the problem and investment in addressing it,

important resources will not necessarily be found in the UK alone. Three important resources:

1. OECD Report: Fit not Fat, is an excellent resource for policy makers.
http://www.oecd.org/document/31/0,3343.en_2649_33929_4599775_1_1_1_37407_00.html
2. Rudd Food Policy Centre at Yale. Amongst other activities, it is now engaging lawyers to challenge defences under the US constitution that give companies the right to free speech that includes misrepresentation of unhealthy foods. Lawyers are also engaged in attempting to stop companies targeting children's mobile phones to advertise cheap fast food at the moment school ends available within a short walk from where the child is located. The Rudd Centre is also engaged in a programme of work assessing the addictive nature of foods with implications for effective interventions as well as policy framing.
<http://www.yaleruddcenter.org/>
3. Active living research at San Diego State University, directed by Jim Sallis that aims to increase physical activity and understand policy and environmental influences on physical activity, nutrition, and obesity. It is a national program office of the Robert Wood Johnson Foundation, committed to reversing the childhood obesity epidemic by 2015 by improving access to affordable healthy foods and increasing opportunities for physical activity in schools and communities across the nation.
<http://www.activelivingresearch.org/about/programstaff/sallis>

8 October 2010

Oral Evidence, 11 January 2011, Q330-349

Evidence Session No.9. Heard in Public.

Members present:

Baroness Hilton of Eggardon
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Baroness Perry of Southwark
Lord Sutherland of Houndwood

Examination of Witnesses

Witnesses: **Dr Melvyn Hillsdon**, [University of Exeter], **Dr Ian Campbell**, [Medical Director of Weight Concern], and **Professor Theresa Marteau**, [King's College London and University of Cambridge] gave evidence.

Q330 The Chairman: Welcome to the three of you and thank you very much indeed for coming. What we'd like to do is to ask you to make an initial statement if you wish to. Just before doing that, I would like to welcome the members of the public and inform, or warn you, that the proceedings are being webcast. There's also an information note available for members of the public. What we would like you to do is introduce yourselves for the record. If you want to make a brief opening statement, please do at that stage, and then we'll go to the first question. I will ask the first question and will then go to the various members of the Committee.

Professor Theresa Marteau: Thank you very much. I'm Theresa Marteau, Professor of Health Psychology at King's College in London. I also direct the Centre for the Study of Incentives in Health, funded by the Wellcome Trust. I'm also the director of the Behaviour and Health Research Unit at the University of Cambridge.

Q331 The Chairman: Would you like to make an opening statement?

Professor Theresa Marteau: Yes, thank you very much. I've been asked to be part of this session, which is to present evidence on obesity. The first thing I'd like to state is I'm not an expert on obesity, but I have some expertise in behaviour and behaviour change. I just want to say a little about the theoretical perspective that I bring to the area. We can understand people's behaviour as comprising the interaction between two systems. The first is a reflective system, whereby what we do is a result of goals that reflect our values and where we're aware of what we're doing. The other system, which actually accounts for much more of our behaviour, is an automatic system, whereby we're often not aware of the impulses that have generated our behaviour. There is an increasing recognition that both these

systems are very important in explaining our behaviour. Often they work synergistically, so they work together well. Sometimes they work antagonistically. This is one of the reasons why, while many of us have very good intentions, we often find ourselves behaving in ways that go against our intentions. When we come on to our discussion of obesity, that is going to be important for understanding why it is that, despite many intentions and people preferring not to be as large as they are, none the less they find themselves in environments where their behaviour is at odds with what they want.

Dr Ian Campbell: My name's Ian Campbell and I'm a GP in Nottingham. I took a special interest in obesity because of what it was doing to my patients long before the medical profession was recognising it as a medical issue. Through various organisations, I've taken it upon myself to help to promote the subject among politicians to try to create policy change, among health professions to get them to implement treatment programmes and among the public to create a desire for change within themselves. The whole concept of behaviour change can't really be separated from dietary change and physical activity; they're almost one and the same thing. In discussing them, we need to be reminded that you cannot influence one without bearing in mind the effect of the other. They are quite integral.

Dr Melvyn Hillsdon: I am Melvyn Hillsdon, Associate Professor of Exercise and Health Behaviour at the University of Exeter. My interest and some of my expertise is in physical activity research and physical activity interventions, and I've conducted reviews of individual-level interventions for the academic literature. I've also been involved in a number of community and national campaigns for promoting physical activity, such as the Active for Life campaign in the 1990s, the Walking the Way to Health campaign, which is still ongoing, I think, and various other schemes such as that. As I say, my interest is in physical activity. It's useful for the purposes of this meeting to think about the changes in physical activity that have occurred over the last 30 or so years, at the same time as which obesity prevalence has increased so rapidly. "Physical activity" is a summative term to represent a whole series of different types of physical activity. The biggest changes that have been observed in physical activity behaviour over the last 30 years have primarily occurred in areas of transport-related physical activity—how people get around, how people travel to and from places—and in occupational-based physical activity. Many manual jobs have now gone. Few people still get their physical activity via work. Yet in that same period the prevalence of recreational physical activity has actually changed little. If we were to try to attribute reductions in energy expenditure through physical activity to some aspects of physical activity, we would see that they are mainly in the areas of occupational physical activity and transport-related physical activity.

Q332 The Chairman: Thank you very much indeed. I'm going to ask you the first question, which is one that I think you'll be expecting, and I have got one supplementary that I will want you to address quite quickly. Can people please keep their answers very short, because we're going to be quite short of time. We've got quite a lot of things that we'd like to ask you and tease out with you, if that's possible. The first question, which each of you might want to answer, or maybe only one or two of you, is: what are the most effective behaviour change interventions to tackle or prevent obesity, and on what evidence and theory is your answer based? Professor Marteau, would you like to start?

Professor Theresa Marteau: Thank you very much. I'll try to be brief. Following on from what I was saying in my introductory remarks about understanding these two systems, we can think about two broad approaches: one is targeting individuals; another is targeting

populations. In terms of targeting individuals, there are a couple of trials that I'm aware of that are about to be published, which provide good evidence for the effectiveness of commercially provided weight-loss programmes. The evidence shows that clinically significant, albeit modest, reductions in weight can be achieved through these programmes, which can be sustained for as long as a year in follow-up. That's good news in terms of targeting individuals and something that commissioners will be interested in, but the effect is very limited when we come to think about populations. The trick is going to be to find effective ways of altering our environments, which are cueing us to consume far more calories than we need. I do not want to get into the debate about forks or feet, but some of the recent analysis that I've read suggests that we need to be placing a lot of the emphasis on forks in tackling this. We know that the environment has changed enormously over the last two to three decades. The food that's being produced and the way in which it's being presented to us in supermarkets, in restaurants and everywhere that we go is cueing us to eat more. While we know that nudging or changing the choice architecture in environments has resulted in us eating more, the question is whether we can do reverse engineering and try to create environments that are going to not cue us to consume so much.

Q333 The Chairman: Can I tease that out slightly, since you've said that, and just ask you what evidence you think there is that the nudges going the other way can work?

Professor Theresa Marteau: A group of us in Cambridge have just conducted a preliminary analysis called "Judging Nudging", which is in press with the *British Medical Journal* and should be out in a couple of weeks' time. I will send you a copy when that's available. I would say at the moment that the evidence is limited—that's both absence of evidence and the fact that what evidence there is would give us reason for caution. What I would say is that there are three aspects of environments where the evidence suggests that there could be effectiveness. One is in advertising; another is in the layout of food in supermarkets and cafeterias; and the other is in food packaging and labelling. I don't know if you want me to say more about this.

Q334 The Chairman: Stop on that at the moment; we'll hear from the others but we'll come back to some of that. Dr Campbell.

Dr Ian Campbell: First of all, I agree with what Professor Marteau has just said. My main interest is in the practical applicability of the science. Behaviour change is very labour-intensive from a practitioner's point of view. Dealing with an individual, you can make significant multiple changes, but it does take a long time. With economic constraints in the NHS and our own population studies, we've got to keep it a lot more simple, so most successful programmes concentrate on one, two or maybe three simple changes: effecting changes in portion sizes of the food that's consumed; basic education about what goes into food and how to make it; and simple changes in terms of how we eat it—whether we sit at a table for, example. Those will produce results on a group level over a period of time but, on a population level, it's even more difficult. Therefore, the evidence base for behavioural change programmes that are successful shows that a large population level is not good.

Dr Melvyn Hillsdon: Similarly, I think that, at the population level, the honest answer is that we don't really know. All the theory tells us that there must be some combination of personal, normative and environmental intervention to change population prevalence. At the individual level, just about all trials of behavioural interventions that are based on some

contemporary theory can show you that they can achieve short-term changes. That's not difficult—as long as they're reasonably contemporary, you can get short-term change—but it wouldn't necessarily follow that you'd then get population prevalence change. The big question is about population prevalence change, not so much about individually delivered interventions.

Q335 The Chairman: Thank you very much indeed. I'm just going to do one quick follow-up with Professor Marteau, because you said that you could talk about the effectiveness of food labelling. We wanted to ask you what evidence you think there is that regulatory intervention, for something like new food labelling, would be effective, after which I will hand over to Lord Krebs.

Professor Theresa Marteau: Could I talk about that but also say a little bit about advertising as well?

The Chairman: Of course, absolutely.

Professor Theresa Marteau: I'll start with advertising. There are some recent experiments, which I think are pretty sophisticated—certainly the ones conducted in the United States, although I haven't read the one that's been conducted in this country. These are experimentally designed and involve children and adults watching TV programmes—I think they were comedies. Half of them had adverts that had food and the other half didn't. What was observed was that, both for the children and the adults, there was an increase in the consumption of the food, which hadn't been advertised but was a snack food available there, both during and after watching the programmes and without awareness. The key point is that advertising is priming the consumption of food. It is not just advertising in that kind of way. It is—this is a new word for me—"advergaming". This is the games that apparently food producers and others generate, where you've got characters that are also displayed on foods. There is a sort of blurring of boundaries between advertising and playing games. With regards to food labelling, there are those around the table with more expertise in this than me, but my understanding of the evidence, certainly comparing traffic-light labelling with, say, a more numerically based system, is that the evidence shows that people certainly understand—and more people understand, more clearly—the nutritional content of the food when traffic-light labels are used, compared to a more numerical system. What we don't know very well is the impact of that knowledge on, first, purchasing and, secondly, consumption. This is where the research is so vital. There's a stream of work that's been conducted in the States looking at the paradoxical effects of food labelling, which you might have heard about already—so-called "health halos". Some people have asked the question: how is it that in the United States so much low-fat food is being sold to a nation that has just got bigger and bigger? There are paradoxical effects of food labelling. That's not to say that food labelling isn't important, but actually we don't know the most effective ways of labelling so that people understand and we avoid some of these paradoxical effects.

Q336 Lord Krebs: Both Professor Marteau and Dr Hillsdon mentioned individual interventions that have short-term effects. I think Professor Marteau referred to changes over a year. The question really is: even if you look at the individual level, which you've indicated is the easiest end of the spectrum, are these interventions sustained? What I'd always heard about weight-loss programmes is they're fine while people are doing it but,

normally two years later, people are back where they started. Am I right in that presumption?

Professor Theresa Marteau: I'll defer to others who might know more about this.

Dr Ian Campbell: To a degree you're correct. For population-based studies, where towns or small cities have had major public health programmes aimed at improving diets and increasing physical activity, their results are either very poor or very short-lived, over a four-year or five-year period. For individuals and people entering into a dietary programme, after a period of five years it's true that perhaps 95% of them will have returned to their starting weight or more. However, for those who have complied over the five years, the success rate is much greater, because a lot of people fall by the wayside very quickly. What I'm trying to say is that those who comply with the programme over a long period of time have a reasonable chance of maintaining weight loss.

Q337 Lord May of Oxford: I'm rather fond of saying that the things that are conventionally called the hard sciences are the dead-easy sciences, because they've got invariant principles and laws. The life sciences are harder because they involve more complicated cases. The social sciences are really difficult, because you've got all the complexities coupled with the fact that the things that you're studying listen to you, which complicates things further. Against that, I find it not surprising that all the evidence we've had suggests that the evidence base is weak, both for looking at changing individual behaviour and changing population-level behaviour. I wanted to focus the question on changing population-level behaviour, about which we've heard evidence that it's not very effective. Is that true? What are the things that you could do at a population level? From the evidence we've had, there doesn't seem to have been much that's addressed particular aspects of cultural norms and variations among different sub-populations. Could you say a little bit about that in terms of population-level interventions?

Dr Melvyn Hillsdon: There are some interesting stories of success. The Cycling Demonstration Towns published their report last year from the first round, which showed some evidence that in the Cycling Demonstration Towns cycling prevalence went up at a time when non-Cycling Demonstration Towns did not show a change at population level for cycling. Even when you compared towns of similar demographics to those that were Cycling Demonstration Towns, the Cycling Demonstration Towns showed an improved prevalence in cycling.

Q338 Lord Krebs: Do you know what the percentage change was?

Dr Melvyn Hillsdon: The percentage change, off the top of my head, was around 2.9 to 3% at the population level.

Lord Krebs: 2.9 to 3%?

Dr Melvyn Hillsdon: Something like that, over a three-year period. At the end of the report, they published a cost-effectiveness study, which showed that it was actually quite a cheap thing to do to get that level of population change. The next, newer round of Cycling Demonstration Towns and Cities, as far as I'm aware, doesn't have the same level of evaluation as the first lot, which seems quite disappointing. Of course, Cycling England, which drove those interventions, is to cease as of March, I believe. There was an encouraging sign there that you could do something. In terms of physical activity, this

relates to what you were saying about cultural things. There are some really interesting trends published a few years ago that show that the prevalence of physical activity varies north to south, particularly in former industrial towns compared to non-industrial towns. That isn't explained by personal socioeconomic circumstances, area-based socioeconomic circumstances or other personal correlates of physical activity, which would point you to socio-cultural explanations for why those differences exist. I agree with you that those haven't been formally explored as to why that might be the case.

Dr Ian Campbell: As important as physical activity is to the whole issue of obesity prevention and management—because it is absolutely crucial—it won't produce significant weight loss on a population. Most of these studies that have been done at a population level have produced either poor results or, indeed, negative results. Mainly they've been concentrating on cardiovascular risk factors, with obesity being monitored almost as a side issue, but there are situations where people have become more active and have improved their diet, but their weight or BMI has actually gone up as an average. One of the reasons why it's very difficult to look at one population and compare it to another relates to racial, environmental and economic differences, which are hard to equate one with another. You can't even compare a control group very easily to the intervention group, because the control group is not immune to the influences that they see around them from the intervention group. The one point I would like to make is that a poor result doesn't mean that the intervention has not been successful. If you are trying to swim upstream, you can swim as hard as you like; if the stream is more powerful, you will go backwards, but it doesn't mean that you're not going backwards slower than you would have done had you not swum hard in the first place. Many of these interventions may be successful. It's just very difficult to set them apart from what would have happened anyway.

Professor Theresa Marteau: I wanted to comment, without sounding like this is special pleading, and say that, sure, behavioural sciences are tough, but they have also been poorly funded over the years. From my understanding of the most recent figures that I'm aware of, from 2006, looking at health research spend—both in government and in charities in the UK—2.5% is spent on prevention and, of that, 0.5% is spent on behaviour. It's a tiny, tiny part of our budget. Of course, while we celebrate the science spend not being cut and there being a slight raise in the health spend, none the less, the proportion is tiny compared to the problem. I also think that, in terms of where the interests of psychologists have lain over the last 150 years—I'm quoting from the *Oxford Handbook of Human Action*—there has been a focus on a study of perception, looking at knowledge acquisition and memory, to the neglect of action. It's only in the last 10 years or so that the science of action, which I alluded to at the beginning, has started to come on stream. I don't think we should kick ourselves too much. There are great scientific opportunities here that could match the need that we face in realising that many of the problems that we face, not just in health, are related to behaviour. I'm talking about an opportunity for significant shifts in research budgets.

Q339 Lord May of Oxford: To come back to the question of population-level versus individual-level, it seems to me that one of the few areas where there is robust, fact-based evidence shows that people are more likely to be entrained in doing something if they see a lot of other people doing it. There's been a lot of work on that. Tony Giddens gave a major speech on this at Climate Week just the other day. It seems sensible thus that there ought to be more emphasis on population-level interventions and I just wonder, first,

whether my impression that that is a more robust finding is correct and, secondly, why there isn't more emphasis on population-level rather than individual-level.

Dr Ian Campbell: I think it's very clear that people are more likely to change their behaviour if the people around them are doing the same. On an individual, two-people or three-people level, certainly we see that. Weight-loss buddies is one of the buzzwords and that really supports people. On a population level, what we've seen, comparing one town that has had an intervention policy and one that hasn't, is that the control town has started to copy some of the things that it has seen in the intervention term. We know that people recognise that it's good. It's become more acceptable so they're more likely to do it. Creating a desire for change is one thing but, if the resources aren't there for an individual to fulfil that desire, the desire is short-lived. We need to make sure that the environment within which they're living not only creates the desire for change but the ability to make that change.

Q340 Lord May of Oxford: I guess it's more complicated than getting one person in a street to insulate their house with a subsidy and then everybody wanting it?

Dr Melvyn Hillsdon: We published some data from Bristol a little while ago where we showed that, if the aggregate level of cycling prevalence in a ward is high, then the probability of an individual you survey being a cyclist is also high. That supports your observation. One of the reasons why there have not been more population-based evidence interventions is the cost and whether the funders are willing to pay for those types of interventions. We've got new Cycling Demonstration Towns going on, we've got Healthy Towns and we've got lots of other population-level interventions, but none of them has been funded to measure behavioural outcomes, so there's lots of lost opportunity.

Professor Theresa Marteau: I want to come back on the point about cost and what we know about how to change behaviour. There are many in the industrial and commercial sector who have the research platforms that we don't have in the public sector to know how to change our behaviour. For instance, supermarkets use some of the smartest cognitive psychologists in research environments and they are shaping our behaviour all the time. What I would like to see is some of that in the public sector.

Q341 Lord Sutherland of Houndwood: I just wanted to pick up the important point that Lord May made about the difficulties in doing social science as compared to studying particles or whatever. I want you to help me to understand. I think there are two kinds of difference—one is practical and one is conceptual. I won't go into the conceptual—that would take us the rest of the week—but on the practical point could you help me by demonstrating or indicating whether in, say, a Cycling Town it is easy to draw a distinction between the results not being very impressive because it's not a good intervention and the results not being very impressive because, by and large, there are a lot of cold mornings and people get up and take their car to work? Can you actually draw these distinctions seriously, so that you get very hard evidence?

Dr Melvyn Hillsdon: You can. The quality of the measure is the key. You sound as if you think 2.9% population change in behaviour is not very good.

Lord Sutherland of Houndwood: It's good, but I worry about the other 97%.

Dr Melvyn Hillsdon: Perhaps an interesting parallel is that, if we managed to achieve a 3% drop in the population prevalence of smoking, we'd be over the moon in three years. I don't think we should dismiss changes in behaviour, not at the individual but at the population level. I think you can tease this out with good-quality measures, and we've developed a new technology that can measure physical activity much more accurately than we have been able to do historically. Next-generation objective measures of physical activity will give you minute-by-minute analysis of physical activity over weeks and days, so that we can much more clearly understand what it is that people are doing at any given point in time. Those are being coupled with GPS devices, so that we can say where people are. If people are cycling, where are they cycling? Is it on main roads? All that kind of technology is helping us much better to understand what it is that people are doing and when and how much they're doing these things.

Lord Sutherland of Houndwood: To draw a message out, which I hope is right, part of how you do this is to make sure that the specification of the innovation is sufficiently detailed that it's measurable and we don't always do that, because we all think, by and large, if you cycle a lot, you'll get thinner.

Q342 Baroness O'Neill of Bengarve: Could I ask you—again, this may be for everyone—about the Government's use of strategies, effective and ineffective? What has been the overall strategy used to prevent and tackle obesity? Has it been evidence-based? Does it address the multiplicity of factors that Professor Marteau mentioned at the beginning or has it focused very selectively on some, to the exclusion of other factors?

Dr Ian Campbell: The only area where we can show relative success has been the reduction in the rate of increase of childhood obesity. Again, it's not very clear why that is the case. If you look at adult obesity, the figures are only rising, so we seem to have failed miserably on that. One of the great difficulties has been that the cause of obesity is so complex that there is no one single solution. There's this constant battle between whether this is governmental responsibility or an individual's responsibility. The more that I study it, the more I recognise that, while we've all got a personal responsibility, it's absolutely essential that government takes a lead role in this. Going back to my previous comment, you may create a desire but you need to have the ability to fulfil it. Government policy has come on a long way, given that 10 years ago there was next to nothing. We've seen slow changes. In some aspects we're moving in the right direction but there's still a lot more to be done. Confronting the real commercial and environmental stimuli of obesity has not yet been achieved.

Dr Melvyn Hillsdon: We seem to be getting mixed messages. We know, for example, that the probability of people who use public transport meeting recommended amounts of physical activity is much higher than people who use their cars, yet we see a policy of increasing costs of public transport and discussions about the possibility of reducing the cost of using your car. Perhaps that's not seen as an obesity or physical activity strategy, but these are the upstream determinants of physical activity behaviour. There seems uncertainty about the commitment to physical activity in schools through school sport. We're not sure what the policy is or is going to be, and what effect that would have on levels of physical activity. The reference to multiple determinants of obesity was partly being addressed by NICE under some guidance that it was working on around spatial planning, looking at the distribution of urban design and how that might affect obesity, because there's correlation evidence for that. That guidance has been cancelled, so I'm not

sure what message that's sending about the interest in upstream multiple-level indicators of obesity. It seems a bit uncertain at the moment what the direction is and where the focus is going to be.

Q343 Baroness O'Neill of Bengarve: Broadly, you're both saying that government is not effectively using even such evidence as is available, and the previous questions established that there wasn't an absolute excess of evidence available.

Professor Theresa Marteau: I'm not intimate with the Government's policy on obesity, but my understanding is that, after the publication of the public health White Paper, there will be a separate report coming out in the spring. Part of it will be the responsibility deal that the Government are engaged in at the moment. Perhaps I could make a few comments about that. This is about government partnering with relevant industries for self-regulation. An interesting paper, which I will pass on to the Committee, is an analysis by Kelly Brownell in Yale of the history of self-regulation of the alcohol and tobacco industries. The paper compares that with marine fishing and forestry to try to see what we can learn about self-regulation for the food industry. In the analysis, the suggestion is that self-regulation has worked well for marine fishing and forestry because the threat is internal. In effect, if those industries don't regulate themselves, they'll have no industry. Where the threat is external, which is what the paper believes has been the case with alcohol and tobacco, and probably with food as well, self-regulation hasn't necessarily worked so well. The report makes recommendations for how self-regulation by the food industry can be made to be most effective. It will come as no surprise to you that the emphasis is on the importance of transparency, objective evaluation and realistic goals. I should say that I am a member of the Behaviour Change Network, which is one of the five groups involved with the responsibility deal, and this is one of the points that I have made on several occasions. There is scepticism; scepticism is good but, in that context, if evidence is collected, then at least we will know, one way or another, the extent to which this is going to be helpful. But we need that evaluation.

Q344 Lord Krebs: To what extent do you agree with the conclusions of the Foresight Report on tackling obesities? I'll just read two very brief quotes from the executive summary. The first is: "Our evidence shows that a substantial degree of intervention is required to affect an impact on the rising trend in obesity". The second is: "The best current scientific advice suggests that solutions will not be found in exhortations for greater individual responsibility, nor in short-term fragmented initiatives". Now, that's very clear. In my view, it's saying that the notion that we should hand over to you as individuals—and, as certain politicians have said, stop talking about people who are at risk of obesity and start talking about people who are greedy and lazy—ain't going to work. Would you as experts in this area agree with what the Foresight team concluded three years ago?

Dr Ian Campbell: I'd agree wholeheartedly with that. Those who exhort the public to greater personal responsibility at the exclusion of state responsibility are doing us a great disservice. The evidence that's come out from a lot of the work that Professor Sir Michael Marmot has done in his social determinants of health reports—one is called *Fair Society, Healthy Lives*, which was published in February 2010—shows quite clearly that individuals are unable to make choices unless the facilitation is there to enable them to make those choices. Certainly it's not just the science; it's what I see in clinical practice. Exhorting

people to pull their socks up and do something different just doesn't work. In fact, you could argue that it's counterproductive, so I do agree with Foresight.

Dr Melvyn Hillsdon: Perhaps similarly, the amount of variance in physical activity and diet that's explained by individual-level characteristics, such as motivation and attitude, is very, very small. If pointing a finger a bit more was effective, you would expect those things to explain a lot more the variance in the behaviour, because that would be the target of the intervention.

Professor Theresa Marteau: I enjoyed reading the report and I share those conclusions, not so much in terms of framing this as a matter of choice but in terms of just understanding human behaviour for what it is. There's a limit to how much we can guide our own behaviour in the environments in which we currently live. In terms of regulation, I don't know that we know enough to point our finger at how we would regulate, say, in terms of food labelling or food manufacture. A recent report in the *Lancet*, prepared for the 2011 UN first high-level meeting of the General Assembly, which will take place this September, on chronic non-communicable diseases, looks at advertising to children and says that this is one of the most cost-effective ways of reducing and actually preventing obesity modelled over the next 50 to 100 years. If there's one intervention, this is the one to go for, which I think very much is in the spirit of the Foresight Report.

Q345 Baroness Perry of Southwark: Before I ask my question, can I just follow on from something that you said a moment ago? I think we've somehow missed in your evidence so far something that has kept bothering me, which is that we ignore the fact that certain kinds of food actually do give pleasure. We know that chocolate, for example, produces chemicals in the brain that are euphoric, and so on. Young children don't just eat because they're perverse or because the environment encourages them to; it's because when they eat certain foods it gives them a sense of pleasure, and they therefore eat a lot of it. When we're talking about behaviour change, isn't the real hurdle that we have to get over the fact that the other rewards of not eating too much chocolate, too many chips or whatever are greater than the very short-lasting pleasures that you get from the chocolate or the chips?

Professor Theresa Marteau: My initial response to that is that indeed is an important point. What comes to my mind is a recent experiment that was conducted in the States, which looked at this in the context of cereals that are being marketed to children. There is an argument that children like high-sugar cereals. Others can correct me if they've read this. As I recall, the children were randomised to get two different kinds of cereal and they were given free range for adding sugar or fruit to them. Where the cereals didn't have sugar added, the children added more fruit and ended up eating fewer calories. We shouldn't infer that children want to eat high-sugar foods. On that point, I don't know if anybody has talked about the Food Dudes programme before. This is, I think, a very elegant intervention, which was conducted by psychologists at Bangor University, as I recall. It was aimed at increasing consumption of fruit and vegetables in four to 11 year-olds. It's one of the few interventions I'm aware of where effects were sustained one year later. In brief, it's a school-based programme and the children are exposed for 16 days consecutively at school to a brief cartoon video, which stars the Food Dudes, who are up against the Junk Punks. They watch this just before lunch and then the teacher gives a small piece of fruit and vegetable to each child, so it's really exposing children to the taste of fruit and vegetables. The teacher then comes around and rewards them, and they get pencils,

rubbers or whatever with the Food Dudes logo, and there's a pack that goes home. As I recall, they then look at how much fruit and vegetables are in the children's lunchboxes and how much the children consume. At baseline, consumption was around 41 grams and, for the experimental group, a year later the children were consuming almost double—71 grams—whereas the control group had not shifted in how much they were consuming. In the Republic of Ireland, that is now happening in all primary schools, I think, but not in England.

Q346 Baroness Perry of Southwark: That's a very nice example of an intervention that was based on good evidence, which was part of my question. If there are others that your colleagues would like to give, I'd be delighted. Do we also have any evidence of interventions that were not based on good evidence, and did they or did they not work?

Dr Melvyn Hillsdon: It's quite interesting in the area of physical activity that, since the late 1980s, most local authorities have been investing in programmes called Exercise on Referral schemes, which normally take the structure of GPs being gatekeepers and screening eligible people for insufficient levels of activity and referring them to a third-party agent, typically the local leisure centre, for low-cost or no-cost physical activity. There have been estimates that pretty much every local authority in the country has one of these schemes, yet there's no evidence at all that they lead to any beneficial change in physical activity. In fact, a new health technology assessment is about to be published in the next two or three months, which again shows that there's no concrete evidence that these schemes might lead to benefits, yet we have been investing in them for many years. When the last review of them was published, there was a lot of backlash about the quality of the evidence, with people saying, "It didn't really show what we thought it would show" and so on. That showed that for most people there's lots of personal investment in these schemes that the science shouldn't get in the way of. That, I think, continues to be the case. The NICE guidance on Exercise on Referral was that no person should be referred to one unless it's part of a randomised control trial. It was quite a few years ago now that that guidance came out but, as far as I'm aware, lots of people still get referred when they're not part of randomised control trials, and I suspect that most local authorities have still got one of some sort or another.

Q347 Baroness Perry of Southwark: So not having the evidence or not using the evidence actually resulted in negative effects. Are there other examples like that or, indeed, of positive results with negative evidence?

Dr Ian Campbell: A lot of the evidence has to be almost by consensus. We know that a lot of small changes have an effect. It's very hard to reproduce them over a long period of time. I am thinking of programmes like the SHINE programme in Sheffield, which works with underprivileged teenagers to build up their self-esteem; as part of that self-esteem, they become more physically active and start to eat a healthier diet. In such programmes, we can show significant weight loss over a prolonged period of time. Some commercial weight-loss programmes are based on the evidence that portion control and peer support are very powerful. They can produce effective weight loss of about 9 kilograms over a two-year period. Sometimes when you go beyond where the consensus is, you can achieve even more dramatic results. I work on a project where—I get criticised by colleagues for doing this—we take individuals and we exercise them until they are dizzy with exhaustion. We control their diet by replacing rubbish with a healthy diet and we see weight loss of about

one stone per week reproduced over many months. In the end, they might be losing nine stones over a four-month period.

Q348 Baroness Perry of Southwark: Is that sustained?

Dr Ian Campbell: It's sustained in those who maintain the regime that they've been given, and that's the key.

Baroness Perry of Southwark: Exactly. How many of them do not maintain that?

Dr Ian Campbell: The majority will not do it, and that's the problem throughout this whole area. If I try to work out the effectiveness of a blood pressure treatment, it's very simple: the patient has to think for one minute to take a pill in the morning and that's their job done. You can show if the tablet works or not. When it comes to obesity, it has to dominate their thinking 18 hours a day in order for them to achieve long-term results. As soon as they're out of the context of that clinical programme into the big bad world again, all the adverse influences that led them to be there in the first place take over. That's the real difficulty. Long-term management is very difficult indeed.

Dr Melvyn Hillsdon: It's a very interesting conceptual challenge. You can correct me if I'm wrong, but the common interest in the last few years in behaviour change is to make small changes over time that are gradual and build up, yet many people drop out of those programmes before the point at which they've seen any positive change to themselves. The interesting question is: if you can engage people in something that requires a much greater level of behaviour change very early, so that they experience some physiological and biomedical changes quickly and there's a reinforcement, is that better than these very small nudges over time? No one ever really sees any observable benefits to themselves. As Ian has said, people can make small changes in their behaviour. The private sector health club industry is quite interesting. There's been a rapid growth. Apparently as many as 7 million people hold a private sector health club membership at any moment in time; they pay on average £35 a month to go to these places. The data that these clubs hold show that most people attend the equivalent of 0.9 times a week. Even when people volunteer and pay good money, they find it very difficult, so they observe virtually no change in weight, etc, and so quite rapidly make decisions about whether they should continue. There is this interesting challenge as to whether small changes over time, where the person perhaps experiences frustration—they don't see themselves as being any different over time—is the way we should continue, or whether we try to expose them to something that's very much more intensive early and look for methods for engaging them and keeping them in it, but where they see reinforcement much quicker. That might be the better way forward. I don't know.

Professor Theresa Marteau: In a way, it's a choice, because it's not just one thing. Either we're trying to boost people's self-regulatory capacity so that they can resist their environment or we look at their environment. I just want to comment on how our environment will change over the next year or so as we have more reminders of the Olympics. Already I'm beginning to see bars of chocolate with Olympic logos on them. How confusing is that? As I understand it, we have three food suppliers whose logos are allowed to be displayed in the Olympic area—Cadbury, McDonald's and I think Coca-Cola. We are going to get this message of the foods and drinks that are doing nothing to tackle obesity joined with physical activity.

Q349 Baroness Hilton of Eggardon: They're also going to allow product placement on television programmes, which is going to exacerbate those problems. Could we turn from evidence to evaluation? What do you see as the barriers to evaluation? Whether you have examples of interventions that have been well evaluated or ones that have been badly evaluated, I'd be interested to hear them.

Dr Ian Campbell: I'd like to think that I'm only associated with projects that are well evaluated, although perhaps not. A lot of the commercial organisations invest in this, because it's their proof that their programme works. The difficulty in the public sector is a lack of finance to see it through and very short-term attitudes. We often see dietetic programmes set up for a period of six months to see if they can reduce the weight of, say, cardiovascular patients. In six months they've achieved nothing, so the assumption is that they haven't worked, so they are scrapped. There are very few long-term studies done, which I think weakens our argument when we go to key decision-makers within the NHS about weight management programmes.

Dr Melvyn Hillsdon: Although the evidence didn't suggest that this campaign was effective, I think that it was a very good example at population level. This is the interesting challenge: how you do this at population level? When the Health Education Authority undertook its Active for Life campaign, a mass-media campaign to promote physical activity in the mid-to-late 1990s, that was very rigorously evaluated. It set up a panel survey and had a small cohort that it followed over time. It looked at all the process indicators that would suggest the uptake and adoption of its messages, awareness and exposure of the campaign. A reasonable proportion of money was invested in that evaluation, which followed WHO guidance on what proportion of an intervention's budget should be allocated to evaluation. It was very well evaluated. The fact that it showed that nothing had changed—

Baroness Hilton of Eggardon: That's information.

Dr Melvyn Hillsdon: It was very important learning for those involved, because one of the things that it showed was that they were probably on to something, but mass media are expensive and they probably didn't get enough exposure to their campaign messages as they would have liked, because the people who did recall it seemed to be making better progress. It was a very good example that you can evaluate whole population-level interventions, but you have to be willing to put the resources in to do it and risk that it won't show you what you hoped for.

The Chairman: Thank you very much. I thank all three of you for a really excellent session. We're very grateful. There are various things that you may wish to add that you haven't had a chance to say. We'd be delighted to receive any additional matters from you and we would love the references to everything that you've mentioned. I kept getting notes from the special adviser saying, "Can we have the references?" Please would you let us have them and forthcoming publications? That would be enormously useful. The transcript will be available in the next 10 days or so and will be sent to you for corrections. Please do look at that and send any additional material. Thank you very much indeed; we're really very grateful.

Department of Health and Professor Erik Millstone

**Written evidence from Professor Erik Millstone, SPRU, University of Sussex
(BC 28)**

In response to the call for evidence in relation to Behaviour Change on behalf of the House of Lords Science and Technology Committee, I am providing a set of answers and documents deriving from a 9-country comparative study of options for responding to the epidemic of obesity.

I was the principal investigator on a European Commission funded 9-country comparative study of public policy options for responding to obesity. The project was known by its acronym as the PorGrow Project, and it ran from 2004 to 2006. My comments derive primarily from the work conducted for that project. Three documents drawn from that project are attached with this letter. One is a booklet entitled *Obesity Policy Options: a systematic appraisal*, and it was published by the Manchester Statistical Society in December 2005; it concentrates almost entirely on obesity in the UK. The second is a booklet entitled *Policy options for responding to obesity: evaluating the options*. It was published in November 2006 for the World Health Organisation European Ministerial Conference on Counteracting Obesity, which was held in Istanbul; it covers obesity policy options in the UK and 8 other EU Member States. The third is a special issue of *Obesity Reviews*, May 2007, and provides considerable detail on the conduct and findings of the PorGrow project.

The information at my disposal does not enable me to answer all of the questions posed in the call for evidence, but the responses below are numbered in accordance with the numbering of the questions posed.

I. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?

There is considerable empirical evidence that obesity can neither be treated nor prevented simply by providing individuals with education and information. In the course of the PorGrow project some 216 interviews were conducted with well-informed policy commentators drawn from a broad range of relevant interest groups, which included:

1. Farming industry representatives
2. Food processing company representatives
3. Representatives of large commercial catering chains
4. Representatives of large food retailers
5. Representatives of small 'health' food retailers
6. Representatives of public sector caterers (e.g. school meal providers)
7. Representatives of consumer groups
8. Senior official government policymakers in health ministry
9. Senior official government policymakers in finance ministry
10. Public health professionals
11. Town and transport planners
12. Representatives of life insurance industry
13. Representatives of commercial sport or fitness providers
14. Representatives of school teachers
15. Members of expert nutrition/obesity advisory committees
16. Health journalists
17. Representatives of advertising industry

18. Representatives of the pharmaceutical industry
19. Public health non-governmental representatives
20. Public interest sport and fitness non-governmental organizations (NGOs)
21. Representatives of trades unions

Despite their many differences, not a single interviewee claimed that education and/or information could by themselves address the challenge of obesity. There was a widespread recognition that they were essential, but no-one believed them to be sufficient.

2. What are the policy implications of recent developments in research on behaviour change?

Research for the PorGrow project indicated that if the epidemic of obesity is to be slowed and reversed in the UK it will be necessary to introduce a portfolio of measures in several categories. As well as improved nutritional and health education, controls on advertising of foods and beverages high in calories, and information about the calorific value of food products and the calorific impact of physical activity, measures will also be needed to improve opportunities and incentives for exercise and physical activity. Measures will also be required to modifying the supply of and demand for foods and beverages, and institutional changes will be required. There was no evidence that technological innovations such as increased use of synthetic sweeteners or fat substitutes, or pharmaceutical products to modify human digestion and metabolism would be acceptable or effective.

Furthermore, only one country has slowed, if only briefly, the rate of rise in the incidence of obesity: namely Singapore. In 1992 the ministry launched a national programme to promote healthy lifestyles in order to target common risk factors for chronic diseases, including obesity, physical activity and smoking. This undertaking included a 'Trim and Fit' programme aimed at improving fitness levels among school children. Overweight children were singled out for special physical exercise regimens, while obese children were referred to school health services for further assessment, treatment and follow up with doctors and dieticians. The 'Trim and Fit' programme reported a decline in rates of obesity of approximately 2% for children aged between 11-12 and 15-16 between 1992 and 2000.⁴²⁷ However, the measures that the government imposed to achieve that result were unsustainably draconian, even in that authoritarian state. In March 2007, the *Washington Post* reported that the Singapore government had decided to end the programme after parents complained that overweight children were bullied and stigmatized. The targeted programme was replaced with a more holistic plan aimed at all schoolchildren, not simply the overweight or obese .⁴²⁸

No other country has yet succeeded in slowing down, let alone reversed, the trend in the incidence of obesity. Singapore only achieved that change by imposing measures that stigmatized individual children deemed overweight or obese. Those measures were, however, socially and politically unsustainable in a country where the citizenry is not noted for its disobedience but for its compliance. If the combination of a highly interventionist and

⁴²⁷ Cheong Mui Toh, Jeffery Cutter & Suok Kai Chew, 'School based intervention has reduced obesity in Singapore', *BMJ*. 2002 February 16; 324(7334): 427 available 20 October 2008 at <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1122348>; Grace Soon, Yang Huang Koh, Mun Loke Wong, and Pin Woon Lam, 'Obesity Prevention and Control Efforts in Singapore' 2008 Case Study (National Bureau of Asian Research: Seattle, WA)

⁴²⁸ Washington Post 20 March 2007, 'Singapore to Scrap Anti-Obesity Program' <http://www.washingtonpost.com/wp-dyn/content/article/2007/03/20/AR2007032001145.html>

highly individualistic approach proved unsustainable in Singapore, it may be unsustainable everywhere.

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

There is very little capacity in the UK to conduct research that is of practical relevance. That capability would of necessity be interdisciplinary, and the vast majority of researchers with knowledge of aspects of the obesity challenge work within single disciplines, which on their own are insufficient.

4. Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

No.

6. How should different *levels* of intervention (individual, organisational, community and national) and different *types* of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

Their interactions need to be mutually supporting and reinforcing.

7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

If they are used in isolation they will either be ineffective or have only very marginal effects.

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation?

No yet, consequently we do not know how successful such interventions have been.

9. Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

Not yet.

10. What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

I am not aware of such mechanisms.

11. What mechanisms exist within government to coordinate and implement cross-departmental behaviour change policy interventions?

There is a team in the Department of Health that has been asked to perform that important role, but there are very few mechanisms with which that team can operate effectively beyond the boundaries of that department.

15. What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?

See comments above about Singapore.

5 October 2010

Oral Evidence, 11 January 2011, Q350-386

Evidence Session No.10. Heard in Public.

Members present:

Baroness Hilton of Eggardon
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Baroness Perry of Southwark
Lord Sutherland of Houndwood

Examination of Witnesses

Witnesses: **Professor Dame Sally Davies** [Director General of Research and Development and Chief Scientific Adviser, Department of Health], **Ms Sian Jarvis** [Director General of Communications, Department of Health], **Mr Richard Cienciala** [Deputy Director of the Obesity Team, Department of Health], and **Professor Erik Millstone** [Professor of Science Policy, University of Sussex] gave evidence.

Q350 The Chairman: Could I welcome all of you and thank you very much for coming? Some of you may feel you're coming to this Committee reasonably frequently, one way or another. What we'd like you to do is to introduce yourself for the record and, if you would like to make a brief opening statement, please feel free to do so. We are quite tight on time. We've got just under an hour and quite a lot of things we want to ask you, so I would ask you, please, to keep answers relatively brief. Sian, do you want to start and we'll just go along that way? Is that the easiest?

Sian Jarvis: Yes. Sian Jarvis; I'm Director General, Communications, at the Department of Health. I did some introductions last time and I know that Dame Sally Davies is going to do a brief introduction so, for time purposes, I shall hand over.

Professor Dame Sally Davies: Sally Davies; as you may know my real role is Director General for Research. However, I have been since 1 May the interim Chief Medical Officer.

Richard Cienciala: Richard Cienciala; I'm a Deputy Director at the Department of Health, responsible for work on obesity.

Professor Erik Millstone: Good afternoon. My name is Erik Millstone; I'm a Professor of Science Policy at the University of Sussex, and my interest in obesity has been in my role as a principal investigator on a European Commission-funded Framework 6 Project, which was a comparative study of obesity policy across nine European countries.

Professor Dame Sally Davies: If I may, on behalf of my colleagues for the Department of Health, I thank you for inviting us to join you and set out the Government's position on obesity, as it's one of our great public health challenges. We were just checking before we

came over when our written evidence was timed from. Of course, it was written before the White Paper on public health was published, so you may want an update on obesity since then, as I believe you're doing a case study on that. That White Paper, *Healthy Lives, Healthy People*, published in the autumn, set out the Government's vision, overall approach and proposals for the new system for public health. The actual approach to obesity that will be published later this year will be based on the principles set out in the White Paper. The proposals in that White Paper for health improvement start from the position that individuals need to take responsibility for their own health, and that it's for government working with a range of other partners to support them in this. The proposals in the White Paper are well evidence-based; they draw on the evidence of what's best. We're already building blocks in place. We are using in the White Paper and all our work an interventional ladder first published by the Nuffield Council on Bioethics, which starts at the bottom end where we just monitor. We could: inform and educate; ideally enable choice; guide choices through changing the default policy—and those two, enabling choice and guiding choice, are the choice architecture nudge bit—guide choice through incentives; guide choice through disincentives, which could be fiscal and other disincentives; restrict choice, which takes you into regulation; and eliminate choice, which takes you into regulation. The Government wants to start at the bottom of the latter, wherever possible, and only move up it if we have evidence that we're not succeeding. I must say, I am pleased by this new Government, at how they're aiming to put science at the heart of government. Both the NHS White Paper and the public health White Paper talk a lot about research, the value of research and evidence. We are working with data, evaluation and the sharing of good practice to put them at the heart of the system. In the public health White Paper we lay out that health improvement activity will be shared between Public Health England—a new part of the Department of Health—and local authorities, where local directors of public health will move in. Clearly government is going to support the local authorities in applying, as best they can, an evidence-based approach to their new responsibilities, as they take them up, as well as applying that to our own actions. For obesity, the arrangements will build on existing groundwork, which we'll share quite a bit with you, I hope, this afternoon, of initiatives and interventions. As I said, there will be a document later this year on obesity. Thank you.

Q351 The Chairman: Thank you. I don't suppose you would like to give us a clue as to when that document might be emerging.

Richard Cienciala: We're planning to issue it, in the time-honoured term, in the spring.

The Chairman: That long spring that lasts until about October?

Richard Cienciala: It's a good few months away yet.

Q352 The Chairman: Okay, thank you very much indeed. I'm just going to ask you the first question. To some extent, Sally, you've actually said some of this, but the Department itself has suggested that the direct costs of obesity are some £4.2 billion a year. Foresight has said that it's going to double by 2050. Foresight has also said that the wider economy is cost in the region of £16 billion because of weight problems, and that again will rise to £50 billion if left unchecked by 2050. The thing that we want to hear from you—we've heard a little bit about the ethical approach and using the ladder of interventions—is what role does government actually have in preventing and tackling obesity, and by what means?

You've talked about the ladder, but what means are appropriate to the Government to use to do so?

Professor Dame Sally Davies: Thank you. I'll start. Clearly, we do need to do something about this as a society, let alone as a government, because of the increased risk of all those diseases that increase morbidity and mortality: diabetes, heart disease and cancer. I think our response starts with: this is a societal issue, and is shared between individuals, communities and government. The Government's role is to support the individual's responsibility, and we must have clear consistent messages on how they can change their lifestyle and how to make it easier. We're looking for the least intrusive approaches, but I'm going to ask Richard to come in first and then Sian to pick up more on the detail.

Richard Cienciala: Building on what Sally has said, the Government sees its role very clearly as providing support to individuals by providing information, by changing the environment and by providing services where those are necessary. In terms of that role, it's very much a role of orchestrating the input of a range of partners. The Government sees obesity as being everybody's business, as it's been described. The role of government specifically, first of all, is to set very clear outcome measures to focus energy and action around, and to incentivise progress towards those by local government, which, as we've said, will have a key role in future. The Government's role is to develop what might be called a real knowledge system of proper provision of data, research, evidence, development and dissemination to support the efforts of a range of partners. It's to work at national level with those partners, including non-governmental organisations, including business and through the Responsibility Deal that's been set up, and to work across government to harness other agents of change in relation to obesity, through the new Cabinet Sub-Committee on Public Health that's been set up. The Government's role then is to run information and social marketing campaigns, and finally to carry out those functions that can best be done and only really done at national level. A very good example in relation to obesity is the National Child Measurement Programme, which, as you'll know, has been running for some years, seeing the weighing and measuring of all reception and year 6 primary school children, and now more recently the feedback of results to parents.

Q353 The Chairman: You seem to be saying that the role of government is partly to work with partners, but also to hold the ring in all of this. I think that's what you're saying—that government takes broad responsibility. Does government then take responsibility for ensuring that these things work?

Richard Cienciala: Government certainly has a role in building a really good evidence base in relation to its own actions. How effective is NCMP? That's something we'll be reviewing this year. But it's also in supporting local government in ensuring that it has access to a real range of robustly evaluated and tested approaches. There's that twin role then.

Professor Dame Sally Davies: There's another bit you're asking, which is: how will we set up public health in local authorities? We are presently consulting on an outcome framework that does include child measurement and healthy adult measurement. Those will be data that local authorities will be able to judge themselves by and use within their Health and Well-being Boards, but also some of these data will be used for the health premium allocation. We're going to have a ring-fenced public health budget, of which a certain amount will go to local authorities; they will then get a health premium that will have a weighting for inequalities and reward success on some of these metrics. We're still working that up as part of how we will make Public Health England work.

Sian Jarvis: I was going to offer you an example of how government has carried out its facilitator role in relation to the social marketing component. The societal movement that Sally talked about is really about bringing together a coalition of brands that the consumer trusts. Government can't do it all. We know that, from the 18 months' worth of research that we did in advance of developing the marketing strategy, mothers in particular were telling us that we needed to work with the brands that they trust, whether it's the doctor, the teacher, the local supermarket, for example, or one of the food manufacturers. These brands are in their daily lives. What we've done is taken a facilitating role, actually partnering with some of those brands. One example is the national convenience store pilot that we did in the north-east of England, where we actually worked with them. We didn't implement or deliver the whole project, but we did provide some funding, and it was match-funded, where we worked to enhance the presentation of fruit and vegetables, for example. They provided chilled cabinets and we had a lot of Change4Life marketing materials around it, which was well evidenced, and we actually were able to demonstrate that it increased the uptake of fruit and vegetables for people shopping in those stores. The National Association of Convenience Stores has rolled out that project into the south-west now.

Q354 Lord May of Oxford: I just want to take up quickly the point about brands they can trust like local supermarkets. To put the contrary view in a deliberately extreme form, in many respects the local supermarkets are isomorphic with drug peddlers. They're trying to hook you on selling you stuff that actually promotes obesity. I can see the simplistic appeal of the truism of "Here are the brands you can trust" and "Let's get them involved," but, boy, that's got to be done carefully. I really don't like that simplicity.

Sian Jarvis: I absolutely understand the nature of your question.

Lord May of Oxford: They have direct interests that are contrary to yours, in some instances.

Sian Jarvis: I'm not saying they are the brands that people can or should trust. What I'm saying is that the research demonstrated that these are the brands that people trust and so, therefore, if we don't work with them, then we are never going to shift it. For example, there has been a lot of controversy around government working with these brands, but you may have seen in the *News of the World* this weekend that we launched the Great Swapathon, where we're actually working with those supermarkets to incentivise—

Lord May of Oxford: I quite agree you've got to be working with them, but I think you maybe also ought to be working with them in a sense that tries to alter their behaviour. You have behind you the threat of things you can do to them, rather than just be supplicant to them.

The Chairman: We may have to leave that bit there. Lord Krebs.

Q355 Lord Krebs: Thank you, Chairman. Sally, I'd like to pick up on something you said in your introductory comments about the Coalition being very much evidence-based, because actually what we've heard up to now can be summarised, slightly oversimplifying; when it comes to population-level change in obesity, a) there is little good evidence about what works, and b) to the extent that there is evidence, the Government isn't taking any notice of it. I would like you to give us some concrete examples of the kind of evidence you have adduced and how that's being put into practice. Just to embroider it a little bit, looking at the Foresight report, again that seems to contradict a couple of things that you have said.

You have emphasised the importance of greater individual responsibility. Foresight says, "Scientific advice suggests that solutions will not be found in exhortations for greater individual responsibility." Equally you said that the Government would like to stay near the bottom of the intervention ladder, yet Foresight says, "Our evidence shows that a substantial degree of intervention is required to affect an impact on the rising trend in obesity." I'm getting confused. On the one hand you're saying your approach is evidence-based. On the other hand, all that we've heard up to now, as well as Foresight, seems to contradict your assertion. Could you elaborate on that for us?

Professor Dame Sally Davies: There's clearly a tension, isn't there? If you want to go fast and make it happen, you'll do it by regulatory route, but will the public accept that? We were having a debate earlier about how long it took to build the coalition to get to non-smoking. I would not dispute with you or with the Foresight scientists that, if we could make it get through Parliament, we could really change things through regulation. We are where we are, and there is a need to raise awareness of the issue, to change societal attitudes to want to work with us and to use the opportunities that are there. This Government have said they will start at the bottom of the ladder, but they reserve regulation as their right. The discussions through the Responsibility Deal and other discussions are quite clear: how we can work together and how we can improve things, but we could always move on to those. It's interesting that OECD said in a September 2010 report that "Cooperation between governments and the food industry is the single most critical link in the adoption of a multi-stakeholder approach." This is about obesity. "Neither party may have a choice. Every alternative to cooperation would likely bring heavy losses to both, including financial losses," so we're not alone in thinking there is an advantage to working together. If you use the example of salt and voluntary work, there is quite significant evidence that voluntary methods can bring it down. I would like to see it further down, but it's the trend that is really important. Big population experiments are very difficult to do and to fund, so I'm not disputing that, but we have evidence from salt and voluntary discussion. If Sian takes you through the evidence about Change4Life, you'll see that that is based on evidence and the data are being collected as we go through to show whether it works or it doesn't, and how to make it work.

Q356 Lord Krebs: Sian did mention the Change4Life Swapathon, and I'd like to ask Sian or you two quick questions about that. One is: what outcome measures will you use to evaluate the success of the Swapathon? Secondly, when I look at the list, and this links to Lord May's question about the Swapathon partners and the brands, it doesn't necessarily match well on to government advice about healthy eating. Zero-alcohol lager is fine. Cornflakes have been criticised by CASH: a portion of cornflakes has more salt than a bag of crisps. It just seems an odd mix. It doesn't fit with the government's advice for healthy eating. How did you choose these particular brands and these particular products to promote through the Great Swapathon? How are you going to evaluate the benefits of it?

Sian Jarvis: The outcome for the Great Swapathon is that our objective is to create a million swaps, say from white bread to wholemeal bread. Warburtons, for example—you'll see a product there that is wholemeal bread, and similarly for some of the low-fat spreads and low-fat yoghurt. It's a balance of risk. Susan Jebb, one of the experts who we were working with, signed off the products. We used the Ofcom advertising nutritional guidelines to actually decide on the products, and some which would have passed we decided not to put in. For example, low-sugar carbonated drinks we decided, although they weren't a particular problem because they weren't full of sugar, on the other hand didn't

add anything to anybody's diet and could potentially be harmful for teeth. We were very careful about which products we put in, and obviously the redemption data that we will get from Asda, which was the partner supermarket, will show whether or not we have actually generated 1 million swaps. We've also got a website, so people are able to sign up and say that they would like to change their behaviour. We are then able to give them information, having signed up to the Change4Life website. We will be able to monitor what people are doing and how they're responding. So far the signs are good.

Q357 Lord Krebs: I count the measures you describe as inputs rather than outcomes. The outcome is that people lose weight. The input measures that you're describing are, while it's on discount, they eat different stuff. You and I would go into the supermarket; if we found a certain product was 50% off, we might buy it. That's not changing our obesity pattern; that's just a short-term response.

Professor Dame Sally Davies: The population outcome measures that we hope to take forward are the ones we're consulting on, child and Adult Healthy Weight.

Q358 Lord Krebs: Eventually, the weight of the population will be your measure of success.

Sian Jarvis: No, we will actually go further than that. It will actually be about the long-term health burden—in other words, reducing diabetes, cancer and heart disease. That will take us 40 years or so to measure.

The Chairman: It might take a while.

Sian Jarvis: There is a line of sight between all of our interventions, particularly the marketing ones, and those final outcome measures.

Q359 Lord May of Oxford: I want to offer an observation, which is possibly not merely curious but a bit improper, and then I'll shut up for the rest of the time. First of all, I'm very sympathetic and understanding of the position you're in, wishing to defend what I think in some ways is indefensible. I spent five years with this dilemma of speaking truth to power but, if you're too truthful on occasion, you make yourself ineffective. Against that, I want to suggest to you that I think it would be as well to be a bit more frankly critical of the Government—and the Ministers will be displeased possibly by it—and of endorsing the Ministers' desires to have voluntary agreements with the private sector of the kind that we just heard criticised. One of the reasons I suggest this to you is I think it likely our report is going to be critical of that. Certainly there will be some members of the Committee who, in the debate, will be very critical of it. That will ultimately be more unhelpful to the Government than having you try to persuade them that too cosy a relation with an enterprise that has some elements in common with drug-peddling is in nobody's best interests. Now I'm going to shut up.

The Chairman: You may not wish to answer that.

Lord May of Oxford: You don't need to reply. Sally knows me well.

Q360 The Chairman: I do want to bring Professor Millstone in, because you were nodding away earlier. Would you like to come in and say what you wanted to say at that point?

Professor Erik Millstone: Thank you very much indeed. Thank you for inviting me. I think it is the case that the Foresight Report on obesity, as John Krebs has observed, has already indicated that starting at this bottom step or two of the Nuffield Council's ladder can only be expected to be ineffective. That conclusion was endorsed by my nine-country comparative European Commission-funded study, where we interviewed a very broad range of relevant stakeholders across nine countries. Only one person in the whole of Europe we interviewed thought that social marketing on its own could be effective, and that was the representative of the UK advertising industry. That apart, everyone was arguing that it would be necessary to go beyond giving information and education, and that a richer range of interventions would be necessary. I was struck by the observation that it's desirable to cooperate with the private sector and, indeed, cooperation, working with the private sector, has an important contribution to make. I was also struck by a Green Paper on health issued by Andrew Lansley just a year ago, in which he and his colleagues said, in effect, that they were planning not merely to work with the food industry, but they had made a decision not to regulate and work through and only through voluntary agreements, which I interpret as tantamount to providing the private sector with a veto over policy interventions. If you start at the bottom of the ladder and you commit yourself only to working with voluntary agreements with the private sector, then you can stay at the bottom of the ladder.

Professor Dame Sally Davies: If you look at the White Paper, you can see that the Coalition Government have moved on and they've committed to use regulation if necessary.

Professor Erik Millstone: There is some talk of nudging, and a contrast has been drawn by the Secretary of State between nudging and nannying. I struggle with that; it seems like a distinction without a difference, because very little of what happened under the previous Government seemed to me to be much more than minimal nudging. What puzzles me with respect to this Government's policy and the Coalition's policy is that nudging is being interpreted as relevant only to nudging consumers. It's not obvious to me at all why it's not also appropriate to nudge the food and drink industry to change their products. In terms of an evidence base for intervention, it seems to me there is an important opportunity that's not yet being adequately exploited. In November 2006 a meeting was held in Istanbul of all member states of the World Health Organization European region, which constituted 42 countries from the Baltics to the Balkans, from the Urals to the Atlantic, at which all of the countries committed themselves annually to provide up-to-date data on outcomes, in terms of height, weight, BMI measurements, food intake, physical activity levels, and which policy interventions were being introduced. I think that the evidence base on which the UK policy should be developed is not simply a narrow focus on what's happening in the UK, but across all of these 42 countries. Which initiatives are being taken and which combinations of initiatives work in which contexts? I have been frustrated by the failure of anyone so far to take advantage of the opportunity that that should provide, though that opportunity is limited only to the extent that not all 42 countries have yet started to fully report the data that they had committed themselves in November 2006 to report.

Q361 Lord Sutherland of Houndwood: I wanted to ask two related questions and they both relate to how the Department reviews its various outputs, developments and wings.

One of them clearly is the National Institute for Health Research. We've had evidence that is very critical of the volume and percentage of spend within that context on piloting, on behavioural change and on seeking evidence of what works. Clearly if you're going to get beyond the argument between nudge and regulation, the best form of nudge that this context offers is good evidence on what will change and what will work. To point up this element of the question, the head of the Cabinet Office Behavioural Insights Team said to us that £500 million of research money is available and less than 0.5% of health research goes on behavioural factors. Yet we know that more than half of all years of healthy life are related to known behavioural factors. There is a discrepancy here. That's a very specific criticism that's been echoed in quieter ways by others. I'd like you to comment on it.

Professor Dame Sally Davies: With pleasure as, four years ago, I set up the National Institute for Health Research. In setting it up, we established a number of research programmes and, for the first time, we established a public health research programme in order to evaluate natural experiments that impacted on public health: things like cycling paths, things that were non-NHS. Indeed, last year we reckon we spent £40 million on research in public health through the NIHR trials and major studies part. It's very difficult to say how much we're spending on behavioural research. I'm glad David Halpern knows because I don't. We are going to do a new study on how much we're putting where, and now the NIHR is set up. What I can tell you is that we've been steadily increasing the amount of money going into public health. Indeed, Theresa Marteau from 1 January is in receipt in her unit of £1 million a year for five years, as a behavioural research unit looking at public health. We've also committed in the public health White Paper to establishing an NIHR school of public health, which will increase the evidence base for the interventions for public health, just as we've done for social care and primary care. We're not where I want to be, but we're a lot further than we used to be and it's a steady upward trajectory. You know, we can't go any faster. This is not about money. It is about the quality of the researchers, the capacity and capability. I'm working with the ESRC and MRC in exactly that, and we're trying to increase health economists. I'm sure whatever subject you choose to talk about, we will find the block is not what I'm prepared to fund; the block is the quality of the scientists and the number of the scientists.

Q362 Lord Sutherland of Houndwood: I think that's a very important distinction you're drawing between the capacity for support—is it available?—and whether you can actually carry out research that's worth funding. I'm sure we'll note that point as very important. It would be very helpful, and I'm sure we'll ask David Halpern the same, just to see your numbers on what the graph is on the spend in this area. I know it's not exact.

Professor Dame Sally Davies: I can't give you a figure on behavioural research, apart from the new unit, because we fund it in all sorts of different places. It's not gettable. I can tell you we are about to announce from our latest themed call, which was on obesity, £8-million worth of research and it's between 12 and 15 studies. Some of them have behavioural elements, but I can't tell you; we don't collect it in that way.

Q363 Lord Sutherland of Houndwood: Just to get a handle on the numbers you have given us, is the £40 million in a year or is it over five years?

Professor Dame Sally Davies: Yes, it was last year.

Q364 Lord Sutherland of Houndwood: That's a negative to his claim, because it's £40 million of £500 million according to him.

Professor Dame Sally Davies: That's in public health research, of which some is behavioural.

Q365 Lord Sutherland of Houndwood: We would like any numbers you do have, however, because clearly this is a very important point that's been put to us; we will want to say something about it. The better informed we are, the better our comment will be.

Professor Dame Sally Davies: We'll do you something on that, with pleasure.

Q366 Lord Sutherland of Houndwood: The other element to this question relates to NICE and a report that we have now seen in the latest *BMJ*. I'll just read the headline: "NICE is told to halt work on 19 public health topics." There's a bit of variation between whether these are being stopped or merely halted. We couldn't but notice this and notice the fact that one of NICE's major projects has to do with obesity. Is it halted? Is it stopped? Is this simply a temporary hiatus while the Government draws its breath? Again, it's the opportunity for you to comment on this report and its accuracy.

Richard Cienciala: NICE has a really important existing and future role as a contributor to building the evidence base. The reason that some of the studies have been halted in relation to obesity is that they were underway and, in the meantime, the Government was producing a White Paper and it was felt really important that NICE looks again at its programme of work in the light of the White Paper and in the light of the new system being set up. As it happens, tomorrow afternoon I have a meeting with NICE specifically about this: how we revive and revise its forward programme of work in the light of the White Paper, so that what NICE can offer will be maximally useful to local authorities as they take up their new role and really support the new system.

Q367 Lord Sutherland of Houndwood: Just two minor points in relation to this. One is it doesn't strike me that that is, as outlined, necessarily the best way to deal with a piece of scientific work that's ongoing, just to say "stop". It might be you lose things that you will never pick up again. I think that's something that has to be clarified. Is that being taken into account—this is the second point—in the discussions with NICE? If you'd like to give us a considered paragraph or two on this report, again, that would be very helpful.

Professor Dame Sally Davies: Can I just say that NICE does not do primary research, which of course you can't turn on and off. They do secondary research—research synthesis. You can turn that on and off. Whether we should is another matter, but you can.

Lord Sutherland of Houndwood: It's only surveys and analysis.

Professor Dame Sally Davies: Yes, it's not primary research, I can reassure you.

Q368 The Chairman: Before Lady O'Neill comes in, there's a very specific point, which is that NICE was going to do or was in the process of doing—I accept it's secondary research—some work on the whole systems around all of this. Some of the evidence that we've had, quite a considerable amount of the evidence that we've had, has suggested that a

whole-systems approach is what is needed in tackling obesity. I think we'd be particularly interested in anything you could submit to us about that particular issue, because that is something that we've heard now quite a lot about in this Committee: that a whole-systems approach is needed and that is one of the pieces of the research that, if you like, has thus far been turned off. I don't know if you want to say anything now, but I would most certainly like something afterwards, if that's possible.

Richard Cienciala: Fine. I can simply reiterate that that's one of the pieces of work that we're discussing. We agree that, and indeed the Government's position is that, to tackle obesity effectively you need a whole-system approach, which involves action at national, local and individual level—population and individual level—and it involves action by a whole range of partners working together. That's very much in support of that whole-systems approach.

Q369 The Chairman: You'll let us have something, will you?

Richard Cienciala: We can do that, certainly.

Q370 Baroness Hilton of Eggardon: It's on this particular point. It seems to me it's the wrong way round: surely the studies that NICE is doing should feed into the White Paper, rather than vice versa. I really don't understand the curious logic of saying that the White Paper should take primacy over evidence that NICE might accumulate. I really don't understand that at all.

Professor Dame Sally Davies: The first thing to say is the obesity framework won't be a White Paper. As for the other, you're presumably addressing it tomorrow and we will address it in a paragraph to you.

Q371 Baroness O'Neill of Bengarve: This is probably a very small point, but you suggested the Government's policy is to stay as near as possible the bottom of the intervention ladder out of respect for choice. One can argue that, because which conception of choice one has in mind depends upon which conception of freedom and coercion. There's a very specific point in there, which I think has considerable public health implications, which is that there are a lot of people who do not have a choice about what meals they get, where the meals are provided at public expense and under the authority of government departments. I'm thinking particularly of prison populations, of school children, where I agree there are certain let-outs, and also of people in hospital. There's no issue of choice there. What is the attitude towards providing unhealthy food to people who are captive eaters?

Richard Cienciala: In talking about the Nuffield intervention ladder and its overall position, the Government also included two caveats. One was that there were particular groups in the population, and children were cited as an example, where an additional degree of protection and support is justifiable. The second caveat was that there may be exceptional circumstances where it is absolutely right to move higher up the Nuffield intervention ladder. In relation to school food, there are existing statutes that govern both the nutritional content and the combination of meals that may be served in schools. Those remain in place, so that underscores the point.

Q372 Baroness O'Neill of Bengarve: A rather clearer example, because there's not the let-out of parental perversity, if you wish, is the question of the prison population and those who are detained in other respects or those who are hospitalised. Will it be—is it—absolutely clear that higher up the intervention ladder is appropriate for protection of people who are captive eaters?

Professor Dame Sally Davies: I can tell you that, in the hospitals in which I've worked, the dieticians have discussed with the catering department the food and have had some input. All hospitals do have dietetic departments. I suspect that is covered there. The prison population I'm not aware we've thought through and that's an interesting idea.

The Chairman: If it were possible to let us have a note on some of that, I think actually that's quite an important issue. There's certainly plenty of evidence going the other way—not on obesity but on malnutrition of older people in hospitals. Again, you've got captive eaters so what happens to captive eaters? If there were something you could let us have on that, I think that would be very useful.

Q373 Baroness Hilton of Eggardon: If we could go back to the voluntary relationship with the food industry and providing information to the public about particular sorts of food that are healthy or not, the traffic-light system, which was promulgated by Sainsbury's, was clearly better understood by the public than ones that had elaborate indications of percentages and so on. Some people don't even understand percentages. I wondered whether it was an example of the undue influence of the food industry that the Government decided not to adopt the traffic-light system as part of their regulation.

Richard Cienciala: The Government has been quite clear that one of the goals in this area is to have a consistent approach that applies across the food sector, and that the approach that is most likely to yield that is to have nutritional information as a percentage of guideline daily amount. That is the basis for the Government's current approach. Of course, this is an area that is subject to EU legislation, which happens to be under discussion at the moment. We'll need to see how that legislation turns out.

Q374 Lord Krebs: Sorry, just to interrupt if you don't mind: did you settle on the percentage GDA because the evidence showed that consumers find that easier to interpret? If so, that's not evidence I've seen; I've seen the evidence from the Food Standards Agency that goes the other way.

Richard Cienciala: No, I didn't say that.

Lord Krebs: Why have you settled on that then?

Richard Cienciala: What I said is that Ministers were very clear that they wanted an approach that was going to command consistent support and be consistently adopted.

Q375 Baroness Hilton of Eggardon: Traffic lights could have been consistently adopted across the food industry, so why did they settle on percentages rather than traffic lights?

Richard Cienciala: We do not believe that traffic lights would have been consistently adopted by the food industry.

Lord Krebs: So you've caved into the food industry.

Richard Cienciala: Ministers faced a choice between opting for an approach that would give consistency—and the evidence does show that consumers are very keen on a consistent approach—and that's the approach they opted for on those grounds.

Q376 The Chairman: Did you want to tackle the question about an obesogenic environment or do you want to take that one? We've covered quite a lot of that.

Baroness Hilton of Eggardon: I thought we'd basically covered it.

The Chairman: We've covered quite a lot of that, but there are some specific issues I think we might want to pick up a bit further.

Q377 Baroness Hilton of Eggardon: Apart from providing information to the public which they understand, there's also the question of providing opportunities for exercise, open green spaces and so on. That surely would require legislation, not just voluntary associations. Is the Government pursuing opportunities for the public to have better exercise, open spaces and so on?

Professor Dame Sally Davies: The forum for the discussion of this is actually the Cabinet Sub-Committee on Public Health, which brings together Ministers from all these Departments. They're using the Olympics as an opportunity to look at exercise and space but, of course, much of it is down to how the local authorities play it out. That's one reason I personally am very pleased that we're moving Directors of Public Health into the local authorities, because it means that they should begin to look at all the things they do—education, planning, cycling paths, transport, whatever—through a health lens as well as through the cost lens and the service lens. Most of that will fall to local authorities.

The Chairman: Professor Millstone, do you want to come in on any of this? You have remained remarkably silent.

Professor Erik Millstone: Uncharacteristically so, perhaps. I'm at a loss to see why it is assumed that the traffic-light system would be any less consistent than a percentage of GDA. The Baroness observed a significant percentage of the population don't know what a percentage is, whereas the traffic-light system is well recognised, although it did encounter some resistance from the food industry. I think it's slightly misleading to characterise it as, "Ministers have decided in favour of percentage guideline daily amounts," because it was quite clear from the document I referred to earlier that, as of January of last year, in the policy Green Paper that Andrew Lansley had issued, he'd already made up his mind at that point that he would not endorse and support traffic-light labelling. I don't think it was on the grounds of consistency; it was a policy decision taken prior to seeing the evidence. I'm also very puzzled by the Government's attitude towards the role of local authorities. In connection with the project that I ran, across nine countries we canvassed a very wide range of different sources to identify as rich a portfolio of policy interventions as we could, and they were almost entirely either at the European level or at the national level. We could find very little at the local level. If local government can exercise influence over these matters, it can do so in only homeopathic doses really. It seems rather curious that the Government is putting an enormous emphasis on the responsibilities that it's assigning to local authorities, when actually they have very few powers. It strikes me as a bit like, "If it works, we'll take responsibility. If it fails, it's the failure of the local authorities." I'm also puzzled by another assumption that seems to underlie policy, which is that while childhood obesity in the UK, in incidence, may have doubled in 20 years, it will take a great deal longer

than 20 years to halve it. *Prima facie*, I don't see why that should be the case. If our culture and our attitudes could change sufficiently rapidly for it to double in that period, in principle, over a similar period it ought to be possible to halve it but, for some reason, the assumption seems to be that this is so deeply embedded and that intervention must be such a light touch that we can or should or must allow any change we achieve to be accomplished over a much longer time period.

Q378 The Chairman: Professor Millstone, you couldn't see Dame Sally's face but I could, and Dame Sally's face was quite a study at one point there. Do you want to come back at all, Sally?

Professor Dame Sally Davies: I'm on record with your Committee on my views about homeopathy. We are giving significant budgets to local authority and they have significant powers, if they choose to play them out. They will get more money if they do play them out. Apart from regulation from the national centre, it is quite difficult to make change. We see it as being a complex environment and local authorities have a role to play. As for halving it in 20 years, we don't quite understand the genetics, let alone the epigenetics and the role of brown fat and central heating. We could have a really interesting debate about why people are fat. I am overweight because I eat too much and I don't take enough exercise, but there are other issues in our population. We are talking about what we can do around the obesogenic environment, the complexity of the handles on that and the behavioural interventions at many levels, but I don't think we fully understand obesity to be able to say we can halve it in 20 years.

Q379 Lord Sutherland of Houndwood: I am not convinced by Professor Millstone's reversibility argument in the same span of time. I look at it from the context of what's happened in school education. I don't think you can turn it around in half the time or even the same amount of time. I would be very careful with that argument. This is a supplementary I should have asked earlier, but we were very pressed. I think we can put it in now; it does relate to a point just made. We can give money to the local authorities if they have good ideas. The suggestion that the Department doesn't know how much it's spending on behavioural research seems to me a worrying one. Shouldn't it know, and shouldn't it be saying that actually we have certain targets, because this is so important? That was the second part of David Halpern's claim—that we know that it's behavioural activity that is a major factor—so we ought to, if we're being thorough in our evidence, look at what degree of investigation we're giving to that as distinct from other factors. I agree that genetics and epigenetics are very, very important, but shouldn't we know or shouldn't you be asking?

Professor Dame Sally Davies: I could do a great data trawl. I don't think that's a great use of time. What we are doing is trying to increase the capacity and capability. As that rises, we will be spending more. We have a good story to tell over the last three or four years of how we are increasing research in public health. I think it's going to be quite difficult to set up a national school of public health research, because we've had this split in public health academia between the academics and the practitioners. To really get to where we need to be, we've got to find a way of bringing them back together. I'm thinking that one through. We won't get big change and the evaluations we need until we achieve that.

Q380 Lord Sutherland of Houndwood: I understand that and I've been involved in fights with both sides of the argument, trying to bring them together. We've come up with translational research, which is a fine topic—a fine name for doing that. I suppose what I'm really asking is, if it's as important as actually this Committee thinks it is to look at how you can effect behavioural change, shouldn't there be a strategy of saying we're going to target that? One element of a strategy would be saying we'll know whether we're spending more, less or whatever over a period of three or five years. Shouldn't there be a strategy and shouldn't we know whether or not that strategy's being followed?

Professor Dame Sally Davies: We have a strategy and Theresa Marteau is heading that strategy in the first place, and we are developing other strands.

Q381 Lord Sutherland of Houndwood: I suppose I'm narrowing her arm to say strategy means something to do with sums of money.

Professor Dame Sally Davies: I don't think it does; I think it's about outcomes actually, not money spent on it or process.

Lord Sutherland of Houndwood: Can we write that down? If I've heard scientists say that before, it's very seldom.

Q382 Baroness Perry of Southwark: We only have a couple of minutes left—perhaps a last opportunity for Dame Sally particularly to define exactly what is the difference between a nudge and a nanny.

Professor Dame Sally Davies: I actually have a quote here. I thought I might use it if pushed. The reason I like it is because Professor Theresa Marteau quoted it, and it comes from the Thaler book on it. A nudge is: "any aspect of choice architecture that alters people's behaviour in a predictable"—

Baroness Perry of Southwark: Slow down.

Professor Dame Sally Davies: I thought you'd have heard it before: "any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives". I haven't got a quote for nannying, but I guess it's Ministers telling people what they should do. Actually I think nannying is a bit different from regulatory approaches, but to get the regulatory approach you've got to get the public accepting of it and we're not there yet.

Lord Sutherland of Houndwood: I think the definition of "nannying" is what the other party tells the public to do.

Q383 Lord Krebs: Very briefly I wondered if I could offer a thought about the distinction. When Theresa Marteau gave evidence to us earlier this afternoon, she referred to the distinction between behavioural systems that are conscious and cognitive, and those that are reflexive and automatic. It seems to me that nannying targets the former, things that you think through, whereas nudging works on your reflexive system; you don't realise you're being nudged but you find yourself doing something different.

Professor Dame Sally Davies: Nicely put. I like that.

Lord Krebs: I don't know whether Theresa Marteau is nodding or whether she thinks I've got it wrong.

Q384 The Chairman: There is an issue as to whether nudges are seen as more effective than nannying. In your view, do you think that they are?

Professor Dame Sally Davies: I think you need a multi-pronged approach. It's a complex problem in a complex environment, and no one approach is going to solve it.

Q385 Baroness Perry of Southwark: Nannying can be counter-productive, can't it?

Professor Dame Sally Davies: Yes.

Baroness O'Neill of Bengarve: If I may say so, I think you gave a very extreme definition of "nannying". I'm not going to offer a better one now but, of course, if that's what nannying is, we're all against it.

Q386 The Chairman: Professor Millstone, I just want a quick comment from you about the value of nudging. Do you think there is value in nudging? You've looked worried.

Professor Erik Millstone: I have yet to see evidence that anything that might count as nudging, with that definition, is able to achieve anything in respect of obesity. I think the Foresight document and other documents give plenty of evidence that nudges on their own will be ineffective. I'd like to make one observation, if I may, in respect of the role of local authorities and the relationship between central government and local authorities, in respect of resources. The observation as I understood it was that some resources would be made available to the local authorities, although I'm unclear as to what powers they will have as distinct from resources, but that further resources would flow only to those that were successful in achieving lower rates of obesity. That strikes me as, in a sense, a perverse judgment. The communities that probably need greater resources are those for which the local authority has not yet been successful in lowering the incidence of obesity, because otherwise, if the resources only flow to the local authorities that have succeeded in lowering the incidence of obesity, that's effectively penalising the victims.

Professor Dame Sally Davies: It fits with this Government's proposals of payment by results, so it's not that everyone will have to make the same increases; they will be variable. Why pour good money after bad? If they're not impacting on it, are they doing the right things? What we're trying to do is to drive innovation and different ways of doing it by saying: if you improve it, you will get more money. It's different baselines to different levels, and it is about trying to get innovation into the system. We will evaluate it as an experiment. I think it's fascinating.

The Chairman: Thank you very much. Can I thank all of you very much indeed for giving evidence, for being very robust in your comments? I think that was extraordinarily useful. There was quite a lot of additional material that we asked for, so we do hope that you're going to be able to let us have that. Also, there may be things you wish you had said or would have wanted to say, but there wasn't any time, and there were some references that you cited, in particular I think Professor Millstone, that we'd very much like to have. You'll get a transcript in the next 10 days or so; get the chance to correct it. If you submit any

Department of Health and Professor Erik Millstone

additional material at the time, that would be enormously helpful. Thank you very much indeed. Thank you, Committee. We're meeting Tuesday and Wednesday next week.

Supplementary written evidence from the Department of Health (BC 151)

i) The Committee requested information on how much the Department of Health is spending on behavioural research

1. The Department invests around £1 billion in research through the National Institute for Health Research (NIHR) and the Policy Research Programme (PRP). Research with relevance to behavioural factors is supported through most of our funding streams, and spend on this cannot be disaggregated from total spend across the portfolio. A range of examples is given below. Figures are the total funding for each stream in 2009-10.
 2. The NIHR Clinical Research Network (CRN - £286 million) provides a world-class health service infrastructure to support clinical research in the NHS in England. The CRN comprises a Co-ordinating Centre, six topic specific research networks, a primary care research network and a comprehensive research network. Eligible studies comprise randomised controlled clinical trials of interventions (including prevention, diagnosis, treatment and care) and other well designed studies for commercial and non-commercial sponsors. Many of the studies supported through the CRN have relevance to behavioural factors, for example studies of preventative interventions delivered through primary care.
 3. The main focus of the NIHR Biomedical Research Centres (BRCs - £118 million) and Biomedical Research Units (BRUs - £22 million) is on transforming their scientific breakthroughs into life-changing treatments for patients. However, some of their research is relevant to behavioural factors. For example, the Southampton Nutrition, Diet and Lifestyle BRU is carrying out research on altering food choices through behaviour change in young women.
 4. The nine NIHR Collaborations for Leadership in Applied Health Research and Care (CLAHRCs - £19 million) undertake high-quality applied health research that is focused on the needs of patients and support the translation of research evidence into practice in the NHS. Research undertaken by CLAHRCs includes studies of preventative interventions, with relevance to behavioural factors.
 5. The NIHR Health Technology Assessment (HTA) programme evaluates interventions in the NHS, and the NIHR Public Health Research Programme (PHRP) evaluates public health interventions delivered in other settings. These programmes spent a total of £41 million in 2009-10.
 6. Examples of recent projects funded by the Public Health Research Programme:
 - David Ogilvie (Cambridge)- Health impacts of the Cambridgeshire Guided Busway (Natural experiment)
 - Iain Crombie (Dundee) Reducing alcohol-related harm in disadvantaged men: development and feasibility assessment of a brief intervention delivered by mobile phone (Feasibility studies and pilot RCT)
 - Judith Green (LSHTM) 'On the buses': evaluating the impact of free bus travel for young people on the public health (Natural experiment)
 - Janet Cade (Leeds) - Does the Royal Horticultural Society Campaign for School Gardening increase intake of fruit and vegetables in children? (2 cluster RCTs)

- Christopher Bonell (LSHTM) - The effects of schools and school-environment interventions on health: evidence mapping and syntheses (Evidence synthesis)
- Mark Petticrew (LSHTM) - Crime, fear of crime and mental health: evidence synthesis of theory and effectiveness of interventions (Evidence synthesis)

7. In 2010, the HTA and PHRP launched a joint obesity call. Projects are just being announced but anticipated spend is £8million.
8. NIHR Programme Grants for Applied Research (£29 million) each fund a series of interlinked projects on conditions that cause significant impact on the NHS. Many of the programme grants have relevance to behavioural factors, for example those studying interventions for prevention of disease and injury.
9. The NIHR Research for Patient Benefit Programme (£12 million) awards grants to promote health, prevent disease, overcome illness and improve patients' everyday experience of the NHS. Much of the research has relevance to behavioural factors.
10. Some funding underpins the spectrum of NIHR activity (including research with relevance to behavioural factors), for example Flexibility and Sustainability Funding (£128 million), Research Design Service (£12 million), NIHR Faculty (£69 million), and NIHR Systems (£24 million).
11. The Department's Policy Research Programme (PRP - £34 million), provides the evidence base for policy development and evaluation of policy implementation in health and adult social care. Since 2005, the PRP has invested in two new academic units where the programmes have a major focus on research relating to behaviour change. A project list for the Public Health Research Consortium (funding £4m over five years) is attached. The recent Public Health White Paper announced the funding of a Policy Research Unit on Behaviour and Health (funding of £5m over five years).
12. DH/NIHR also works in collaboration with other funders. In response to the National Institute of Cancer Research report on spend on prevention, the National Prevention Research Initiative (focusing on chronic disease prevention – not just cancer) was launched in 2005⁴²⁹. So far the NIHR contribution has been almost £10m towards the four calls to date. The UKCRC Public Health Research centres are another collaborative venture. The NIHR contribution is £5m over five years. Most of the Centres have a significant focus on research relating to behaviour change.

Public Health Research Consortium Programme 2005-2011

Completed Projects

Project Code	Duration	Project Dates	Title	Principal Investigator
AI-05	12 mths	1.11.05-	National Tobacco Control	Gerard

⁴²⁹ The National Prevention Research Initiative (NPRI) is a national initiative made up of government departments, research councils and major medical charities that are working together to encourage and support research into chronic disease prevention. Its core aim is to develop and implement successful, cost-effective interventions that reduce people's risk of developing major diseases by influencing their health behaviours.

		31.10.06	Policies: do they have a differential social impact?	Hastings, Stirling
A2-06	18 mths	1.4.07-31.9.08	Do price and income impact on young people's smoking?	Nigel Rice, York
A3-06	16 mths	1.8.07-30.11.08	Estimating the Costs to the NHS of Smoking in Pregnancy for Pregnant Women and Infants	Chris Godfrey
A5-06	24 mths	1.4.07-31.3.09	Impact of smokefree legislation in England on individuals and communities: qualitative longitudinal study	Stephen Platt, Edinburgh
A7-08	6 mths	18.8.08-20.2.09	A review of young people and smoking in England	Amanda Amos, Edinburgh
B1-06	12 mths	1.1.06-31.12.06	The changing social pattern of obesity: an analysis to inform practice and policy development	Martin White, Newcastle
B2-06	24 mths	1.1.07-30.9.08	How do young people engage with food branding?	Martine Stead, Stirling
B4-06	9 mths	1.2.06-31.10.06	Development of monitoring and evaluation framework for obesity policy in England	Stephen Platt, Edinburgh
B5-06	9 mths	1.9.06-31.5.07	Scoping review on evaluation of Healthy Start	Mary Renfrew, York
C1-05	12 mths	1.10.05-31.9.06	Shiftwork and health: a systematic review	Mark Petticrew, LSHTM
C2-06	24 mths	1.10.06-30.9.08	Helping chronically ill or disabled people into work: what can we learn from international comparative analyses?	Margaret Whitehead, Liverpool
D1-05	9 mths	1.10.05-30.6.06	Assessing the challenges of applying standard methods of economic evaluation to public health programmes	Mike Drummond, York
D2-06	11 mths	1.10.06-31.8.07	Tackling inequalities through the social determinants of health: building the evidence base.	Mark Petticrew, LSHTM

Ongoing Projects: will move up to completed projects when Final Report approved

Project Code	Duration	Dates	Title	Principle Investigator
A4-06	22 mths	1.8.07-31.5.09	Dynamic model of adult smoking related costs and consequences for England	Chris Godfrey, York
A6-08	16 mths	1.6.08-30.9.09	Evaluating the impact of picture health warnings on cigarette packets	Heather Wardle, NatCen
A8-10	13 mths	1.3.10-31.3.11	Using qualitative research to inform interventions to reduce smoking in pregnancy in England: a systematic review of qualitative studies	Hilary Graham, York
B3-07	20 mths	1.8.09-31.3.11	What scope is there for averting the adverse health effects of obesity? Investigating the role of physical activity.	Chris Power, UCL
B5-07	46 mths	1.6.07-31.3.11	The process and impact of change in school food policy on food, nutrient intake in school and beyond	Ashley Adamson, Newcastle
B5-07A	34mths	1.6.08-31.3.11	An economic evaluation of change in school food policy	Nigel Armstrong, Newcastle
B6-07	27 mths	1.2.08-30.8.10	Obesity in ethnic minority children and adolescents: developing acceptable parent and child-based interventions in schools and places of worship	Seeromanie Harding, Glasgow
D3-07	30 mths	1.9.07-28.2.10	Will policies for the early years reduce inequalities in health? A synthesis of evidence to inform policy development.	Catherine Law, UCL

ii) The Committee requested information on the National Institute for Health and Clinical Excellence work programme on obesity and on a whole-systems approach to tackling obesity

1. The Government recognises the importance of the independent advice provided by the National Institute for Health and Clinical Excellence (NICE) and the high regard with which practitioners hold NICE recommendations. As such, the Government has made it clear that NICE will continue to play a valuable role in the development of public health guidance.

2. In light of the coalition Government's priorities for improving health, Ministers have reviewed the topics on NICE's public health work programme on which NICE has already commenced work to ensure that they remain appropriate. Consequently, NICE was asked to put on hold work on the *Preventing obesity using a 'whole-systems' approach at local and community level* guidance currently in development.

3. Providing guidance on how local communities can take a whole systems approach to tackle the obesity agenda is a topic that is relevant and of value to public health practitioners. However, with the significant reforms to the public health system and the forthcoming White Paper follow-up document on obesity it is timely to revisit the focus of this work. Any guidance should be fit for purpose, supporting practitioners and local authorities, in their new role within the public health system in delivering effective local action.

4. The Department is also considering the position on two referred topics for obesity guidance on which NICE has not yet commenced work:

- i) Identification and management of overweight and obese children in primary care
- ii) Identification and weight management for overweight and obese children:
community based interventions.

iii) Government view of a whole systems approach

1. The Government considers that the complex nature of obesity means that the Government cannot tackle obesity alone. Our work will involve all parts of society and focus on developing partnerships for action with the private, public and voluntary sector, as well as local communities.

2. The Government accepts the Foresight report on obesities that a broad response is required to tackle the 'obesogenic environment' and generate the degree of change necessary to address obesity. In addition, a range of interventions are necessary at individual, family, community and societal level.

3. The Government considers that progress can be made on tackling obesity by supporting people to make better choices and working in partnership – alongside individuals taking responsibility for their own health.

4. Local authorities are in a good position to influence many of the wider factors that affect health and well-being. In future local authorities will be given responsibility for tackling obesity and improving health. This will enable them better to align health and other relevant policies such as planning, transport and the environment to help deliver improvements in health.

iv) The Committee requested additional information on how the Government is working to improve food provision within public funded organisations, including where there are 'captive eaters'.

1. The Government is developing Government Buying Standards (GBS) for food, which encourage procurement that reduces the environmental impact of food and catering to support a healthy balanced diet for public sector workers and those in the care of public sector bodies.
2. GBS will define mandatory standards and voluntary best practice applicable to central government departments. To maximise benefits Government will promote GBS to the wider public sector.
3. NHS organisations procure food at a local level and as set out in the NHS Operating Framework 2011-12⁴³⁰ will consider the GBS for food when the Government publishes the GBS in 2011.
4. The Ministry of Justice (including courts and prisons) procure food centrally and therefore GBS is applicable.
5. Schools in England are already implementing standards to improve food provision to meet the nutritional requirements of school-aged children. These standards were introduced under the previous Government and are set out in the 2008 regulations⁴³¹
6. The Food Standards Agency produced a toolkit for caterers providing food in major institutions⁴³², these are currently being updated and will provide additional support for GBS.

Background information

Government Buying Standards on Food

7. DEFRA and DH are the lead Government Departments on the development of Standards for the public procurement of food and food services. GBS builds on learning from the Healthier Food Mark project and the external review of the GBS closed on 24 Jan 2011 with a view to publication in March 2011.
8. The GBS standards for sustainable procurement come in two levels, the minimum level is mandatory for central government departments and their executive agencies and a higher best practice level.
9. The objective of including nutritional criteria in the standards is to reduce the salt, fat (particularly saturated fat) and sugar content of food and increase the amount of fruit and vegetables, fibre and oily fish, in the foods procured, and meals served, by the public sector. Additionally, the inclusion of nutritional criteria will contribute toward Department of Health objectives of reducing diet-related ill health and its costs to the NHS and the wider economy.

NHS tools to support healthier food provision

⁴³⁰ http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_122738

⁴³¹ <http://www.legislation.gov.uk/uksi/2008/1800/made>

⁴³² <http://collections.europarchive.org/tna/20100907111047/http://food.gov.uk/healthiereating/healthycatering/pubinstguide>

10. There is a range of ongoing support available to NHS organisations, which aim to ensure access to quality and nutritious food is the norm within the NHS. This includes -

- The High Impact Action (HIA): 'Keeping Patients Nourished': launched last year⁴³³
- 'Essence of Care' benchmarking tool (which helps staff appraise how they deliver care, provides a benchmark for nutrition and hydration)⁴³⁴.
- The Better Hospital Food programme, which helps NHS organisations to deliver consistent high quality food and food services to patients⁴³⁵.
- The Protected Mealtimes Initiative (PMI), which helps patients to eat without interruption and with nursing staff assistance by stopping all non-urgent clinical activity at meal times⁴³⁶.
- Sustainable Food; A Guide for Hospitals, which provides guidance on what hospitals can do to improve the sustainability of the food they provide to patients, staff and visitors, and advises on how hospitals can assure the sustainability of their food service provision.⁴³⁷

11. Within the new registration system, (under the Health and Social Care Act 2008), part of the guidance relates to 'meeting nutritional needs'. Providers of regulated activities must ensure that service users are protected from the risks of inadequate nutrition and hydration.⁴³⁸

Toolkit for caterers providing food in major institutions

12. The Food Standards Agency has previously provided advice to support major institutions deliver a healthier and nutritious food provision. This toolkit included practical guidance on how to improve the nutritional value of food provided including reducing the amount of saturated fat, salt and sugar.

- This advice includes weekly example menus, to help caterers across the UK provide food that meets the nutritional needs of adults working in or in the care of the public sector. Two pieces of guidance exist aimed at caterers (1) who provide food to adults aged 19 to 74 (2) and people aged over 75 years in residential care. To note this guidance does not cover people with specific medical dietary needs.

13. DH are currently revising this toolkit to support the GBS for Food.

31 January 2011

⁴³³ http://www.institute.nhs.uk/building_capability/general/keeping_nourished_getting_better.html

⁴³⁴ http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_119974.pdf

⁴³⁵ <http://www.hospitalcaterers.org/better-hospital-food/>

⁴³⁶ <http://www.hospitalcaterers.org/documents/pmd.pdf>

⁴³⁷ http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_098880.pdf

⁴³⁸ http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_079931

**Living Well west Midlands, Great Yarmouth Community Trust,
Yorkshire and Humber Health Trainer and Central YMCA**

Written evidence from Living Well West Midlands (BC 64)

Questions

Research and Development

1. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?

A: For Living Well this can be described best in terms of individual case stories and I enclose our newsletter which contains really good examples of how people have turned their lives around and what motivated them to do it through the services provided by our projects. Paul, who is one of the beneficiaries taking part in our Staffordshire Changes project, was drinking at the age of nine, and taking drugs from the age of eleven. He was signposted to Changes in 2008 and through the wellbeing workshops, he changed the way he looked at his problems, with skills and tools provided to help him deal with life. The encouragement towards a more structured life, with discipline and routine really helped him turn his life around. He is now supporting the Changes programme himself though volunteering. We have attached the full story (written in Paul's own words), for your interest.

6. How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

A: I think we can learn from the work and recommendations of the Foresight reports with respect to the different types of intervention that should be interacted with to achieve policy goals. These reports have helped support the importance for our Living Well work to be run in different settings such as schools, workplaces, luncheon clubs, community buildings, Councils or Health centres, depending on the needs of the community and how that community is set up.

7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

A: It is important that behaviour change interventions are used in combination with other policy interventions. For example, individuals who are trying to change their eating habits to healthier options need to be supported by the type of food available in their area. If all that is available are fast food outlets and snack bars, this will act against that individuals ambitions and they are more likely to fail to achieve them. Our Dudley Healthy Retail project was based on research with the community in an area where little fresh fruit or vegetables were readily available and one of the outcomes of this was for them to work with schools and local traders, to encourage parents coming out of school to buy fruit and veg. from stalls (stall owners were given an incentive to move closer to the schools). This was backed up by nutrition and cooking skills in the schools. It took time for parents to adjust but latterly the traders involved have reported increased sales. This is also true on a larger scale, for example planning, housing, environment all have an impact on the way people live their lives and can help support healthier behaviour, such as walking rather than driving, accessibility of open space to play etc.

Practical application

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

A: The Living Well portfolio has been subject to a large scale evaluation, which has meant the outcomes, rather than just the outputs, of the work have been measured. This evaluation work has been really important in terms of measuring the impact on individual's behavior and lives, rather than just counting numbers of people attending a session. The evaluation work has proved valuable in giving the projects credibility with potential funders, and as part of this we have been able to help projects working in the voluntary and community sector with cost-benefit tools and training sessions on how to use them. However, in this case we were in a good position in that BIG understood the importance of evaluation and were willing to help fund it. The case study evidence has been particularly useful, as evidence to feed into policy documents and also promote the projects through the press and events. The Voluntary and Community sector is quite often expected to provide a huge amount of information to justify their work in a very short bid timescale. While it is important for organizations to provide sufficient proof that a project will work, smaller Community organizations quite often do not have the capacity or funding to carry out this type of work to the level required by funders or commissioners, as it is an intensive process in terms of staff time and a level of skill is required for it to be carried out effectively. Evaluation also requires a degree of independence by those evaluating. Support to these organizations to help them develop their evaluation work is therefore essential, otherwise smaller community groups may not be in a position to provide the evidence required.

9. Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

A: It is very important for Government to learn lessons from the success or lack of success of interventions, especially from voluntary sector to be fed back into the design of future interventions. Many projects within the Living Well portfolio work in partnership between local authorities and voluntary sector organizations. Many voluntary sectors act as delivery agents for behaviour change interventions in the community and therefore have firsthand experience of the challenges faced and the effective ways in which provisions can be delivered. At Living Well, we think it is very important to disseminate the lessons learnt throughout our portfolio in order to influence the design of future preventions. We are currently writing a legacy document, which will contain case studies from each project addressing what challenges they have faced, the real impact of their work and "top tips" for the future.

14. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

A: I think it is important to work with the individuals and families who are most likely to be targeted for behaviour change in order that interventions becomes a workable solution, rather than one that policy makers or other interested groups 'think' might work from an academic perspective. Many of our projects are based on research with the groups who have been targeted and have been honed and improved based on feedback from those involved at every level. For example our Living Well Herefordshire project worked with Schools, School nurses, parents and children to offer after school activities and support for children identified with weight or social problems. During the course of the work, feedback

Living Well west Midlands, Great Yarmouth Community Trust, Yorkshire and Humber Health Trainer and Central YMCA

from the school nurses and the children influenced both the model of referral and the type of activities offered.

October 2010

Written evidence from the Great Yarmouth Community Trust (BC 32)

Summary

LIFE is a community-based obesity treatment programme for adults with a BMI of 27-40 delivered by a Community Trust (see notes 1,2,3,4). The dietary, physical activity and behaviour change advice is drawn from best practice guidance (5). LIFE is delivered by qualified and well trained nutritionists (6,7), and feedback from patients is positive. An impact evaluation of LIFE is currently in process (8), while LIFE is compliant with published technical and clinical advice (see appendix 1), the quantitative results of the programme do not fulfil expected outcomes (9). Nonetheless the LIFE programme can demonstrate the value of behaviour change interventions to the individual patients, and offers a very strong model for a group based weight management intervention (10), although it is not a specialist clinical model for class three obesity treatment (11). There are gaps in the evidence base for obesity interventions (12), including physical activity guidance for weight management (13) and mapping the health economics such as the financial returns for reduced waist circumference alongside weight loss (14). Local interventions such as LIFE may lack the robust data required to contribute to published research and inform policy development (15). One of the key issues for interventions is the planning for evaluation, local programmes often follow a more organic process of piloting, scale up, and delayed summative evaluation (16). But the programme should be thoroughly examined; referral and retention issues, for example, can inform understanding of patient groups (17). Effecting broader societal change will require a range of approaches, but the LIFE clients demonstrate the need for community-based obesity treatment through structured behaviour change programmes (18).

Evidence Notes

1. LIFE (Lifestyle Improvements Food & Exercise) is a community based obesity treatment programme for adults with a Body Mass Index of 27-40. The LIFE programme was written in 2004 based on existing best practice guidance. The programme provides information and practical experience in nutrition and physical activity, with support to clients for making the behaviour changes necessary for a healthier lifestyle.
2. The LIFE programme is delivered within the work of a Community Trust. Therefore the intervention is embedded in an ethos of offering quality services that meet the local need, and outside of traditional health settings. Programmes are run in community venues, and clients are linked in with local support services, including those provided by the local PCT, but additionally private and third sector services.
3. The standard LIFE programme consists of 10 weeks of structured intervention, with follow up sessions over the following 12 months. The programme commences with an individual clinic appointment to discuss dietary behaviour. Ten weeks of group sessions are offered with nutrition workshops followed by structured physical activity sessions. All the discussed information is reinforced in an attractive resource book for patients and in discussion activities during the sessions. Patients may also be offered local exercise on referral schemes, and will be referred/ signposted to all other appropriate services.

4. The LIFE programme has several derivative courses to ensure that there is a wide programme offer. Life 4 Life is a four week healthy lifestyles course for overweight and obese adults, and is also offered within workplace settings. IDEAL Life is tailored to the needs of patients with type 2 diabetes. A six week programme, Food Fitness Fun is delivered for weight management for people with learning difficulties. The obesity interventions are also set alongside community nutrition activities to support appropriate child nutrition including weaning, and improving food and cooking skills.

5. The content of a LIFE programme includes key nutrition and exercise messaging:

Advice on eating habits to include:

- Encouraging people to eat a minimum of 3 meal balanced meal every day.
- Ensuring that people reach “5 A Day” every day.
- Enabling people to develop a happy, relaxed relationship with food.
- Explaining the impact a balanced diet will have on health and weight.

Advice on physical activity habits to include:

- Adapting daily life to generate an increase in general physical activity.
- Encouraging patients to work towards a minimum of 30 minutes of moderate exercise 5 times a week.
- Providing opportunities for patient to try a range of different types of moderate exercise e.g. walking, swimming, gentle aerobic, gentle dance classes, chair-based exercise, gym sessions, moderate intensity circuit classes.
- Enabling patients to try lower intensity exercise improving body balance and relaxation e.g. pilates, tai-chi, yoga.
- Explaining of the benefits of physical activity to general health and weight management.

Behaviour and lifestyle changes:

- With each patient the LIFE group facilitator will need to assess, recognise and address the reasons why the person developed weight problems and the reasons why the patient has failed with previous weight management attempts.
- To increase chances of long-term maintenance of results patients should be advised in making progressive but significant changes to their lifestyle using principally the SMART model⁴³⁹.

6. The LIFE programme is delivered by professional nutritionists (qualified to degree level and listed on the Association for Nutrition register) supported by Level 3 Exercise Professionals (listed on the Register of Exercise Professionals) and State Registered Dietitians. The programme nutritionists are highly trained with a thorough knowledge of the programme and the broader weight management picture. They are also trained in motivational interviewing skills to enable them to work appropriately with ambivalent clients at an individual level.

7. Registered Nutritionists (or registered Public Health Nutritionists) are well placed as health professionals to deliver a weight management programme such as LIFE. They have an appropriate level of technical knowledge including understanding the role of significant comorbidities such as hypothyroidism, diabetes and osteoarthritis on weight management as

⁴³⁹ Content taken from LIFE Programme Specification, Eve Harrison for Great Yarmouth Community Trust, 2009

seen in a large proportion of the target group. Furthermore nutritionists will identify clinical conditions or concerns for which an individual should be referred to a dietitian or back to their GP. They are able to work flexibly in community settings. However a cross disciplinary model of nutritionists, exercise professionals and nutrition support assistants is also viable. Other similar weight management programmes have a 'nutrition assistant' or Health Trainer role, of someone to befriend clients, remind them of appointments and accompany them to sessions or to participate in exercise where appropriate, and provide ongoing support around their individual goals and behaviour change. However, for an obesity treatment programme it would not be appropriate for staff without relevant nutrition/dietetics/exercise qualifications to conduct measurements, or to give individual nutritional advice beyond the eatwell plate messages. It is also important to note that the title 'Nutritionist' is not currently protected so any rigorous intervention must seek registered nutritionists as the measure of competence. Furthermore there is a role for psychological support services, firstly in work to promote behavioural flexibility with patients, and secondly in work to provide interventions for individuals with complex emotional drivers influencing their eating behaviours.

8. A three part evaluation of LIFE is being conducted May – October 2010. The components of this evaluation include a review of the latest developments in the evidence base for obesity interventions to inform programme development, a quantitative evaluation of programme metrics to date (in process), and a review of qualitative evidence and impact for the LIFE programme (in process). The best practice guidance review and lessons learnt for programme development is detailed in appendix I (not published here).
9. Despite the alignment of the programme with all best practice guidelines (see appendix I (no published)), and its delivery by well trained focussed professional nutritionists, the outcomes for weight management metrics are slightly below target. This is particularly noted around weight loss, as patients adopt healthier eating patterns, but also increase their energy expenditure through physical activity, and so may be partially explained by the development of lean muscle.
10. The results from patient feedback questionnaires suggest that the attendees rate the LIFE programme highly. Many individuals are able to explain the difference that attending a programme has made to their outlook, and their confidence in being able to make positive lifestyle choices. They are often appreciative of the support of an individual nutritionist but comment on the value of having participated in the group sessions. Therefore LIFE offers a strong model for an intervention of tailored support through group based sessions.
11. A key threshold for interventions tackling obesity is a BMI of 40, with primary care services often targeting individuals with a BMI of less than 40, and tier three health care where available offered to individuals with a BMI greater than 40. However, although the clinical needs of individuals with higher BMIs may require both a broader team of professionals and thorough assessment of physiological and psychological health, it is worth noting that group-based behaviour change interventions within this target group should be considered for further exploration.
12. The guidance literature often notes the gaps in the evidence base, so some of the statements are tentative rather than confident in tone. Much of the research is drawn from international contexts. There is also the potential for a vast amount of grey literature, which

may often bear more relevance to programme delivery if there were an appropriate forum to hold this information. The most recent evidence note from NHS Quality Improvement Scotland⁴⁴⁰ again draws on available appropriate research and comments that ‘evidence regarding the relative effectiveness of individual or group weight management programmes is unclear’. This exemplifies the significant gaps around the evidence base – the premise of whether to run individual or group-based interventions will set the tone of any behaviour change programme and there is no clear evidence either way.

13. The physical activity component of LIFE draws on the At Least Five a Week report⁴⁴¹ reviewed in 2009⁴⁴². The recommendation for physical activity for the general population is 30 minutes of moderate intensity on five days of the week. However there is no national statement on exercise recommendations for weight management. The NOO briefing paper comments on that those who have already lost weight should be active for 60-90 minutes daily to avoid re-gaining weight⁴⁴³. Whereas the SIGN guidance⁴⁴⁴ for Scotland prescribes for an amount of physical activity equivalent to 1800-2500kcal/week ie. five sessions of 45-60 minutes of exercise for overweight and obese individuals. Therefore as an obesity treatment programme, the LIFE programme is operating within some areas for which there is no clear guidance. Furthermore patients on the LIFE programme frequently complain of their confusion around the messages they hear about what they should be doing.
14. The LIFE programme has very strong data to show reduced waist circumferences of patients. While the financial returns associated with weight loss has been investigated, the health economics sector has as yet failed to map the value of reduced waist circumference. This is despite the fact that health professionals fully recognise that central adiposity is a key predictor of poor health status, and there is a clear evidence base around this.
15. One of the challenges is the uni-directional transfer of information: programmes such as LIFE may lack sufficiently robust data to inform the evidence base nor may they have data to contribute to the development of realistic good practise guidelines for effective interventions.
16. The LIFE programme, like many other community based programmes was piloted and evaluated in one location. As the results were positive, funding was secured for the scale up. Programme resources were concentrated on delivery with a larger team over a much wider area, and while routine data records were kept, the need for robust data to fully answer evaluative investigation temporarily overlooked. However alongside ongoing internal evaluation, the programme has recently contributed data to the first collection using the Standard Evaluation Framework in development by the National Obesity Observatory, which is an attempt to pool data from service deliverers.
17. The LIFE programme has maintained beneficiary numbers throughout the duration of the funding and accepts both referrals from health and social care professionals, but also self referrals. In this intervention, patients who are self referrals have higher completion rates,

⁴⁴⁰ Evidence Note Number 29 June 2010, NHS Quality Improvement Scotland.

⁴⁴¹ At least five a week: Evidence on the impact of physical activity and its relationship to health, Department of Health 2004

⁴⁴² On the state of public health: Annual report of the Chief Medical Officer 2009, Department of Health 15.03.2010

⁴⁴³ National Obesity Observatory: Treating adult obesity through lifestyle change interventions – A briefing paper for commissioners, March 2010.

⁴⁴⁴ Scottish Intercollegiate Guidelines Network: I15 Management of Obesity – A national clinical guideline, February 2010

will report more behaviour change, which is often validated by progress in their anthropometric measures. However, it should be noted that there are significant personal and social barriers for individuals to access a group based community intervention such as LIFE. The LIFE programme hosted researchers from ESRO whose report⁴⁴⁵ has sought to stratify the weight management target audience, and to explore the questions of what interventions will engage different audiences and contributes an alternative slant on the issues around service provision.

18. In recognition of human nature where short term comfort is often prioritised over longer term principles, the concept of incentives should continue to be considered. The contribution of financial incentives might fit well with a structured behaviour change model where significant individual and group support is offered. Ultimately, legislative actions such as the 'fat tax' provide an alternative approach which will have a much farther reach than a local behaviour change programme. However, fiscal penalties against free choice in food behaviours would be perceived by many of the LIFE patients as unjust governmental interference. The LIFE patients value the opportunity to choose to enrol in a programme for which they are in control of their outcomes, and where they can reflect on their behaviour patterns to encourage long term changes. Therefore as a mode of behaviour change, an intervention such as LIFE bears significant merit.

23 September 2010

⁴⁴⁵ Maximising the appeal of weight management services: A report for the Department of Health and Central Office of Information, 24.03.2010 ESRO

**Written evidence from the Yorkshire and Humber Health Trainer Team
(BC 25)**

Introduction

The Health Trainer Programme has been developed over the last five years in a unique collaboration between the National Team at the Department of Health, regional teams and local services. An enormous amount has been learnt about how to recruit, train and support a lay workforce to effect behaviour change in some of the country's poorest communities. This submission is being made by the Yorkshire and Humber Health Trainer Team which is responsible for rolling out the health trainer programme across the region. The paragraphs have been numbered so as to correspond to the questions put by the committee.

Research and Development

1. What is known about how behaviour can be influenced?

Since its inception monitoring and evaluation have been central to the development of the health trainer programme. A national Data Collection and Reporting System (DCRS) has been established, service evaluations and client surveys undertaken, and many case stories compiled. From all this evidence we know that health trainers are:

- Successfully supporting people to make and maintain behaviour changes which benefit their health, particularly in relation to healthy eating, weight loss and increased physical activity.
- Reaching people in the poorest health who generally make least use of services to improve their health
- Connecting people into activities in their communities thereby reducing social isolation and improving mental health and well being.

1.1 We are continuing to build the evidence base and in Yorkshire and Humber we are in the process of undertaking (in collaboration with the Centre for Health Promotion Research at Leeds Met University) a series of evaluations of pilot health trainer projects in which we are endeavouring to discover what is distinctive about the way health trainers work which enables them to be effective in some of our most deprived communities. The first of these evaluations was of the North Lincolnshire service. The full report can be accessed by going to the following link <http://www.yhtphn.co.uk/ht-evaluation>. The evaluation found that health trainers were succeeding in reaching some of the poorest communities in the district and supporting many people to make changes to a healthier lifestyle – primarily by helping them to change to a healthier diet and be more physically active. Clients greatly valued the flexible, friendly approach of the health trainers and the fact that they had time to spend with them (an average of one hour per week for 6- 8 weeks). The report concluded that: '*At times of widening inequalities in health coupled with reductions in public spending there is a need for innovative ways of tackling old problems and the Health Trainer Service offers a model combining volunteers with a small paid workforce to make a difference to the health of some of the most disadvantaged communities in North Lincolnshire.*'

3. Is there sufficient funding for the evaluation of behaviour change interventions?

In its pilot phase the Health Trainer Programme has been well supported nationally and regionally to monitor and evaluate activities and DH has funded the Data Collection and Reporting System devised for health trainers until February 2012. However local services

generally struggle to find enough funding to evaluate, and in the current economic climate, even where services receive continued funding (and some are being cut) this is often reduced to the bare minimum leaving nothing with which to commission external evaluation and little time for anything beyond basic monitoring.

4. Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

This has long been a challenge. We support a regional network for those commissioning and providing health trainer services and have set up a website (<http://www.yhtphn.co.uk/health-trainers.html>) to further support the dissemination of research evidence into practice. We are also collaborating closely with the Centre for Health Promotion Research and hope to publish some papers on the growing evidence base for health trainers.

4.1 We will be undertaking a synthesis of the evidence base over the next few months with the intention of publishing a series of briefings and holding a regional seminar to disseminate our findings. Over the next few months we will be investigating the possibility of establishing a Knowledge Partnership to take forward this work, but this is challenging when potential partner organisations are being reorganised! We are also concerned that many personnel with experience of implementing health promotion programmes are leaving as a result of recent staffing/spending reductions and those that remain are overwhelmed with the pressures of restructuring so translating research into practice is unlikely to be a priority for them. Nationally and regionally we have been working hard to ensure that policy makers know about our work in the hope that it will influence the policies being developed by the Coalition Government.

6. How should different levels of intervention and different types of intervention interact in order to achieve policy goals more effectively?

13. When is it appropriate for the state to intervene to influence the behaviour of members of the public?

We have found the report produced in 2007 by the Nuffield Council on Bioethics an invaluable source as it sets out very clearly the ethical dilemmas in public health and the need for clarity re when state intervention is justified and at what level. The report can be downloaded at:

<http://nuffieldbioethics.org/sites/default/files/Public%20health%20-%20ethical%20issues.pdf>

7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

We firmly believe that behaviour change can only be effective when policy supports one to one work with clients by 'making the healthy choice the easier choice' – the smoking ban is a classic example. A key role of health trainers is to support clients to take part in health improvement activities, for example joining a walking group or a cook and eat class. This is only possible if there are other programmes or interventions which are organising such activities, or working towards, for example making local parks attractive and safe places to walk. We have found that clients are much more likely to make and sustain behaviour change if they take part in group activities but that the less confident clients need some one to 'buddy' them by for example attending with them the first time they go – something a health trainer can do. Where there are few activities or facilities, health trainers have a

much harder job supporting people to change and may become involved in setting up activities alongside their individual work with clients. An example of this is in Scarborough where there has been little investment in health improvement for many years, so little for health trainers in our pilot scheme to refer people into. So at the request of one of the local GPs, health trainers have set up a seated exercise class, and are now getting requests to set up further classes in other GP surgeries.

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

As highlighted above, the Health Trainer Programme has had monitoring and evaluation built in from the outset. The success of the programme has been summarised in our response to question 1). The approach taken is evidence based - health trainers use a model of working set out in the Health Trainer Handbook which was developed by the British Psychological Society based on evidence of what techniques work in effecting behaviour change

Health trainers are trained to be competent to communicate with individuals about promoting their health and well-being and enable individuals to change their behaviour to improve their own health and well-being. The evidence based techniques used include motivational interviewing, active listening; exploring current behaviour and ambivalence, setting goals and contracts, self-monitoring, and building self-efficacy.

8.1 Health trainers are also trained in engaging with and making relationships with communities. The evidence base for community engagement and training materials to support it are contained in the Health Trainer Community Engagement Resource Pack.

8.2 As previously mentioned, DH has funded a Data Collection Recording System (DCRS) which has been developed into a sophisticated system with the capability of recording a wide range of health trainer activity and client outcomes. The minimum data which services can record are about the make up of workforce, the clients/communities which are being reached, and whether clients are changing their behaviour and making more appropriate use of services.

8.3 In addition to monitoring their activity and outcomes through the DCRS, many services have also commissioned evaluations of their local services and/or training programmes. Details of 57 local evaluations are now held on a national database. In Yorkshire and Humber in addition to the ten evaluations commissioned by local services, the regional team has commissioned five evaluations, one of which has been completed, three are underway and a fifth will be undertaken after Christmas. Three of these evaluations are of pilots funded by DH to reach deprived communities underserved by health trainers, one is of a DH funded scheme to employ ex offenders to work with offenders and their families in community settings, and the fifth is to evaluate a scheme funded by a GP alliance where health trainers are working as part of a mental health care pathway. We are also drawing up a brief to undertake a sixth evaluation of health trainers working with people with long term conditions. Services also collect case stories from both health trainers and clients and in Yorkshire and Humber we commissioned NHS Direct to undertake a client survey across the region. Training has been provided to enable health trainer service managers to use a value for money tool to assess the cost effectiveness of their services.

8.4 DCRS reports are produced nationally every six months and end of year reports have been produced for the last four years. These all show that health trainers are being effective

in reaching some of the communities in the poorest health who are least likely to use preventative services. We have produced a regional summary of outcomes which clearly demonstrates what is being achieved particularly in relation to healthy eating, weight reduction and increases in physical activity. To view the report follow this link and click on 'evidence' then 'outcomes' <http://www.yhtphn.co.uk/h evidence-and-evaluation.html>

8.5 Over the next six months we intend to produce a synthesis of the evidence in relation to health trainers in the following areas:

- supporting people to improve lifestyle and connecting them into activities which will enable them to maintain behaviour changes
- enabling people with long term conditions to better self manage
- connecting people with low level mental health needs into social support activities (social prescribing)
- reducing inappropriate use of GP services by 'frequent attenders'
- Improving outcomes in acute care by providing post and pre operative support for people who need to lose weight or stop smoking.
- Reaching vulnerable and marginalised groups who have the poorest health but generally make the least use of health improvement services.
- Acting as a 'bridge' between people and services and 'buddying' people without the confidence to get involved.

We'll also be looking at how effective health trainer services have been in recruiting and developing a lay workforce and what part this plays in their effectiveness. Finally we'll be seeking to address the questions:

- Is there anything distinctive about health trainers and the way they work which enables them to successfully support clients?
- What factors are important to determining whether health trainer services are effective?

9. Within government, how are lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions?

Just as it has always been challenging getting research recommendations implemented, so the lessons learnt from rolling out innovative programmes like health trainers are all too frequently lost and the 'wheel reinvented' a few years (or less) down the line. This is even more of a danger in times of structural change and spending reductions, not least because many people with knowledge and commitment move on. There has been some real fragmentation of health improvement services following the commissioner/provider split in PCTs with many, including health trainer services, previously managed in Public Health, going into provider services with the loss of involvement of senior public health managers with understanding of previous successes and failures. This process is being exacerbated by ongoing management reductions and reorganisation. There is a real danger of some services which are effective and popular with GPs being cut in the period between now and GP consortia, which would fund them, being established. If this happens much of the learning about how to set up and run an effective health trainer service, which has taken place over the last five years will be lost.

10. What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions?

The National Health Trainer Team at DH which has steered the roll out of the programme finished on 30.9.10. Most regional teams have funding to continue until March 2011, some for a short while beyond. Whilst some services have been up and running for four or five years many are still in their infancy and need support if they are to be implemented effectively. At present it is unclear where health trainer services will 'sit' once the NHS is reorganised but there will inevitably be many changes in commissioning and provider arrangements – early indications are that in this region services will go to or remain in, hospital or mental health trusts, voluntary/community organisations, local authorities and a provider set up as a community interest company. As a relatively new, unregulated service there is a danger that health trainers are decommissioned or if they are commissioned those undertaking this have nowhere to turn to for support and so will not benefit from the lessons learnt over the past five years. As mentioned above much expertise in commissioning and managing health improvement services is in danger of being lost. The move of health improvement into local authorities could lead to the provision of advice and support, but it is as yet unclear what their priorities will be and what capacity there will be to support the delivery of behaviour change interventions.

12. What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?

The Health Trainer Programme has been a great example of turning the policy ambition set out in Choosing Health into a programme which has been implemented across the country. This was achieved by a unique way of working through the early adopter sites which were charged with sharing their learning with adjacent PCTs which were then linked up into regional hubs. Regional hub leads then formed the national hub which worked with the national team. There was a constant flow of information and innovation between national, regional and district level which has enabled the programme to deliver an effective model incorporating accredited training packages, handbooks, a data collection system, operational protocols, and a growing evidence base. The regional networks are still operating linked to the civil servant in DH who now has a watching brief on the programme. These could be built on to provide a mechanism to continue to cascade learning about how to achieve effective behaviour change, particularly within our most deprived communities. However cutbacks in DH are a cause for concern – the National Support Team for Inequalities for example, has supported the cascade of learning about health trainers, but is going in March 2011.

14. Should the public be involved in the design and implementation of behaviour change policy interventions?

Our model of working with clients is to enable them to set their own personal action plan so that they have ownership, they decide on the pace at which they can make changes, and they feel in control. We have found that clients respond well to this. Some members of the public might be prepared to get involved in the design of interventions, but for most people, and particularly for those in poorest health, our experience would suggest that they want to be involved at the level of their own and their families health, and maybe with small group activities, but are less likely to engage in more formal processes. Those that might be prepared to do this will need a lot of training and support to enable them to work with confidence alongside professionals. Health trainers (and other front line workers) are a source of rich information about the communities they work with but are seldom given the opportunity to have a say in how interventions are designed and implemented – this could be easily rectified and would be likely to result in more appropriate and accessible services.

15. What lessons can be learnt from other countries?

The Centre for Health Promotion Research (CHPR) at Leeds Met University has just completed a national study People in Public Health which included a review of the literature (published in English) about what is working to engage lay people in public health in the UK and elsewhere. Visit the PIPH website for more information:

<http://www.leedsmet.ac.uk/health/piph/>

CHPR has also undertaken an evidence review on community health champions and how they work to improve health, which drew on lessons from other countries, for the regional Altogether Better Programme. These can be accessed on the ABP website at:

<http://www.ypho.org.uk/resource/browse.aspx?RID=45921>

16. Tackling Obesity

The majority of health trainer clients want to work on healthier eating and/or losing weight. The latest DCRS report shows that nearly 60% of the 78,092 health trainer clients who have developed a health action plan, were working on their diet. 75% of these clients were successful in making changes to improve their diet. To see the full report follow this link and click on evidence then DCRS: <http://www.yhtphn.co.uk/htevidence-and-evaluation.html>

In many areas there is little or no support available to people who want to lose weight, other than from the commercial sector which people in the poorest health may not have the money or confidence to access. Because of this in some areas health trainers are the first point of referral for primary care practitioners who have a patient who is struggling to make and maintain weight loss without support.

Concluding remarks

Our evidence shows that health trainers are a popular and cost effective way of supporting behaviour change, especially in communities which have been the 'hardest to reach'. Please do visit our website for more information and resources and/or contact us if you have any questions or require any further information.

5 October 2010

Written evidence from Central YMCA (BC 85)

Background

Central YMCA is a London-based health and education charity which works locally, nationally and internationally. We have a particular interest in activity for health. Our operations include a national training provider for exercise professionals (YMCAfit), an internationally recognised qualifications' awarding body (CYQ), and the development and delivery of educational resources and activities for young people and target populations.

Central YMCA welcomes the opportunity to respond to the House of Lords Science and Technology Select Committee call for evidence on Behaviour Change. Central YMCA has a particular interest in behaviour change – we are interested in helping address the barriers which individuals may face in order to achieve a healthy and active life, and in providing support and interventions targeting those who are least engaged in physical activity.

While this inquiry focuses specifically on obesity, our particular interest is in the “calories out” side of the equation – i.e. how can we provide individuals with the opportunities and support to be more physically active?

Response to questions

1. What is known about how behaviour can be influenced?

Much work has been done on behaviour change and the factors which influence it. Behavioural change science originated in social psychology, but in recent years has been adopted by healthcare professionals and exercise/sports psychologists.

In order to change a person's behaviour there needs to be an understanding of both the individual (the person) and the environment in which they live. There are many different elements which influence behaviour change and centres of excellence have developed in the UK to better understand these factors.

Factors which influence behaviour begin with the individual and whether the person believes they perceive themselves as being a particular type of person e.g. are they physically active (self-perception theory)? Much work has been done by Professor Ken Fox at the University of Bristol to better understand this.

Many interventions are based around self determination theory (which includes self perception, but also other issues such as how much control an individual has over their life and how they relate to other people and different situations) – Martin Stannage (University of Bath) and Joan Duda (University of Birmingham) have conducted extensive work in this area.

At an environmental level, Central YMCA has recently undertaken work to better understand how important peer support networks are at encouraging and sustaining individuals in changing their behaviour. We have developed the Activator® model as a means of engaging those who are less active by training and developing activity champions in Workplace and Community settings.

2. What are the policy implications of recent developments in research on behaviour

change?

One implication for behaviour change interventions that work is for professionals to apply the learnings to their everyday work with individuals. For example, findings from the TREAD project which examines exercise and depression may suggest the need for Physical Activity facilitators to be in place in primary care settings.

At a community level, the place where an individual lives has an impact upon their behaviour and the ability to change this behaviour. This has policy implications for urban planners who are designing community provision. In order to facilitate behaviour change and to increase physical activity opportunities consideration must be taken of the availability of green spaces, access to leisure centres, proximity to local shops, and transport provision – including active travel and public transport arrangements.

Aside from a neighbourhood's architecture and layout, we believe that social support within a community should also be strengthened. For example, as part of the Well London programme, Central YMCA has developed a network of Community Activators – these are volunteers who live within their local communities and who have been trained to become activity champions. They provide support to their peers in order to be more active – for example, by engaging with their neighbours, delivering exercise classes or running walking sessions and signposting them to local activity provision.

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

There is scope for more funding, although this has become less of an issue in recent years. Organisations such as the NPRI (National Prevention Research Initiative), ESRC (Economic and Social Research Council), Lifelong Learning and Wellness and charities including the British Heart Foundation and Diabetes UK are some of the main funders of behaviour change interventions. The NIHR have also funded behaviour change research recently.

However, there is a funding shortfall in implementing what we know works and putting this into practice – for example, equipping healthcare professionals with the requisite skills - and this requires significant funding. We know what does work, but we have difficulty getting initiatives out there and ensuring they are quality assured. More funding is required to strengthen the final stage of the MRC Framework for Complex Interventions which is about long term implementation of interventions.

Methodological issues around the accurate assessment of daily physical activity mean that the evidence base around the impact of environmental interventions and public health messages on physical activity behaviour change is still low. Accurate assessment of physical activity is challenging and so the costs associated with this are relatively higher than for other health related behaviours.

More research into methodological approaches to lifestyle interventions in the real world leading to advice on best practice for designing and evaluating such interventions would be beneficial. Traditional randomised controlled trials are often not practical to implement in this area and lack of guidance on alternative evaluation approaches leads to interventions being poorly evaluated or not evaluated at all. It is disappointing that so many publicly funded behaviour change interventions have not been adequately evaluated.

4. Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

No response

5. What should be classified as a behaviour change intervention?

There are a variety of different models available which seek to explain the process of changing an individual's behaviour and which are relevant in designing physical activity interventions. At present, complex behaviour change interventions are not well described and where they are, the terminology used is inconsistent (Michie et al). This "constrains scientific replication, and limits the subsequent introduction of successful interventions."

A significant evidence-base exists for behaviour changes such as those involved with smoking cessation. While this is a useful starting point, a more limited evidence base exists for physical activity, and the behaviour change involved in giving something up (e.g. smoking) is not easily transferable to the change involved in taking something up (e.g. healthy eating or exercise).

Central YMCA believes that, in the case of physical activity, an effective behaviour change intervention should result in a sustained behaviour change for at least 12 weeks.

6. How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

There is a need to work at all levels to successfully change individual behaviour. While it is important to recognise the importance of the individual, we feel that it shouldn't just be left to the individual to change their behaviour. The community in which an individual lives and their life circumstances are fundamental to effecting successful behaviour change. Simply focussing on the individual and choice architecture are not enough to change behaviour and may simply end up exacerbating inequalities – those who are able to make choices whether because of wealth, education or fewer time constraints will find it easier to take advantage of opportunities to help them change their behaviour.

With respect to the individual there is a need to understand where they are on the "stages of change" model. Interventions should be tailored to match a person's readiness to make a change.

A recent NICE report into the use of incentives in improving health shows that a policy intervention such as incentives can be successful at targeting a specific one-off behaviour change, such as attendance to a clinic. However, to be most effective and influence a wider behaviour change, they must be used as part of a wider programme of change. More research is required to understand the cumulative impact of physical activity interventions at different levels on individuals physical activity behaviour. The combined influence of several different interventions may well be different from each intervention in isolation but this is as yet not well understood.

7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

There is a need for behaviour change interventions at multiple levels. The individual doesn't live in isolation from the socio-economic environment and developing an intervention without regard for other issues may impact on efficacy.

Stand-alone behaviour change interventions may also run counter to other policy interventions, and in doing so send out mixed messages to the public. For example, the Change4Life national social marketing campaign which encourages the public to make changes to their diet and activity levels can only be effective if individuals can realise these opportunities by having access to places to be active and affordable healthy food. The same issues identified in the Marmot Review into Health Inequalities, in order to improve individual health and wellbeing impact on the effectiveness of behaviour change interventions. Policies which tackle low pay, low educational attainment, poor working conditions and emotional resilience are required alongside behaviour change interventions.

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

In some areas there has been a significant evidence-base behind behaviour change interventions, such as with smoking cessation. However, in other areas, such as physical activity and alcohol, there is no systematic evidence-base. In the case of the Change4Life campaign, recent research from Kantar Worldpanel has indicated that progress is slow. While there has been an increase in consumers choosing food due to its healthy qualities, fat and salt consumption is on the rise and calories per pack are also increasing. This is owing to the difficulty in changing eating habits compared to making preferred products healthier. Although food manufacturers are backing the campaign, it is their products which are causing the increased fat and salt consumption.

To ensure success, such mixed messages from the Government and the media need to be avoided, for example healthy food messages can be blunted by mixed media stories about "research" which shows the benefits of eating foods which could be regarded as high in fat, salt and sugar. Such cases prove highly counter-productive as it can be easy to reverse behaviour change built up over an extended period of time through a small number of conflicting reports.

Public health and environmental interventions to promote physical activity are not always evaluated as rigorously as they could be. This is probably due to the costs associated such evaluation.

9. Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

10. What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

We are not aware that lessons learnt from the voluntary sector in terms of behaviour change have been gathered, analysed and shared among a wider audience. In addition to this, there is currently no central indicator or best practice to follow.

Nor are we aware of any consistent mechanisms providing advice or guidance in respect of behaviour change interventions, nor any consultation with the voluntary sector. As such, we have developed our own model and templates for the monitoring and evaluation of projects and programmes. This revolves around the 12 week sustained behavioural change model, using peer support networks where possible and addressing barriers to participation (both in terms of capacity provision and individual concerns).

In relation to social marketing, the National Social Marketing Centre exists to assist in Commissioning and developing behavioural interventions across a variety of sectors. However, we feel that guidance and findings are not necessarily filtered through to the relevant organisations and broader guidance on behaviour change is not readily accessible.

11. What mechanisms exist within government to coordinate and implement cross-Departmental behaviour change policy interventions?

No response.

12. What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?

No response.

13. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

We believe that state intervention becomes necessary when there is a threat or when national interest becomes affected – for example threat of war, threat of bankruptcy, threat to public health – such as with mass vaccination programmes or seat belt legislation.

It is difficult and ethically questionable to force behaviour change. However, such is the scale of the public health crisis caused by rising levels of obesity that the balance is shifting in favour of requiring state intervention. In a recent report by NICE, Richard Ashcroft (professor of bioethics at Queen Mary, University of London) stressed the importance of assessing the effectiveness of a scheme and its ethics separately, as ‘while a scheme may be demonstrably effective, it could be ethically unacceptable.

While restricting smoking has been effective in reducing smoking rates, it is much more difficult to compel an individual to be more active or to ban the consumption of unhealthy foods. Instead state intervention could take the form of support offered to individuals – whether this includes instruments such as incentive payments and access to peer support networks. Positive measures which reward “good” behaviour have been found to be effective at sustaining long term change.

Intervening on an environmental level to develop transport infrastructure and public spaces which promote physical activity is likely to be acceptable to the public and have a positive impact on physical activity levels.

14. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

On an ethical level, we believe the public should be involved in the design of behaviour change interventions, whether this is through focus groups, surveys or any other method of engagement.

Public engagement is crucial and it is at its most effective in the developmental stage of any policy intervention. Interventions should include an assessment of the target group and work alongside other organisations and the community itself to decide on and develop initiatives, and build on the skills and knowledge that already exists in the community, for example by encouraging support networks and providing structures for people who can support each other.

For any successful behaviour change policy intervention it is important to understand what the barriers are to change, how important the individual feels change is and the self-efficacy of those involved. These issues are key and then answers can only be found through public engagement.

It is our view that potential schemes should be piloted as this provides the opportunity for trial, evaluation and alteration. The result is that all issues have been encountered and rectified prior to a nation-wide adoption of any given campaign. One issue is ensuring that the lessons learnt from pilots are distributed widely and feed into national guidance. We are not aware of anyone who currently does this for physical activity.

15. What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?

Finland

The case of Finland – a shift from competitive and elite sports policies and programs to the promotion of exercise and sports for all, thus focussing on physical activity in daily life – has shown the benefits of a sustained focus on physical activity interventions. Repeated surveys have shown that during the 1980s and 1990s participation in recreational physical activity increased among the young, working age and elderly population. Much of this success has been attributed to the Finnish Government's decision to make physical activity a key area of focus. Legislation directed state subsidiaries to municipalities for the salaries of 'sports secretaries' and the construction of sports sites, as well as providing funding to local sports associations. This led to an increased opportunity for regular physical activity in daily living environments.

North Karelia

In the 1960s, Finnish men had the highest death rate from heart disease. Despite a high level of fitness, the death rate was especially high in the province of North Karilea, owing to the consumption of high fat dairy products. A community-based program was set up in 1972 to counter the trend, with health care centre personnel trained to give advice on quitting

smoking, to give dietary advice and to conduct blood pressure and cholesterol measurements. Training was also given to other groups working with health issues.

Various activities and programmes were also set up, including; workplace schemes; national weight-loss TV series, inter-village cholesterol lowering competitions; education of active people in the community on health-related issues; anti-smoking legislation; working with food manufacturers and supermarkets to facilitate dietary changes. Vast improvements were seen since the start of the intervention:

- One in ten people used butter on bread by the end of the study, down from 80%
- The consumption of whole milk dropped from 70% to 14%
- Smoking among men fell by a third
- Finland has reduced its incidence of heart attacks by 75% since the early 1970s
- 3,800 premature deaths have been prevented in North Karelia (50,000 across Finland)

Sweden

Recent research has studied the effectiveness of a lifestyle intervention on patients at moderate to high risk of cardiovascular disease on quality of life and cost effectiveness. The intervention group were given progressive exercise training three times a week, diet counselling and regular group meetings during a three-month intervention period, after which they were invited to attend group meetings at regular intervals and encouraged to maintain at least 30 minutes per day of physical activity.

Over the three year period, costs were \$337 higher for the intervention group than for the control group. However, during this time, the average number of visits to the family physician decreased for the intervention group and increased for the control group, which led to a net saving for patients in the intervention group.

8 October 2010

Oral Evidence, 18 January 2011, Q387-430

Evidence Session No. II. Heard in Public.

Members present:

Lord Crickhowell
Baroness Hilton of Eggardon
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Baroness Perry of Southwark
Earl of Selborne
Lord Sutherland of Houndwood

Examination of Witnesses

Witnesses: **Ms Zena Lynch** [Director of Living Well, West Midlands Councils], **Ms Helen Johnston** [Healthy Living Development Manager, Great Yarmouth Community Trust], **Ms Judy White** [Strategic Lead, Yorkshire and Humber Health Trainer Team] and **Mr Robin Gargrave** [Central YMCA].

Q387 The Chairman: Welcome to the witnesses and thank you very much indeed for coming, and welcome to members of the public as well. Can I just tell everybody that the proceedings are being webcast and there's an information note available for members of the public with some background to the inquiry and Members' interests, so far as they're relevant. To the four of you giving evidence, what we need you to do right at the beginning is to introduce yourselves for the record and, if you want to, make a brief opening statement—please keep it fairly brief. So, would you like to start?

Judy White: Hello, I'm Judy White; I'm the lead for Health Trainers in Yorkshire and Humber.

The Chairman: I'm really sorry to interrupt you at this stage. The acoustics in here are ghastly and you really will need to throw your voice, even though you do have a mic, otherwise we don't hear very well. So, over to you again, sorry.

Judy White: I'm Judy White; I'm the lead for Health Trainers in Yorkshire and Humber. I'm also a senior lecturer at Leeds Metropolitan University in Health Promotion, having worked in health promotion for more years than I care to remember—about 25 years. I really welcome the chance to come and talk to you about Health Trainers. It's a programme that's been going now for just over five years and I've been involved since the beginning, initially setting up a programme in Bradford and, more recently in my role at the University and as regional lead, in looking at the evidence base and synthesising that. So I'm here to share that with you today, hopefully.

Zena Lynch: Hello, I'm Zena Lynch and I'm Programme Director for Living Well West Midlands. Living Well West Midlands is a portfolio containing 29 projects and it's being funded through a three-year period based on a successful funding bid we made to the Big Lottery Fund. The projects focus on three key areas: increasing physical activity, improving food and nutrition, and improving mental wellbeing. The projects vary in their makeup and they range from volunteer-led programmes, outdoor programmes and school-based projects to projects working with employers. The types of projects were set up dependent on the needs of the area they served. During the life of the project there's been a large-scale independent evaluation of the work that we've carried out, and the full report can be made available to the Committee.

Helen Johnston: Thank you. Good afternoon, my name's Helen Johnston, I'm here to represent Great Yarmouth Community Trust. I work there as the Healthy Living Development Manager and we oversee the nutrition programmes across Norfolk and North Suffolk. These are primarily weight management programmes, which are run in community settings, working with the overweight and the obese populations in those areas through these group-run, multi-component programmes.

Robin Gargrave: Good afternoon everybody, my name is Robin Gargrave, I'm the Innovation and Development Director for Central YMCA, which is the world's first YMCA, established in 1844. A key part of our work is physical activity, the calories-out part of the equation around obesity. We are working very hard to discover why it is the majority of people don't exercise, even though they are contemplating it, and don't take part.

Q388 The Chairman: Thank you very much indeed. I'm going to start off and then different members of the Committee will come in at various points. I know you've had some advance notice of the question areas, but there will be supplementaries and things that you don't know about. As you speak, we'll think of things we specifically want to ask you. So let me start off by asking all of you how effective your programmes have been in achieving sustained weight reduction in your local areas, or indeed more nationally? When you answer that, can you tell us which methods of evaluation you used, and over what timeframe, to measure your results; and how what you learnt from that is fed back into the design of any current or future interventions? Okay, who wants to start?

Judy White: Health Trainers is a peer-led, client-centred programme, so clients decide what it is they want to work on in terms of a healthy lifestyle. 60% choose to work on their diet and 25% choose to look at increasing their levels of physical activity. For most of those it's about wanting to lose weight; most people are there because they do want to lose weight. In Yorkshire and Humber we've got some areas where the numbers are higher than that. For example in Rotherham, which has got a big problem with obesity, as does the whole region, they've focused even more and so 69% of the clients coming through Health Trainers are working on their diet, and about 20% are working on physical activity. We are achieving results. Health Trainers support people on a one-to-one basis, they see people for up to an hour, so they've got time to work out a personal action plan with them. This is something they can do that is achievable for them, and then they support them to achieve that. So, if needs be, they go with them to a new walking group, or something like that. They're particularly working with people with disadvantage, so self-confidence is a big issue—often people have wanted to do something for a long while, but have needed a bit of support to get there. So they set a personal action plan. What we're finding is that about 70% of those who decide they want to lose weight are making changes; they're achieving

their health action plans. We know all this because we've set up a national system called the Data Collection Recording System, funded by the Department of Health, that requires those who participate in it, which is now the vast majority of services, to collect a minimum data set. This includes: what people are working on, what the primary issue is, and how far they're achieving it. It also collects information on the Health Trainers themselves and on the clients and where they're from. So we have very good statistics about deprivation, about access, about what people work on and what they're achieving. We're targeting the so-called hard to reach, so people in the poorest health, and looking at our statistics we can show that they're achieving just as well as everybody else and are really making a difference to their lives. We've got some spectacular examples of people losing weight; we ask Health Trainers to collect case stories—sometimes clients write these in their own words—and people are losing two to three stone in weight, where that's been their aim. So it's optional for clients because it's client-led, they can be weighed, they can have their BMI measured, and we've got statistics on that where it's happening, so we can see significant drops in BMI. We also record fruit and vegetable consumption; we can show good rises in that and a reduction in eating fried and fatty foods. Very importantly we also go back, not to everybody because that is too resource intensive, but where we can we see if people are maintaining the weight loss, because clearly for long-term health that is what matters. We're finding that the numbers there are very good. I was just looking at some bang-up-to-date statistics that the DCRS (Data Collection Recording System) team based in Birmingham have sent me. They had gone back to people between three and six months later and 80% of those who'd made changes were still maintaining them. Although people are seen one to one, what we find is that most people find it really hard to make lifestyle changes on their own, so we like to join groups and work with others. One of the things the Health Trainer does is to take people and introduce them to what's going on, signpost if they're happy to go on their own, or go with them if they need that help. This is what helps people maintain, because they're not just losing weight, they're getting out and it's sociable. That's what clients often tell us; clients love Health Trainers because they are people who have dedicated some time and who are from a similar background. 60% of our Health Trainers are from the deprivation groups of quintiles one and two, that's the lowest 40%, and 65-67% of our clients are. So we are targeting and then working with people who are from similar backgrounds, who they feel they can confidently share their issues with and who understand their culture, where they're coming from, and the difficulties they're having.

Q389 The Chairman: Can I stop you there, because I want to tease this out? Obviously you've got a very good monitoring system. We've had a lot of evidence about evaluation, so to what extent is yours what we would call traditional evaluation with a control group—seeing whether, if the Health Trainer programme weren't in place, some of these people would have lost weight anyway? Do we know that the intervention itself actually works? Obviously it's also up to your clients whether they go for the collection of the data.

Judy White: The Data Collection Recording System is just that. It records the data that Health Trainers enter on who the clients are, what they're working on and so on. It's an electronic system that can then pull off reports that are very good, not just for evaluation but for performance managing, because you can see where it's working and where it's not working so well, so services can tweak who's going where and really get the best value for the investment. There are also a number of local evaluations that have gone on. We haven't done control-based studies but we've done quite a lot of surveying clients. Clients will tell us, and they say it time and again, that this is what's made a difference. We ask

them, specifically, “Could you have done this without a Health Trainer?” or words to that effect, and 99% of the time they say “No, I needed that bit of motivation”. It’s the confidence thing more than anything, in order to get started. A lot of people have some sort of low-level mental health issue, they’re anxious, they’re a bit depressed, and there are a lot of emotional issues around being overweight and obese. So it’s having support for all that as well that’s really making the difference.

Q390 Lord Krebs: Just to build on that question from the Chairman—these are self-selecting people who are motivated to change their lifestyle and you have facilitated them in that. So, if I’m right in that contention, is it also correct that we don’t have evidence that this approach would work for the population as a whole—only once you’ve got people who are motivated and converted to the idea can you help them along the road?

Judy White: I wouldn’t say they were self-directing in quite the way you’re describing.

Q391 Lord Krebs: How do you recruit them then?

Judy White: Some are referred by GPs, other health professionals or other professionals. The majority do self-refer, but part of the role of Health Trainers is to do community engagement. So they don’t sit in a clinic or sit in a community centre and wait for people to come to them, they go and tell people about what they’ve got to offer. That could be anything from standing at the school gate talking to young mums about what they can offer, to going to a supermarket and having a stall—all sorts of things. That’s critically important because the sort of people we’re targeting wouldn’t come forward if you just left it to them, or put up a poster or a leaflet or whatever. What we’re finding is that where people see the Health Trainer themselves, they see a friendly face and think “Well, I could talk to her”, they’ll come forward. Again, we’ve got lots of examples of people saying, “If you hadn’t talked to me in that kindly way at Morrisons supermarket, then I’d never have got started on this”. So I wouldn’t say they’re the confident self-motivated sort in that sense at all. I think the community engagement is really critical.

Q392 The Chairman: We’re going to have to keep answers short otherwise we’re not going to get to the end of this, but Ms Lynch, would you like to come in?

Zena Lynch: Thank you. Many of the Living Well projects focused on initiating and sustaining behaviours to improve physical activity levels or healthier eating, rather than specifically focusing on measuring weight loss. Some of our projects did measure weight loss: for example our Solihull SHINE project measured BMI as part of the assessment criteria. We generally found that the simpler the project design the more effective its implementation and Solihull SHINE is one of the more straightforward, reproducible programmes. It stands for Stay Healthy: Improve Nutrition and Exercise. This was delivered through Solihull PCT, in partnership with the voluntary and community centre. It was a weight-based management programme for children aged 8 to 15 and their families, and was delivered by a team of trainers and coaches at clinics and held in community centres throughout Solihull. There were bronze, silver and gold awards for the different levels that people got to. Projects used family-based interventions and the peer support of the families was quite an important aspect. It looked at using non-traditional and non-competitive games to promote physical activity, because many of the beneficiaries that were

involved did not have a good experience with traditional sports, so there was a need for people to do things differently; this was a challenge to trainers, who were mostly from sports coaching backgrounds. The model is actually sustaining beyond the life of the Lottery funding, based on a commitment to the programme from the PCT. With respect to referrals, they were referrals from GPs, and they also worked with school nurses for referrals to the programme.

Q393 The Chairman: Was it evaluated?

Zena Lynch: Yes. Basically, because we've got so many different types of projects working, not just one model of delivery, each project had an individualised project plan and the data was collected quarterly, so that we could share the lessons amongst all the different projects and partners that we had.

Q394 The Chairman: So there wasn't a control group?

Zena Lynch: There wasn't a control group⁴⁴⁶.

Q395 The Chairman: Thank you very much indeed, Ms Johnston?

Helen Johnston: Thank you. So when we're looking at programmes around weight management our key measure for its effectiveness is weight loss, in terms of what's in the grey literature and what's out there. When our programme has been evaluated we do see weight loss, but not at high levels⁴⁴⁷. We see changes in behaviour, we see increased consumption of fruit and vegetables for example, we see reduced portion sizes and lots of self-reported behaviour changes. We see reduced waist circumference, but as yet that isn't an indicator that can translate into policy recommendations and the effectiveness of the programme overall⁴⁴⁸. What we don't see are high numbers of clients losing weight, and that's after intensive intervention with fully qualified, very capable nutritionists and ongoing follow up. It's a thorough intervention. In terms of tracking our data, we follow people up for a year, so we see them after one month, three months, six months and 12 months. To generalise, the majority of people don't come back. They love our programmes, the testimonies about their participation in the programmes and how it's improved their confidence and how they feel more motivated are great, but they don't come back and see us at three months, and they don't come back at six months. We have tried lots and lots of different methods to engage with these clients. I think that, because weight regain is such a sensitive issue in obesity work, clients don't want to come back and see us if they've regained weight. So actually the paucity of data is a real challenge. I represent a programme that's in its third year of delivery, so we've seen hundreds of clients, and yet when we go for evaluation it is really quite challenging to have enough data to allow statistical inference. Our evaluation is conducted externally through the University of East Anglia, because money was set aside through the PCT that commissioned the service to do that. The

⁴⁴⁶ Some Living Well projects were 'open' such as Dudley Parklife and therefore not appropriate for control groups, however, some projects such as SHINE and Coventry Body and Mind could have this approach applied. The expenditure on evaluation would have been far greater (by about a factor of 10) if a control group had been used.

⁴⁴⁷ Recent research suggested that clients lost 1.9% of their initial body weight and 13% of participants achieved 5% weight loss.

⁴⁴⁸ Waist circumference is recognized as a clinical predictor of risk, but it is not used as a public health indicator with a correlate DALY qualification for health economics consideration.

evaluation has been done on an annual basis. The programme obviously started with an initial pilot phase and an internal evaluation, which looked really positive, but actually what's happened when we've scaled it up across the full PCT area, (and we have a similar programme rolling out across another PCT area), is that we've not been able to show the same scale of impact. Through bringing that external evaluation in, which is very robust, we have evidenced behaviour change but we have not evidenced effective weight loss at a significant level for the majority of clients who we've retained on the programmes.

Q396 Lord Krebs: If I understood you correctly, Ms White said that in her programme people had sustained weight loss three to six months later, and in yours they haven't. So what is she doing right that you're not doing?

Helen Johnston: It's a good question.

Q397 Lord Krebs: Do you have the answer? Have you compared?

Helen Johnston: No. Some of the people who do come back are losing weight, and when we view it at an individual level there's always testimony of really positive progress, but when we actually compare it to the groups overall, they're not maintaining their weight well.

Q398 The Chairman: Can we just pick this up? Ms White I think you didn't actually say how much weight was lost, so that's one thing that we would like to know. The other thing is whether there is a system at the moment for sharing the data, a system of sharing systems of evaluation, even systems of monitoring—because some of it sounds like monitoring more than strict evaluation—so that you could actually compare between you what works? Does that exist at the moment? Could central Government do more to help that happen?

Helen Johnston: There is an initiative to do a standard evaluation framework for these kind of interventions through the National Obesity Observatory. So that's certainly something that we contribute to. What you'd find with some of the weight management programmes is that it is very hard to get hold of the monitoring and evaluation data. We sit on it, because our fear is that we'd lose our programmes. There is a tension in this, and actually I can be a lot more frank today because our programmes are being decommissioned because they're not deemed sufficiently effective on weight loss. They're very effective on behaviour changes around other health indicators but, at the end of the day, we cannot prove sustained weight loss at the scale that would be deemed necessary for public health commissioning.

Q399 The Chairman: Well, thank you very much for being so honest. Mr Gargrave?

Robin Gargrave: Thank you very much. Over the last six years, Central YMCA have been applying ourselves to trying to develop and roll out programmes to get people more physically active; to move them from inactivity to becoming more physically active. We believe that we've got some data to show the efficacy of the approach that we've adopted. It's been a community-based approach, trying to embed activity champions within the community. These people are not professionals, they're actually from the community, often peers within the community—sorry about the pun—who will inspire, motivate, gain the confidence of other people and act as role models to move them from inactivity towards

activity. We've been involved in five specific programmes, some national, some local, two in London. I can give you a very quick snapshot of one that was a big project, funded by Sport England, called YMCA Activate England. It engaged 8,000 beneficiaries over the two years of the programme; 46% of those engaged were previously inactive or sedentary and 80% of the participants were below the Chief Medical Officer guidelines for sufficient activity to benefit health. We trained 112 of these community activators; some worked with children and 65 additional activators worked in mental health, to try to move people with mental health conditions from inactivity towards activity. So there is some evidence of the efficacy of the intervention. Similarly we have had no controlled studies; they are very expensive. We anticipate being involved in a controlled study with the University of Bath and the University of Bristol in two years' time, should the funding come through, which will be trying to activate older people. That will be a proper, controlled trial, using the activator model. As far as the methodology is concerned, all the programmes are evaluated externally and, whilst we don't do controlled studies, we've tried to engage with professionals at the University of Westminster, for example, who are evaluating our workplace activator, which is trying to activate shift workers in central London and workers in small and medium enterprises. If the programme is of a year duration, which seems to be ideal in order to get real behaviour change, we monitor at 12 weeks, six months and 12 months, collecting some baseline data at the outset, and try to see how the transition of the individuals concerned has translated into behaviour change at the end of the 12 months.

Q400 The Chairman: If the funding comes through you've obviously got this major evaluation in two years' time?

Robin Gargrave: Yes.

The Chairman: At the moment are you sharing the monitoring data that you've got with, for instance, the other witnesses today? Is there any informal exchange of monitoring data to give you a hunch about what might be working and what isn't?

Robin Gargrave: There is some informal exchange and I found it very interesting when I went to the British Heart Foundation National Centre for Physical Activity and Health; just in a year there are 60 case studies. There's lots of very good work being done at a community level across the country and I think one of the challenges is to try to join this up and try to get some real national data that shows the direction of travel, and also indicates what's working, what's not working and why. Anything that the Government can do to help facilitate that would be most welcome.

Q401 The Chairman: Do you think Government could do a lot more to facilitate this?

Robin Gargrave: I believe so, yes. At the moment everything that I read—Charlie Foster at Oxford University, even in the Insight Report—says that there are significant challenges around monitoring evaluation and data collection. I will just echo, as well, when you're dealing with activators who probably are embedded in the community, it doesn't really turn them on to collect data and write up reports of stuff like that. It's very hard to get these guys doing this stuff.

Q402 The Chairman: It's not their kind of work?

Robin Gargrave: It's not their kind of work, they're people people, but in the training and development we give to the activators we are trying very hard to train them and give them the principles of monitoring and evaluation, and to give them the tools for data collection.

Q403 The Chairman: In so much as you're getting data from the monitoring, could I just ask you and Ms White whether you've noticed any variation across the programmes you've been involved in?

Robin Gargrave: Yes. For example, in the workplace activator we're expecting our six-month data in February, which we're very happy to share with the Committee. We did notice working with people in small and medium enterprises in central London that actually the levels of motivation amongst that workforce are far greater than some of the work we've been doing in deprived communities such as Peckham, in very difficult estates. They're all inactive, but actually the people from higher socio-economic groups respond much more positively to behaviour change, and that's echoed in the research as well.

Q404 The Chairman: Ms White, did you want to come in about whether you've seen variation across your patch?

Judy White: Yes, Health Trainers isn't a standard model. It's not being delivered in exactly the same way everywhere. Largely it's been Primary Care Trusts that have rolled out Health Trainer programmes, so they've all decided how they want to do it, and what we've been trying to do is to support and advise them in order to build on the evidence of what worked with the early adopters, and there is a standardised training now. So there's variation in that sense. In terms of data collection, the Data Collection Recording System is a way of standardising what's collected. You've got a minimum data set that you have to enter, but like Robin's saying, it all depends on the quality of what's collected. Even with paid Health Trainers it's a struggle, it's the last thing that you want to do. So it's done better in some places than others, there's no doubt about that. What happened with Health Trainers is that we've built it up from nothing, so the Data Collection Recording System wasn't there right at the beginning, so some of the early adopters set up their own and then they've transferred, or one or two haven't transferred. So that's what happens when things are allowed to grow bottom up—here are lots of advantages but there are downsides.

Q405 Lord Krebs: I have a factual point for Mr Gargrave. When you talk about activity, what do you mean? Are we talking about people jogging, or walking to work, or what is it?

Robin Gargrave: It can be anything provided the end game is to try to move people to meeting the Chief Medical Officer's required minimum for true health benefits to come through. That is five times or more per week of 30 minutes cumulative duration, of moderate intensity. So it could be walking, it could be sport, or it could be heavy housework or gardening. So we try to encourage not just one route, the gym or something like that—anything will do provided you get a sufficient dose to improve your health. Now for a lot of people even that, which seems quite a low level to a fitness person like me, actually is a distant dream. Someone who's been completely sedentary for the whole of their life thinks, "Five days a week, what's that about?". So we train the activators to move them to that position, but it could be anything, my Lord.

Q406 Earl of Selborne: I think that's a very interesting description from four different locally based initiatives. Indeed in the case of the YMCA I understand there's also a national element. Let's go on to the next stage now then. Let's suppose that the great difficulty you referred to, of getting standardised data, could be achieved, and you have information coming from your local interventions that might appear to stand up to a wider project intervention. How would you see that being organised both locally and nationally?

Robin Gargrave: If there could be a standard set of measures, and a standard data collection tool, then that could answer it. We're trying to develop one just across the YMCA movement at the moment and that's quite challenging. We can come up with measures, for example, of someone's self-efficacy, their confidence and belief to actually achieve some behaviour change. We can do physiological measures before, during and after a programme. All of these would have to be agreed. You could measure physical activity on a self-reported basis before, during and after. If you standardised the things that you were trying to learn about and you standardised the tool for collecting it then it could work, but it would be quite a challenge.

Zena Lynch: I think you have to be quite careful not to superimpose a single evaluation model on to every project. We found that quite challenging; because we've got such varying projects, from workplace projects through to school-based projects, to superimpose a standardised model on top of that is actually quite difficult. So that's why you have to think carefully about the tools, and one of the tools that we used, developed by Warwickshire Medical School, was something called WEMWBS. This was to measure people's mental wellbeing, because we found that the mental wellbeing of people was actually a predisposer to how well they then became active or ate more healthily. So if they were feeling confident then their healthy behaviour followed their confidence. So some of the tools were very good, and the WEMWBS tool was particularly good because we could use that across all of the projects. So I think that you just have to be a little bit careful about trying to superimpose one model on every project or every community project. Also, some projects are very small and data collection for very small community-based projects is costly in time and finance.

Q407 Earl of Selborne: Do you see a national justification for the programme, or do you think it's only relevant locally?

Zena Lynch: I think there are reproducible projects within our programme. Not every project would be reproduced nationally because they were built up from local needs. I also think that's quite important, because in order to get the buy-in locally the project has to be seen to be relevant to that local community. For example, our Stoke Living Well project was very similar (to the YMCA project) in that it had community champions who were trained up in Cook and Eat, and taking forward things such as being swimming leaders, walk leaders and that sort of thing. That worked very well in Stoke-on-Trent city centre. One of the things they did was work with Stoke City Football Club and had men-only physical wellness sessions. Linking it with the local football club was a great way to get men to come out and do some physical activity. That is a very specific model, and I don't know whether you could reproduce that model but there are examples of projects that could be run nationally.

Q408 Earl of Selborne: In Yorkshire and Humber you've reported something more positive. Do you see any rollouts on a national level based on the work you've done successfully?

Judy White: I should have made clear that this is a national programme. Health Trainers is a national programme for England, so at the end of the last financial year something like 90% of Primary Care Trusts had got some Health Trainer programmes, some very small and some much bigger. So I'm the Lead for Yorkshire and Humber, but there are Regional Leads across the country. I echo what Zena's saying, but at the same time we have got our Data Collection Recording System. I think if you wanted to look at something that might be adaptable, to work as a system for measuring other behaviour, it would be well worth looking at it because we found it an excellent system. It's wonderfully supported by the Birmingham-based group that run it and it's been invested in by the Department of Health. It would be a real shame to reinvent the wheel and set something similar up.

Q409 Baroness Perry of Southwark: I was just intrigued by what Ms Lynch said earlier, that in her experience there is such a strong correlation between people's mental health and their self-confidence, and their willingness to participate in and stick with changes. Is there any hard data on that? Is there any psychological evidence about people's ability to stay with a programme and to improve their general health?

Zena Lynch: Yes, there is some evidence that we've reported on around that. We actually measured people on the WEMWBS scale when they entered a programme to when they left it. Also there is some evidence about people maintaining programmes, which links with what Helen was saying; there is some evidence about where people are at when they came into a programme; some people needed a lot of time building up a relationship with the professional as a precursor to then going on to having healthier behaviours. So, it was the building of that person's confidence that took the time—it was that that was the important part, and then you go on to maintain a healthier way of living once you have done that. We also found that people needed to feel the need and the belief in the change themselves first, before they would actually commit further to a programme and that was about confidence building as well. We found that family and peer relationships were very important. Particularly for children but also for adults with learning disabilities, if you involved the whole family and the carers in the change of behaviour then it was far more likely to sustain. We found that people like to see progress as well; they like to be able to see the changes that were happening to themselves, for example, when their WEMWBS score was improving, or their BMI improving. Also, with regard to the mental wellbeing side, the projects needed to show that they were fun and interesting; this was a precursor to someone even coming through the door was that they needed to think it was going to be interesting and fun and not just a boring programme. That related really well with the Stoke projects, the football club example that I gave, but Stoke also did things like massive Cook and Eat days when they invited the public in.

Q410 The Chairman: Mr Gargrave, do you want to come in very briefly?

Robin Gargrave: My point's been covered thank you.

Q411 The Chairman: There's one question that I just want to check with you about where you're measuring success and whether there's any particular measure that you use. For instance, not so much with children, but with adults could you just use BMI as a kind of generic measure—would you and could you do that?

Zena Lynch: Well you could if their goal was just to lose weight but what we did was work very closely with the individual to set out what their goals were. In some cases it was about increasing physical activity or eating their five a day.

The Chairman: Rather than specifically on weight loss?

Zena Lynch: Yes.

Q412 Lord Patel: It is a small point. Ms White, you said your programme was national—England-based. So, what does the picture look like across England? Are there pockets where the programme is well taken up compared with others? You also said it was the PCTs that were funding some of the programmes on GP referral basis. How is health service reform likely to impact on the future of the programmes?

Judy White: Good question. Health Trainers came out of the *Choosing Health* White Paper back in 2005 when the implementation plan—

Lord Patel: So this was the Government's initiative at getting a healthy lifestyle?

Judy White: Yes, there was funding in the PCT budget. There were *Choosing Health* monies for PCTs to roll this out. It wasn't ring fenced, so some used all of it and some used none of it, some got started straight away, some only decided to do something a year or two ago. So we've got programmes at very different places, very big in some parts of the country, very small with much less happening in others. So it is a bit patchy, but as of the end of March last year 90% of PCTs had some sort of programme. It will be lower now. We had 100% in Yorkshire and Humber; we've got one PCT that had a small programme that's just been allowed to die as people have left. We've got another programme where they've been taken out to do something else, so it's gone in effect. We have others that are being cut or in danger of being decommissioned in the current climate. There is danger from the changes that are coming, because a lot of Health Trainer programmes don't know quite where they're going to end up. Some will move to be managed in local authorities; some will go to be managed in mental health care trusts. It all depends on the local politics and geography.

Q413 Lord Krebs: I wanted to focus on cost-effectiveness. Do you have a measure of cost-effectiveness for any of your programmes? Say with weight loss, how many pounds does it cost to get one person who is overweight back into the healthy BMI range? Just give us a rough estimate. If we imagine rolling it out for the 40% of the population we've got to deal with, what would be the cost to the nation? What's the cost per person of an effective treatment? I was going to ask Judy White.

Judy White: Sorry, were you asking me? Sorry, I wasn't quite sure.

Lord Krebs: Well any of you, but I'll ask you now.

Judy White: Well, at a national level when there was a national team, which has gone now, the Department of Health commissioned an eminent health economics professor, Graham Lister, to develop a value-for-money tool to gauge the cost-effectiveness of Health Trainer

services. So he did the background work on this, and there is now a tool that local services can use, and they can adjust it so that it fits their service so that, depending on what they want to do, it can show how effective or not they are. There are some impressive results. I was looking at one that had been done in North Lincolnshire in our region, and they've been able to demonstrate that there's a net saving to the health service and to the public sector. They're only a small programme but they're saving in excessive of £100,000 a year. That's built on assumptions; it does get complicated.

Q414 The Chairman: But there's no universal nationwide calculation?

Judy White: They're all different, that's the problem, so they've all got to adjust it a bit. In Rotherham, which I was looking at earlier in the week because it focuses particularly on obesity, they have come up with a calculation based on what it costs to put a Health Trainer in and how many people they see, so it costs about £125 for them to see a client for 6-8 sessions. If their clients make on average 3 changes then it comes out at about £40 per outcome that they achieve, but they're not all necessarily around weight reduction because it's not specifically a weight reduction service.

Q415 Lord Krebs: £40 per person?

Judy White: So there is some information out there but it varies from place to place.

Q416 The Chairman: Would you be able to let us have some of that?

Judy White: Yes of course.

The Chairman: That would be enormously valuable.

Q417 Baroness O'Neill of Bengarve: I have a very small supplement to that, and I don't quite know who may wish to answer it. Do you yourself have a robust enough judgment of how well the intervention is working for a given client, or how well a given intervention's working, to say "This one's not working; we'll stop this one" or "We'll stop working with this client"? Do you get good enough evidence for that?

Helen Johnston: I think there's a place for external evaluation, certainly from our experience.

Q418 Baroness O'Neill of Bengarve: Well, let me ask a blunter question. If you find non-compliance or resistance from somebody who is ostensibly engaged in the programme, do you say "Sorry, no more" or do you not?

Robin Gargrave: In any programme you always will get people who will sign up and then perhaps not even turn up for the very first session. There will be other people who show ambivalence as the programme rolls on and may drop out. What we do with the activators, and I'm sure the same is true of Health Trainers, is to try to keep them really engaged. The Let's Get Moving initiative means if people haven't shown up for a while they get telephone calls and they do get ongoing support. So I don't think you'd ever give up on someone, but

a lot of people will self-select out of programmes. That is quite common, particularly when you're dealing with more hard-to-reach groups.

Judy White: There's no compulsion to be there, so they're not going to keep coming if they're not motivated.

Q419 Baroness O'Neill of Bengarve: So you're really relying on client choice to achieve exit of the non-engaged.

Robin Gargrave: With peer support.

Baroness O'Neill of Bengarve: Rather than your decision that this is not engagement, it's simply wasting the Health Trainer's time?

Judy White: Certainly from a Health Trainer's point of view, they wouldn't continue seeing somebody they felt was just coming in for a chat and wasn't doing anything. There is a limit on how many times they would see somebody; it's usually six to eight sessions. It's a contract, basically—it's part of the motivational interviewing approach that they take. They set goals so there is an expectation that they're achieving; they'll be checking that out with them. That's what clients like, actually. They think, "Oh, I'm going to see them next week; I want to prove I'm doing something", and if they were just getting nowhere the Health Trainer would say, "Look, I just don't think this is working for you and I think we're going to have to close this if you've not progressed any more by next time". We've had some independent evaluation. We got NHS Direct to do a client survey for us, and that was showing that clients really like this; they like the fact that there is an expectation that they're going to come and tell the Health Trainer whether they've done what they said they'd do last week—not in a punitive way but in a friendly, supportive way. If they come and say, "Well, actually I didn't get around to doing that because this happened" they'll say, "Fine, well, let's start, and look and see what you can do this week".

Baroness O'Neill of Bengarve: I relate this to the conclusion that the programme is both cost-effective and appreciated. I take evidence for it being appreciated but less obvious is the cost-effectiveness.

The Chairman: I don't think we've got that.

Q420 Baroness Perry of Southwark: The projects that you're involved with are very much working with people as individuals, working on a one-to-one basis, perhaps less with the West Midlands project. A lot of the evidence that we've had has indicated that there is—to put it in rather ugly words—an obesogenic environment. If people can't get to a gym or can't go jogging conveniently, and if they can't get good, cheap food, they're less likely to sustain an effort to lose weight. What, in your experience, do you feel is the balance between working with individuals and getting them motivated through your programmes, compared with changing the environment in which everyone lives?

Robin Gargrave: It is a challenge. If you believe in self-determination then obviously behaviour change exists with self. But self is within the macro-environment and it does present a challenge. So if you're working with individuals who may want to change or who may be contemplating change but they live in an environment where perhaps it's difficult to access fresh fruit and vegetables at a reasonable cost, that lacks open space and where their culture is against physical activity, then you are starting to hit a number of additional barriers. So I absolutely think that the obesogenic environment is critical, and the more that

can be done to make that environment more friendly to change the better, because that will increase the chances of the individual, self-determined, actually making that change.

Q421 Baroness Perry of Southwark: What could Government do to create that different environment?

Robin Gargrave: Well, the Government are already doing some stuff; you can see the progress that's been made in London, for example, around cycling. There have been policy decisions—there have been some environmental changes with cycle lanes being introduced and a cheap bike hire scheme. So the Government can do things to improve the environment. Local communities can do things for themselves. Part of the Activate London programme we were involved in—Well London, it was called—involved the setting up of cooperatives supplying cheap, fresh food in very difficult areas where that stuff just wasn't available. So I think that Government, local authorities, communities and charities can partner up to do a significant amount of work to address the obesogenic environment.

Helen Johnston: I think something to flag up as well is around health inequalities, because there is sometimes concern that some of our interventions don't necessarily tackle health inequalities because actually we recruit people and are most able to work with people who have a reasonable sense of self-efficacy. They are people who can bring themselves on to a programme, with our support, and we do give them lots of targeted support; the individuals who can interact within a group, who can discuss and take on new information, and use it to enable them to make changes. We also work with individuals who really struggle with that. We have a programme for adults with learning difficulties, and conveying messages around nutrition is much harder when individuals find it harder to make those changes for themselves, and find it harder to connect with a programme. One key example is around nutrition labelling. We have a labelling system that is about presenting information in letters and numbers. For individuals who are not numerate, or are illiterate, that labelling system is part of this environment framework that they live in, which makes it very hard to make informed choices at the supermarket. The clients, even those who we retain our programmes—who love our programmes—find it so frustrating when we spend time talking with them about how to read a nutrition label and how to make an informed choice about a food product. So that's an example of a change I would certainly be very keen to see.

Q422 Lord Krebs: Last week we heard from the Department of Health that Ministers had decided to push the food industry in their voluntary adoption of food labelling for a numerical tabulation of guideline daily amounts. Am I hearing you saying that for the kind of individual about whom you're talking, that would not be a good outcome in terms of helping them to help themselves?

Helen Johnston: It does not provide information that they can assimilate and use.

Q423 Lord Krebs: So why has the Department of Health chosen to go for the solution that doesn't provide benefits in improving people's health?

Helen Johnston: Nutrition labelling is quite a tricky topic and there is a very powerful lobby around nutrition labelling both in this country and in the EU.

Q424 Lord Krebs: Powerful lobby from who?

Helen Johnston: It's a contentious issue.

Q425 Lord Krebs: Sorry, who are the people who are lobbying?

Helen Johnston: The food manufacturers and the supermarkets.

Q426 Lord Krebs: So you're saying that the Government is kowtowing to the food industry, who clearly don't want clear labelling because it would be damaging to their products?

Helen Johnston: The recommendations from the public health professional bodies have all been pro a labelling system that has information represented beyond words and numbers—for example, traffic lights. As yet that has not been pushed forward.

Q427 Lord Sutherland of Houndwood: I wanted to pick up a couple of themes that have already surfaced. The general question is about the fact that there are various agents at work; national Government level, local authority level, local level, community group level, and organisations such as your own YMCA, which is clearly a national organisation. Obviously we all think it would be better if they all worked together, so could I start by asking: have you any examples of cross-fertilisation?

Robin Gargrave: Yes, in a number of the projects that we've been involved in we've tried to develop partners as much as possible. In workplace activators we engage with employers in small and medium-sized enterprises; they are partners. We work with the Fitness Industry Association to engage the local gyms and places where people can actually be more physically active. There are funding bodies, like NHS Camden, NHS Westminster and the Department for Work and Pensions. Different sources of funding come together, and there is engagement with the universities as well in monitoring and evaluation. Where I think there's an issue—and I think this is where you're going with this—is, in terms of working with each other, we tend not to. We tend to work in silos.

Lord Sutherland of Houndwood: Well, that's the point really.

Robin Gargrave: There are some examples where we've partnered with other organisations but I think as a general point, within public health we still tend to operate in silos and organisations because that is where the funding has gone in the past: to individual organisations. So I think you're on to something there.

Q428 Lord Sutherland of Houndwood: Ms White?

Judy White: A couple of points. In terms of the Health Trainer programme itself, I think it's been a really interesting example of how a programme has grown by constant feedback up and down between national, regional and district levels. There was a national team up until the end of September, a very small team, that led on this from the Department of Health. There were the districts that were setting up their own programmes, and that's included not just Primary Care Trusts but the Army, prisons, other offender health settings and so on. Some big employers like Royal Mail have taken on Health Trainers. Then there were the regions that they set up, which were very much in this hub-and-spoke model to roll out

Health Trainers from the early adopters. The way we worked was that the national team was the small group here at DH, but the rest of us who were at regional level were meeting on a regular basis. So we were constantly feeding things up and down, so we were learning from all levels. So that's just one thing to mention. The other thing I wanted to say is that, yes, there is a lot of silo working, and it depends very much on the way that the public health directorates and PCTs work across with local authorities, but in some places there still is a joined-up approach. This is so important; Health Trainers work well where there are a lot of other things happening, because a lot of what we do is signpost people to things. So where there's not much going on this can create difficulties. An example from my region is Scarborough in North Yorks, which has always struggled and really not invested anything much in health improvement activities because they've always been challenged in terms of finance. So we've set up a very embryonic Health Trainer programme with money from the Health Inequalities Unit at the Department of Health, but they're doing great work, but finding it challenging because there's not much to get people involved in. So you need a lot happening and we need to work across with each other, support each other, refer in and out and so on.

Q429 Lord Sutherland of Houndwood: I'm very conscious that we're getting very near the end of the session. I wanted to ask two very quick supplementary points. What should the role of the national Government be? You mentioned creating environments and cycling tracks, which may be a local authority matter. Secondly, you've mentioned the reduction in cash available several times. Are you fearful for the various initiatives you're involved in? Is it the double whammy? The new health service Bill is published tomorrow, where there will be much more devolved commissioning. Does that include you and the sorts of projects that you're involved in? Is this an opportunity or a concern?

Robin Gargrave: I think it's both a threat and an opportunity.

The Chairman: In about one minute each.

Robin Gargrave: I believe it is, provided we get clear guidelines on new commissioning processes—I'd love to see the Directors of Public Health really getting behind physical activity, because compared to other behaviours it is still quite low down the priority list compared to smoking cessation. We'd like to see equal priority for that and also for healthy eating as well.

Zena Lynch: I think it's important to recognise the value of in-kind support, because a lot of our programmes are run by volunteers or with volunteers, and actually that brought in £1.2 million worth of in-kind support, if you added up all of their volunteer time in hours. I think that it's also important to show the comparative advantage of the voluntary community sector in delivering service. In the third sector we're actually very quick in getting up and running with our programmes. The problem was that then they weren't part of the mainstream PCT service, which meant that it was a really hard job for them to then become commissioned as a service. Then it was vice versa when the PCT or local authority were taking up the services directly; it took longer but they were more able to mainstream because they were part of the process.

Judy White: I totally agree with that point; we have got volunteers linked with Health Trainer programmes making huge contributions. The point I want to make, very quickly, is that, yes, I am fearful; I think there are real dangers that services are going to get decommissioned. Not all Health Trainer services are permanently funded. The work that

I've been looking at in Rotherham is so impressive for a very small amount of money. They've got about £140,000 this year; they're seeing 1,400 patients with just something like 4.5 whole time equivalent Health Trainers, making a huge difference to people. They don't know if they've got any money next year because they're on short-term money and everything that's short-term funded at the moment is going, so they're busy lobbying. The GPs love them, or most of them do because they're in most of the surgeries, but there's a real danger they'll get lost in the interim, because practice-based commissioning has gone so they can't appeal to that. They haven't got their hands on the money yet to say, "Well, we'll fund you". Just imagine, a service like that could go and then a year down the line we'll be looking to reinvent it and all that time, effort and people who have been trained is in danger of being lost. So I have got concerns.

Q430 The Chairman: Ms Johnston, a last word?

Helen Johnston: I would second what my colleagues have said. I think within public health we need to be very clear because we have these really fantastic representations of community programmes and community projects. Where public health responsibilities are given over to local authorities there's a danger that these community lifestyle services, and those that the Health Trainers can then direct and signpost some of their clients into, will really fall down the gap.

The Chairman: Thank you very much indeed. Can I thank all four of you for coming and giving us evidence today? Some of you have volunteered some extra evidence, and please could you let us have that? That would be enormously helpful. You'll get a transcript in probably the next 10 days or so, do feel free to correct anything that you think is wrong. Also if there are any additional points that you want to make at that time please do let us have them. Thank you very much again.

Katherine Kerswell, Association of Public Health Directors, Weight Watchers and MEND Central

Written evidence from Weight Watchers UK (BC 30)

Summary of content

- How Weight Watchers tackles obesity
 - Weight Watchers' current and potential services to the NHS
 - The evidence base on the efficacy and cost effectiveness of Weight Watchers' services
 - What needs to change to maximise the impact of weight management interventions within the NHS
- I. Recent independent research¹ shows that when primary care and the private sector work in collaboration, behavioural changes that result in weight loss outcomes can be significant. This submission from Weight Watchers outlines how the company works with the NHS and offers an insight into their experiences of the current challenges associated with translating research into evidenced based practice and delivering an effective weight management intervention in primary care. In order to accomplish industrial scale weight management commissioning in England, it needs to be supported through; directive policy, governmental guidance and adequate ring fencing of resources.**
- 2. Tackling Obesity: How Weight Watchers works**
- 2.1 Weight Watchers offer a wide range of effective services, products and publications for those interested in healthy weight loss and weight control. In the UK over 6,000 meetings are held every week with over 1,700 trained Leaders.
- 2.2 Weight Watchers has a holistic approach to weight loss. The Weight Watchers philosophy is built on a '4 way approach', to ensure healthy and sustained weight loss: (1) healthy eating; (2) physical activity; (3) group support; and (4) behaviour change. Based on NICE² guidance, Weight Watchers understands that to lose weight safely and sensibly, a person must learn to eat healthily, increase physical activity, create and live in a supportive environment conducive to achieving a healthy weight, and manage the challenges involved in changing behaviours.

2.3 Regular support is a proven element of effective weight loss interventions². Indeed Weight Watchers own research indicated a dose-response to attending weekly meetings; in other words those people who attended the greatest number of Weight Watchers meetings had the greatest weight loss³. This phenomenon has been verified by further independent clinical trials, whereby weekly group support was found to be independently and significantly associated with weight loss success⁴.

2.4 In Weight Watchers weekly meetings, members are weighed in a confidential environment on regularly calibrated scales. There is a weekly healthy weight loss curriculum, delivered through the discussion section of the meeting and weekly

programme literature. The meetings are designed to be interactive, animated and encourage hands-on learning through group discussion and offer guidance and tools to help individuals stay motivated and achieve realistic weight-loss goals.

3. Weight Watchers is an effective agent for the delivery of behaviour change interventions to tackle obesity, offering efficacy and value in obesity interventions to the NHS

- 3.1 Following extensive research and evaluation Weight Watchers launched its Referral Scheme in April 2005. The scheme which offers the NHS a subsidised package to bring the Weight Watchers programme and weekly meeting support to overweight and obese patients in England. It is designed to complement the services offered by NHS providers like GPs, dietitians and practice nurses and broaden patient choice of weight management services accessed through primary care.
- 3.2 Potentially, over two thirds of the adult population in the UK needs access to some sort of weight management service and rates of overweight and obesity are rising⁵. Surveys have identified that capacity for obesity management within GP practices is limited⁶. The Darzi review recommended that 'systematic and industrial scale' interventions are needed to tackle obesity and the resultant long term conditions such as diabetes and coronary heart disease (CHD). In his view the NHS is required to commission obesity management services on a national scale to make any meaningful impact on this rising epidemic⁷.
- 3.3 The NHS has limited capacity to tackle this rising epidemic. In contrast to the intrinsic limitations in NHS provision, Weight Watchers has the operational infrastructure to provide the 'industrial scale' of services through its 6,000 community based meetings throughout the UK, meets NICE² best practice standards, is proven to be cost effective to the NHS⁸, and is proven to be a significantly effective complement to primary care services¹.
- 3.4 The overweight and obese population is diverse, both in terms of its BMI distribution and weight management needs⁹. Previous clinical research indicates that different weight management approaches are effective with different individuals^{10, 11} and therefore a range of service options should be available to NHS patients needing to lose weight. Relatively small numbers of obese patients with complex health problems require specialised treatment from multidisciplinary teams of health care professionals. Others require one: one style interventions from health professionals such as dietitians, practice nurses or GPs. Then there is a large group of the overweight/obese population which is likely to respond well to group support interventions. While standard treatment packages such as this may not suit the needs of all patients, Weight Watchers meets NICE best practice standards and is underpinned by a robust level of research and evaluative data – so is well placed to support the NHS in managing the scale of services required. Such an approach spares the very skilled input which qualified health professionals can provide and means that the NHS do not have to invest in the development of their own group interventions, helping to maximise the cost effectiveness of obesity strategies at PCT level. With this model, the referring healthcare professional continues to maintain ultimate clinical responsibility for the patient, whilst Weight Watchers delivers the intensive

regular intervention considered necessary to achieve effective weight loss and maintenance. To support weight maintenance, once any member reaches a healthy weight, they can attend Weight Watchers meetings free of charge for the rest of their lives.

- 3.5 To date, just under two thirds of Primary Care Trusts (95) have procured weight management services from Weight Watchers. The Weight Watchers Referral Scheme consists of an individual patient pack of vouchers for 12 Weight Watchers meetings. The cost to the NHS is currently £45 for 12 sessions (the cost to the NHS of one 10 minute GP consultation is £20). Most PCTs offer this service free of charge to patients; however patient access varies between PCTs and also between GP practices within those Primary Care Organisations which have procured this package for their patients. The majority of PCTs purchase packs on a pilot basis (less than 250 packs) and therefore only have capacity to offer referral to Weight Watchers to very small numbers of hand selected patients. Each PCT sets its own criteria for eligibility, usually based on BMI and co morbidities, which are currently obviously driven by their own priorities and resources. There are currently inequalities in access to the Weight Watchers Referral Scheme both within and across PCTs. The most recent independent audit of the scheme¹² showed that of the 29,326 referrals to Weight Watchers, 26,252 (90%) were female. Median age was 49 years (inter-quartile range (IQR) 38 – 61 years). Median weight at the start of the referral course was 94.3 kg (IQR 83.7 – 107.7kg) and median BMI 35.1 kg/m² (IQR 31.8 – 39.5kg/m²).
- 3.6 It is clear that the current profile of patients referred into the scheme is not a representative sample of those who need weight management services across England. Many PCTs are using the scheme solely as a 'last resort', rather than offering the service to all those who may benefit (prevention of overweight, treatment of overweight and treatment of obesity).
- 3.7 There is a strong cost effective argument for commissioning interventions such as the Weight Watchers Referral Scheme, to provide the resource-intensive weekly support significantly associated with effective weight loss⁴, on the required industrial scale, in order to spare the highly specialised care provided by health professionals for more complex cases of obesity. Overweight and obesity have cost implications for both the healthcare system, the broader community and society. Substantial change in the current provision and uptake of weight management services will be needed to produce the reductions in preventable diseases that will lead to the greatest reductions in future healthcare costs.
- 3.8 In March 2008 Weight Watchers commissioned a modelling exercise to harness the forecasting capability developed for the Foresight review to examine the potential impact of large scale implementation of their 12 week intervention package for primary care¹³. This was a very conservative population based analysis, to simulate the potential health and economic impacts of population based engagement with a short term weight management intervention. The first stage of the modelling exercise mapped key characteristics from the referral patient database (detailed above in paragraph 3.5). Analysis of weight loss distributions suggested an average BMI loss of 1.5 units (equivalent to a loss of 4-6kg) in participants who completed a

12 session course. This information was subsequently entered into the Foresight computer programme to simulate virtual referrals in the English population (this equated to around 10% of the English population / around 4.9 million) from 2010 to 2030 and national health and economic outcomes were predicted up to 2080. With potentially more than two thirds of the adult population needing access to some sort of weight management services, it is clear that this analysis is understood to be somewhat conservative.

- 3.9 Assuming the typical BMI loss of 1.5 units is sustained over the participant's lifetime, this simulation estimated savings in healthcare costs of £1,860 per intervention person. This translates into a total saving of over £9,064 million to the NHS in the period to 2080. When theoretical allowances were made for a 50% drop out rate and a 25% success rate in maintaining weight loss over a lifetime then the UK Government would make savings in direct health care costs of about £230 (at 2009 costs) per participant of the Weight Watchers course and £1,600 per head in full economic costs. When these estimated savings are offset against the cost of the intervention to the NHS (£45 per participant per 12 week course) savings to the Government on total economic costs still remain around £6.4 Billion.
- 3.10 Health outcomes in participants appeared similarly significant. A 20% reduction in risk for diabetes was estimated and 5% reduction in the likelihood of developing other BMI related diseases including cardiovascular disease and arthritis. Accordingly the micro simulation demonstrated a reduction in BMI related diseases over time amongst the intervention population. A measurable reduction in diabetes rates emerges as early as 2019 equating to avoiding around 5,000 cases of diabetes per year by 2050. In addition a small but measurable increase in life expectancy was estimated (an additional 4-5 months/participant).
- 3.11 This modelling exercise confirmed that large scale application of a modest single weight loss intervention might result in considerable savings to Government and improvement in health outcomes for individuals.
- 3.12 Weight management interventions are a cost effective use of NHS resources². An economic analysis of Weight Watchers was undertaken by the Health Economics Consortium at York University, to assess the relative costs and benefits of Weight Watchers methods following the NICE obesity review in 2006. The study suggested that Weight Watchers is a cost effective intervention for the NHS to help prevent and manage obesity⁸. The cost effectiveness ratio of Weight Watchers generated by this economic model (£1,022 per QALY) is towards the lower end of the range of those for other interventions. Paul Trueman, Director of the Health Economics Consortium at York University and author of the study said: 'One of the key elements in the cost effectiveness of interventions designed to prevent obesity is that they produce a lasting effect, with weight loss being maintained over time. The advantage of Weight Watchers over other similar commercial organisations and services provided by the NHS, where people receive dietary guidance, is that Weight Watchers have conducted trials involving two year follow-up studies which prove the long term effectiveness of their methods. These observations are supported by additional studies looking at weight loss maintenance after 5 years'.

- 3.13 As outlined in some detail already, there is strong evidence underpinning both the Weight Watchers programme and its methods, which are based on weekly group support and healthy behavioural change. Weight Watchers controls the quality and credibility of its programme delivery by centrally producing literature that are approved by a qualified Health Professions Council (HPC) registered health professional, and standardised training for Leaders
- 3.14 Over the last decade Weight Watchers has made significant investment in research to evaluate the efficacy of its methods, and the effectiveness of its NHS Referral Scheme. Specifically:
- 3.14.1 A recently completed randomised controlled trial¹ conducted across 3 countries (England, Germany and Australia) revealed that patients referred to Weight Watchers lost significantly more weight (-4.02kg) at one year compared to those who received standard care within primary care (-1.59kg). Of those who completed, patients referred to Weight Watchers lost significantly more weight (-6.87kg) at one year compared to those who received standard care within primary care (-3.17kg). 61% of Weight Watchers patients vs. 32% of standard care patients lost ≥ 5% baseline weight. Dropout rates were also higher in the primary care group (50%) compared to the Weight Watchers group (41%).
- 3.14.2 Data obtained from the Weight Watchers Referral Scheme database for 29,326 referral courses within 74 PCTs between 2007 and 2010 demonstrated that there was a 58% course completion rate with a median weight loss at 3 months of 5.2kg (5.5% of baseline weight) 33% of all referrals resulted in a loss of ≥ 5% baseline weight and 6.8% in ≥ 10% loss. Of completers; 55% lost ≥ 5% baseline weight and 12.2% lost ≥ 10% baseline weight¹².
- 3.14.3 A randomised controlled trial carried out in 2003 evaluated two weight loss methods; Weight Watchers and self-help. After 1 and 2 years, body weight, BMI and waist circumference were more significantly decreased in participants assigned to the Weight Watchers group. Regular meeting attendance was significantly correlated with both weight loss and weight loss maintenance¹⁴.
- 3.14.4 Weight Watchers has invested in a number of pieces of research to measure weight loss sustainability for example; Based on corrected weights from a national telephone survey of Lifetime Members^{15,16}, weight regain ranged between 31.5% and 76.5%. At 5 years, 19.4% were within 5 pounds of their original weight goal, 42.6% maintained a clinically significant weight loss of 5% or more, and 70.3% were below their initial weight.
- 4. Obesity interventions are often inappropriately designed and evaluated within the NHS, due to lack of commissioning expertise, clear criteria and defined processes for evaluating efficacy. This response also addresses the translation question within the call for evidence: Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions.**
- 4.1 In terms of commissioning of weight management services within primary care, there are currently insufficient skills and expertise in the translation of research developments in behaviour change into developing comprehensive multidisciplinary

weight management strategies and into commissioning weight management interventions.

- 4.2 Helping people lose weight is complex, often requiring behavioural intervention, backed up by regular support and review. Obesity is a chronic disease. Despite the complexities of effective weight management interventions, Weight Watchers has found that primary care commissioning processes are often driven by commissioners with little apparent knowledge of the obesity literature and a seemingly poor understanding of the realities of weight management.
- 4.3 Added to this, the quality, content, intervention methods, target audiences, safety and effectiveness of weight management services vary enormously and commissioners don't have adequate guidance to assess them. Whist commissioners have clear guidance from NICE² on evaluating the safety of weight loss interventions (Weight Watchers' experience is that this has resulted in a procurement box ticking exercise which is a poor solution to using services with proven effectiveness), there are no comparable criteria for evaluating effectiveness. In other words there is no clarity on the level of evidence above which commissioners can deem weight loss interventions effective. In Weight Watchers' case; the NICE review² recognised Weight Watchers as the only commercial programme with good quality evidence underpinning its efficacy and Weight Watchers has conducted a wealth of evaluative studies to investigate the effectiveness of the intervention it offers to the NHS.
- 4.4 The NHS should procure evidence based services. As a result of extensive research and evaluation, Weight Watchers has comprehensively documented the outcomes which can be achieved by referral of patients to Weight Watchers within a primary care setting. In contrast, few NHS providers of weight management services (dietitians, practice nurses, GPs) have accrued parallel outcome data, and as a consequence they know little about the true outcomes of the interventions they facilitate, yet within commissioning circles NHS professionals remain the preferred providers of all weight management services. Weight Watchers hopes that government and the NHS work towards having an equal playing field for contracted weight management services delivered to NHS patients. Despite a comprehensive and credible evidence base, Weight Watchers has recognised that there are sensitivities against private sector providers, as recently indicted within the research conducted by Civitas¹⁷.
- 4.5 Under the new White Paper proposals (Liberating the NHS), the current main commissioners of weight management services, Primary Care Trusts (PCTs) will be phased out by April 2013. The vast majority of commissioning responsibilities will be transferred to new GP commissioning consortia. However, it is not clear within any of the detailed White Paper consultations whether the new GP commissioning consortia will procure weight management services (e.g. NHS referral to group support programmes such as Weight Watchers) or whether the contracting process will be the responsibility of public health directors, who sit within local authorities and lead on wellbeing services, or of the NHS Commissioning Board. This key question needs to be answered clearly and explicitly. It is hoped that with these changes come a real focus on evidenced based weight management commissioning, based on high quality research data.

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6 October 2010

Written evidence from MEND Central (BC 94)

1. This evidence is submitted on a corporate basis on behalf of MEND Central by Phil Veasey, Director of Strategic Partnerships and Dr. Paul Chadwick, Consultant Clinical and Health Psychologist, Clinical Director, MEND Central, and Research Associate, Cancer Research UK Health Behaviour Research Centre, UCL.
2. The focus of this submission is on question 16 – Tackling Obesity. MEND has an expert team that includes specialist paediatric dieticians, a psychologist specialising in childhood obesity, and an expert support team that enables local health partnerships to deliver programmes. We are willing to contribute further to the inquiry through oral evidence.

An introduction to MEND.

3. MEND Central is a social enterprise that delivers 5 weight management programmes in local communities for new mothers, children of different ages and adults. The majority of our programmes are delivered in England and Wales. Programmes are also delivered in Australia and the USA.
4. All programmes are cost effective, sustainable and scalable and are built on a foundation of evidence-based practice, quality assurance and continuous improvement. In England and Wales over 1,000 programmes are delivered per year, impacting over 40,000 participants to date. MEND is the child weight management partner of over 100 PCTS and 50 Local Authorities in England.
5. MEND has evolved from a 20 year partnership with Great Ormond Street Hospital and the University College London Institute of Child Health. Clinical research published in February 2010 (16a and 16d) states that the MEND 7 – 13 Programme helps children to lose weight, increase physical activity levels and self esteem, and also reduces sedentary behaviours. Positive outcomes continued to improve after participants completed the programme and were sustained at 12 months.
6. MEND's secure web based system is the largest repository of child weight management programme data in the world.

16.a. the latest developments in the evidence-base in relation to changing eating and physical activity behaviour;

7. Successful management of obesity in both children and adults requires changing multiple eating and activity behaviours simultaneously. Evidence suggests that this is most effectively achieved by multi-component programmes which modify obesogenic eating and activity habits, using interventions derived from cognitive and behavioural therapy (Summerbell et al., 2009; NICE CG43).
8. The MEND 7-13 Programme is one such programme and its delivery into communities throughout England and Wales (para 24) represents the largest roll out of any community-based weight management programme for children in the UK, if not the world.

Programme Structure

9. The MEND (Mind, Exercise, Nutrition, Do It!) 7-13 Programme is a community intervention aimed to empower families of overweight and obese children, aged 7-13 years, to adopt and sustain healthy lifestyles. The MEND Programme comprises an intensive 10-week phase, consisting of 20 two-hour sessions held twice a week, followed by a two-year support service.

Intensive Phase Programme Outline

10. Twice-weekly sessions take place after school or on weekends and are ideally run over the school term. Locations suitable for delivery of the Programme include community venues such as schools, leisure centres and community halls. Sufficient space for classroom-style activities as well as an appropriate area for physical activity involving up to 15 children, and access to a swimming pool (where possible) is the basic requirement.
11. The Programme is delivered face-to-face in a group setting and involves direct participation by all children and their parents or carers. Recognising the importance of family involvement for behaviour change, the Programme requires a parent or carer to attend all sessions. Each session has two halves, starting with an hour of theory delivered in a workshop-style lesson format encouraging group discussion between all children and adults. This is followed by an hour of fun land- or water-based physical activity for children, during which time parents or carers engage in an hour of guided discussion. Facilitation rather than a didactic approach underpins all theory and guided discussion sessions.

Programme Content

12. The theory sessions alternate between ‘Mind’, (based on social learning theory and behaviour modification) and ‘Nutrition’ (based on government healthy eating guidelines) topics. They are designed to teach practical skills around nutrition, education about healthy food choices and behaviour change techniques to support the implementation of new habits. Sessions use age-appropriate language and emphasise practical, hands-on learning using specially designed games, visual demonstrations and activities, e.g. a supermarket tour (including food-label reading) and a healthy recipe-tasting sessions. Children and parents or carers also engage in discussion and negotiation to determine individual goals and rewards. Children and parents or carers are encouraged to work towards weekly nutrition and physical activity goals with the help of over 140 pages of interactive handouts.
13. The physical activity (‘Exercise’) sessions are based around multi-skill style team games that are non-competitive, structured and progressive, thereby promoting overall improvements in agility, balance and coordination. Physical activity sessions incorporate a range of alternative activities which are designed to appeal to and engage young people who may not be motivated to participate in more traditional activities and are delivered in a fun and game-based manner.

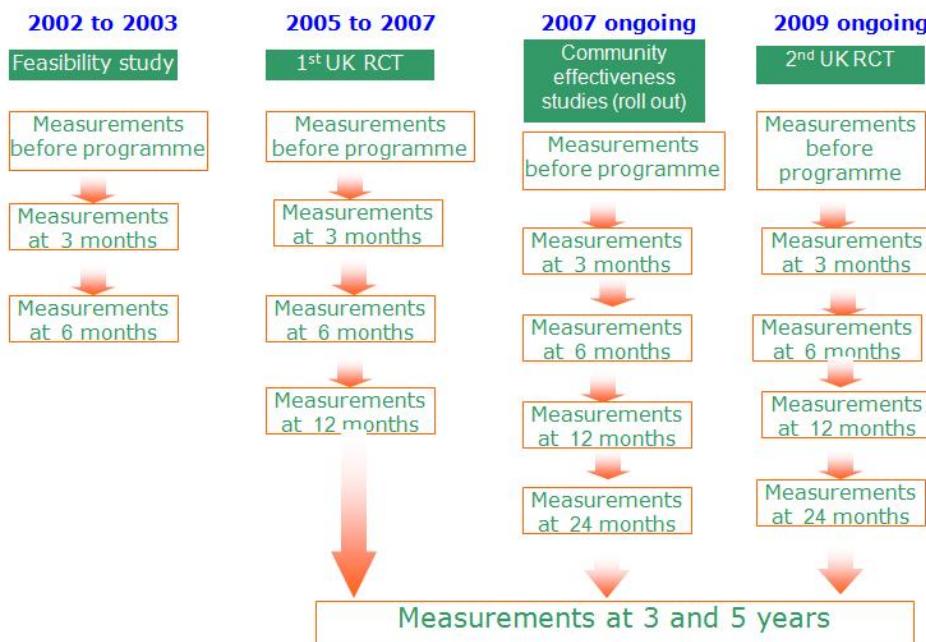
Two Year Support Strategy

14. Creating a healthier lifestyle takes time. MEND families are supported for two years to make and maintain healthy lifestyle changes to help their child achieve a healthier weight. After completing the 10-week MEND 7-13s intensive phase of the intervention, families can continue to be motivated and supported by MEND World activities and resources.

MEND World is a standard part of MEND's offerings and is managed by our Sustainable Health Outcomes Team.

15. Research has outlined the clinical parameters needed to help individuals to make behavioural changes which result in a medically meaningful degree of weight loss (Adults: Shaw et al., 2005; Children: Summerbell et al., Both: NICE Guidance CG46), but much less is known about the most effective way to deliver such interventions at scale so that they can have a meaningful impact at the population level. Within the arena of adult weight management there is strong evidence that intensive, behaviourally-based weight management programmes (DPP's) can result in weight losses that are able to prevent progression to diabetes in approximately 58% of at-risk individuals (Lindstrom et al., 2006; DPPOS., 2009). Whilst the cost-savings of this form of prevention have been shown to offset costs for treating diabetic individuals there is a general perception that such programmes are difficult to implement at scale in the 'real world', and very few studies provide data to the contrary.
16. The evidence-base for the DPP's largely reflects the state of the wider literature on the effectiveness of weight management programmes beyond the confines of controlled clinical trials. There are few evaluations which give answers to the important questions of (1) whether the effects observed in controlled clinical trials are seen in the 'real' world, and (2) whether it is feasible to scale up such interventions without compromising efficacy. Designing and implementing trials to answer these questions takes considerable resource and time, and the requirement for rigorous evaluation has to be balanced against the need to address an immediate public health issue: the high proportion of obese children who need treatment now.
17. Weight management programmes fall into the category of 'complex interventions' and recent MRC Guidance on developing and evaluating complex interventions outlines a rigorous but non-linear model of development. This approach makes it easier to accommodate the need to do something alongside the requirement to ensure that what one does is worth doing and evidence-based.
18. Evaluation of the MEND 7-13 Programme has largely followed the development-evaluation-implementation cycle outlined by the MRC. Whilst the evaluation process has not always been as linear as we – and perhaps others - would have liked, MEND have managed to accrue data that can begin to address the important questions of whether it is possible to deliver clinically meaningful outcomes at scale by the implementation of a standardised programme. Figure 1. shows the research activity being conducted on the MEND 7-13 Programme.

Figure 1.



19. Table 1. below presents the anthropometric outcomes achieved by children in MEND Programmes across a feasibility study (Sacher et al., 2005), a Randomised Control Trial (Sacher et al., 2009), and an analysis of the general delivery of the programme in England and Wales over the past 4 years (Kolotourou et al., 2010).

Table 1.

	Feasibility (Sacher et al., 2005)		RCT (Sacher et al., 2010)		Roll Out (Kolotourou et al., 2009)	
	3 months	6 months	3 months	6 months	3 months	6 months
	N=10	N=7	N =47	N = 71	N=6815	-
BMI	-0.9 (0.8)	-0.8 (1.2)	-0.9 (0.8)	-1.0 (1.6)	-0.8 (1.0)	-
Waist circumference	-2.2 (2.6)	-3.4 (2.0)	-2.9 (2.2)	-4.2 (3.4)	-2.7 (4.0)	-
Self-esteem (range: 36-144)	+14.7 (8.1)	+13.2 (7.6)	-	-	-	-
Self-esteem (Harter) (range: 0-4)	-	-	+0.1 (0.5)	+0.2 (0.7)	-	-
Self-esteem (Rosenberg) (range: 0-30)	-	-	-	-	+3.5 (6.1)	-

These outcomes represent clinical meaningful improvements in key indices of weight status, cardiovascular health and psychological well-being relevant to the burden of

overweight in children. Encouragingly, outcomes appear to be equivalent despite the dilution of expertise in delivery team as outlined below:

- Feasibility: this was delivered by experts in the weight management area: a psychologist, dietitian, and physiotherapist.
- RCT: Delivery utilised dieticians but the non-psychologist delivery of the behaviour change component.
- Roll Out: A large proportion of delivery partners were non-specialist and non-professional.

20. Whilst these results are consistent with the view that the dilution of the level of behaviour change expertise does not necessarily compromise the efficacy of behaviourally-based interventions, we believe that there are certain features of our implementation model that encourage the equivalency of outcomes across diverse settings:

- **In the case of child weight management there is a need for highly structured programmes with detailed session plans to support the integrity of treatment delivery;** programmes need to be designed by experts but with dissemination by non specialists in mind from the outset. This means paying close attention to understanding the most likely delivery mechanism and tailoring the treatment to ensure that what is being asked is commensurate with the skills and capabilities of the delivery team such that treatment can be delivered safely and responsibly. It is important to note that not all behavioural or dietetic interventions can be delivered by non-specialist staff and this needs close attention during the development stage. MEND, however, has evidence to state that (1) non specialist staff can deliver child weight management programmes effectively, and (2) delivery models with clear guidance and performance indicators increases the likelihood that treatment fidelity will be maintained.
- **A commitment to competency-based training models and ongoing opportunity for quality assurance;** a competency-based approach enables a wider range of professional groups to be used in delivery which in turn increases the potential reach and the cost effectiveness of the intervention. ‘Manualisation’ and competency-based training enables more effective quality assurance processes.
- **The need for a centralised team of experts to analyse programme data and to maintain a focus on outcomes;** interpretation of anthropometric and psychometric outcomes are complex, especially when measuring change in the context of a child’s growth and development. Such expertise is often scarce at the local level and this can result in inadequate analysis and misinterpretation of outcome data, leading to ineffective decision making and potential misuse of public resources.
- **The need for independent academic evaluation;** MEND believes that independent academic evaluation of our services is essential in building an evidence base to inform best practice. We have a history of partnering with reputable academic groups to provide independent evaluation of our services. These include partnerships with Institute of Epidemiology and Biostatistics at ICH to investigate the impact of MEND 7-13 Programme in relation to health inequalities, and Deakin

University in Australia to conduct an RCT on our prevention programme for families of 2 - 4 year old children.

- **The need for the MEND programmes to be part of a broader local community obesity strategy;** The optimal delivery of the MEND 7 – 13 programme takes place when the programme is part of a ‘care pathway’ where recruitment and the signposting and/or provision of programme follow on activities, for example, are provided by the local health partnerships who are hosting MEND Programmes.

16.b. who are the most effective agents for the delivery of behaviour interventions to tackle obesity;

21. Obesity is not a homogenous disease and therefore a tiered approach to the delivery of behaviour change interventions is required. However, community based interventions can work well for those with ‘simple’ obesity, i.e. without co-morbidities.
22. The MEND Community based model is expert enabled and locally led; the course content, resources, leader training are developed, quality assured and continuously approved by obesity experts, while the programme is hosted by a programme manager based in the local health partnership, who deals with the logistics of recruitment, booking venues, collating resources etc, and delivered by local, trained leaders.
23. As explained in paragraph 21, the RCT and the feasibility trial highlighted that trained non specialists can achieve the same results as obesity specialists from UCL and GOSH, at least in the short to medium term, and if this approach was adopted widely, it would significantly enhance cost effectiveness and reduce NHS capacity constraints. The current Coalition Government has placed a focus on improving public health and this model will be able to utilise a wider ‘public health workforce’ that may include fitness trainers, teachers and pharmacy staff for example.

16.c. how current behaviour change interventions tackle obesity and what use is made of available scientific evidence;

24. In 2006 MEND won a £7.9m four year contract from the Big Lottery Fund (BLF). ‘England on the MEND’ was funded to achieve a significant and measurable reduction in the national incidence of childhood obesity by delivering over 1600 MEND 7-13 Programmes, utilising 90 local partnerships of Schools, PCTs, Local Authorities, and Leisure Providers throughout England between 2007 and 2011. The Programmes will reach nearly 20,000 families and build the capacity of delivery partners for the implementation of future obesity interventions.
25. The project has enabled MEND to roll out an evidence based child weight management programme at scale to local communities throughout England utilising a collaboration of third sector provider and local health partnerships. The delivery model is based on a concept of a ‘nationally-championed, expert enabled and locally led programme’. It has produced demonstrable outcomes in reducing BMI and waist circumference and improving the self esteem of participants.

26. We have already discussed the origins of the MEND 7 – 13 programme in terms of available scientific evidence. In a sense the pioneering nature of the MEND 7 – 13 programme and the high value MEND places on continuous improvement means that the scientific evidence continues to grow and influence programme development.
27. The MEND 7- 13 Programme, for example, is now on version 6.2. This continuous improvement has been informed by a combination of an RCT, participant feedback, programme manager feedback, programme leaders feedback, and sharing best practice which includes a bi annual conference.

16.d. whether such interventions are appropriately designed and evaluated;

28. The design of the MEND 7 - 13 programme has already been discussed. In terms of evaluation, the very first MEND 7 – 13 programme was delivered in 2005. Since then an RCT, and evaluation of over 15,000 children participating in the programme has led to the world's largest body of evidence documenting successful outcomes for any child weight management programme.
29. The RCT demonstrated that children in the intervention group experienced statistically significant reductions in waist circumference and body mass index, increase in physical activity and reductions in sedentary behaviours, improvements in cardiovascular fitness, and increases in self esteem. The trial conducted by a team at University College London Institute of Child health, Great Ormond Street hospital and UCL Cancer Research UK Health Behaviour Research Centre, highlighted the positive impact of the MEND 7 – 13 programme. Children's outcomes improved over the course of the 10 week programme (3 months), and continued to improve for the three months following the programme. The six month health improvements were maintained 12 months after starting the programme. The 86% attendance confirmed the acceptability of the programme to families and is extremely positive for such an intense community based programme.
30. MEND's web-based Operations Management and Monitoring System (OMMS) allows Programme Managers, and MEND Central staff to store and manage participant's information, record and store data, such as participants' measurements, feedback and attendance, and produce participant and programme reports. This makes it possible to effectively and efficiently evaluate results.

16.e. What lessons have been learnt and applied as a result of the evaluation process.

31.
 - The MEND Programme is scalable and cost effective. In local communities non specialists can deliver programmes with the right toolkit, training and skills.
 - Local data collection (para 31) is challenging and community practitioners don't necessarily have the skills to collect the data. We have focused attention on data collection in 'skill updates' and best practice conferences.
 - The local health partnerships are critical in the delivery model particularly in terms of recruitment and signposting to sustainable activities post programme.
 - Recruitment to programmes is a challenge. However, once recruited there is an excellent retention level.

- There is potential for some graduates (probably 15%) to be ‘recycled’ to support further programmes. MEND is so confident in this that we have a vision for the roll out of a network of trained ‘health ambassadors’ – graduates of MEND Programmes who can support the behaviour change process at street level.

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18 November 2010

Oral Evidence, 18 January 2011, Q431-455

Evidence Session No.12. Heard in Public.

Members present:

Lord Crickhowell
Baroness Hilton of Eggardon
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Earl of Selborne
Lord Sutherland of Houndwood

Examination of Witnesses

Witnesses: **Ms Katherine Kerswell**, [Group Managing Director of Kent County Council, and former president of the Society of Local Authority Chief Executives (SOLACE)], **Dr Frank Atherton**, [President of the Association of Public Health Directors], **Ms Zoe Hellman**, [Company Dietitian, Weight Watchers], and **Mr Paul Sacher**, [Chief Research and Development Officer, MEND Central].

Q431 The Chairman: Can I start by welcoming our witnesses; it's very good to have you with us. Some of you were here and heard the last session, so you know how it works. What we'd like you to do, right at the beginning, is to say who you are for the record and, if you wish to, make a very short opening statement. We probably have about 50 minutes; the session will be relatively short. After you've introduced yourselves and made your initial statement, I'll ask the first question and then we'll distribute questions around the Committee. If you could keep answers short that would be great. I think most of you heard, but we are being webcast, so people will be able to hear everything you say. You will also get the transcript later, and will, if you feel you haven't said something, be able to add that in evidence to us afterwards. So if you feel you haven't had enough of a say, you'll get it then. Over to you, please start.

Paul Sacher: My name's Paul Sacher, I wear a number of hats. My primary role is that of Chief Research and Development Officer at MEND. MEND is an organisation that trains local professionals to deliver child and adult weight management programmes in their local communities, both nationally and internationally, in partnership with Primary Care Trusts, local authorities and leisure providers. I also am a senior research fellow at the Institute of Child Health at University College London, specialising in obesity research, as well as an Honorary Principal Dietician at Great Ormond Street Hospital. My professional background is in nutrition and dietetics.

Zoe Hellman: I'd like to take the opportunity to thank you for inviting me here today. My name's Zoe Hellman, I'm the Weight Watchers Company Dietitian and I work across the

Katherine Kerswell, Association of Public Health Directors, Weight Watchers and MEND Central

UK business, within R&D and our public health functions, which deliver and evaluate our NHS referral scheme. This is a 12-week intervention package that we offer to the NHS. I've also worked as a Weight Management Clinician within the NHS so I've seen both sides of the fence. In the context of today's session I see myself here as a representative of a service provider to the NHS that provides locally based services that are supported nationally. We believe that we have lots of opportunities to make a significant impact on obesity and achieve significant savings for the Government. Our concerns are around the current and proposed commissioning structure and the responsibilities for central Government to actually achieve the scalability of services that we need to tackle obesity.

Dr Frank Atherton: Good afternoon, I'm Dr Frank Atherton, I'm a Director of Public Health in North Lancashire but I'm also the President of the Association of Directors of Public Health, which seeks to bring together the views of the Directors of Public Health across the UK. Clearly public health is in a state of transition at the moment and Directors of Public Health have been over years looking at issues around behavioural change, not just when it comes to obesity but to smoking, alcohol and a whole range of issues. Part of the concern that we have, as Directors of Public Health, is how we continue that work in the current environment and into the future, as we move into the local authority domain.

Katherine Kerswell: Good afternoon, my name is Katherine Kerswell. I'm actually called Group Managing—

The Chairman: I'm really sorry, you're going to have to speak up, this room has appalling acoustics, so you'll just have to shout or project.

Katherine Kerswell: I'll begin again. My name's Katherine Kerswell, my job title is actually Group Managing Director of Kent County Council. I've just stepped down from being the President of the Society of Local Authority Chief Executives in the country. I've been a Chief Executive for 13 years and on four councils, so I have experience of running organisations in the East Midlands, West Midlands, rural, urban, large and very small. So I can bring that perspective to you today.

Q432 The Chairman: Thank you very much indeed, very helpful. I'm going to start and then it will go around. This is particularly for Paul Sacher and Zoe Hellman, so for MEND and Weight Watchers. Can you tell us how effective your programmes have been in achieving sustained weight reduction? Could you also tell us whether your programmes could and indeed should be scaled up and implemented across the country? If that were the case, what would central Government and local government need to do to make that possible?

Paul Sacher: Okay, I'll start.

Zoe Hellman: Be my guest.

The Chairman: And you haven't got a lot of time.

Paul Sacher: Since the first MEND 7-13 programme was delivered in 2002 we've done the full gamut of clinical research, namely feasibility, pilot, efficacy and effectiveness studies to fully evaluate the outcomes. I think that's really important because if you actually look at the types of programmes that are being delivered nationally, many locally developed programmes are often not able to develop and evaluate the programmes as well as they should do. So we did a feasibility trial in 2001, which was followed by a pilot and randomised control trial at UCL Institute of Child Health and Great Ormond Street

Hospital in 2005. What's been really interesting from an academic perspective, once we had very successful results in the randomised control trial, was then to take something outside of clinical research and implement it in the real world. That was enabled for us by a £7.9 million Big Lottery Fund grant, which we received in 2006. That really enabled us to roll out, for the first time internationally, as far as we were aware, a large-scale community-based child weight management programme that was evidence based, expert enabled and locally delivered. So, as far as how effective it's been, we've continued to evaluate the programme, we have good results up until 12 months. The programme has been delivered at more than 300 locations across the UK, as well as in Australia, Denmark, New Zealand, the US, Canada and soon to be the Middle East. Again, from an academic perspective it's been very interesting to take learnings from the UK and actually use them to compare the outcomes in other countries. What we've seen is that the programme produces improvements in outcomes such as: reductions in body mass index, reductions in waist circumference, also very importantly improvements in things like cardiovascular fitness, physical activity and sedentary activity levels and again some of the psychosocial measures, so things like self-esteem, body image and other important relevant measures. The outcomes improve over the course of the 10-week programme until at least 12 months, and we continue to support families up until two years, because obviously support and maintenance is crucial in sustaining the health improvement one sees. Since the Big Lottery Fund grant, we've been centrally commissioned by the Welsh Assembly Government to roll out across Wales, we've also been commissioned by the New South Wales Department of Health in Australia, to roll our programmes out across New South Wales. Again, that's enabled us to show that a community-based programme can be effectively scaled up, and that's enabled us to continuously improve the programmes, focus on quality assurance and to reduce costs. Something that's recently been evaluated is the health and wellbeing impact of our programmes. That's been done by York Health Economics and nef consulting. What they've found in this independent study is that the incremental, cost-effectiveness ratio of the programme is £1,671 per QALY gained, or quality-adjusted life year, which is well below the NICE threshold of £20,000 to £30,000. They've also calculated that the programme creates health and social outcomes with a combined total value of £3,831 to £5,331 per child, and they've basically concluded that the programme is a cost-effective as well as cost-saving intervention, which provides an ROI on public investment of between 967% and 1331%. So we now have the clinical data; we know the programme works; we know it is cost effective and cost saving and we know that when the programme is commissioned at scale, costs come down by around 50%. So if this type of programme was to be procured centrally at scale and delivered locally, we could see immediate cost savings of around 50% in the UK. In terms of what central Government and local government can do, the MEND model champions an approach that is nationally championed, expert enabled, and locally delivered. MEND does not believe improved health outcomes or behavioural changes can be delivered by government alone. Instead we support an approach which emphasises locally-led engagement, but also highlights the importance of commissioning solutions at scale. We support an approach that allows local government to be responsible for forming suitable local partnerships for effective delivery of these programmes, and our approach is very much about training local staff by experts and providing them with the support, the programme and the training and allowing them to deliver the programmes to their own communities because they are the experts in their own communities. We find that is a very sustainable model in terms of financial as well as in terms of the health outcomes achieved. We take very much a Big Society approach which means providing

resources to communities and local authorities, to encourage them to work together to deliver programmes cost effectively, and I'll hand over to Zoe.

Zoe Hellman: Thank you. I'll be brief. Okay. In terms of your first question about evidence base, Weight Watchers has undertaken comprehensive research, not only with the programmes that we deliver to our members but with the referral scheme that we offer to the NHS. We recently reported on the first look at our results from a randomised control trial that compared having access to Weight Watchers versus standard care within primary care, and this was across the UK, Australia and Germany. Standard care could be something like having a brief intervention with a GP and then being monitored, right through to seeing a dietitian or a practice nurse. What we found was that 12 months down the line, people who had access to Weight Watchers lost significantly more weight, in fact more than double, and the retention rates were higher. What that shows is that actually working with a provider like Weight Watchers, as well as in collaboration with a health care professional, seems to be really effective. In terms of the 12-week intervention that we offer to the NHS, we have significant audit data on that, that's done independently by the MRC and led by Dr Susan Jebb, and that shows that an average completer of the programme loses 5.5% of their body weight and that 58% of everybody who's referred completes the scheme. We also have other evidence of our usual membership in terms of weight loss sustainability from two right through to up to five years' success with maintaining weight and we're also about to commission specifically a weight maintenance piece associated with our work with the NHS. We also have evidence of our cost effectiveness, which shows that our cost effectiveness is around £1,000 per QALY which is on the lower end of other behavioural interventions already offered on the NHS. We also have health and economic evidence to show the benefit of even just wider scale application of a short intervention like Weight Watchers and the significant economic and health benefits that you can get from that. And I think the beauty of working with providers like Weight Watchers is the instant scalability of it, rather than the intrinsic limitations within the NHS. From a personal perspective I used to see clients for weight management; I used to see them for 45 minutes for a new appointment and then offer them another appointment for half an hour in two or three months' time, versus sending your patient to someone like Weight Watchers, where you can have that intensive weekly group support that's been proven to be independently and significantly associated with weight loss. In fact there's a dose-response to going to a group support meeting and weight loss. So you have that instant scalability, where, for example, if you did commission services like this on a national level, it's delivered locally, commissioners can make it meet the local needs, but rather than reinventing the wheel and reinvesting resources in offering patients to go, for example to a practice nurse that costs £20 to £30 for a half an hour appointment, the 12-week intervention with Weight Watchers costs £45 to the NHS. So, the second question in terms of scale is, absolutely we are ready to be commissioned on an industrial scale. We're already, across the country, 6,000 meetings a week in community-based venues. We're ready to go. And in terms of what role we feel the Government needs to have, at the moment we work with two thirds of PCTs across England, which might sound impressive, but many of those are still at pilot stage. The average BMI of a person who comes through our referral schemes is 35, which, when you think about where the sweet spot of treating overweight and obesity comes, between a BMI of 27 to 30—that's when you're going to help prevent those chronic diseases—actually we're not being used in the right way, to help support those patients who need it.

Q433 Lord Krebs: Very briefly, I just want to understand, that MEND and Weight Watchers are, in a sense, two competitors or alternative schemes for managing weight loss, one focussing on children, the other on maybe adults and children. You both quoted, very impressively, figures on pounds per QALY and I think, in the case of MEND, pounds per child effectively treated. At least on the QALYs, the data within an estimate of error are pretty similar; you both are similarly cost-effective. So my question is, if I've understood it correctly, are there lessons that you learn from each other? Are your schemes essentially very similar, or do you operate just in parallel and don't cross, apart from in Committee hearings like this?

Zoe Hellman: At the moment MEND's interventions are very focused on childhood weight management and Weight Watchers on adult weight management. Weight Watchers currently do not offer childhood weight management services, but obviously we've both been through the challenges of working with the NHS in terms of certainly some of the things we're facing at the moment, going through the tender process, which has its challenges to non-NHS service providers. We have been sharing learnings on that and working together in terms of, if a tender comes up where they want both childhood and adult weight management services, we complement each other.

Paul Sacher: We can provide a joint offering that is very cost effective and obviously provides high quality.

Q434 The Chairman: And you have done so?

Paul Sacher: We have done so.

The Chairman: And you have done so. Alright. Thank you.

Q435 Lord Sutherland of Houndwood: Simply to clarify a comment from MEND, you said "If", and gave a couple of conditions about support and finance and then said, "If this were the case, there would be immediate savings". It's the word "immediate" that fascinates me. Do you mean within the same financial year? Do you mean within five years? If within the same financial year, then this is an organisation that could grow very quickly.

Paul Sacher: Like Weight Watchers, we can get to scale within a very short term. We have a very scalable model and we have shown we can scale up rapidly within three months. For a certain budget, if these types of programmes are commissioned locally, the costs are greater than if they are procured centrally or commissioned centrally, because obviously you don't achieve economies of scale. So when I said 50% reduction, that's based on a budget set aside for obesity potentially within the public health budget, and if that budget was used to procure centrally, you could achieve a 50% reduction, you get 50% more children through the programme for the same cost.

Q436 Lord Sutherland of Houndwood: So is the source for the savings and the source for the commissioning the same single source? That makes the argument much more powerful than if they're separate commissioner and savings—do you understand what I'm asking?

Paul Sacher: No, can you repeat that?

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Lord Sutherland of Houndwood: No. Right, try again. Well, suppose, for example, the saving is to a particular primary care trust, but the money is being put up by some other source, the local authority, then you get the classic, "Well, not in my patch, I'm not making the saving". The savings and the sources of cash, can they be brought together?

Paul Sacher: Well, I guess once a saving is made it's then up to whoever's commissioned or paid for those services to decide where that funding goes. I'd like to think that funding could be put back into other public health initiatives or continue to be invested in the management, prevention and treatment of obesity, because with our combined forces we've calculated that we are only reaching under 1% of the children in this country who are overweight or obese, so we're just scratching the tip of the iceberg. So even with the promise of ring-fenced funding in this area, I still worry that we won't have nearly enough, we won't be able to provide the amount of programmes needed, to enable every child to seek what is actually recommended as the first line treatment by NICE in this area, which are multi-component programmes like MEND.

Dr Frank Atherton: On the same point, I think it's fair to say that the savings are unlikely to accrue in the same year, to be honest. The savings are in terms of heart disease, diabetes.

Q437 Lord Sutherland of Houndwood: Yes, I'm more interested in the location.

Dr Frank Atherton: They're medium- to longer-term and, of course, the savings accrue to the NHS to some degree, but, to argue that they reinvest, there's a time issue and then there's an organisational issue, so it is quite complex to make the argument. However, from a director of public health point of view, investing in these types of programmes as part of the whole pathway, from prevention through to people, adults and children who need these kind of weight support services, and right through to the NHS services for morbidly obese people, this is a good investment.

Q438 Lord Patel: My questions are brief and the answers can be equally brief. I have supplementary questions for all of you, but I will start with Ms Kerswell. Can you give examples of successful interventions that your authority has commissioned and do you know of other authorities who have commissioned a successful intervention?

Katherine Kerswell: Yes, absolutely, and I suppose the thing that you've got to bear in mind when you're tackling obesity is not to be too specific about the projects. In our creating of cycle routes, 100,000 people used that new route within the first 18 months of its opening and people were being more active and tackling lifestyle issues. In my last authority we used the MEND project, very, very successfully in Corby to make a real difference in young people's lives. In my current authority at Kent we have a fascinating project called Activmob, a little like the earlier project you were hearing: small-scale interventions, really making a difference to people's lives and a fascinating programme with young people called House, where we take over an empty shop unit in one of our towns within the county. We're there for a month; it's a rolling programme and they come in, in a very non-prejudicial way, and get access to all sorts of positive lifestyle help and support.

Q439 Lord Patel: So are these targeted towards risk groups? We heard MEND say 5% of the obese children are reached by them.

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Katherine Kerswell: Yes.

Q440 Lord Patel: Are these just enthusiastic cyclists that join the programme?

Katherine Kerswell: No. They would be, yes, but others are targeted. The MEND project is a very targeted project. The House project is open to all young people, but with specific encouragements for certain groups to come in as well and the Activemob, you want people who are interested, but you're also reaching out to certain groups to say "What about you?" So it does range.

Q441 Lord Patel: Dr Atherton, how successful will public health directors be in implementing the most successful programmes when public health directors are more aligned to the local authorities?

Dr Frank Atherton: One of the previous witnesses commented on the different environments that directors of public health have found themselves in. I think it's fair to say that there hasn't been any problem in terms of lack of commitment of directors of public health or understanding that this is major public health problem. The difficulty has been that different areas, different PCT areas, have had differential levels of funding and some PCTs have been funded below the target to which they were expected to be funded. So in some areas there has been very little marginal resource to invest in these types of programmes. In other areas there's been plenty of resource to invest in them. Even in Lancashire I can point to different PCT areas which have had different successes in liberating this sort of resource. Now, as we move into the local authority, there is a transitional risk I believe; in fact, there are two transitional risks. One is that within PCTs there's a risk that the successful programmes, where they do exist, could be seen as soft targets and could be subject to expenditure reduction and to cutbacks. There's also a risk, as we move into local authorities, which of course face difficult budgets, of keeping the programmes going. So there is clearly a transitional risk and it's down to those areas, those PCTs and those local authorities that really see the long-term benefits of these types of programmes, to provide the leadership and to encourage continuation of the programmes. I agree with the previous witness who said it would be really unwise and against the interests of our populations if these programmes were to fold and then have to be reinvented.

Q442 Lord Patel: To MEND and Weight Watchers—the same question. You suggested to us that your programmes are highly successful, they're cost effective in QALY terms and so on. So what's going to happen to you in the future with funding?

Paul Sacher: Well we hope that local commissioners, GP consortia, when they review the evidence will actually commission based on evidence and cost-effectiveness and if they do that then interventions like MEND and Weight Watchers will continue, hopefully, to be commissioned. What is a risk is when evidence is not reviewed accurately and what we call home-grown programmes, which are developed locally with no evidence, are actually selected over programmes like MEND and Weight Watchers, which have the evidence behind them. That I think is a risk.

Zoe Hellman: I would second what you say, and just add for a bit of context that when we work with commissioners for PCTs we sometimes find a lack of understanding about the complexities of weight management but also a lack of ability or a lack of action to review the

evidence base. Often when we submit our proposals to the PCTs or submit through a tender process we are shocked how little we are asked for outcomes, cost-effectiveness. So, we certainly welcome the new approach towards a longer-term health care service rather than short-term goals but also, hopefully, the integration of more skilled people to actually look at the evidence base. What we would certainly champion is to do that at a centralised level, because at the moment commissioners from neighbouring PCTs are doing exactly the same things, and that time and resource is very much wasted. Central Government could look at service providers like MEND and Weight Watchers, review their evidence base in terms of outcomes, safety, cost effectiveness and provide an approved provider list to commissioners rather than just guidance. We've learnt from experience that there is guidance for service providers in childhood weight management services, but commissioners don't use it. That's what we'd like to save time and money.

Q443 Lord May of Oxford: I don't have so much a question as just a request. One of the things that Weight Watchers referred to was this interesting estimate of the success rates they achieve and so on; the estimate of the savings in direct health care cost are about £230 per participant in Weight Watchers and £1,600 per head in full economic cost. As an academic who's lived a life on three continents I am familiar, and indeed have been engaged in creativity in full economic cost, but 600% seemed to me quite startlingly interesting. Could you please let me have, or let the Secretariat have, a note about that because I'd be interested in that?

Zoe Hellman: Absolutely, I'll give you a full report.

Q444 Lord May of Oxford: Okay. Let's not take time on it now. Also, I did have a minor question. It seems to me possible that many people who are engaged in trying to control weight in a commercial sector manner, rather than with a voluntary body, insofar as either their own money is involved in it or they see that their tax money is involved in it, actually take it more seriously. I wonder to what extent—and again, don't try and answer it at length—anybody has thought that actually asking people to pay for things can be a quite powerful motivator in getting them to do it, even though it's a rather unfortunate thing to acknowledge?

Paul Sacher: I think this is where our models differ, because, to date, no family has ever paid for our services. Obviously, someone has to pay, but the families themselves haven't and I think when you review the evidence, I don't think there is any evidence to show that people who pay for these services do better, but Weight Watchers might have a different experience.

Zoe Hellman: Well from our experience, because it is a very interesting concept and some PCTs, because they decide how they refer patients to Weight Watchers, might ask for a nominal fee, but what I would say, looking across the board in terms of Weight Watchers evidence across all the countries that we work in, is that you don't see a difference between weight loss outcomes achieved through the referral scheme, where people primarily get it for free, and if they pay for it themselves. What's really important is that schemes like the referral scheme can help tackle health inequalities and help give people access to something like Weight Watchers that they might otherwise not be able to afford.

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Q445 Lord Crickhowell: I'm slightly shell shocked having come from debating a subject on the floor of the House. But I suppose I should declare an interest in that I have a wife who is a member of Weight Watchers and is a great supporter of the programme. But that leads me to my first question, because she's one of the people who's an individual going to Weight Watchers, and I seem to recall when we first started this enquiry and had some presentations we had one or two presentations who were extremely sceptical about the long-term benefits and the retention rates. Now, you made some rather positive noises on that front. How far is the retention that you achieve the result of the fact that you are working through health authorities and local authorities and they are helping you with the retention? Is there a difference between that effect and people who come independently? That's my first question. My second picks up a comment about MEND saying that they can train the trainers and so on. Well, I have a daughter who runs a change management business—not in this field—almost entirely resourced by training the trainers. It would be interesting to just have a tiny word on training the trainers and how you achieve that.

The Chairman: You're going to have to be very brief, because we are beginning to run out of time

Zoe Hellman: In terms of individual retention of people going to the referral scheme, obviously that's a 12-week intervention. If people want to continue going to Weight Watchers they can go back to their referring practitioner and have two, three, four packs, and if you think the average BMI of a patient is 35, they really do need a continued pack. When someone reaches their healthy weight with Weight Watchers they can come in for free for the rest of their life, whether they came in through the NHS or paid for it and actually there are similar retention rates between people who will pay for it or not. In terms of training the trainer, our leaders are community based leaders who have actually lost weight with Weight Watchers. We train them through a standardised programme and an ongoing CPD, so in effect they are health champions within their communities and help that ripple effect of changing behaviours.

Paul Sacher: I think it's just to state that our national attendance—and this is based on almost 7,000 children nationally—is around 78%, which I think says a lot about an intervention that's twice a week for 10 weeks that involves the whole family. We also have an 87% retention rate nationally so I think what that shows is that there's a real demand from families and when families are presented with the opportunity to go on these types of programmes they really do benefit and they make the most of it.

Katherine Kerswell: It was only a very small comment to the gentleman there about the value attribution of paying for something and I think in behaviour, the value attribution that we've seen is more about: whose opinion are you valuing that is recommending you to go on something? So I've seen very good retention rates off schemes called the DocSpot, where the doctor, instead of drugs, gives you a prescription for exercise or support in different ways, to help you change your lifestyle and that value; then there is the value of your opinion of your colleagues and your Weight Watchers community and that keeps you going and it's that sort of value attribution that we shouldn't lose sight of.

Q446 Baroness Hilton of Eggardon: People are clearly motivated by different things. Some may be motivated by money and some by their need to get healthier if they are referred by their doctor. A lot of the evidence we've had has not been about the individual but about the environment in which they find themselves—which may be the family, in the case of MEND or it may be the social group. But there's the wider community and the

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influence of whether there's availability of parks, recreation grounds, cycle tracks, the effect of supermarkets, fast food, and whether they can afford some of the better diets that are recommended to them. I'm wondering to what extent you see that as being influential in their behaviour as opposed to individual approaches. It's a question for all of you I think, because the local authority provides some of the environmental facilities and you provide an alternative way of dealing with the problem.

Dr Frank Atherton: I'll lead off, and I'm sure Katherine may want to add to this. It's absolutely critical that we tackle the environment as well as the individual and there's clearly a role both for central Government and for local government in supporting that and achieving that. The circumstances that people find themselves in really matter. Things like the services that are available through local authorities really matter, and having access to physical activity for example. But also the way that we in the UK use the planning system to design an environment that can actually build health into people's lives is really important. We've got great examples; someone mentioned, I think, the cycling demonstration towns, or perhaps it was cycling in London. With relatively small investment in the infrastructure and environment we can actually change the number of people who cycle or who, for example, walk to work or to school. So it is absolutely critical in terms of nutrition, in terms of physical activity and there are powers available to local authorities, which I think have been used, but could be used to greater effect to support the sort of personal interventions that we've been talking about through Weight Watchers and MEND.

Katherine Kerswell: I think it's enormously important, the environment that you're in, and for me this is where political leadership of local communities is so important. I recall very strongly the Liverpool City Council decision to say "We won't have smoking in Liverpool". Do you remember that? They stood up and said it; they didn't have the power to do it but they made the political argument to do it and that was very, very important, about what matters and what do we value in our community. We now have the advent of the joint needs analysis between us and public health, and the fact that doctors will have to take cognisance of that in their commissioning strategies, and we can build in broader environmental themes into that through the health and wellbeing boards and I think that will be a very, very powerful context for how we commission activity in this area.

Zoe Hellman: Interventions such as ours are more about helping people make informed choices about what they're going to eat and drink from what's around them and motivating them and supporting them to make changes in their activity and behaviours. So regardless of their environment—absolutely I agree, environment is a major part of this debate—helping to educate and then support people to make changes is important and that's where we come into that round.

Q447 The Chairman: You've given very good examples, if you like—the Liverpool one being a very good one—of where there's been political leadership. But what I think you haven't said, and I think we'd be interested in, is what responsibility you think both local government, with all the changes in public health, and central Government actually have in doing something about this. How strong should that responsibility be?

Katherine Kerswell: I think it is pretty fundamental; it goes right to the core of our wellbeing duties that we have as local government now and it goes to all of the responsibilities about stewarding your area. I think politicians would see it more as how we're improving the quality of life rather than how we're tackling particular difficult lifestyles and they would see it in that vein. I think this is the advent of something very, very

important, with the joining up of public health into local government. I've managed three joint public health directors, so it's not unusual to have close links at all, but I always remember in Solihull, where I was chief executive a number of years ago, the north of our borough, Chelmsley Wood had very, very poor health outcomes and the two restaurants that were available for local people to go to were a chunky chippy and a well-known burger chain. That was it. That really was it. And I can remember thinking, when can we use our planning policies to say "No more takeaways, no more this. Let's drive health in that way". Now, we couldn't at that stage, but this begins saying how can we take that very big next step.

The Chairman: That's very helpful.

Q448 Baroness O'Neill of Bengarve: I think this goes in the same direction and is really, again, a question for the local authority and public health perspective. We've had a lot of emphasis on choice—on making choices available to people, supporting them, informing them. But surely there is another range of initiatives which would fall to the responsibility of public health and local authorities, which are not about enabling, but perhaps about restricting choice. For example, on the news today we had some discussion of the beginning of an alcohol pricing policy that would eliminate the choice to get oneself blind drunk for sixpence, or whatever the classic phrase was. I just wanted to know whether you think that public health and local authorities between them retain responsibilities of that sort and to what extent we can even evaluate the individualistic approaches unless we know which background of public health policies in the narrower and classical sense of the term are in place.

Dr Frank Atherton: I'll certainly lead off on that. There is currently a paradigm shift, I believe, and there's a sense that the focus of current public policy is to move, not completely away, but from tackling the social determinants, the things that make and keep us healthy, towards an individualistic approach to health. I genuinely believe that both of those are really important and so it's vital that local authorities take responsibility for providing the environment which supports health. Now, you've heard from Katherine a couple of examples of how that can happen. Another good example might be in the world of alcohol and this perhaps gets you into the realm of what is the role of central Government and local government. Because, clearly, the local authority has responsibility for overseeing the regulation of licensed premises, but the fact that public health was never written into the regulatory framework at central Government level means that there's a slight disconnect. I think we can start to see the same sorts of issues with, say, food labelling, which you referred to earlier, where a local authority cannot determine what supermarkets do on its patch, but central Government, if it chooses to, can choose to regulate, to say to producers and to sellers of products, that really we have to have in this country a standardised, effective, easily understandable system for food labelling. In fact, we surveyed directors of public health last year about this; it was one of their top wish lists that we could get to that in terms of improving the health of the population. So there's a lot that central Government needs to do to support local government, but at the end of the day the shift of responsibility to local government, who will in future, subject to the Health and Social Care Bill being passed, have a responsibility for health and wellbeing is a very positive one, we believe.

The Chairman: Thank you very much indeed.

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Q449 Lord May of Oxford: The new public health White Paper, *Healthy lives, healthy people*, places greater responsibility on local authorities and their public health directors. Coming, as I do, from the position that Governments tend to be stronger on process than product, I'd be interested in your opinions about what impact, if any, these proposals will have on efforts to prevent and tackle obesity at the local level?

The Chairman: And you've got very little time.

Lord May of Oxford: And could I repeat, again, the injunction to be a little less prolix.

Katherine Kerswell: Little less?

Lord May of Oxford: Little less prolix.

The Chairman: Keep it short.

Katherine Kerswell: I think it will have enormous benefit, I would say. I think the relationship with public health, whilst it has worked in various parts of the country, has worked because of relationships and, when PCTs we've referred to this have taken different approaches to levels of funding, we've been in a really sticky place trying to get good activity on the ground. So bringing it into local government—I believe the money will be ring-fenced when it comes to local government—I think will be very, very powerful. The issue for us is the relationship with the GP consortia, and how that is built between local government and then the voluntary communities that will bring all of the work together, because GPs aren't used to working with politicians; they're not used to working to big strategies and coming together and things. We've got a lot of groundwork in building relationships to do there. I think there's a lot of willingness for that to happen, but there is an awful lot of work there to be done. So I'm very positive about this shift and having public health part of local Government.

Dr Frank Atherton: I would echo that. Directors of public health are universally welcoming the move into local authority, because that's where the levers of change actually exist.

Q450 Lord May of Oxford: If I could quickly follow up, particularly to Dr Atherton. How do you intend to address the current inequalities outlined by Weight Watchers in access to referral schemes both within and across PCTs? I think these kinds of inequalities, which are greater in this country than in Australia, if I may say so, somewhat invalidate any simple comparison with schemes in New South Wales.

Dr Frank Atherton: It's a really important question. We've struggled to address inequalities effectively in the UK, even in times of plenty. It's going to be even more difficult in times of scarce resource. I think it boils down, not just to the sort of programmes that we've been talking about today, but again to looking to the whole pathway, because we need to start with children. I would regard children actually as the sweet spot, rather than the obese. What concerns me is that some of the programmes that we know are effective in terms of shaping early behaviour and lifelong behaviour are, again, vulnerable to cuts. So that risks widening inequality if we're not careful. So my simple answer is to look at the whole pathway and not just the obese.

Q451 The Chairman: Can I just pick up one thing, which I think is really important? Given that local authorities are likely to commission various forms of interventions, do they

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have the budgets once they have commissioned such things to evaluate them properly, and will they do so?

Katherine Kerswell: It's not a huge strength; money is incredibly tight. But public health does bring a discipline of that, actually, and within our public health work that we have done, there are evaluations, so I think it's something we can build upon, but it will be very tight and the very advanced levels of evaluation, blind trials and the rest, I don't think would be possible for us.

Dr Frank Atherton: Can I just add to that very, very, briefly, which is to say that evaluation and evidence go hand in hand. We have a really good evidence base for many of the programmes that we're currently commissioning, but it's not complete. NICE has produced guidance on behavioural change. It's regrettable that some of the guidelines that NICE was going to produce, particularly around a whole-systems approach to obesity and the impact of spatial planning on health, have now been suspended. That is regrettable.

The Chairman: I'm afraid we're going to have to move on, because we're running out of time.

Q452 Baroness O'Neill of Bengarve: I think we have in fact covered quite a lot of this question so I will simply read the question, so that we're all on the same turf then, perhaps, make one comment. What mechanisms do we have in place to ensure that local initiatives to tackle obesity are evidence-based, effectively delivered and adequately evaluated; and whose responsibility is it to produce evaluation guidance and ensure consistency in evaluation? It may help to focus answers if you concentrate particularly on where you think there are gaps in the powers of local authorities, gaps in evidence that needs to be produced or difficulties.

Dr Frank Atherton: Well, I'll probably just reiterate what I've said, which is that although we have this deep belief that addressing the environment will have an impact on individuals and on communities, we need to continue to build that evidence base. That's very difficult to do at a local level and really needs to be done at national level and that's why I'm concerned that NICE has suspended some of its programme around those sorts of areas.

Zoe Hellman: What I would currently say to that is from our experience commissioning of adult weight management services isn't evidence-based and there certainly isn't a level playing field between external providers and internal providers of services, so we would certainly welcome some initiatives from central Government to drive that and provide more directive advice, rather than leaving it up to local government, who may do things differently; that would save a lot of time and resources, to do it from a top-down approach.

Paul Sacher: Our experience is that locally people just don't have the skills to evaluate these types of complex interventions and I can't tell you how many evaluations I've seen that have just been really low quality, poorly done by a student or someone else, and I just think there needs to be some kind of national guidance. The National Obesity Observatory has actually produced some really good guidance in this area, but it's largely being ignored.

Zoe Hellman: What I would add to that, is, and I believe MEND do it as well, for everybody who's commissioned the service through Weight Watchers we provide data on every single patient back to the commissioners so we're transparent in that data to help them evaluate it, but it's actually the person who does it at the other end.

Q453 Baroness O'Neill of Bengarve: But of course you have a self-selecting cohort of participants, don't you.

Zoe Hellman: For the people who go through the referral scheme?

Baroness O'Neill of Bengarve: Yes, but you gave some figures I think on the proportion that you're reaching and also the obesity level that is typical of them. This is not, as it were, an across the board study of an obese population.

Zoe Hellman: No these are just simply the people who are referred into the scheme. The commissioners set the referring guidance and the health practitioners refer people in, so it's very much controlled by the PCT at the moment.

Q454 Lord Krebs: I was going to ask you about the roles of central Government, local government and local organisations in the commercial sector, but I want to slightly recast that, because, as I understand it, MEND and Weight Watchers's business model is predicated on the fact that people get fat and you treat them then to encourage them to lose weight—but it would surely be better to prevent people getting fat in the first place? So part of our focus on behaviour change is how do you change people's behaviour in such a way that they never need to walk through the door of MEND and Weight Watchers and you go out of business. That would be the ideal outcome—not personal, you understand—but from the health of the population. And so I wonder if you could very briefly, in the dying embers of this session, tell us whose role it is—local government, central Government or commercial sector—to prevent people getting fat in the first place.

Paul Sacher: In an ideal world organisations like ours wouldn't exist, because we wouldn't have an obesity epidemic and all of this would be done through the NHS and it would work lovely and it would be available nationally. The reality is it's not, and it's not available and therefore organisations like ours play a crucial role. We do provide a range of programmes; the one we've been focussing on here is secondary prevention, because anything you do with kids really is prevention. You're preventing children growing up to become overweight and obese adolescents and adults. So, I think we do provide programmes for all two-to-four-year-olds, for example, which are very much focussed on prevention, and we also have some national, physical activity promotion programmes, but we support an approach that is nationally championed, but locally led, and we feel central Government has a responsibility to champion better public health through initiatives such as Change4Life, but then you also need the provision of locally led behaviour-change interventions such as MEND and Weight Watchers to complement that work that's being done nationally.

Lord May of Oxford: The basic problem is that the food industry is better at behaviour change than the Government and it just happens to be changing it in the wrong direction.

Lord Krebs: Yes, they spend more money on it, they're more skilful.

The Chairman: Does anybody else want to come in on that?

Zoe Hellman: I would just make the final point, really, that, regardless of where different obesity programmes are commissioned—by GP Consortia, NHS, local authorities—behavioural change interventions are the constant. Whether you have drugs or surgery, you still need to educate people and to support people and that stands true for prevention and treatment. I think that really needs to be a constant throughout any treatment modality.

Katherine Kerswell, Association of Public Health Directors, Weight Watchers and MEND Central

Katherine Kerswell: Could I just add that your premise about “isn’t it better to prevent” I would absolutely agree with, but the situation exists of where we are. The situation also exists in this country; there is a freedom to be fat, if you wish and we’ve got to be very careful about how we model policy, whether at local government or national Government, about personal lifestyle choices.

Q455 Lord Krebs: But just a minute, the coalition is committed to the concept of nudging people and nudging people, presumably, to prevent them getting fat, rather than nudging them after they’ve got fat, to encourage them to get less fat.

Katherine Kerswell: I would say in reply that doing nothing is not a neutral option in this. You have to decide what you’re going to do about behaviour and the freedoms of choice, pro-social, or avoiding personally damaging behaviour. The role for local and national Government is not to have policies that are incoherent about this and I find it very difficult to understand the policy around food quality in prisons, because that really does make a difference to people. Fantastic work is being done by the School Food Trust about changing the quality of food in schools and seeing the performance of young people improve, because of the regular food that they’re getting, and water—a very important aspect; the 24-hour licensing is a really difficult concept in communities—and then having positive choices about lifestyles. So we have to be very, very clear about not having incoherent policies, either nationally or locally about a local positive environment to be healthy.

Dr Frank Atherton: A final point from me.

The Chairman: Last word.

Dr Frank Atherton: The answer to your question about whose responsibility is it, business, local or central Government: clearly it’s all of them. We have seen some improvements, perhaps, in, for example, the amount of salt in food, but they’re fairly marginal. That’s why I and the Director for Public Health believe that having regulation as a potential option, when other issues such as voluntary regulation do not work, is really important. I think that’s recognised in the current policy when we talk about the ladder of intervention; so we start with nudges and those kinds of influence, but at the end of the day, Government has a responsibility and can’t wash its hands of the health and wellbeing of the population.

The Chairman: Thank you very much indeed. Thank you for coming to give us evidence. You will get a transcript in about 10 days or so. Please feel free to correct anything that’s wrong; please feel free to add things that you didn’t get a chance to say; and please, those things that you have referred to, and it’s particularly MEND and Weight Watchers, those studies and publications you referred to, please do send them in. We’re immensely grateful to you. Thank you very much indeed.

**Sainsbury's
Oral Evidence, 19 January 2011, Q456-475**

Evidence Session No.13. Heard in Public.

Members present:

Lord Crickhowell
Baroness Hilton of Eggardon
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Earl of Selborne

Examination of Witnesses

Witnesses: **Mr Justin King**, [Chief Executive, Sainsbury's].

Q456 The Chairman: I would like to welcome you, Mr King, and members of the public. For members of the public, there is an information sheet that lists the interests of various members of the Committee. Mr King, you may wish to know that there will be a written transcript, which you will be able to look at, correct and add further information to. Justin, we're really, really delighted that you've come, thank you very much indeed. It's going to be, because of your timetable particularly, a fairly short session. I will start, and then hand round to various members of the Committee. But before I do that, would you for record introduce yourself, and if you want to make a short statement as well, that would be very welcome. Over to you.

Justin King: I will if I may. I should say, if you feel that the conversation is fruitful I'm happy to run on, but I don't know what the protocol is on that. I did send a letter in advance, and I'll in large part rest with that letter; I hope that the Committee Members have had the opportunity to look at that. But if I may just for a minute or so, firstly I suppose I should introduce myself. Obviously you know that I'm Chief Executive of Sainsbury's, but I have a lifelong career in food. The early part of my career was with manufacturers, so I worked for Mars, Pepsi and Häagen-Dazs, and then I've worked for three retailers—I've worked for Asda, Marks & Spencer and Sainsbury's—so I have a fairly broad perspective on this issue, a lifelong working career. Really just two or three big things: our starting point is that we believe that positively engaging with consumers is the right way to bring about lasting change, and that's the way that we run our business. We focus on making it easy for them to make those changes, providing them with the necessary information to make those changes and, where necessary, incentivising and rewarding those changes. And that's not just on issues that, if you like, are of societal concern; that's how we run our business, that's how we build our business, so as a successful business I think that we can assert that that works. What we can't do is assert that that works better than other things that might be

proposed, because that's not how we run our business; we don't take half the country and approach it positively and half the country and approach it negatively and see which delivers the best result. Nor do we tend to take a very scientific approach to change when we make it, because one of the beauties of being a retailer is that you can change something this week, see an instant effect or not the following week, and change it back if necessary, which is clearly very different from the legislative construct. We do think that there is a very productive role for Government in this. We're not against legislation; in fact, in some instances I think we would positively encourage it. It creates a common and fair playing field for all companies on that turf and it's the way that the Government says what the rules are in societal norm terms, so I think it's perfectly legitimate. We do think, however, that the Government has a role to ensure that legislation is then easy for industry to work with. If you take age restriction as the obvious example, where we have a situation where I think there are 13 different age restriction regimes on various different products that we sell, and yet there is no common identification system that allows us to identify whether somebody's 12, 14, 16, 18 years old or likely to pass the item to a third party who may or may not be in our car park. That's, we think, quite unhelpful in us then playing our proper part in delivering that legislation. We think absolutely that Government should educate and inform. We're great supporters of public policy advertising on health and nutrition issues. We think it creates a field of play into which we can then compete and work, it actually gives us that opportunity, so we are big supporters of that. And I come last to voluntary agreements because on the whole we're not great supporters of voluntary agreements. We think that they are often the refuge of scoundrels; those that are at the fringes of industry behaviour love to wrap themselves in voluntary agreements and say that we are acceding to industry norms, and therefore they tend to be lowest common denominator. But I think that they are appropriate when it's about an industry saying, "This behaviour is not acceptable," to those of us who are the responsible members; in other words highlighting behaviour at the fringes. And that's where joining responsibility deals with Government can be quite helpful, because ultimately if the fringes of an industry will not move into that centre ground then ultimately legislation is likely to be the outcome. But the problem with voluntary agreements, I think, is that they tend to be lowest common denominator, they tend to be overtaken by political events very easily, and most of these things require long-term commitment from the industry and they tend to not last very long and are very difficult to therefore fully engage with. So those would be my thoughts. I hope that's been helpful in adding some colour to my letter.

Q457 The Chairman: That's been very helpful, thank you very much indeed. I think we'll be probing quite a lot of that in what we ask, but can I start by saying that you've already said that you do feel as a business that you have some responsibility towards your consumers, and you want them to make informed choices. Could you tease out a little bit the extent of the responsibility you feel that Sainsbury's and other businesses like yours—the people who you think are in the centre ground, not the fringe players—have in changing the behaviour of consumers in the public interest? So, for instance, in getting them to have healthier diets in order to reduce obesity. Also, you've said that you like to give consumers incentives. Are incentives the only means that you think it's appropriate to use, or are there others?

Justin King: We see that responsibility first of all as being absolute. We are setting out to play our part in feeding the nation, and therefore we see ourselves, Sainsbury's specifically, as having an absolute responsibility to help our customers eat healthily and well. In my

letter, I laid out our goal as a company, explicitly referring to, "Fresh, healthy, safe and tasty food". The first of our corporate responsibility principles that describe our business is, "Best for food and health." In that regard, we see our responsibility as being ahead of the consumer, taking them on a journey. We don't hide behind the idea that we will only do things when consumers demand them of us. In fact, that would be a very poor competitive construct: we would lose competitively if that's what we did. We're looking for grains of opportunity, we're looking to work with the grain of behaviour as it starts to change and then get ahead of it and help, to the second half of your question, through either making it easier or making it universal. So an example of that would be Fairtrade. We moved all of our bananas to Fairtrade at a time that only 30% of the bananas that we sold were Fairtrade, so one in three of our customers had chosen to make that decision. We felt that that was enough of a momentum to make the full decision, but we felt that we couldn't then charge a premium because most of our customers still had said, "Actually, if it costs more money that's not something we want to engage with." So we introduced Fairtrade bananas at no extra cost to the consumer. That was a very significant cost for the company. One of the first questions my new Chairman asked me when he joined is, "Can you prove that £4 million a year premium pays back?" The answer to that question was no, so I said, "But if you ask me whether I think it is the right thing to do, given our brand and what we are trying to do with customers, it's a dead straightforward yes." So that's our approach, that's what I mean by making it easier, making it low engagement; in that instance, you get Fairtrade for free, if you like. And information: the obvious example would be that we were the first retailer to do front-of-pack multi traffic light nutritional labelling, and we are still the biggest, and we believe we are leading on that. We were then, we still are now and our customers love it.

Q458 The Chairman: Can I turn that round then and just ask you one supplementary before handing on. You are, if you like, leading your customers, you're creating the environment. So how responsible is the food industry as a whole—Sainsbury's in particular, but the food industry as a whole—for creating an environment in which unhealthy choices are often the easier ones to take, and what responsibility do you feel at Sainsbury's for rectifying that?

Justin King: There's a little bit of a difficulty in the question, if I might address it, because I think our starting proposition is that there is no such thing as unhealthy products; there are unhealthy diets. Now, I'm not for a moment disputing that certain products may feature more highly in unhealthy diets, and therefore I think it's very difficult for us, if we stay true to the idea that we are trying to make our customers' lives easier, to interject ourselves into that relationship that individual customers might have with an individual product. So to explicitly address a question that's buried in your observation but wasn't explicitly there, should there be certain things that we should choose not to sell?

The Chairman: Or not to place in the reach of children, or not to place prominently?

Justin King: And I think I can demonstrate a couple of examples where we bring that thinking. If one talks about sustainability, there are certain species of fish that we will not sell. So we have absolutely edited that choice from our offer. Most of our competitors have not. We don't believe that we can say to our consumers, "All the fish that you buy from us will have a level of sustainability and responsibility in," when some that are explicitly not are on sale, so we have edited that choice. To the point about consumers with confectionary, I'll give you a contrast: we have removed confectionary from our tills in our

stores. We did that because what the majority of our customers said was that making our lives easier, which is explicitly a business goal, means that you don't, when we're there with children, present us with that pester-power problem whilst we're standing by the till. However, we have not removed confectionary from our tills on our convenience stores, because almost no parents with children shop in those stores, and our customers in those stores say that their lives are made easier by having it easily available for them when they're buying their sandwich and their drink and a snack. Now, we provide choices. They can buy, say, a Mars Bar, they can buy an apple. Both are available within arm's reach of desire. But at that point we believe it a matter for the consumer to make the choice, not for us to edit it.

Q459 Lord Crickhowell: I wanted to come in on that point if I could. I think you gave yourself a let out about convenience stores. I frequently shop at your store in Paddington on the way to my home in Wales, and I would like to make an observation, as one easily susceptible to—I might not name the kind of chocolate, but my wife is critical if I buy them. They're not actually at the pay till, but they are in the place where you queue to wait for the next free one. They are very temptingly placed, deliberately, I suspect, so that—I agree, probably not many children are going through, though perhaps quite a few if they're travelling on the train from Paddington station—someone like me, a sucker, is most likely to buy them.

Justin King: Of course there is. We place them there because that's what customers want, and as a consequence of that they buy more of them, so we could get locked in a very circular argument about which is the chicken and which is the egg. But I think I would assert that that store, and it is one of our largest and most successful convenience stores, is absolutely somewhere where the vast majority of consumers are, like yourself, an adult able to make a choice of their own free will. But as I said, there is a wrinkle to that, which is that we try hard to ensure that choice is available, so I think if you wrack your memory, or at least take me up on this and check, you will see that it's also very easy for you to pick up a piece of fruit or perhaps a bag of nuts, be they salted or not. So we do provide choice in that situation. I think that is something where, if we're back to where legislation might sometimes have a role, I would not suggest to have legislation on this, because I think it would be against the interest of the vast majority of consumers, but if ultimately there were direct evidence between the placing of an individual product in a certain location and direct health harm, that is absolutely where the legislature should address its attention, because it has a high bar on legislation, it has to prove as much as is reasonable, causality and proportionality, and I'd throw that challenge back. But I think we are intellectually consistent, if you like, because if you go into our main chain stores, where a very high proportion of our customers are shopping with children, particularly young children, I think we've been entirely consistent with our thought process.

Q460 Earl of Selborne: I think I'd better start by declaring an interest that I'm an apple grower, and the largest outlet for our apples is Sainsbury's, and I hope after this inquisition that I still—

Justin King: Well I'm very happy to confirm we're the largest retailer of British apples in the UK.

Earl of Selborne: In your letter to us, you have a paragraph about responsible promotions and product placement, and you've already told us that there's not necessarily

such a thing as “an unhealthy product”. But I think we must assume that food promotions, product placements, will impact on consumption to a certain extent, and indeed it would be odd if that were not the case. Now it may be temporary, but it certainly will impact. And in so far as some products, unlike apples, are clearly less healthy, isn't there an obligation on supermarkets to prevent positive product placement and promotion of such products?

Justin King: No, I don't think there is an obligation on us to do that, but I think what there is an obligation on us to do is ensure that customers have the opportunity not to or to exercise a choice to do something different. Perhaps I could illustrate that with a couple of examples. We have quite a lot of debate around the nature of promotions in produce and whether they should be half price or buy one get one free, because a number of people have suggested, although I have to say there is no evidence for this, that buy one get one frees lead to waste. Broadly, our experience is when we go half price the same consumer that buys one and gets one free then buys three at the half price. So if they were in fact connected to waste they'd do more. But the point I'm trying to make is we provide that choice over time. If you go into our produce department there are some that are buy one get one free and there are some that are half price and we alternate over time. The same would be true if you look at fizzy drinks: we never promote the sugared variety without promoting the sugar-free variety or the reduced-sugar variety at the same time. If you look at our pricing within products where there are flavour variants, yoghurts might be an example, we don't differentiate in our pricing although there might in some instances be a cost justification for so doing between what one might call healthy or unhealthy alternatives. So I think we level the playing field and provide choice for our consumers. And of course as far as our own label products are concerned, over 5,000 of them have multiple traffic lights on the front, and so we're also providing that information for consumers at the moment that they make the selection on the shelf, so we equip them to make the choice, even if the product is being promoted.

Q461 Earl of Selborne: In your letter to us you quote, as evidence that these product placements don't have a long-term effect, an independent survey of customers of 2007. But would you accept—and we are of course the Science and Technology Select Committee, or Sub-Committee of it—that there is an evidence base that would suggest that this isn't always the case, and perhaps the consumer survey won't give you the hard evidence that we're looking for?

Justin King: Yes, we're not trying to assert that it's always the case that they never will, but I think it is important to understand that, taken from the point of view of an individual retailer, the vast majority of promotions, whatever their type, are fundamentally about ensuring that our customers buy it from us, as opposed to somebody else: so-called larder filling. And indeed the weight of our data—we have a Nectar Card, which gives us data—is all about identifying products that our customers very likely buy from somebody else. The very obvious example would be if we can see one of our customers is buying baby food from us but not nappies, there are probably only two conclusions. One is that they use terry nappies or the other is they buy their nappies elsewhere, and we would promote and incentivise that customer to buy more. So the weight of our effort is about stealing the purchase from somebody else. But it is inevitably the case, in a marketplace where consumers make choices overall about what they buy more or less of, that things that are relatively cheaper in the marketplace at large will be bought more often. Simply put, if Coca Cola was on average sold cheaper everywhere in the market than Pepsi, Coca Cola would

Q462 Earl of Selborne: But if I could just go back to your product placement. You've already said that you're not too concerned where you place the confectionary near the checkout in convenience stores, because it's not likely to impact on children. But no less surely, doesn't it verge on the irresponsible to put in an easily accessible place for impulse buying something like a chocolate coconut bar, which is about as unhealthy a confectionary as you can imagine, if you think about the implications of that in a place where school children certainly might well be persuaded to buy on impulse?

Justin King: No, I don't believe it does. If I could, if it wasn't clear what I was asserting in terms of removing confectionary at tills I'll repeat it, which is that we do that because the majority of our customers tell us that it makes their lives easier. We're not making a moral or ethical judgement in doing that about whether children should or shouldn't consume confectionary; we think that's largely a matter for their parents. Now, you've just described an individual product as "about as unhealthy as it can get". I would assert—and I don't speak for any brand now, I'm representing Sainsbury's—that that product can still have a role in a perfectly healthy diet. Now, I don't think, therefore, that we can be accused of irresponsibility, nor can we be, I think, expected to take over the role on behalf of parents and purchasers in making that decision. I think we've been consistent in our approach in availability, but ultimately these are for individuals to make their own decisions about, and I have stood in our stores at school run time at eight-thirty in the morning, and watched where students go to purchase what probably constitutes breakfast for them at that time, and I can tell you everything from bananas to ice creams and all in between are being purchased. Actually, if you look at many of our stores, what they would pull to the front of the store in the morning if they have a school nearby would be a selection of products like bananas, apples, lunchbox type items, but bakery items as well, cookies and doughnuts, because those are the things that consumers buy at that time.

Q463 Lord Crickhowell: Following up, I'm not going to accuse you of irresponsibility; I think a lot of things you do are extremely good and helpful, and, as a purchaser of Fairtrade coffee almost always, for example, excellent. I do think you can be more helpful in one respect, and that is particularly for the part-time male shopper who doesn't go in every week—making it easier for us to find products. It just happens that my wife has dietary problems, and I therefore have to go and search out the gluten free, that type of product, and it's very often very difficult to find—the cereals and so on that go with them—and the same thing, I think, applies to low fat. I think you could do more in clearly identifying where you do have choices. You've spoken perfectly reasonably about the choices, if you've got the one you've got the other, but if one knows where they are, we don't have to go and ask your always helpful staff to go and find them. Very often going round a big store, particularly if it's not the one you go to regularly and the layouts are different, is a nightmare for customers. Do you think you could make it easier to find the special dietary items in particular; the ones that people are looking for in the context of our inquiry?

Justin King: I'm sure we could, because that's core to our business objective, which is to make it easier for customers to find the products that they want to buy. We have a very clear measure of our success in doing that, and that's retail sales. And to the specifics of your question, there is no absolute answer. Sometimes a product category is better

separated all around the store; sometimes it's better to pull it together. Sometimes that's about the lifecycle of where that is in it becoming a growing consumer interest. It's never absolute. As it happens, on the particular products you're talking about, gluten free, which we deliver in our brand Freefrom, which is a Sainsbury's brand, in almost all of our stores we pull that together in a block, because the vast majority of our customers are shopping for a family where one member is challenged, they're a coeliac, and they want to go to that one place, find their solution and then do the rest of their shop. Whereas if you take organic as an example, if you were to go back 10 years you would have found organic all in one place, but that's developed to a level of scale now. What most of our customers say is, "It's just part of the shopping that I do. Please put it adjacent to the normal products and I'll pick it up as I go around." That's not an exact science. On organic, for example, I can tell you that the entire industry had about three goes at that between distributing around the store, pulling it back together, distributing it around the store. And it does vary, but you sort of go with the centre of gravity of where customers are. If you take the specifics of low fat, low sugar, low salt type products, they are generally distributed around the store; they sit adjacent to the normal version.

Q464 Baroness Hilton of Eggardon: If we can go back to the multiple traffic light labelling, which has a clear evidence base of consumer satisfaction and effectiveness, why do you think that the rest of the industry has not adopted it?

Justin King: I think it's disappointing, and I think you will find on the record I've been reasonably vocal about that over the years.

The Chairman: You'll note it on our record too.

Justin King: That's why we took a unilateral decision, and this goes back partly to my point earlier about voluntary agreements sometimes being unsatisfactory. There was an attempt by the industry to coalesce around a voluntary agreement together with the FSA at that time, and we felt very strongly that it was coalescing around a lowest common denominator, when our customers had clearly told us they expected something more and better. And when we made the change we were not the most popular people in the industry because we were felt to have broken ranks from something that industry could have got away with. Now, we don't see that as being an issue to get away with. We think informing our consumers and allowing them to make better choices to eat healthier isn't a get away with issue; it's actually a really positive, business-winning position to have. We are absolutely certain we have customers shopping with us today because of our multiple traffic light labelling that we would not otherwise have. I will directly address the real point of your question: I think it is materially easier for a retailer to take that view, because if in the end the consumer chooses an alternate product, we're selling it as well. If you're a manufacturer and that internal product is not yours, that's a lost sale. So it's self-evident, I think, why manufacturers would be more fearful of what they believe is something that in concept is, to the Earl of Selborne's earlier question, demonising individual products. Our view is that if you provide the information people will do it in an informed way. As a corollary to that, a direct consequence of us putting that information in front of consumers is it has raised the bar for us in product development, because we've seen the impact, say, in our Indian ready meals section: anything with a red on it, and in the early days pretty much all of them had a red on it for salt and for fat, sold less. So our product developers worked out how to deliver the same taste with less salt and less fat to reduce the red off the front of packs so that we could sell more of them.

Q465 Baroness Hilton of Eggardon: The Government has gone along with the idea of having percentages. Do you think that customers actually understand percentages?

Justin King: Well clearly they don't, and I think there's legion evidence as to how difficult the average member of the UK population finds the maths of percentages. But I don't actually think that's the point. The point is that those percentages and the data on which they are based and the data on which our colour labelling is based have been on the back of pack in a consistent form for the best part of 10 years. It's not legislated; that was of the creation of the industry through voluntary agreement and it has never required legislative power. But I would argue that's done as much good as it can. The consumer that is prepared to engage with that long since did, and broadly the evidence was that they were engaging with it at home, when you have a little bit more time to sit at the breakfast table, read the panel and work out what it really meant. In the 25 seconds or so you have to make a choice at the shelf-edge label the maths is too difficult, I think, and to bring it from back of pack to front of pack doesn't feel like a big step forward. By illuminating the maths, because there is no difference between what we're doing and GDAs, we are simply bringing the maths of GDAs to the front of pack and then using colour to help navigation, and only colour, in our view, works in the 20 seconds or so that a customer makes a choice.

Q466 Baroness Hilton of Eggardon: So you feel it's disappointing that the Government has not gone along with your system?

Justin King: I think it's difficult because I think there's some debate over whether the Government has the legislative competence on labelling and whether that actually resides in Europe, and certainly from what we've experienced in Europe, there is much more negative sentiment, driven by some of the big European branded manufacturers, we think, towards the idea of any front-of-pack labelling, let alone front-of-pack labelling that involved the use of colour. So I think that's why, in the end, we took the view that it seemed unlikely that there would be either an industry consensus that we felt was high enough nor legislative force, so we got on with doing the right thing for our customers. Over 90% of our customers say that they understand it, and over a third of them say they actively use it to change what they buy. There are few things that have that amount of support amongst 20 million customers a week, so we're happy we're doing the right thing by our customers.

Q467 Lord Crickhowell: You've already answered most of the questions I was going to ask you about voluntary agreements, about which you've been very clear. You've raised in your letter one matter that I don't think you mentioned earlier and I will ask you one supplementary question. You said that "the Coalition Government support for voluntary arranged deals instead of legislation is not necessarily to be welcomed. Such arrangements can be as much of a burden to them in terms of their regulatory burden on business as more formal regulation." So you clearly, I think, are indicating that not only do you not think they're effective but you think they actually add a burden. Is that right?

Justin King: Yes, we think that they do. There is at times almost a sense of voluntary agreements that become "choose your punishment" as opposed to a proper engagement with the issue, and I think our starting point is that we are very happy to engage where we believe what is being suggested will genuinely address the issue that's being dealt. But I think that voluntary agreements almost always struggle to cope with a standard starting point, so

a good example would be Change4Life. We're not members of Change4Life, and that feels at one level very inconsistent for us, given the rest of our positioning. But that would have required us to, in effect, abandon everything that we had done on Active Kids, which was our key platform for engaging children with activity, because it was taken as a clean sheet of paper and one could only claim new, different and incremental activity, which tends to be the obsession of Government and voluntary agreements. And we weren't prepared to row backwards on something that we had already done huge amounts of work on over many years. And that's why it becomes burdensome, because inevitably you end up having to force fit what you're already doing into something that may not even last the test of time, and that's why I said sometimes legislation is better. It is burdensome, of course, but it's consistent for everybody and does tend to stand more the test of time than a voluntary agreement. I see from your previous submissions that you've discussed plastic bags. It's a very interesting piece of turf. There was huge industry consensus in a voluntary agreement together with the Government's nominated body WRAP on that, which had spent a long time getting many more than the four grocery retailers in the room to agree on focusing on environmental impact, not the number of bags per se, and they are different, and that was a voluntary agreement that many people had lined up behind; not least, we had moved all of our free plastic bags to 50% recycled content at great cost to our business. That was blown away by that agreement literally being dropped one Tuesday morning and a new one proposed and in essence enforced, which has had, I would argue, less impact on the issue it was seeking to address, that of the environmental impact of plastic bags, hence where some of our concern about the burden of voluntary agreements comes from.

Q468 Lord Crickhowell: We've had quite a lot of evidence that doubts the effectiveness of voluntary agreements as well, but there is one exception: salt. The campaign to reduce salt does seem to have had some effect. It may just be the exception that it was led off by the Food Standards Agency and generally supported?

Justin King: As I said, there are circumstances where voluntary agreements can be the best tool. I think legislating on salt would have been and remains spectacularly difficult. How do you legislate individual product by individual product? What the voluntary agreement did was focus on the areas of most concern in their contribution to the national diet, and get the industry to move as much as it could lockstep. On salt, that was vital, because the nature of salt is if the industry is not moving lockstep the consumer broadly speaking doesn't come on the journey; they simply seek out the places where better taste can still be found. If you take soups as an example, in the early days, and I'm going back quite a long way, probably eight years now with this change, Heinz went first on the salt reduction in that process. Initially, until Campbell's and Crosse & Blackwell joined in, the sales of Heinz soup went down and Crosse & Blackwell went up as consumers sought out the taste that their palates still preferred. That was clearly against Heinz's interests, but they were able to live with it in the certain knowledge that everybody else was coming on the journey, and they felt longer term they would get credit from consumers for leading the charge. But I'm certain that had they not had confidence because of the voluntary agreement that others would follow, they would not have made that step because it was against their short-term commercial interests. So voluntary agreements do have a role, and that's a great example of where I think it's probably the best mechanism.

Q469 Lord Patel: A very short question: yes, there was a voluntary agreement to reduce salt and certain fats from the very high level where they were. But none the less, there are still lots of products, particularly consumed by younger people, that contain a lot more than a daily requirement of salt and fats, including trans fats, and there does not seem to be any will to reduce these levels further.

Justin King: I think there is will, but I think these are complex issues, and I think we may be coming to the limits of what voluntary agreements are able to deliver. Remember, of course, that the participants in that salt voluntary agreement are, broadly speaking, the better end of the industry; the people who might do it voluntarily anyway. And so you're going to have activity at the fringes, and ultimately, as I said in my preamble, it's perfectly legitimate for the Government to legislate those fringes away if it believes that there is sufficient evidence to do so. I think on trans fats, what you're seeing at the moment is largely individual companies taking action, because what we're all seeking to do is to take those out without impact on taste⁴⁴⁹. The difficulty on salt in particular is that, because of the relativity issue, unilateral steps cause you problems with switching. Within our own stores, when we took our own label bread ahead of where branded bread was, customers just bought more branded bread and less own label, so we had to step back from that. I don't think, on the whole, trans fats present that same conundrum. We're finding different ways of delivering the same taste, sometimes more expensively—the reason trans fats are used is that they're invariably the cheapest source to deliver that, but they're not the only source to deliver that taste—and therefore you're actually seeing individual companies taking the lead on that. And so I'd be, from your perspective, less concerned about the lack of voluntary agreements, because individual companies are leading the charge. But it is a subject where we can do with better information and education because consumers are quite blurry on what they should be doing to taking fat and trans fat in particular out of their diets.

Q470 The Chairman: And do you at Sainsbury's feel that is partly your responsibility? Do you offer information for consumers around those issues?

Justin King: It's partly ours, because if we're doing it and we want to get credit for having done it, then we have to tell our consumer about it, and there are many more opportunities today than there were even five years ago to do that: from Facebook all the way through to normal advertising that we've always done and all points in between. But I said in my preamble that there is a role for education driven by Government, and I know there's been some evidence presented about whether or not progress is being made on five a day, but what I can tell you is that, in Sainsbury's over the last three years, our customers have increased their average purchasing of fruit and veg. We now have the highest level by some margin amongst our grocery competitors. We believe we've done that under the umbrella of a clear message from Government, five a day, which we have then driven hard on. And the reason that we're in a different position is not because our customers have got different messages from Government but because we have driven harder on that agenda and made it easier. I'll give you a specific example: in a couple of years in the early days of creating our Active Kids programme, where you get a voucher for every £10 you spend in Sainsbury's, we doubled up the points on fruit and veg. So we said to parents, "If you want to collect more vouchers for your kids to take to school to get sporting equipment, buy more fruit and veg." And they did, because they wanted to collect the vouchers.

⁴⁴⁹ We removed all hydrogenated vegetable oil (the manufactured form of transfat) from all our products in 2007.

Q471 The Chairman: Can I just tease this a bit further, because I think this really interesting and is the nub of some of the stuff we're concerned about. You're saying there's a role for Government in providing this information. You took this information, and a Government campaign, the five a day, and really ran with it. Now, you presumably ran with it mainly for commercial reasons?

Justin King: Yes.

Q472 The Chairman: But you also saw, because of the Active Kids campaign, a separate argument for doing it. How do you make those decisions and to what extent do you think you've got a responsibility to push something like five a day?

Justin King: I think it starts with what I said earlier about our corporate position. It would be incredible for a business to assert of itself that it's best for food and health, and then not do everything it possibly could to drive an agenda of healthy eating, particularly on turf that the Government has clearly laid out. So internally we say to ourselves, given that five a day is a very clear message, how can we demonstrate to our customers nobody is doing more to help them get to five a day? And so it's partly Active Kids, it's partly that all of our recipe cards—and I got these to leave behind actually, which are our latest January recipe cards—

The Chairman: Good, I haven't got them yet.

Justin King: Well you won't because, they literally only go in store today, so even if you are customers you won't have got them yet. It's making sure that 50% of those have a portion of fruit and veg in them. We don't actually call them recipe cards on the whole internally; we call them tip cards, because one of the things our customers said is, "If you give us recipes it's too complicated. Give us four or five ingredients and make it easier to put them together." So we've done it through that, we've done it through introducing a range of 30p veg, and that's at cost to our business in the short term—it often doesn't reflect the price that we're paying—but we wanted a proposition that said, "If you want a low price point of entry to fruit and veg, we'll always have five or six items on sale at 30p." So there are lots of things that we've done.

Q473 Baroness O'Neill of Bengarve: You indicated in your letter to us that you thought that there were contexts in which you might welcome more formal intervention by Government that would support your attempts to actually shape, not just follow, consumer choices. Can you give us examples of the sorts of areas where you think some formal intervention by Government might be actually useful to the agenda that you have?

Justin King: I think that probably the most obvious example is in the area of recycling. I think that we've seen a tremendous amount of public discussion about how much waste, both food and packaging, is created, a desire to lay that largely at the door of grocery retailers, and yet if you actually look at what we and other grocery retailers are doing, the long-term commitments we've made to reduction are very significant. The vast majority of our stores have recycling facilities; we recycle all our plastic bags, for example, to my earlier point. If you recycle them their environmental impact is significantly diminished. And yet we're doing all of that without a consistent legislative framework. When we did a piece of work a year or two ago when we wanted to change our communication in-store, we got to 90 different recycling regimes across the UK. Communicating that to consumers is

Q474 Baroness O'Neill of Bengarve: Would you have a similar view about alcohol price regulation?

Justin King: If you accept that pricing is actually going to address the issues that it purports to address, which are, I think, anti-social behaviour as a result of irresponsible short-term consumption and health damage as a result of inappropriate long-term consumption—I think I would simplistically put it that way—then I think that is a matter for Government. Apart from the obvious legal difficulties in attempting to lay at the industry's door an agreement that certain levels of pricing will or will not be made, you are simply never going to get multiple people in any industry to sit down and discuss pricing, because the law is very clear and the Government cannot protect us from that. So if the Government wishes pricing to be part of the mechanism because it believes there is clear evidence, then absolutely legislation is appropriate. I guess I will say, however, that legislation already exists, it's called taxation, and it would be very easy to do any budget any time if the Government believes the evidence is truly there. As we saw in Scotland, when the Government brought forward that legislation, they found that was a difficult turf because actually the evidence of benefit is really quite limited. What's sad, I think, is that it's focusing on something that has little benefit when there are so many things that much of industry is involved in, which I'm pretty sure your next witness will talk to you about, which have evidence of really significant progress on the issue, and it's a shame that they don't get as much air time and don't get as much legislative support.

Q475 Baroness O'Neill of Bengarve: So provided it's level playing field regulation, it's not something that you would object to?

Justin King: No.

The Chairman: Thank you very much indeed. I think this has been a really useful session. It was useful to get some of that on the record. You will get a transcript. Please do add anything if there's anything you wish you had said that you didn't have time to. Thank you very much indeed and we will see you again in Warwickshire.

Supplementary written evidence from Sainsbury's (BC 157)

Thank you for giving me the opportunity to give evidence to your Committee on the 19th January. Following that session I thought it would be helpful to provide supporting information on the effectiveness of Multiple Traffic Light (MTL) labelling. We are content for the Committee to publish this letter if it wishes.

Background to MTLs

As you know, Sainsbury's offers over 30,000 food and drink products, around half of which are our Sainsbury's own brand.

As part of our commitment to being best for food and health we give customers clear and straightforward labelling that helps them make more informed choices about what they eat and drink – a crucial part in encouraging positive behaviour change.

We were the first UK retailer to apply front-of-pack Multiple Traffic Light labelling in 2005 to our own brand products, making it easier for customers to make healthier choices at a glance. This is important since consumers usually have little time to make their choices when shopping. In 2007 we introduced them in our in-store recipe cards and we have also added them to our online grocery website. MTLs, which are based on Guideline Daily Amounts (GDAs), are now on over 5,000 products.

Our decision to do this was corroborated by a European Food Information Council study⁴⁵⁰ of consumers across the EU in 2009 which found that:

- The average time spent choosing a product is 30 seconds; this varied from 48 seconds in Hungary to 25 seconds in the UK.
- 85% of consumers only looked at information on front of pack; and
- Although 27% said they always or regularly looked for nutritional information, this was 43% in the UK.

Impact of MTLs

Independent research conducted in May 2010 by Ipsos Mori⁴⁵¹ shows that 35% of our customers actively look for Multiple Traffic Light labels when they shop, and 93% of those researched find the labels easy to understand.

By way of example, on the introduction of Multiple Traffic Light labelling, against a comparable 12 week period during which fresh ready meal sales grew 26.2%, sales of Be Good To Yourself Easy Steam Salmon and Tarragon (mostly green traffic lights) grew 46.1%, whereas sales of our Taste the Difference Moussaka (mostly reds) decreased by 24%.

As I mentioned in the evidence session, as well as influencing purchasing behaviour, a direct consequence of introducing MTLs is that it has raised the bar for us in product development. Having seen the impact on sales, our product developers work to reformulate

⁴⁵⁰ Journal of Public Health, *Use and Understanding of nutrition information on food labels in six European countries*, Grunert, Fernandez-Celemin, Wills, Bonsmann and Nureeva, 2009.

(<http://www.eufic.org/upl/I/default/doc/GDApaperPubHealth.pdf>)

⁴⁵¹ Ipsos Mori, Sainsbury's Customer Insights, Multiple Traffic Light labelling – wave 10, May 2010.

Sainsbury's

products to make them healthier and reduce the red traffic light segments on the front of packs.

21 February 2011

Diageo

Written evidence from Diageo (BC 115)

Diageo welcomes the opportunity to contribute to the Committee's inquiry into Behaviour Change.

Diageo is the world's leading premium drinks business and a top-20 FTSE 100 company. We currently employ more than 22,000 people worldwide, in 80 countries, including 5,000 in the UK. Our brands include Smirnoff vodka, Johnnie Walker and J&B whiskies, Captain Morgan rum, Baileys liqueur, José Cuervo tequila, Tanqueray and Gordon's gin, Smirnoff Ice RTD, Guinness beer and Blossom Hill wines, as well as a range of malt whiskies from our 28 Scottish distilleries. These brands feature in almost every bar, pub, club, restaurant, off-licence, supermarket and licensed convenience store in Britain.

Responsible drinking is at the heart of our business interests. Our reputation as a business and the reputation of our brands are damaged when our products are misused. We have a long established track record of leading our industry in promoting responsible drinking and retailing and were founding members of industry social responsibility organisation -The Portman Group. We have also supported alcohol awareness charity, the Drinkaware Trust since its inception in 2005, and took a lead role in the development of the Campaign For Smarter Drinking, a £100m social marketing campaign delivered in partnership with Government to shift attitudes towards drunkenness.

We feel strongly that Diageo and our industry, alongside government and other stakeholders, have an important role to play in shaping and changing behaviour and attitudes to alcohol in this country.

In summary we believe that:

- Behaviour change interventions need to be rooted in a strong and clear evidence base, as well as subject to rigorous measurement and evaluation
- Interventions are generally more effective when targeted at specific groups with specific problem behaviours rather than employed at the total population level
- Government-led interventions need to be properly co-ordinated across different departments to ensure consistency in messaging and approach
- Businesses have an important role to play in behavioural change initiatives providing consumer insights and social marketing expertise and experience that can add a significant and complementary dimension in engaging different audiences to reflect on, and change their behaviour
- Partnership approaches involving a range of stakeholders are often the most successful in achieving lasting behaviour change

This submission seeks to provide evidence to three specific areas of the inquiry:

- the extent to which behaviour change interventions require a mixture of different tools to succeed;
- the role of industry and the voluntary sector in shaping behaviour patterns;
- the relationship between Government, industry and the voluntary sector in promoting behaviour change to achieve policy goals;

It also includes two specific case studies which seek to demonstrate with empirical evidence how we are able to garner unique insights into consumer behaviour and design campaign tools and messaging which speak to the intended audiences in language which they understand and can connect and identify with.

I. Research and Development

I.1 Whilst Diageo can only highlight recent research in alcohol policy and drinking behaviours, there have been a number of developments in this area in recent years which provide transferable insights into behaviour change.

I.2 One of the most interesting and compelling is in the power of social networks in influencing behaviour. The social drivers for drinking behaviours is borne out by a study⁴⁵² of the impact of social networks on problem drinking among young people conducted by FDS International and Volterra Consulting for the Advertising Association in June 2008. While this qualitative study looked at binge drinking as a whole, and did not disaggregate for alcohol beverage types, nevertheless its conclusions provide an important insight into why some young people drink to excess, which should be taken into account by policymakers seeking to discourage irresponsible drinking and antisocial behaviours. The study concluded:

‘The results establish that social influence operating through personal friendship networks is sufficient by itself to explain a large rise in binge drinking amongst young people. The results clearly show that an individual is more likely to be a binge drinker if their close friends are binge drinkers too.’

I.3 Another separate but linked area is that of social norming, where there is evidence that dispelling myths about ‘social norms’ can cause individuals to change their behaviour. Perceptions of social norms strongly influence how we behave as individuals. However, research has found that we are often inaccurate in these perceptions, and tend to assume others behave in a less healthy manner than is actually the case. This approach seeks to correct such misperceptions through the dissemination of information on the actual norms in a population.

I.4 Challenging and changing social norms towards alcohol is central to both Diageo’s own ‘Choices’ campaign and the Campaign for Smarter Drinking (case studies can be found in the appendix of this document).

I.5 As such we warmly welcome the Health Secretary’s inclusion of this area of study within the scope of discussion on a ‘Responsibility Deal’ in Public Health, and the formation of a Behaviour Change or ‘Nudge’ Unit within the Prime Minister’s Policy Unit.

2. Policy design and evaluation

General

⁴⁵² *Advertising and the misuse of alcohol: Report 3 – The impact of social networks on problem drinking*, FDS International and Volterra Consulting, June 2008.

- 2.1 Ultimately, there is no such thing as a ‘one size fits all’ approach to successfully changing behaviour. What types or mixtures of interventions are successful is often dependent on a range of factors, not least the outcome required and the desired timescale in which to achieve it.
- 2.2 Different interventions should be used at different levels to achieve an overall objective. While there should be a central uniform theme, if this is backed up at different levels and with other types of information, it will achieve more cut-through. Levels of outcome are rarely just restricted to the level of the actual intervention as the behaviour change of an individual influences their family and friends⁴⁵³.
- 2.3 In some cases, legislative interventions can be effective in legally mandating certain behaviours, for example the introduction of seatbelts to promote road safety or a mandatory BAC limit to tackle drink driving. However, these have only been successful when accompanied by awareness campaigns and social networking/influencing campaigns to change underlying attitudes to these types of behaviours. In the case of drink-driving, recent progress can be attributed to the success in changing the social norm around drink-driving. Such behaviours are now increasingly viewed as socially unacceptable and the number of drink-driving offences has fallen as a result.
- 2.4 However, in other areas legislative interventions have been less successful in effecting behaviour change. In the last decade, the alcohol industry has been subject to a blizzard of legislation attempting to tackle alcohol misuse – most of which has been ineffectual in changing behaviours partly due to poor enforcement, but also because they have failed to be formulated on a clearly established evidence base for the policy or seek to properly evaluate the existing policy before proceeding with further interventions.
- 2.5 Behaviour change interventions need to be targeted. No single method can be universally applied to influence all behaviour and all people. Universal interventions do not invariably have uniform effects, and may be more effective among some population groups, or in some settings, than in others⁴⁵⁴. For example, different groups (measured by age, socioeconomic position, ethnicity or gender) react differently to incentives and disincentives, or ‘fear’ messages. Effective interventions target specific groups and are tailored to meet their needs.
- 2.6 When designing alcohol awareness campaigns it is not possible to communicate to the variety of different audiences which need to be reached with a ‘one size fits all’ message. We cannot hope to engage a 20 year old ‘binge drinker’ and a 60 year old ‘hazardous drinker’ with the same communications tools or channels. Different social groups are also likely to need different tools or channels.

Delivering in Partnership

- 2.7 We strongly believe that businesses have a role to play, along with other stakeholders, in behavioural change initiatives. Businesses can be invaluable partners

⁴⁵³ Ormerod, P N Squared: Public Policy and the Power of Networks. Royal Society of Arts August 2010

⁴⁵⁴ NICE Special Report on Health Systems and Behaviour Change Pg. 66

due to their lines of communication with customers, shoppers and consumers and their expertise in creating the messaging that is most appropriate to them. Campaigns such as the Campaign for Smarter Drinking and the work of the Drinkaware Trust are examples of where Government and businesses have worked closely together to develop strong, targeted and effective behavioural change campaigns.

- 2.8 The Committee may wish to consider how resources outside of Government, for example from partners in business, may help to tap into expert knowledge in encouraging consumers to change behaviour, which could also be used to support a range of Government initiatives effectively.
- 2.9 Businesses can also work successfully in partnership with Government and other stakeholders such as local councils, trading standards and law enforcement agencies to challenge attitudes to alcohol and effective behaviour change in other ways via:
- 2.9 **Workplace Programmes:** The development of workplace alcohol programmes which provide advice and guidance to employees on their alcohol consumption. Such schemes would be applicable to others areas including diet and physical exercise.
- 2.10 **Schools-based programmes:** Whilst alcohol education is primarily a function for government to deliver via the national curriculum, Diageo, sponsors "Wasted" , a new theatre-based education programme from Collingwood Learning for school pupils aged 12-14. The objective is to enable young people to understand the facts, causes, and consequences surrounding alcohol misuse. This has been developed in consultation with young people and Smashed performed to 18,000 pupils in 80 schools in 2010, covering Manchester, the North East and London, with selected events in Yorkshire, Lincolnshire, Surrey and Hampshire. 95% of the pupils enjoyed the programme with 100% of teachers saying that they believed the performance was a valuable aid to their students learning.
- 2.11 **Screening and Brief Intervention:** SBI involves specially trained medical personnel engaging with people who arrive drunk at hospital accident and emergency departments or even police stations, by asking them a series of questions about their alcohol consumption, warning them of the dangers and suggesting ways to moderate their behaviour. Diageo has supported the training of medical personnel in SBI in New York State and recommends building on existing pilots in Liverpool and London by providing an alcohol officer in the Accident and Emergency Departments of every hospital. There is a growing body of evidence to suggest that these types of targeted intervention are successful in addressing problem drinking patterns and behaviours.
- 2.12 As part of a working partnership between Diageo and the **National Organisation for Foetal Alcohol Syndrome-UK** (NOFAS-UK), a new training programme for midwives, funded by Diageo, 'What do you tell a pregnant woman about alcohol', has piloted in Birmingham and London in February, to equip midwives with the skills to start conversations with mums-to-be about the risks of drinking during pregnancy and its effects on the child later in life. 226 midwives attended the pilots with extremely positive feedback; 90% of the attendees surveyed are already using the

skills they learned in their everyday practice with 94% believing that the programme should be mandatory for all student midwives.

- 2.13 **Community Alcohol Partnerships:** The RASG's (Retail of Alcohol Standards Group working with the Wine and Spirit Trade Association) Community Alcohol Partnerships (CAP) is a good example of a programme which targets and challenges the behaviours of young people to alcohol and significantly reduces related instances of anti-social behaviour. The police assessment of the CAP in St Neots, Cambridgeshire indicated that incidents of anti-social behaviour declined by 42% over the course of the pilot period.
- 2.14 **Product packaging and labeling:** While there are limits to the role of product packaging and labeling in influence behaviours, they can, alongside other communication channels, play a role in providing consumer information and guidance. The alcohol industry is currently in the process of finalising an enhanced voluntary agreement to ensure the overwhelming majority of alcohol products purchased in the UK include a range of information including the number of units, daily sensible drinking guidelines, and a responsible drinking message as well as other information.
- 2.15 **Co-regulation:** We believe that where Government seek to regulate certain activities or to mandate certain standards - for example the responsible promotion and retailing of alcohol in the UK in order to impact the behaviour of consumers - this can often be best achieved via a system of co-regulation between Government and industry. Under co-regulation, Government can contract out the development of such regulation, which can often be made binding through existing legislation. An example of such a system is in operation to regulate alcohol advertising. It operates under an MOU between the Government, the Advertising Standards Authority and OFCOM which then regulates the industry's advertising of alcohol. Such a scheme avoids the need for legislation, is more flexible and can adapt quicker to social changes or changes in technology.

3. Conclusion

3.1 Ultimately, achieving lasting success in changing behaviour requires a range of different types and levels of intervention with appropriate time to become embedded. They should be grounded in a strong evidence-base, effectively targeted and draw on all available information and expertise. Legislation should not be a default position but where it can play a role, must be backed up by appropriate awareness campaigns and, crucially, enforcement.

A co-regulatory approach should be considered before legislation as well as undertaking a review of enforcement of existing legislation. As can be seen above, a wide range of targeted approaches are required and legislation can therefore be blunt and less effective than these targeted interventions.

The private sector should not be overlooked when looking to tackle behaviour change. It has the benefit of a direct line to consumers as well as extensive marketing expertise, particularly in an industry such as alcohol.

Diageo would be a willing participant in any moves by the Committee or Government to explore further ways of working together to influence behaviour change.

Previous Campaigns

I. ‘The Choice is Yours’ Campaign (2006- 2007)

Our research (from Millward Brown) revealed the insight that young people (18-24 years old) need the acceptance of their friends in order to ‘look cool and attractive’. However they were not aware of the ‘social damage’ that drinking excessively was doing to their image. Our intention was to get them to think that if they could see themselves drinking irresponsibly – would they like what they saw?

The target audience was segmented into the four groups listed below and the campaign was subsequently targeted towards the “irresponsible shamefuls” as the group who would be most likely to reflect upon and change their behaviour. (research is available on request)



The core insight gained was around the ‘fear of social erosion’, although we believed that we needed to encourage more positive attitudes towards alcohol. The key communication insight was that there is a moment during everyone’s night out when they make an important choice around continuing to drink more alcohol or not – the moment of choice.

Subsequently, a campaign was developed around this theme, with the television ad airing in the four weeks between the Government’s ‘Know Your Limits’ advertising and anti drink driving campaign. This ensured a sustained responsible drinking message reached consumers in the lead up to the festive season.

For the first time, this innovative, integrated campaign included broadcast, outdoor and print advertising, plus the digital launch of www.thechoiceisyours.com – an interactive and engaging website to draw attention to alcohol consumption. The campaign ran nationally

throughout November 2007 on prime time television and through digital, outdoor and print advertising. The results revealed:

- 62% were more likely to consider drinking responsibly as a result of seeing the adverts
- 92% said that the adverts and website are the kind that makes you think about drinking responsibly
- 89% said that the adverts made them aware of the choices when drinking
- 80% of people understood the main message to be about responsible drinking
- 95% said that **it's good to see alcohol companies advertising a responsible drinking message**

2. Campaign for Smarter Drinking (2009 – 2010)

In September 2009, Britain's drinks industry announced a £100 million social marketing campaign aimed at encouraging more responsible drinking among young adults and shifting attitudes towards drunkenness. The social marketing insights used for this campaign were very similar to those developed for 'Thechoiceisyours' campaign above.

The campaign came together after the alcohol drinks industry was asked by the Prime Minister to join together to tackle irresponsible drinking. By launching the CfSD, the industry sought to maximise its expertise in direct-to-consumer marketing and understanding of how best to influence consumer behaviour.

The line underpinning the campaign, 'why let good times go bad?' is designed to avoid talking down to young adults or telling them what to do. Instead, it emphasises the benefits of responsible enjoyment and offers practical tips and reminders like drinking water or soft drinks, eating food before one drinks and planning a safe way home before a night out. The campaign was launched with the support of the Secretary of State for Health and the Home Secretary, as well as leading police officers.

The first phase of the campaign rolled out in September 2009 in bars, pubs, supermarkets and high street retailers. On-trade, off-trade and producers worked together to deliver almost £23.8million worth of media value. The campaign targeted 18-34 year old 'irresponsible shamefuls' and promoted messages at or near to point of sale or point of consumption.

This initiative represented the largest ever media spend on responsible drinking messages. Developed by over 45 companies as the *Campaign for Smarter Drinking*, it was launched in partnership with independent charity Drinkaware and the Government and is intended to run for 5 years.

This has been an unprecedented campaign involving some of the biggest alcohol producers and biggest names in the on- and off-trade in this country. The 2009 campaign was robustly and independently verified by Millward Brown and was judged a success on the Government's own KPIs for raising awareness and changing behaviour.

A consumer survey of target audience 18-34 year olds by independent research company Millward Brown showed:

63%	of our target audience claim they are likely to consider drinking differently
85%	of our target audience felt the information was highly relevant to them, with credibility, believability and necessity also scoring highly
65%	of our target audience agreed that the communications are distinctive, interesting and involving
92%	of the target audience thought the points made were believable
30%	campaign awareness within our core target audience after only 4 weeks (8% more than comparative behaviour change campaigns)
60%	of the total sample say they are likely to adopt the tips in future
56%	of our target audience said they would talk to friends about campaign communications (twice the UK norm for a campaign)

Summary

We believe that the above examples demonstrate that the industry has a vital role to play in changing attitudes and behaviour towards alcohol by employing the same sophisticated marketing techniques employed to promote some of the most famous fmcc brands in the world today.

We do not accept that 'scare tactics' work in the arena of behaviour change around alcohol consumption and misuse. Instead, we believe that we need to encourage people to take responsibility for their own alcohol consumption or over-consumption and adapt the communications as necessary using innovative and creative messaging that resonates with the target audience.

It is also worth noting that since The Drinkaware Trust started four years ago, supported by the alcohol industry and offering impartial responsible drinking advice and promotional campaigns, the incidence of binge, teenage, hazardous and harmful drinking have all declined as detailed in the 'Statistics on Alcohol England' released in May 2010. We do not claim that this positive downward movement can be attributed to the success of The Drinkaware Trust and industry social marketing campaigns alone but we do contend that such initiatives have played a significant part in these encouraging trends.

November 2010

Oral Evidence, 19 January 2011, Q476-502

Evidence Session No. 14. Heard in Public.

Members present:

Lord Crickhowell
Baroness Hilton of Eggardon
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Earl of Selborne

Examination of Witnesses

Witnesses: **Mr Mark Baird**, [Corporate Social Responsibility Manager, Diageo].

Q476 The Chairman: Mr Baird, we were very worried you weren't here, but you obviously have been here all the time. Welcome, thank you very much indeed for coming. I think you were here right at the beginning, so you heard how we work. We're going to ask you to introduce yourself for the record, make a statement and then I'll start the questions before colleagues come in. There will be a record and you will get the chance to correct it. If you want to add additional material or we have particular things we want you to add, we'll ask you. So thank you very much for coming and please do introduce yourself for the record and make a statement if you would like to.

Mark Baird: Good afternoon, my name's Mark Baird, I'm Corporate Social Responsibility Manager for Diageo Great Britain. I've been in the drinks industry for around 33 years, around 21 of those with Diageo. And for those of you who don't know us as well, Diageo is the world's leading drinks producer with many of the world's leading brands, such as Johnnie Walker Whisky, Bell's Whisky, Gordon's Gin, Smirnoff Vodka etcetera. My role as Corporate Social Responsibility Manager involves, amongst other things, working with stakeholders up and down the country, with local authorities, with police, with NGOs, with schools, in promoting responsible drinking and tackling alcohol-related harm.

Q477 The Chairman: Thank you very much indeed. And let me start by asking you for any examples that you can adduce of successful attempts at changing behaviour by Diageo, what evidence you used to formulate those initiatives, and how they were evaluated?

Mark Baird: If I may I'll give two national examples and two more local examples, smaller examples?

The Chairman: Sure.

Mark Baird: If I start with Diageo's Choices campaign, which we ran in 2007, that started off with segmenting 18 to 24 year olds into different market segments and then we aimed the campaign at a particular segment called the "irresponsible shamefuls", people who would

take on the message and who would be likely to listen to the message. The campaign insight was based on the importance of social currency within that 18 to 24 year old age group, and it's very important how they're perceived by their peers, and it's very difficult for them if they're seen to not be liked by that group, or if you lose social currency by getting drunk and making a fool of yourself. So we designed a campaign around those insights that actually showed the moment of choice that everybody has of an evening when you either decide to have that extra drink or not, and we showed some of the risks and some of the consequences of having that extra drink. The campaign evaluation showed us that 62% of people who'd seen that campaign in our target group said that they would think differently about how they were drinking as a result of that campaign. So we started off with segmenting the market and ended with an evaluation of how we thought the campaign had gone. Now, I accept that that's an indication that people said they would change behaviour rather than actual behaviour change. Another campaign more recently is Why Let Good Times Go Bad, which we've been involved in along with Drinkaware and the Government. Again, that's aimed at a similar age group, 18 to 24 and the campaign's worth around £100million of value over five years. It's based on giving young adults hints and tips on how to drink more responsibly. Again we've evaluated the campaign, it's been running for two years now, and the most recent evaluation, which is just a few weeks old, shows us that 70% of the target audience are more likely to change their drinking habits as a result of the campaign and 77% of the audience are actually taking on some of the tips, and both of those figures have grown from 2009 to 2010.

The Chairman: Could you let us have that evaluation? That would be terrifically useful.

Mark Baird: Yes, I'll make that available through Drinkaware. If we look at more community based interventions rather than nationally based, we're working with the local authorities in West Yorkshire on a campaign called Operation Northdale. That's a two pronged approach where there's a social marketing campaign and volunteers are actually out in the street talking to young women as they go out on a night out and making them aware of some of the risks of drinking too much, the risks of being separated from their friends, the risks of taking an unlicensed taxi, and they give them information and they talk to them about those risks. Over the two years of that campaign, sexual assaults have reduced by 71% in that area. It's been a very successful campaign in actually making young women aware of some of the risks. Another campaign we've been involved in, last year was the first year, was at Cheltenham Races, where we worked closely with the Cheltenham Community Safety Partnership, with the local police and the local authorities to conduct again a two pronged approach with a social marketing campaign but also working with the police on the ground, putting in taxi marshals, putting in a number of things with the police and Bluetooth safety messages to some of the race goers. Again the results of that from the police have been that alcohol related crime had gone down by 48% from the previous year, and thefts, which is another targeted area that they were communicating on, went down by 10%.

Q478 The Chairman: So the success rates look really quite good for all of these. Can you tell us anything about the evidence base that you used to design these interventions? Where did it come from?

Mark Baird: The Choices campaign, and the Why Let Good Times Go Bad campaign are based on the same research, which as I said segmented the market into four groups and then used the insight of those individuals on what would make them think differently about

their drinking. And it was the social erosion and the acceptance of their peers and the views of their peers which were important, so we used that insight to tap into, to make them aware of “here’s what happens when things go the wrong way”.

The Chairman: Right, but it wasn’t a theoretical base? It was a segmentation?

Mark Baird: Yes, that’s right.

Q479 The Chairman: Okay, thank you very much indeed. Can you also say something about what you think Government could learn from some of these examples you’ve cited?

Mark Baird: I think there are a number of things. One is targeting, so I mentioned we segmented the audience. I think it’s very important that when we’re involved in social media campaigns such as this that we’re talking to a specific audience. I think the difficulties are when we try and talk to everyone about the same thing, when we tell people to stop drinking and we don’t target and we don’t segment. I think also there’s a lesson in working together with the industry. We have great marketers, we have insights, we use those insights to sell our brands and we can use those same kinds of insights on how to get messages across to individuals. So I think there are benefits in the Government working alongside industry and using the expertise and also the communication channels within an industry.

Q480 Baroness O'Neill of Bengarve: In your written evidence you note that most of the legislation targeting the alcohol industry in the last decade has been ineffectual in part, and you say that this is because it was not formulated on the basis of clear evidence base. Can you just give us some examples of the initiatives you had in mind as failing for this reason?

Mark Baird: One is Alcohol Disorder Zones, which were put in place but actually not used by any local authority; they gave local authorities the opportunity to charge licensed premises for disorder, but actually it was never taken up. Another which we saw come into force last April as part of the mandatory code was to ban something called the dentist chair. Now, research has shown us that the dentist chair doesn’t exist in the UK except for one in a pub in Newcastle somewhere. I’ll maybe explain about that more: the dentist chair is something that I think was seen in bars in Majorca some time ago, and essentially young people would go into the dentist chair, or something called the dentist chair, and then somebody would pour alcohol down their throat. But again we put legislation in to ban something that doesn’t really exist in the UK at all. I would also say that there was a proposal to triple the tax on ready-to-drink products, or alcopops as they’re most commonly known, and again, there is no evidence to show that these particular products cause any more harm than any other drink. Actually they are relatively expensive and relatively low in alcohol, and they’re certainly not the drink of choice of young people. Something else that we will see over the next few months is a late night levy coming in that will impose a fee on premises which are open late at night, whether they’re a responsible premises or not. And again, I think there’s not an evidence base to show that that would make a difference. We’ve seen some other things in Scotland over the last two years or so. We’ve seen the attempt to put in a minimum price; we’ve seen an attempt to ban under 21s from buying alcohol in off sales. We have seen restrictions on promotional materials outwith the alcohol area in a supermarket, and we’ve seen a ban on multi-buy discounts. It’s essentially linear pricing, so if you buy six products they must be six times the price of

one product. And again, there's little or no evidence to show that these will actually make a difference in targeting alcohol related harm.

Q481 Baroness O'Neill of Bengarve: Thank you very much. If I can just take a very quick further question on that. Most of what you mentioned are excellent examples of what you might call panic legislation: it fails because it was not well designed, with no good evidence base. The one that is intriguing is the one that grows out of the Licensing Act, where local authorities were given the power to fine or close; they were given proportionate powers to discipline those premises where a lot of alcohol related disorder took place. It doesn't seem to have worked. Why have local authorities, despite what I assume is the distaste of residents, been so reluctant to use the powers they were given?

Mark Baird: I think if we look at Alcohol Disorder Zones, local authorities didn't want to be tagged with being the first in the country to have an Alcohol Disorder Zone. And also from the point of view of encouraging people into your city or town centre, you wouldn't want to be known as an Alcohol Disorder Zone. It doesn't send a very good message to consumers. So I think that is one of the main reasons why it wasn't used.

Q482 Lord Crickhowell: I'm going to be provocative and probably unreasonable. You're very convincing and compelling when you talk about initiatives that you've taken and you've tested and that are evidential and so on. Forgive me for saying, but when you criticise various Government taxation proposals or initiatives that you say are unhelpful, one is tempted by the thought, "you would say that, wouldn't you?" because it's against the interests of your industry, which is to sell more alcohol. How do you deal with that obvious and probably unfair reaction? It's a very difficult case that you have to make. You can be very positive about certain positive things, but if you say "oh well, there's no evidence" for almost every proposal that is brought forward by Government, one is tempted to say "is there any evidence that you've really got that the Government proposals are not going to work?" Or is it an instinctive reaction of your industry?

Mark Baird: I hope you would share my view that it is important that legislation is evidence based, and I've tried to quote examples where I don't think the evidence base is there. For us to enter into some of the campaigns and initiatives I've discussed, then it is important there's an evidence base there, it's important that we're tackling a particular problem and it's targeted. So very much, and again coming back to the lessons that the Government can learn, I think it's very important that initiatives or legislation are targeted, and we are actually very clear about what is the problem we're trying to solve, and will the piece of legislation or the particular campaign solve that problem? And I think that, in some of the examples, has not been the case.

Q483 Lord Crickhowell: Can I put the question in a different way, then? If the Government comes forward with a proposal for which presumably it has some grounds—it's been given some evidence to suggest it might be helpful, otherwise it's unlikely to have started down the road in the first place—are you collecting firm clear evidence about the impacts to show that is a wrong approach? Are you collecting an evidential base for your opposition?

Mark Baird: I will take an example from the supermarkets and a piece of legislation that was attempted in Scotland to ban multi-buy discounts, because they encourage people to

Q484 Baroness Hilton of Eggardon: We have heard that there is strong evidence about minimum pricing, and the Government yesterday issued a statement saying they were going to introduce a minimum price per unit of alcohol. Are you saying that that is not going to be effective? They've set it at a very low level, but are you against the idea that minimum pricing might actually have an effect on people's drinking behaviour?

Mark Baird: I would suggest that there's a lot of research on minimum pricing but contest that there isn't any evidence. Nowhere in the world has tried or implemented minimum pricing. It hasn't been tried anywhere at all, and Scotland last year would have been the first had it gone through. I think minimum pricing is based on the false notion that it would reduce excessive drinking amongst a minority of the population who drink to excess. Someone who gave evidence to this Committee, Debbie Bannigan, just a couple of weeks ago had said that for the people who she sees coming through her door with very serious alcohol problems, price is not an issue. Pricing in supermarkets is not an issue. These individuals will buy alcohol regardless of price, but will tend then perhaps not to buy clothing or food for their children. Again, I think if we come back to: what was the problem we're trying to solve? If the problem is excessive drinking, then I don't believe the evidence is there to show that putting in a minimum price of, for example, 50 pence would actually reduce excessive drinking. The main report which is commented most upon is the Sheffield Report, as you'll know. The Sheffield Report has a number of flaws. One of the main flaws is that there is no account taken for income; so there are predictions in the Sheffield Report of how people will behave at a given price, but there is no consideration taken at all of income. So it presumes that an 18 year old who's on social security will react exactly the same as an 18 year old who's the son of a millionaire. There's no account taken of that at all. Also, the Sheffield Report predicts that an 18 to 24 year old binge drinker in the modelling would drink 0.8 units less per week. So even though I challenge the model, the model itself shows that a binge drinker would drink about half a pint less a week with a 50 pence minimum price, or alternatively they would need to only spend £1.14 to actually maintain their drinking at their current level.

Baroness Hilton of Eggardon: It depends upon the level at which you set your minimum price calculation.

Mark Baird: Yes, but there are various predictions within the Sheffield model. There's 40 pence, 50 pence, etc.

Q485 Lord Patel: Does industry sell alcohol below cost?

Mark Baird: There are a few circumstances in the past few years where it has been found, but it is very rare.

Q486 Lord Patel: So you must think that selling it at low price encourages more buying and therefore more drinking?

Mark Baird: It depends on a definition of below cost, because what the Government put in yesterday was a ban on selling below tax, which is different from selling below cost, because cost would by its very nature take in elements of transportation, distribution and production costs. So actually it's very difficult to put in a ban on below cost selling; there have been a few circumstances where that has been found over the past couple of years, but it is rare.

Q487 Lord Patel: Your industry doesn't do it?

Mark Baird: I should have explained right at the start, as an alcohol producer we don't have any retail outlets and we can't dictate price, so we don't actually sell alcohol to the public, we sell alcohol to the likes of Sainsbury's and Tesco and trade outlets.

Q488 Baroness O'Neill of Bengarve: You gave us some evidence on binge drinking and price sensitivity. There is a very large public health concern about drinking that is not actually binge drinking but is the regular consumption of rather too much, often indeed by people who are relatively well educated and on relatively decent incomes. Do you have any evidence on, as it were, chronic over-drinking?

Mark Baird: In terms of evidence?

Baroness O'Neill of Bengarve: Of what it is sensitive to. If you said look, the major health problem is not only the binge drinkers; we know about that, we know about the people who will not buy clothes for their children, that's a very serious social problem. But there are other problems of people who end up with liver damage and with a variety of other diseases. Do you have evidence on ways in which you would deter that sort of consumption, or is it simply one of the staples of the industry's income?

Mark Baird: We tend to get involved in campaigns which are more about prevention rather than trying to get involved in cure of people who are seriously down the line in terms of alcohol misuse. We do work with organisations such as the British Liver Trust, who are actually working on a campaign to target that particular group, because we have seen as a group that is increasing. One of the things that's happened in the UK since 2004, we've seen consumption continue to fall. So over the last six years we've seen consumption falling, and yet we've seen alcohol related harm continue to rise. So although that would suggest that there isn't a link between consumption and harm, we still do see harm continue to rise. And that is in particular groups and particular social economic groups, and that's often tied to patterns of drinking. So, for instance, we know that people on higher incomes tend to drink more on average than people on lower incomes, yet people on lower incomes have more alcohol related harm, and that's often down to a number of social and economic factors, but it's also down to patterns of drinking, where it's binge drinking in large amounts on one or two days rather than drinking spread over a course of a week.

Q489 Lord Patel: I was going to return to the pricing issue again, and I think to a degree Baroness Hilton has raised the issue. You said that there is evidence that the pricing will not work, but there is a lot of evidence produced by others that says that minimum pricing

will work. So in terms of people who legislate or not, who's right? And there are examples of other countries where the pricing is so high that it does reduce consumption.

Mark Baird: I don't believe I said there's evidence that pricing doesn't work. What I did say is there's no evidence that pricing does work, and you refer to other countries, so if we look at Southern Europe, for example countries like Spain, Portugal and Italy, where alcohol is relatively cheaper, we don't see such levels of alcohol related harm. We look at countries like Norway and Sweden, where prices are very high, and yet they have higher levels of alcohol related harm. Now, there doesn't seem to be that relationship that a high price means low harm.

Q490 Lord Patel: Do Norway and Sweden have higher incidence of binge drinking and consumption than we have?

Mark Baird: They have higher levels of harm, not so much binge drinking. We see more binge drinking in the UK than we see in these countries, but they have relatively high levels of harm in terms of disease and alcohol related admissions, etc.

Q491 Earl of Selborne: I'd like to look at the role of advertising and product placement, and I accept that you don't retail alcohol but you certainly advertise alcohol and no doubt you promote it on television and in films with product placement. Just looking at the evidence base as to the role of advertising in reinforcing or encouraging undesirable behaviour, could I remind you of the National Institute for Clinical Excellence's (NICE) report of June 2010, Alcohol Use Disorders, which says, "there is evidence that alcohol advertising does affect children and young people. It shows that exposure to alcohol advertising is associated with the onset of drinking among young people and increased consumption among those who already drink." And again, there was a comprehensive review of advertising in 2009 and that concluded that alcohol advertisements increased the likelihood of young people starting to drink, the amount they drink and the amount they drink on any one occasion. Does all this amount to evidence in your eyes, and if so, does this amount to a case for regulation rather than voluntary agreements?

Mark Baird: There are many reports and research papers on the role of advertising and alcohol use. Many are mixed, and for some of those which you quote, the evidence is rather weak. If I look to a more recent report which was published just in the last 12 months, and it was conducted by Stirling University and overseen by Professor Gerard Hastings, who's very well regarded in this field, a longitudinal research study actually found that there was no association between awareness of alcohol marketing and advertising at age 13 and either the onset of drinking or the volume of alcohol consumed two years later. So one of the most recent studies has actually shown the opposite of what was shown in the NICE report.

The Chairman: Could you send us the reference?

Mark Baird: Absolutely.

Q492 Earl of Selborne: Is that more recent than the NICE report, which was after all in June this last year?

Mark Baird: Yes, it was literally within the last 12 months.

Earl of Selborne: June 2010 is the last six months.

Mark Baird: I think it was published in 2010.

Earl of Selborne: Yes, well, the NICE report was June 2010. I'm just asking if it's more recent than then?

Mark Baird: I can't be absolutely sure, but I'll certainly send it through.

Q493 Earl of Selborne: But anyway, you would reject the NICE report as factually incorrect?

Mark Baird: As I say, the evidence on advertising and young people's drinking is weak at best. France is often used as an example, where the Loi Evin basically bans alcohol advertising in sporting events and in many forms of the media. It's been in place for quite some time, and the French Government in a study had found that after ten years of it being in place, it hadn't made the impact it was there to make. It hadn't actually reduced binge drinking or harmful drinking. Over the past 24 months in France we have seen an increasing problem with teenage binge drinking. So the youth who have grown up with an advertising ban in France are actually displaying the same kind of problems we're now seeing in this country, and actually the French call it "le binge drinking".

Q494 Earl of Selborne: But given that information, does that amount to a case for reducing regulation on product placement of alcoholic products on television? Because that's what appears to be happening at the moment; from 23 February, paper references to products and services will be admitted in films, TV series and entertainment shows and sports programmes.

Mark Baird: Alcohol has been omitted from that Bill, and I believe high fat, salt or sugar foods have also been omitted. Alcohol placement has not been permitted within that relaxation. We're actually subject to some of the tightest regulation in the world in the UK in terms of advertising, and it's very well regulated by the Advertising Standards Agency and the Portman Group. I think we're actually very proud of our advertising and marketing record in the UK.

Q495 Earl of Selborne: Do you think there is any case for changing the advertising regulation in any shape or form?

Mark Baird: Not right now. I think they're very strict; I think they work. A recent study in 2009 by the ASA conducted to monitor the compliance with the advertising rules for alcohol advertising came up with a compliance rate of 99.7%, which is an incredible figure in terms of compliance with the regulations.

Q496 The Chairman: So you don't think there is any reason at all for any strengthening of any of the regulation?

Mark Baird: I think the regulations we have work. I don't believe they need strengthening right now. If there was evidence to show that then we would certainly look at that and we'd want to talk to Government about that. We are now starting to create more guidelines around the digital arena, which is more social marketing and online advertising

Q497 Lord Patel: So if the regulation doesn't work in the face of the evidence of increasing alcohol consumption, sales of alcohol, binge drinking and disease related to alcohol, what are we going to do?

Mark Baird: If I may challenge: actually, since 2004, as I mentioned earlier, consumption has come down, and in the latest figures on alcohol in England published in May just last year, binge drinking is reducing, harmful drinking is reducing, hazardous drinking is reducing and teenage drinking is reducing. So we have actually, since 2004, seen a steady decline in alcohol consumption, and the alcohol consumption decline last year was the fastest in the last 60 years. So the issue, I think, and you touched upon it, is that we are continually seeing consumption come down, but we're seeing the harm figures go up, which tends to suggest it's not overall consumption, it's patterns of drinking, people drinking in harmful patterns.

Q498 Baroness O'Neill of Bengarve: So what do you think would be an effective intervention that would address the increasing harm due to alcohol consumption?

Mark Baird: I think we need to pay as much attention to educating under 18s, to making over 18s aware of the risks and dangers of alcohol and giving them more information in terms of unit information and what responsible drinking means, and I think we need to enforce the laws that we have. I think there's a number of laws we have, for instance, serving to drunk people or serving underage or buying for underage people, which are in place but are very rarely enforced.

Baroness Neuberger: Can you also let us have the figures that you've got showing the decline in drinking?

Mark Baird: Sure.

Q499 Lord Patel: Also, going back to Lord Selborne's point, it'd also be useful, once you've had a chance to look at NICE's June paper, to know why you think their methodology is not right, considering the decision they come to is quite different.

Mark Baird: What I haven't done is challenge their methodology, because I don't know it. What I'm saying is there are many studies on that particular aspect of drinking; NICE have quoted some of the studies which say there is a direct correlation between advertising and the onset of drinking. Similarly there are other studies which disagree with that. And even the studies that NICE quote, I believe the evidence is weak, and in some instances, they haven't controlled enough for confounders, so they haven't actually taken other areas and other issues into account.

Lord Patel: Their methodology is pretty science based.

Mark Baird: I'm sure it is, and I'm more than happy to give you the reports I am referring to.

The Chairman: Yes, that would be enormously helpful.

Q500 Lord Crickhowell: You heard Mr King talking about partnership and his reservations. In your written evidence, and I think you're dealing with another aspect of partnership, you note that businesses can be "invaluable partners due to their lines of communication with customers, shoppers and consumers, and their expertise in creating the messaging that is most appropriate to them." How important is it for Government to work in partnership with business like your company when seeking to change behaviour? And what should be the respective roles of Government and business in that partnership?

Mark Baird: I actually have personal experience of working in partnership with Government, I forgot to mention it at the start. I personally was seconded from Diageo into the Scottish Government Health Department for two years to set up and to lead a partnership called the Scottish Government Alcohol Industry Partnership where 14 of the biggest players in the alcohol industry in Scotland come together with Government and work on promoting responsible drinking and tackling alcohol related harm. I worked inside the Department of Health for two years, so I'm very clear on the roles of Government and working with industry. One of the things that we've said in our submission is that there is real opportunity for Government to work with industry in this regard, and I'll give you examples that I've used there. If we look at expertise, I said earlier that we own many of the most successful alcohol brands in the world. We obviously have some of the best marketeers behind those brands who design the campaigns. We believe that we can use that expertise to design social marketing campaigns as well. In the recent Why Let Good Times Go Bad campaign that I discussed, we actually seconded the senior Smirnoff brand marketing manager in to help design it. So that's a way we can use our expertise and our consumer insights to bring expertise into that particular area. If we look at our reach and how we can talk to consumers, we work with a number of our customers. To take an example, last year we worked together with Asda in 100 of their biggest stores throughout the UK, and we conducted a unit awareness campaign and then gave consumers a measure so they could measure their alcohol at home. And we did that with 60,000 consumers, so the opportunity of us and Asda working together to talk to 60,000 people about responsible drinking I think is very powerful. We also used that same communication vehicle in the on trade, where we work a lot with bars, pubs and clubs to get responsible drinking messages over. And again, if I come back to the Why Let Good Times Go Bad campaign, we were able to work alongside Government and the campaign to put the materials in at the point of purchase, so we put a lot of these materials into washrooms in bars so that people could actually see them all the time and they were constantly there, and we put these in supermarkets, and we put collars over the necks of hundreds of thousands of bottles throughout the UK. So I think it's opportune for Government to work alongside the industry and use the channels we have to talk to consumers.

Q501 Lord Crickhowell: In your evidence you cite the work of the Drinkaware Trust. Tell me more about it.

Mark Baird: The Drinkaware Trust was formed around 2005 with a remit to basically educate around alcohol. I personally think that it's no coincidence that we've seen alcohol consumption reduce from 2004. I think Drinkaware has a part to play in that. Their campaigns have been very successful. They have a very impressive number of website hits; they conduct a lot of their campaigns via website. They were very successful last year where they conducted an exercise in Newquay where there had been significant problems the previous year with teenage drinking and two youngsters actually died. Last year there were no incidents like that at all, and Drinkaware are very, very efficient at getting messages

across on responsible drinking. I think the reason they're successful as well is because it's a partnership. On their board sit industry and health professions, so although the organisation is funded by industry it has health professionals on its board that give it advice, so the advice you see on a Drinkaware website is not coming from the alcohol industry; that would be wrong. It's designed in conjunction with health professionals.

Q502 Lord Crickhowell: One of the pieces of evidence that we have: one person said that the industry as a whole is spending, whatever it is on advertising, perhaps £800 million, and contributes a relatively small sum—I don't think these are the figures for your company, but the industry—of £20 million to the Drinkaware Trust. Now, I think you've clearly indicated that it must be in the interests of the industry, although you're an industry trying to sell alcohol, that people drink responsibly, because clearly it's going to be damaging if the message gets stronger and stronger that harm is being done. Are you satisfied that you're getting the balance right in the amount of money you're spending and in the efforts you're making on the one hand to sell your product—in Scotland, which you cited, it's a particularly important contributor to the economy, so I understand the need to sell the product from a company point of view, and indeed from a wider perspective—and putting over the messages which you clearly indicate are significant to people that they've got to drink sensibly and responsibly?

Mark Baird: I think if I take a couple of your points there: the £800 million figure was an estimate, and nobody knows whether that's right or not. The Drinkaware campaign is £100 million value over five years, but that's just one of the hundreds of campaigns that go on. So that's not the total amount of money that the industry puts in. We're very proud of our record in social responsibility. We take it very seriously, and at Diageo we believe that as a leader within our industry we have an obligation to lead the industry in that field and I think we do. We conduct many campaigns up and down the country, I'm more than happy to give you more examples of those in print, if you like, and I think we do get the balance right. The spend on social responsibility has continued to increase throughout the industry if we look back over the last ten years or so, through campaigns like Drinkaware but also individual campaigns with organisations like ourselves, so the Choices campaign I mentioned earlier was on national TV around Christmas time, which as you might imagine is not cheap.

The Chairman: We have to stop, so can I say thank you very much indeed. What would be enormously useful is giving us some more examples, and giving us the references that you've mentioned. Also, I don't know whether this is possible, but some reference to what you actually did in your two years in the Scottish Health Department I think would be enormously useful for us to see how that partnership worked over those two years. Thank you very much indeed for coming. You will get a transcript, you get the chance to correct it, and of course we've asked for lots more material, but if there's other material beyond that that you want to give us, please do feel free to do so. Thank you very much indeed. Committee, we're finished, but don't forget we meet again next Tuesday afternoon. Thank you all very much.

Asda and the Fitness Industry Association
Oral Evidence, 25 January 2011, Q503-554

Evidence Session No.15. *Heard in Public.*

Members present:

Lord Crickhowell
Baroness Hilton of Eggardon
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Baroness Perry of Southwark
Earl of Selborne
Lord Warner

Examination of Witnesses

Witnesses: **Mr Paul Kelly**, [Head of Corporate Affairs, Asda], and **Mr Fred Turok**, [President of the Fitness Industry Association].

Q503 The Chairman: Welcome to our two witnesses. Welcome to members of the public, some of whom are actually witnesses for the second part of the session. We're delighted that you're with us. The proceedings are being webcast, and there's an information note available for members of the public that gives some background to the Inquiry and gives you a list of Members' interests. For our two witnesses, we would like you each to introduce yourself for the record and, if you would like, to make a short opening statement we do want to keep everything quite tight if we can. From then on, I will ask the first question and then the questions will go around the Committee.

Paul Kelly: I am Paul Kelly and I am the External Affairs Director for Asda. In the past, I was a member of the School Meals Review Panel and until the end of last year I was also a member of the School Food Trust Board and of the Council of Food Policy Advisors. We very much welcome this inquiry as an opportunity to demonstrate the role that retailers can play with other partners and with other agencies from the public and the voluntary sector to make interventions that can change the way in which consumers behave in relation to their diet or in relation to other areas of activity, perhaps around sustainability. We have some examples.

The Chairman: I'm going to stop you because I know this sounds awful, but it's appalling for acoustics in here. I suspect that my Committee Members aren't hearing you brilliantly, and the people behind you certainly won't be. Can you talk up a bit?

Paul Kelly: Right, I certainly can.

The Chairman: Sorry.

Paul Kelly: I normally get accused of talking too loudly.

The Chairman: You can never talk too loudly here.

Paul Kelly: We have some real life experiences of how we can make interventions with our consumers to help give them information and extend choices that help them to make better and informed decisions in relation to what they purchase and what they consume. Perhaps that is something we can explore in more detail through the questioning.

Q504 The Chairman: Thank you very much indeed, Mr Turok.

Fred Turok: Good afternoon, my name is Fred Turok. I chair the Fitness Industry Association and I've also recently been appointed to chair the Responsibility Deal for the Physical Activity group, along with the Minister of State for Health, Simon Burns. In my opening statement, I would like to just try and explain where I'm coming from and how I can help the Committee. First of all, we need to be very careful that we don't allow obesity to be the core focus. As far as I'm concerned, physical activity and the amount of food that we eat—so the balance between energy in and energy out—is a critical component and obesity along with many other illnesses, such as diabetes, are effectively the outcome. The second element I'd say is the role of physical activity is not just in helping medical conditions such as obesity, but also has a vital role in both remedial and preventative treatment in doctors' surgeries with GPs etc. The third element, I would say, is that there is no conflict between sport and physical activity; what is crucial is that we look at all activity, whatever base it takes, as an opportunity to get Britain healthier by getting people to be more active. And the last point I would make is that it's really important as I see it that we use the expertise and facilities that are available to us all within this country in order that we ensure we make maximum impact in improving the health of the nation.

Q505 The Chairman: Thank you very much indeed. I'm going to start and ask you a very general question: what responsibility do you think that businesses, such as supermarkets and fitness centres, have for changing, or helping to change, the behaviour of consumers in the public interest by encouraging healthier diets and more exercise to reduce obesity? You began to touch on it but can we tease that out a bit more? Because the thing we're particularly interested in is by what means is it appropriate for you to do that.

Paul Kelly: All businesses, and particularly businesses like supermarkets, do have a responsibility to help their customers make better and more informed choices; I don't think we can abdicate that responsibility. It is beholden upon us to work multi-sectorally with others. I don't think that any one business, or any one sector of business, has all of the answers. There are lots of influences that play on consumer decision-making, whether that's in a store environment, or whether that's when they're at a fitness club, whether that's when they're watching television. So I think we have role to play and it's about making those choices easier for them. One of the things that comes back every time we talk to our customers through listening groups and through our research is, "Look, I want to do the right thing for my family. I want to be healthier. I want to eat the right things. I don't want Government to tell me what to do, but what I want is the information to make those decisions."

Q506 The Chairman: We heard from Justin King from Sainsbury's last week, who said very clearly that at Sainsbury's it wasn't the policy to force customers to make particular choices or changes to their lifestyles that they don't want to make but that there was plenty of encouragement that supermarkets could give. So, could you perhaps tell us how appropriate it is for Asda, or for any other supermarket for that matter, to prevent positive product placement, and what should happen about the promotion of unhealthy products in supermarkets?

Paul Kelly: We try to strike a balance in any promotions that we do, getting the balance right between healthier and perhaps what would be perceived as less healthy products. It's also important to understand the dynamics behind the way in which supermarket promotions work; for brand owners, the way in which you grow market share is to encourage people to swap from one brand to another. Very often, what we see there is the promotional money flowing into wanting to promote a particular product and our challenge back would be, in some instances, 'It's great if you've developed for example a low sugar, low salt baked bean, but it is important that it's displayed in the same eye line as the perceived less healthy version and that when you have the baked beans on promotion, so should that one be on promotion as well.' Sometimes it's about getting the brands to put their promotional money across the whole of that category, not just into a particular product. We have to push back at times and say, "What we want to see is more of a balance across the categories." That becomes much easier for us, for instance, in produce, where that's our project that we're buying and we can put onto promotion. Sometimes it's quite difficult to persuade some of the brands, which are still what the vast majority of customers buy into, to take the same approach to promotions.

Q507 The Chairman: It's quite good to hear that, but if it's not you, it's the people that manufacture the brands. To what extent is the industry as a whole then responsible for the creation of the environment where unhealthier choices may be the easier ones to make precisely because the unhealthy stuff is being put on promotion?

Paul Kelly: What we're beginning to see is a much greater understanding across the industry of the need to strike that balance. One of the things that is beginning to be encouraging out of the work both Fred and I are doing on the Responsibility Deal with others is a recognition of the role we have to play in creating those right conditions. Ultimately, customers will buy what customers will buy, but it is about giving them the choices that becomes the central part of what we need to achieve.

Q508 Baroness O'Neill of Bengarve: Can I just ask you to tease out what you mean by a "balance between the healthier and less healthy choices"? The ordinary person would think that that is an absurd thought, if you're seeking a balance there. They would say, "Either you're saying, 'We don't take any stance on what people choose' or you're saying 'We try to encourage or promote healthy choices.'" Why seek a balance with unhealthy choices?

Paul Kelly: What I'm saying is that customers buy into promotions. They're looking to save money; they see promotions as a way of saving money. We are looking to get a balance across the store, so that not all of the promotional money is going into products that would be perceived to be less healthy, but those promotions are not always dictated by the supermarket. They will be part of a brand strategy right across grocery retail, right across that category, to get people to switch from a competitor brand to their brand.

Q509 Lord Krebs: Mine is a variant of Lady O'Neill's question. If we're to believe what you told us at the beginning, that you believe you have a role in promoting healthier choices, would a metric, and indeed an ambition of Asda, be over time that a smaller part of your market is unhealthy food? Are you trying to reduce your sales of unhealthy food?

Paul Kelly: What matters to—

Lord Krebs: Just a yes or no. Not a "what matters...". Yes or no?

Paul Kelly: Over a period of time what would matter to us: at the end of the day what the consumer buys from our perspective—

Lord Krebs: No, that's not answering the question.

Lord May of Oxford: You're not answering the question.

Paul Kelly: Look, with respect, I'm coming to answer the question, but I want to put some context around the answer.

Lord Krebs: Give the answer first, and then put the context.

Paul Kelly: The answer would be yes; the context around that would be that for us as a retailer what's important is that the customer comes into our store and spends. Whether that spend is healthy or unhealthy is not the issue; it's about having the overall spend.

Q510 Lord Krebs: Thank you, you've just contradicted yourself.

Paul Kelly: No.

Q511 Lord Krebs: You've said what matters is the overall spend, not whether it's on healthy or unhealthy.

Paul Kelly: What I was going onto say is it's not in our interests for our customers to be eating unhealthily because they will be customers with us for less long because their life expectancy is likely to reduce. So from my perspective, I would be very happy if they bought all healthy, but that is not the way in which consumers behave.

Q512 Lord Warner: Can I take a specific area? I'm afraid it's food again, but I'll take a specific area and ask you how you think the industry responds in that area. I would like to take the area of snacks, which are full of salt, sugar and all sorts of things, and often in combinations that are not particularly healthy for you and which are touchingly attractive to children. Can you tell us on whether the industry has any policies on packaging up individual packets of snacks into larger and larger volumes? Have they any constraints on the shelf space they actually use for that group of products?

Paul Kelly: Certainly, our policy is to sell from single pack through to multipack in snacks. That's a reflection that we tend to cater for larger family groups, larger customer groups, rather than single groups; for a mum coming in to do a monthly shop, or a shop every other week. She's looking to buy a large packet that will last for the whole month or to do a top-up shop and just wants a couple of packets of something. We don't have a policy of forcing people into larger pack sizes.

Q513 Lord Warner: What about shelf space for that group of products?

Paul Kelly: The shelf space would be directly linked through to the amount of sales, so broadly, if you take snacks as a category, there is no particular distinction between the shelf space given over to multipack versus single pack.

Q514 Lord Warner: So, if they're piling into multipack, you would just give more shelf space to it?

Paul Kelly: Not necessarily, because that wouldn't be giving people the choice. So what we might look to do is a range review, so that we perhaps have a smaller number of similar products in a category, but we wouldn't change the balance between single packs through to the larger the multipacks.

Q515 The Chairman: Would you remove, for instance, confectionary from near the checkouts in the larger stores, where you have more families?

Paul Kelly: Rather like Sainsbury's, in the smaller stores we've seen demand from parents to remove it from checkout, but not so much so in the larger stores. Whereas in the past we would have had confectionary on virtually every checkout, it's probably one in three, one in four in the larger stores that now have it.

Q516 The Chairman: Sainsbury's actually has removed it from the larger stores and they have it in the smaller stores where there aren't so many children, actually, but fine, thank you very much indeed.

Lord May of Oxford: I probably shouldn't even bother. First of all, I want to say it's a bit unkind of us to seem so hostile, because I've been at the opposite end of this sort of thing on occasion, but the fact is it's not too extreme, I think, to say that the reason that obesity is on the rise is the extreme skills supermarkets have shown in essentially doing something that isn't all that different from peddling harmful drugs. The reason that you provoke a certain amount of irritation is that I'd be much more sympathetic if you just said, "We're in the business of making money for the shareholders and this is what works," rather than cover it in this sophistry about balance.

The Chairman: Do you want to respond or shall I just hand over to Lady Perry?

Paul Kelly: The reality here is that any business is in business to make money.

Q517 Lord May of Oxford: Some of them are better regulated against harm.

Paul Kelly: If you look at the amount of regulation around supermarkets and food retail relative to some other sectors, we're not exactly an unregulated sector.

Q518 Baroness Perry of Southwark: Mr Kelly, you said earlier that you yourself—that is to say Asda—might not be responsible for promotion; it could be the brand themselves that are doing the promotion. Have you ever suggested to the brands people that you don't particularly want them promoting something which you know to be an unhealthy food in

your supermarkets, or have you ever had discussions with them about reducing the amounts of sugar, salt, fat or whatever in their products if they want to have them sold through your outlet?

Paul Kelly: I certainly think we've got examples of where we've used reformulation of our own brands, where we've reduced salt, fat and sugar, in a category like cereals or in certain ready meal categories, as leverage with some of our brands to say, "We can show you the evidence that says consumers are switching out of your own brand into our own brand because we've taken some of those decisions to make those products healthier and we've made clearer, through our front of pack labelling, the nutritional content of those particular lines." Our philosophy as a business is not to be promotionally led. We'd like to see the brands putting the investment into lowering the price right across the category for customers on a permanent basis, rather than high-low pricing that just encourages switching between brands.

Q519 Lord Crickhowell: I just want to ask you a question I put to Mr King. It's about the clarity of the labelling of various categories when you have them in close proximity and the care you take to put particular products needed by some people where they can usually be found without a profound search—say gluten free. If you've got your various products, do you have them quite clearly labelled, so that it's easily spotted by the customer that they're low salt or they're low fat, and are the gluten free products in a place where they're readily identifiable and easily found?

Paul Kelly: If you take an example like gluten free, we would always have a bay of gluten free because the customer who is looking for a gluten free product will shop that whole bay, pretty much. Where we've got products that are low in salt, fat and sugar, we still have them by category; so cereals will be where cereals are, ready meals where ready meals are. On all of our own brand products in the relevant categories, we're using our own labelling system, so that people can very easily see the food's nutritional content. That for us has been one of the big drivers of seeing change. Certainly, when we introduced our own front of pack nutritional labelling, one of the lessons that we learnt out of it very quickly was that, giving people an indication of the nutritional content of food, they were then looking to trade into a healthy alternative in that category. So, take a lasagne, for example, where, if they saw it had a high fat content or a high calorie content, they were looking for healthy alternatives. If it wasn't there, they'd take it out of the category. That was one of the biggest drivers for us in looking at reformulation right across our range.

Q520 Lord Crickhowell: I don't think you've quite answered my question. Yes, I can understand about your own labelling, but none the less, if you had some of your suppliers producing low salt or low fat and others not, would you put them so they were clearly sitting in a place where someone wanting them wouldn't have to grope along the individual labels on a whole range of packets of whatever they are—say, cereals—but would actually head for the block within the cereal complex with the kind of product that they were looking for?

Paul Kelly: Sorry, forgive me, I did misunderstand the question. In those examples, no we don't because the feedback from the customer is that, "I know that I'm going to go in and shop cereals and I will look across the category of cornflakes and look for what I'm looking for. I don't particularly want it to be all of the low salt or all of the low sugar together." That's the feedback from our customers.

Lord Crickhowell: Well, not from this one.

Q521 The Chairman: Mr Turok, do you just want to say something to us about what responsibility fitness centres have for changing or helping to change the behaviour of consumers in encouraging more exercise?

Fred Turok: Sure. First of all it's worth understanding that at the moment in the UK there are around 6,000 facilities. Those facilities have around 7 million members and it's our pretty accurate guesstimate that we're seeing approximately a million people a day, which is more than the National Health Service is seeing. That's effectively the industry's first commitment and its role in effectively influencing the health and wellbeing of those 7 million people in the million visits a day. The second element is the role of business in general. By the way it is just worth saying that approximately 50% of those 6,000 clubs I mentioned are owned by us, the taxpayer, so this is not just about the private sector; this is actually 50% state owned, Government owned, taxpayer owned, and the other 50% a combination of trusts and private businesses. The second point I would make is within these businesses and within our sector, we have a tremendous amount of expertise and a tremendous amount of surplus capacity. It's my view that we could probably double the amount of people that are going through our local authority and private sector organisations, but the key question is, how do we then fit business into that? What businesses, such as Asda, have is tremendous knowledge of consumers and the penetration into local communities. So, it has marketing capability, consumer knowledge, and facilities within communities. The key question is how do we use that experience and expertise and embrace organisations such as Sainsbury's and Asda and then work with them to provide education and opportunity because the converse is that we only focus on the energy in piece and in my view we miss out on a massive opportunity. So, to answer your question, finally, I think business has a critical role and there is an interesting question: is there such a thing as an unhealthy food or is it an unhealthy diet and lifestyle? It's something that is worth further discussion.

Q522 Baroness Perry of Southwark: I wondered if both of you could give us some examples of where you've tried to change people's behaviour, perhaps with your traffic light scheme in Asda. I notice that there is a current campaign, "This year, next year, sometime, never: when are you going to join your fitness centre?" There is quite a good poster campaign going at the moment. So examples like that where you've tried to change people's behaviour, either your existing customers or those you'd like to be your customers, and can you tell us whether they've been successful? What has the outcome been? Are there lessons that Government could learn from your experience?

Paul Kelly: One of the examples has been around front of pack nutrition labelling, where certainly we give people a very clear indication; we opted for a system which was based on guideline daily amounts, but was supplemented by the use of colour, traffic lights, and with text, high, medium, and low. As I was referring to earlier, one of the things that we learnt there was particularly in complex processed foods, ready meals, which are still a staple part of what a lot of consumers buy, intuitively people have had an understanding that lasagne was relatively healthy, but actually then seeing the information on front of pack, where there was more red information on fats and salt than they had expected, you saw them looking to trade out of that alternative into a healthy alternative. One of the things that I think we also saw was how internally it became a focus for food development teams in saying, "Actually, if we take that little bit of salt out, if we reduce the fat content, if we change the balance,

actually we can take that from a red to an amber or from an amber to a green in that particular category.” It drove a lot of innovation. Overall, if you look at salt as being an example, where we signed up to the FSA’s first targets on salt and met it around a year earlier than the target, it was very much because we knew that that was going with the grain of what the consumer would go along with and wanted to go along with. It was supplemented, and this is really important, by retailers and manufacturers taking action, supplemented by information from Government through the Food Standards Agency with its salt campaign, which was raising awareness among consumers to look at the salt content. We saw shifts in categories, where, out of the less healthy versions, we were seeing declines in sales—it may have been 30-40%—but it was transferring into a healthier alternative in that category. That, over time, is about shifting people’s diets and what we see is, broadly, those sales have stayed in those categories, so that shift from one category to another has broadly remained.

Q523 Baroness Perry of Southwark: Are you saying that’s 40% or 50% that were changing?

Paul Kelly: Yes; we’d see the sales of that lasagne that was the higher salt and fat and sugar version switching into a healthier option and staying with than healthier option, rather than trading back to the other option. One of the advantages of schemes like this was that people knew that red didn’t mean stop, red meant this is about a treat. So, certain products, I don’t need to; I know a cream cake is going to be high in sugar and fat, that’s about a treat. It’s actually in those more complex, processed foods, where I want the indication. Cereals were another example. I’ve actually worked around stores doing accompanied shops with mothers with armfuls of cereals because the children are on half-term and you say to them, “Have you read the information? Do you know how much salt or sugar is in a particular product?” “No, I haven’t thought about that. Actually, that’s quite interesting, I’m going to put that back and replace it with something else.” You can see ways in which you can shift behaviours through providing people with that information. We also supplement it as well through our magazine, which has a readership of 5 million, where we use the same system for recipes. It actually says, if you prepare this, you can be absolutely sure in those quantities that is the calorific intake, the salt, the fat, the sugar intake as well.

Q524 Baroness Perry of Southwark: That still does go very much back to your dialogue with the brand producers themselves; you’ve got a lot of buying power with them, a lot of clout with them, and if you point out to them that people are switching from their high sugar, high salt, high fat products, you could have a big impact.

Paul Kelly: I think you’ve seen some of that brought to bear with some of the food manufacturers, who’ve also been at the forefront of doing some of the reformulation. The issue is that we don’t have consistent front of pack information available to consumers.

Fred Turok: Firstly, it’s worth mentioning as we’re both sitting here the Swapathon, which is the Change4Life programme, which was launched in January with the *News of the World*, Asda and the Fitness Industry Association. That’s an example of Government, or the Department of Health, through Change4Life, energy in and energy out, working together. Some 5 million vouchers have gone out. We’re yet to see what the full impact is, but it’s very encouraging and an example of what can be done. I have any number of bits of research that our industry has done and I’ll go through a few of them, but it’s worth stating

from the beginning that actually our industry, our sector, survives on the back of changing behaviour and of letting members, customers, see results and get value for money. Otherwise, our sector wouldn't exist, whether it's a local authority sports centre or a private gym. That's the first point. We spend every day of our lives bringing new people into our businesses, our centres, and then providing them with assessment, and reassessment, and helping them to track effectively, as I said, value for money and results. I will give you a few additional examples, which again are illustrative of the impact of physical activity. The first one that I will start with is group exercise. An organisation called Les Mills, which develops group exercise classes, has shown that of those people taking part in regular, group-based exercise, 72% will continue to participate and 74% will refer somebody else to come and join them in that group exercise. So in fact we've known for a number of years that group exercise is hugely valuable in terms of participation and retention: sustainable physical activity. That was a piece of research and 72.2% compares to the average retention rate in our industry of around 65%. The next one I will use is something called GO Curves, a franchise organisation that operates across the UK. In a six week programme with 15 and 16 year olds, it provided that 50% of participants would continue post the programme at a minimum of six hours a week, which was the start of the programme—the other 50% wouldn't have followed as much—but demonstrating what impact going through a supervised programme can have. Then I will go through a very interesting one which was DC Leisure and a child weight management programme. Again I won't go into the detail, but actually just by providing two motivational interview techniques to those young people with their parents, the show ratio at regular sessions post that intervention rose by 20%.

Q525 Baroness Perry of Southwark: Who did the interview?

Fred Turok: The interviews were done by MEND⁴⁵⁵—I can't remember what it stands for—but it basically is a child weight management programme: their instructors, their assessors. The last one—again, there is a lot of detail here—is Doncaster Active Partnership, Be Active, Be Healthy. That had three employers and 100 places and that showed—I won't go through all the detail—approximately a 20% decrease in systolic blood pressure, 80% decrease in number of female participants with high risk categories of waist-hip ratios, 16% increase of males in the low risk category, and so I can go on. The most interesting one is that just under 50% of the participants in that had not only increased their own physical activity levels, but had referred other people to do exactly the same, so effectively acting as mentors or ambassador. Because we all know, that if you take regular exercises, you feel good about it and want to tell other people. I can go on and provide you with any number of bits of research.

Q526 The Chairman: It would be very helpful if you could send us some of that actually, that would be great. Thank you very much.

Fred Turok: Pleasure, pleasure.

Q527 Lord Krebs: I've got two very quick questions, first to Paul Kelly. We've been puzzling a bit over front of pack labelling, because Sainsbury's have told us that the multiple

⁴⁵⁵ This is incorrect. The interviews were delivered in a Carnegie programme.

traffic light system in their experience has altered consumer behaviour. You've indicated the same thing at Asda, yet the Government has clearly said that they don't want to standardise on multiple traffic lights but on guideline daily amounts, which the Food Standards Agency's work shows has less communicative power, less effect on consumer behaviour than the multiple traffic lights. Do you think that Government has got it wrong? Just "Yes" or "no".

Paul Kelly: Yes, I do think that Government has got it wrong.

The Chairman: That's very helpful.

Q528 Lord Krebs: Yes, thank you. Now on the question of exercise I had two, again, very particular questions. What proportion of the average person's weekly energy expenditure comes from being in gym or the group exercise class? That's a factual question. Second factual question, of the cases that you reported of health improvements, blood pressure, over what time period have they been measured and sustained?

Fred Turok: Let me see if I can answer the first question first, I don't have that sort of detail.

Lord Krebs: Could you write in and tell us?

Fred Turok: We can certainly come up with more detail than I've currently provided.

Q529 Lord Krebs: Because I believe there are studies that have measured this and I think you'll find the results quite surprising.

Fred Turok: Yes. We work very effectively with a gentleman called—again, it would be worth you having a look at his research—Professor Steven Blair from America, who is the leading exercise professor in the USA. I've got a number of reports here that I can leave but we will send you a lot of this stuff. The important point here is that it isn't just about the amount of exercise you do in the gym. It is about joining a gym or joining a local authority facility and making a lifestyle change; a commitment to taking more physical activity. That doesn't have to be just inside a facility. It actually can be in any form of exercise, whether cycling, walking, swimming, etc. That's the first point I would make. The second point I would make is that in order for exercise to be truly effective, you have to be able to measure impact and outcome. The beauty of having a proper assessment with a structure by someone who then designs a programme specifically for you—whether it's a woman who is 70 years old, about osteoporosis; somebody who is going to have a child, so pre and then post natal exercise; or somebody who suffers from sports injury—is that it has been specifically designed for an individual. This is why as an industry we commit—it doesn't always happen—through the Fitness Industry Association to ensure that any new person joining a facility has that full assessment and an evaluation and then has a programme designed specifically for them.

Q530 Lord Krebs: Second half of the question.

Fred Turok: I'm sorry, remind of the second half, would you?

Lord Krebs: You gave us some measures of health improvement and I asked how long did they persist; months, years, decades?

Fred Turok: Right, absolutely. Each one that I've given you would have had a different level of commitment in terms of time and constant measurement and I will need to send you all that detail which you digest.

Q531 Lord Krebs: Because what we've heard in previous sessions is that particularly in relation to weight loss, programmes work if they're intensive, in small groups or individuals, in the short term, but what is extremely difficult is to get them to persist and sustain over the long term.

Fred Turok: But of course it is.

Lord Krebs: I just wanted a factual answer, that's enough, if you write in and tell us.

Fred Turok: I'm sorry? May I just respond to that? It's so obvious that that's the case because if you don't get the balance between energy in and energy out, and you're constantly on a diet, no person can live constantly on a diet. We have to influence people to modify or change their behaviour to make physical activity a core part of what they do in their days and weeks and months. As we age, it becomes even more important. So, what I would say is that a good weight loss programme, weight management programme, was linked very carefully to an energy out programme, a physical activity programme, whatever that physical activity is, walking, cycling, joining a gym, it doesn't matter, that's the nirvana of how we crack this problem of obesity.

Lord Krebs: Those are just the sorts of programmes that I was talking about.

Fred Turok: Correct.

Q532 Lord Warner: Both the FIA and Asda are involved in partnerships with Government to try and deliver behaviour change programmes through Change4Life. What do you think are the key elements of a successful partnership between business and Government? Viewed from your perspective, how do you think Government can work with the private sector most effectively to bring about behaviour change? What has it felt like for you?

Paul Kelly: From Asda's perspective, we've been very encouraged by Change4Life. Something we had wanted to see for some time was a drawing together of strands of different campaigns around a simple message. One of the feedbacks that we got from consumers was that there are lots and lots of different initiatives and we don't really understand how they all fit together. The simplicity of the Change4Life message is very appealing to consumers and the consistency with which it has been delivered. We've seen as we track it awareness of Change4Life increasing literally every month since it was launched, and awareness of the brand, and therefore when we do something like the Great Swapathon, which is going very well and we think we're ahead of target on a million swaps, people respond to it: "I understand where that fits in and I like the message". When it comes to voluntary agreements between Government, industry, and I would put the third sector into this as well, whether that is charities or NGOs, we need absolute clarity around roles and responsibilities. Who is going to do what? What is being measured? How is it going to be evaluated? Then, we stick with the targets. Because trust is key to holding these partnerships together and by and large on Change4Life that has worked very well. In other sectors, outside of health, the Courtauld Commitments around waste, for example, worked well until Ministers decided unilaterally to change one of the targets and interpret it in

another way, which actually was not where industry was driving towards. It was driving towards meeting another target. Voluntary agreements work as long as the roles and responsibilities are clear and the evaluation is clear. Our experience of Change4Life is very good. We think it is right for our customers in terms of its simplicity. We were glad that the Government retained it because actually in the past we had seen initiatives ditched for political expediency, where actually they were at the point at which they were beginning to work.

Fred Turok: I would agree with what Paul has just said. Change4Life is a great brand and has some great marketing messages and it was brave for Andrew Lansley to keep that. The challenge now is how do we make an impact on the back of that strong brand? This is where the Responsibility Deal comes in. This is where a combination of charities and non-government organisations, business etc will come together in order to work out a number of both group and individual pledges which are about action, about how we take the British public and how we influence them in terms of behavioural modification and change; how we look to see what effect we can have; and how we evaluate that impact. From my point of view, we're going through an extremely exciting time. Previously, there was some sort of dividing line between business, the food sector, the alcohol sector. What has happened now is that everybody has come into the tent and said, "We're committing, as per the Responsibility Deal, to be part of influencing public health." The question of how we do that has yet to be clearly determined, but the motivation and the effort that is currently going in, as far as I'm concerned, is massively positive.

Q533 Lord Warner: How long do you think this will last? You're in the enthusiastic stage at the moment.

Fred Turok: Yes, I'm always enthusiastic.

Q534 Lord Warner: How long do you think these partnerships have got to last for to produce some goods?

Fred Turok: I believe that every day a new partnership and a new pledge should be launched. This is about building this into the DNA of society. This is about building into society the fact that at local and national level groups and organisations are joining forces such as Asda, Change4Life, Fitness Industry Association; it's something that's going to happen all the time. I don't think we can expect Government to dictate this from the top. This is something that the organisations that are involved in the Responsibility Deal have to own themselves. If they own it themselves, let's be clear, there is going to be self-interest involved, but, to be frank, so what? We actually want business to be successful as long as the outcome of the various pledges and projects that happen are actually to the benefit of public health.

Q535 The Chairman: Doesn't that require the interests of the various partners always being aligned? So, if anybody doesn't agree—so if your voluntary organisation, say, doesn't agree with your business partner—how can that work?

Fred Turok: Absolutely, so for example in the physical activity board that I chair, we have a network that includes all facets of physical activity: Cancer UK, Macmillan, we have charities as well as businesses, as well as delivery agents from Sustrans to British Cycling to walking

etc. The common theme is simple. It's using physical activity as a tool in our armoury to get Britain healthy. I've called the plan the 100,000 plan; 100 projects delivered by 1,000 partners. That's the ambition of this. It's to try and give it its own motivation so that we don't need constantly to be told what to do; the ownership rests effectively with a bunch of people joining forces to deliver measurable impact outcomes.

Q536 The Chairman: And there isn't disagreement about the aims because people do have, obviously, different objectives within the groupings?

Fred Turok: That's interesting because if you'd been at the meeting that I chaired of the Physical Activity Network, probably there were 60-70 organisations there; big, well-known national brands. There was some disagreement, but guess what, out of that have come—still in draft stage—six core pledges which we've got, so far, the vast majority to sign up to and I've no doubt that they will all sign up to them. That is about suddenly leaving our self-interest outside the door at the moment and saying actually there is mutual self-interest here in terms of improving public health because, guess what, if we don't, we have a major problem. By 2050, 54% of adults, as you well know, will be clinically obese and we just can't sustain that financially.

Q537 Lord Krebs: This is really to Paul Kelly. As I understand with the Change4Life Swapathon, with which you're involved, there is a £50 voucher booklet that provides discount on certain foods. Is that right?

Paul Kelly: There is a booklet that has vouchers where you can get 50 pence off a packet of grapes or 75 pence off baking potatoes; a whole range of different vouchers that can be redeemed.

Q538 Lord Krebs: I just wondered in relation to this initiative whether you're aware of the relatively recently published research by Epstein et al, which shows that offering people discounts on healthier foods doesn't result in people consuming a healthier diet because they just use the money saved to buy unhealthy products. That is very, very clear experimental research that was published recently. I wondered in light of that whether you feel that this might be a mistaken venture.

Paul Kelly: I haven't seen the research so I can't comment on the research. From the point of view of the timing of doing vouchers when people are thinking about new year's resolutions, particularly changing habits, what we're seeing in feedback from customers is, "This has stimulated me to think differently." What we won't know until we start to do the analysis—we've still got another couple of weeks of the vouchers to run—is what's happened to the rest of the basket spend. Where we've seen coupons redeemed, what's happened in the rest of that transaction? What we've seen so far is the highest redeeming coupons have been around produce, which we wouldn't have expected to see around this time of year. So, so far, we're encouraged by what we've seen, but until we do the full analysis and evaluation it's a difficult question to answer just at the moment.

Q539 The Chairman: When will that be done? When will that be finished?

Paul Kelly: The evaluation will take place during February, so we should have some results by the end of February.

The Chairman: It would be enormously helpful if you could share some of those with us. That would be really very helpful for this Committee.

Paul Kelly: Of course.

Q540 Lord Krebs: On that evaluation, looking back at the evidence that we got from the Department of Health, when we asked them what was the outcome that they were looking for, they were looking for actual change in prevalence of obesity. You can't surely determine that by the middle of February.

Paul Kelly: I don't think, from the Swapathon, given this is 5 million voucher booklets, a population of 56 million, you can expect that one intervention is going to do that. It is back to the point Fred was making earlier, in answer to your question, Lord Chairman.

Q541 Lord Krebs: Let me just quote Dame Sally Davies, "the population outcome measures that we hope to take forward are the ones we're consulting on: the National Child Measurement and the Adult Healthy Weight." So they're claiming that what this Great Swapathon will do is change the average body mass of adults and children.

Paul Kelly: I think it can contribute, but it cannot in itself change it because it's not available to all the population.

Lord Krebs: And Sian Jarvis goes onto say that it will take 40 years or so to measure. It's just a different perspective.

Q542 Lord Patel: Mine is a simple question, I hope the answer is simple too. It's to Mr Turok. You said that there are 6,000 fitness centres and 50% of that is publicly funded. What, in money terms, does that mean?

Fred Turok: Oh gosh, in terms of the amount the taxpayer spends?

Lord Patel: Yes.

Fred Turok: I really wouldn't know, but I can come to that figure easily.

Q543 Lord Patel: It would be good to know. If I might go on to the question that I wanted to know about, it has been suggested to this Committee that voluntary agreements between the Government and business such as those that may arise out of the Public Health Responsibility Deal Networks, will not be effective in achieving behaviour change. Do you think that voluntary agreements will be effective? And, if you don't, when do you think more formal intervention might be appropriate?

Paul Kelly: I'm a great believer in voluntary agreements because they create a race to the top; regulation creates a race to the bottom. When you have regulation, companies concentrate on complying with the regulation, whereas the structure and the framework we're putting around the voluntary agreement allows companies to go beyond the core pledges. That creates a competitive dynamic; that drives innovation.

Q544 Lord Patel: So, when Mr Justin King, who you might know, said, “The coalition Government’s support for voluntary arrangements such as responsibility deals instead of legislation is not necessarily to be welcomed, since such arrangements can be as burdensome in terms of their regulatory burden as more formal regulation,” do you completely disagree with him?

Paul Kelly: I disagree with Justin on that. Supermarkets are not all sheep.

Q545 Lord Patel: So why do you think that two supermarkets disagree with each other as to whether voluntary agreements will work or not work?

Paul Kelly: Perhaps it’s different experiences. Our experience has been very positive. We believe that regulation is to be avoided because regulation feeds the perception that the consumer has of the nanny state. 86% of the consumers that we have researched through our Pulse of the Nation panel said, “I don’t want the Government to tell me what to do. I want to see initiatives that help.” Voluntary agreements do that. The competitive dynamic that it puts into the marketplace will drive better outcomes over time than the regulatory framework will.

Q546 Lord Patel: At what point do you think there should be a regulatory framework?

Paul Kelly: The regulatory framework would have to come in if we were to fail over time to meet the targets that we’re looking for in terms of the long-term health outcomes.

Q547 Lord Patel: What timescale would that be?

Paul Kelly: It’s got to be longer than a lifetime of a Parliament would be my guess.

Lord Patel: That could be quite short soon, who knows.

Paul Kelly: Some of the factors that we want to influence are not going to be changed by one campaign. There are multi-factoral and multi-sectoral approaches needed and lots of factors that impinge on them. The value that comes out of the voluntary agreements is that for the first time, rather than having the various interest groups shouting at one another in megaphone diplomacy, we’re sitting in a room thrashing it out. It isn’t easy in some areas, but progress is being made and that is better than the kind of warfare that went on before.

Q548 The Chairman: Can I just pick up on one issue where I think you and Sainsbury’s would agree, which is about the traffic light labelling of food, where Justin King’s view would be that it would be preferable if everybody was actually told they had to do that. He is critical, as I think indeed you are, of the Government’s present position; that would be an area where, if you like, regulation might work better because it would apply to everybody, rather than a voluntary agreement. That’s just a for instance; I’m not suggesting that it has to go that way, but that would be a good example that you might both share.

Paul Kelly: Where there is a very clear evidence base, as there very clearly is in all of the research that has been done, particularly the research that has been commissioned by the FSA, of not just a consumer preference, but clear evidence of the impact that it has, there is an argument for it.

Q549 The Chairman: That would be an example where you would say regulation might well be better than voluntary agreement because voluntary agreement on that has not thus far certainly worked?

Paul Kelly: Without having had the multiplicity of schemes, we wouldn't necessarily have found out which is the most effective. Having now found out that there is very clear evidence that supports one scheme, there is some case to say that we should now regulate in that area. In other areas, the default has too often been regulation, whereas actually a voluntary agreement would have delivered a better outcome.

Q550 Lord Patel: Can I suggest politely that in fact industry doesn't want regulation because it will then have to start not promoting the foods that the voluntary agreement allows them to do? Whilst they claim that they have an agreement to reduce salt for instance there are lots of products—I could take you through Asda, if you like, tomorrow and show you—that are way above the daily requirement of salt. Then when we come to trans-fats there are lots of products that have trans-fats, which have no nutritional value at all.

Paul Kelly: If you take trans-fat as an example, in an Asda product there is no trans-fat. We have removed all the trans-fat.

Q551 Lord Patel: But there are lots of products that have trans-fats.

Paul Kelly: That's an issue for the brand manufacturers. Maybe that's a question you should be taking to the brand manufacturers. Back to your point.

Q552 Lord Patel: You purchase those products to sell to me.

Paul Kelly: There have been times on regulation where certainly we've said we would urge Government. We were one of the first to say to the Government, "We actually think you should outlaw, for example, the sale of alcohol below duty plus VAT." I am pleased to see that the Government has now followed that lead and announced that that is what it's going to do. Supermarkets and business are not always against regulation if it's good and sensible legislation. In other instances, you can achieve more through voluntary agreement than you would do through regulation; my point about race to the bottom, rather than race to the top.

Q553 Baroness O'Neill of Bengarve: What you have said is extremely interesting. I just wondered whether you could give us any example of where Asda as one supermarket, or supermarkets collectively, have decided of some brand, or particular product, that it's sufficiently outside the tolerable as a component of a healthy diet and have refused to market it. Is there any case where you've refused to market?

Paul Kelly: I can't think of one straight away. I will go back, and if we have I will supply some information.

Q554 Baroness O'Neill of Bengarve: That would be very interesting, if you could supply us with some examples and then we can also see whether others are following your lead on that or you're following others' leads and so on.

Paul Kelly: You raise a very interesting point for the future around choice editing; creating the conditions with consumers to choice edit in the future, so consumers understand why we're doing it and why we're taking particular products out of categories, is also an important part of behaviour change. I don't think we've got the consumer to the point of acceptability on that yet as an industry.

The Chairman: Anything you could let us have on that would be enormously valuable. We need to stop there. Can I just tell you that there will be a transcript provided to you in about 10 days' time, which you will be able to look at and correct if you think that there is anything wrong. If there is additional material that you wish you'd given us, but haven't, do add it then and it will be added to the record. It would be wonderful if you could let us have the things that we've asked you for.

Paul Kelly: We will do.

The Chairman: Thank you very much indeed.

Paul Kelly: Thank you.

Supplementary written evidence from Asda (BC 158)

Thank you for the opportunity to give evidence to the Sub-Committee in January. I appreciate the chance to discuss the ways in which Asda is helping its customers to live more healthily. During the session there were two points on which I said I would provide the Sub-Committee with further information.

The first was on our assessment of our involvement in the 'Great Swapathon', the latest Change4Life activity. As you know, in January we worked with the department for Health and the *News of the World* to distribute four million voucher books which provided up £50 off healthier foods, drinks and activities; many available in Asda. This was approximately a £500,000 investment by Asda. Our initial assessment of the initiative has revealed that:

- 1 in 10 of our customers received the voucher book. This is a strong level of penetration given that 4 million voucher books were distributed and we serve 18 million customers.
- 304,000 vouchers were redeemed on Asda products, saving customers over £195,000. This does not include vouchers included in the book which were not redeemable at Asda.
- Vouchers on fruit and vegetables were the most popular, making up the majority of redemptions. Within this category, feedback from our stores suggested clementines proved particularly popular with customers.
- 91% of customers who saw the voucher book said they liked some or most of the offers available and 88% said they would use at least 1 or 2 of the offers.
- 46% of customers said the voucher book would encourage them to eat more healthily and 42% say it would encourage them to move more. Other customers said they already eat healthy (44%) and already exercise a lot (29%).

We are currently carrying out more detailed assessment of the campaign. We will use the research and customer insight to inform future Asda and Change4Life healthy living campaigns.

I also said I would provide the Sub-Committee with and examples of 'unhealthy' products which Asda has decided not to stock. In terms of Asda brand products, our aim is offer customers a full choice of products, but also ensure that each product is within our nutritional parameters for its area. It is important to note that we apply these parameters regardless of range, so our Smart Price value products and Extra Special premium products must comply with the same standards. Where a product fails to meet our criteria we will work with the supplier to reformulate and improve the product. To date we have invested more than £30 million in this reformulation process. I would like to highlight some notable product reformulations:

- Chilled pizzas – an average reduction in saturated fat of 32% across the range.
- Fish fingers – 21% saturated fat reduction.
- Mexican range – reduced saturated fat in three key lines by up to 35%.
- Sausage rolls – an 18% saturated fat reduction across the core range.
- Chocolate Mini Rolls – reduced saturated fat by 20%.
- A new reduced fat range of three flavours of baked crisps, with an average of 68% less saturated fat than standard crisps.

Asda and the Fitness Industry Association

- A 3.8% sugar reduction in our own-label cola (the maximum possible without requiring additional sweeteners).

In addition, across the Asda brand range we met the original FSA salt targets by the end of 2007, two years ahead of schedule, and will continue to work hard to reduce salt levels further. We have also completely removed all hydrogenated fat as well as artificial colours, flavours and sweeteners from our own-label products.

28 February 2011

Supplementary written evidence from the Fitness Industry Association (BC 159)

The FIA has attempted to provide evidence in response to the questions posed at the Select Committee on Science ad Technology. Though detailed answers could not be developed for all of the questions due to the short timescale following the committee.

Q525 Evaluation assessments of programmes including Go Curves, Be Active Be Healthy

The case studies outline the long term sustainability of programmes.

Curves – Gravesend

Pilot in Kent with Curves in Gravesend

The pilot funded 50 women over a period of 6 months to work out at Curves at least 8 times per month and receive nutritional and healthy eating advice.

Women who participated were recruited through the wellness centre and links established through the Practice Nurse, a local GP and mental health support groups.

Participants were interviewed to establish their baseline health and exercise levels plus assessment of body weight, measurements and % body fat. Attitudes to exercise, physical benefit and changes to general wellbeing were also recorded.

There was a 3.3% attrition rate, which is significantly below the industry standard during the programme.

The outcomes of the pilot showed that participants almost met the 8 times per month attendance criteria (the average was 7.4 visits per month).

Curves identify women who join curves as having the aim of loosing weight and reducing their risk of diabetes and strokes. Weight loss for the group was monitored and the combined weight loss for the pilot was 2300lbs – 24% of the groups total weight.

DC Leisure

Carnegie Weight Management

Child weight management programmes are delivered through the fitness sector on behalf of the local PCT.

Developing on the programmes, this operator has introduced the use of motivational interviewing techniques with the families involved to identify their motivation and commitment to the scheme.

This has improved the show rates at sessions by 20%

Let's Get Moving

The FIA, in partnership with behaviour change specialists Scintillate, has been commissioned by a consortium of 5 Essex Primary Care Trusts to deliver a programme called Let's Get Moving.

Let's Get Moving is a physical activity intervention based on motivational interviewing techniques. Patients will be referred to the programme by referral from the 10 GP practices spread across the 5 PCTs taking part.

The initiative will be delivered by 10 to 15 committed exercise professionals from our member clubs who will receive training in motivational interviewing, enabling them to act as Clinical Exercise Practitioners for the duration of the programme. By providing training for qualified exercise instructors, a safe and effective programme will be created in order to educate and motivate patients into habitual activity.

Let's Get Moving is a tested care pathway which has now been developed and adapted for successful application through the fitness sector. Using specific behavioral change techniques, and supporting participants at points where attrition is common, the programme has the potential to significantly reduce the healthcare costs through physical activity.

RAMBLERS

Get Walking, Keep Walking

Summary

This intervention is a 12 week walking plan to support everyday, independent walking. The project encourages regular independent walking close to home as part of everyday life – including trips to shops, school and work.

Programmes begin with four weekly facilitated walks and other activities, and briefing in the use of support materials such as the walking plan, logbook and step counter.

Participants are then asked to undertake seven weeks of independent walking with the help of the plan and signposting to other walking opportunities, meeting again for a celebration event at Week 12.

- Around 65,000 people have participated so far.
 - Of over 9,000 programme participants, **42% were from non-white ethnic backgrounds** and 31% were under 35.
 - **24 weeks on, participants were active on almost one average day more a week than at registration.**
 - Participants had **increased the total time they spent walking** per week 24 weeks on: programme beneficiaries spent 56 more minutes per week walking from place to place and 71 more minutes walking for leisure.
 - 40% said they had **taken up other forms of physical activity**.
 - 80% said they were **less likely to feel depressed**, and 70% said they were **more energised and motivated**.

Sport England

Return to Sport (Hampshire & Isle of Wight)

Sport England invested £34,000 to enable a two year joint partnership project (Sport Hampshire and IOW, Hampshire County Council and local authorities) aimed at the County's inactive and moderately active adults aged 16 years and older. The project encouraged individuals to take up regular physical activity through a re-introduction to familiar sports – swimming, badminton, netball, football, touch rugby and running/jogging.

Results

- There was an overall increase of adults participating in sport five times a week from 20% in August 2005 to 24% in January 2007.
- There was an overall increase of adults participating in sport three times a week from 21% in August 2005 to 25% in January 2007.
- In August 2005 15% of adults had never participated in sport before, by January 2007 this had decreased to 11%.

Key lessons learnt - Sustainable sports pathways

One of the key successes was through providing young people and adults with an introduction to a sport, offering basic coaching and a chance to try and develop new skills. In general the programmes lasted for six to ten weeks. At the end of the course there was an activity in place for participants to continue taking part.

Return to Netball was one example of the kind of projects on offer. The netball development officer developed a series of sessions in local authorities across the County to introduce women back into the rules and playing positions of the game. The sessions were either delivered as a course by a local club coach or by an existing club, therefore allowing for a pathway for regular participation.

Q542 Public Ownership of fitness centres

In 2010, there were 2686 public sector facilities in the UK⁴⁵⁶. These facilities have c.2.9million members. The market value of the public sector fitness industry is £1.1billion.

Membership of public sector facilities generates c. £85 million per annum. This does not include casual spend ('pay and play' users).

Q528 Energy Expenditure

Although there are many influences on body weight and composition the principle determinant is calorific balance (energy expenditure). Calorific balance refers to the difference between calorie intake (the energy equivalent of food ingested) and calorie expenditure (the energy equivalent of resting metabolic rate, physical activity). Studies suggest there has been little change in total change in total caloric intake per capita over the

⁴⁵⁶ 2010 State of the Industry Report (The Leisure Database Company) – pg 5

past few decades, however levels of physical activity, both as activities of daily life and exercise, have declined a great deal over the last decade, and therefore the levels of overweight and obesity have risen dramatically.

The rate at which the body uses energy is termed the Basic metabolic rate. Estimates of energy expenditure at rest and during exercise are often based on measurement of whole body oxygen consumption (VO₂) and its calorie equivalent. However, other factors that affect BMR include:

- Age: BMR gradually decreases with increasing age, generally because of a decrease in fat free mass
- Body temperature: BMR increases with temperature
- Psychological stress: Stress increases activity of the sympathetic nervous system
- Hormones: For example, thyroxine from the thyroid gland and epinephrine from the adrenal medulla both increase BMR

The average total metabolic rate of an individual engaged in normal daily activities ranges from 1,800 to 3,000 kcal. In contrast the energy expenditure for an athlete engaged in intense daily training can exceed 10,000 kcal. Calculations to estimate what proportion of the average person's weekly energy expenditure comes from being in a gym or a group exercise class are not practical. This is principally, because it would depend on a number of variables:

- Length of time in the gym
- Activity in the Gym
- Age & body composition of the individual

Clarification on these issues would allow for a calculation of the energy expenditure in the gym.

Fitness Industry and Behaviour Change

Member Retention

It is the business of gyms and leisure centres to encourage customers to attend the gym on a regular basis and help them achieve their goals. There is growing evidence from fitness providers about improving retention through helping customers meet their goals and attend regular sessions at the gym.

One provider has implemented a system which tracks new members for the first month-6 weeks, with a series of 5 sessions with an instructor. This ensures that the customer can identify their goals, be given a programme designed personally for them, and can be tracked and motivated throughout the first month. The delivery of the programme now sees 52% of members reaching their 5th session, which is an impressive industry statistic. In addition, motivational classes are held regularly, giving continued support to members.

The sector has developed expertise in supporting members to meet their health and fitness goals through exercise

GROUP EXERCISE

Asda and the Fitness Industry Association

As a service provider in the UK, the fitness industry is good at responding to its customers and improving the programmes and service offered. The UK fitness sector has over 7million members which is 12% of the population.

Regular users of gyms are recognised as being more likely to renew their gym memberships. Specific research undertaken by Les Mills (group exercise) shows that 72.2% of participants in Les Mills classes renew their membership, and 74.7% are either very likely or extremely likely to recommend group exercise classes to a friend.

The retention figure of those who do group exercise classes is greater than the wider industry attrition figure of 35.5%. Group exercise is a motivational and supported form of activity delivered using the expertise within the fitness industry

February 2011

UK Faculty of Public Health, British Medical Association and Dr Susan Jebb

Written evidence from the British Medical Association (BMA) (BC 53)

Executive Summary

- Behaviour change is a complex area and requires a comprehensive strategy which involves the interaction of a number of policies, from legislation, regulation and taxation to providing information, persuasion, engagement and personal responsibility. Important lessons can be learned from obesity, tobacco and alcohol.
- There has been a significant rise in the levels of obesity among children in the UK and more recent predictions anticipate that this trend will continue.⁴⁵⁷ Given the health consequences of obesity, and the number of factors that have an impact, major changes from the level of policy through to individual behaviour are needed to halt this trend.
- Tobacco control requires a wide range of behaviour change policies. The types of policy which work will depend on the current levels of awareness of harms, social norms and societal willingness to accept more coercive measures.
- There is substantial evidence that targeted and population-wide alcohol control policies can reduce alcohol-related harm. Lessening the burden of alcohol misuse requires strong leadership and the implementation of effective alcohol control policies.
- Addressing these key public health concerns requires a comprehensive strategy that promotes individual behaviour change across society as a whole and seeks to remove or mitigate unhealthy and unhelpful influences on behaviour. The BMA believes that emphasis on partnership with the alcohol, tobacco or food industry and self-regulation has at its heart a fundamental conflict of interest that fails to adequately address public and individual health.

About the BMA

1. The BMA is an independent trade union and voluntary professional association which represents doctors and medical students from all branches of medicine throughout the UK. With a membership of over 143,000 worldwide, we promote the medical and allied sciences, seek to maintain the honour and interests of the medical profession and promote the achievement of high quality healthcare.

Introduction

2. Behaviour change is highly complex requiring a comprehensive strategy involving the interaction of a number of policies, from legislation, through regulation and taxation, to providing information and persuasion, and promoting engagement and personal responsibility.

⁴⁵⁷ National Heart Forum (2009) *Obesity: Recent trends in children aged 2-11y and 12-19y*. London: National Heart Forum.

3. The BMA's response to this inquiry briefly focuses on our observations of behaviour change in relation to obesity, tobacco and alcohol. As the leading professional organisation for doctors in the UK, the BMA has published several reports in relation to these key public health concerns. Our response to this inquiry is informed by these reports which can be accessed on the BMA website at www.bma.org.uk.

Obesity

4. As highlighted in the 2005 BMA Board of Science report *Preventing childhood obesity*⁴⁵⁸ there has been a significant rise in the levels of obesity among children in the UK and recent predictions anticipate that this trend will continue.⁴⁵⁹ Given the health consequences of obesity and the number of factors that have an impact, major changes from the level of policy through to individual behaviour are needed to reverse this epidemic trend.
5. The 2007 Foresight report on obesity, *Tackling Obesities: Future Choices*, called for a system-wide approach to behaviour change interventions to tackle obesity. In 2008, the Government launched *Healthy weight: healthy lives*, a cross-government strategy for England which introduced a number of interventions. While these steps are helpful, the BMA believes that more meaningful policies designed to support behaviour change are needed on such issues as school nutrition, healthier environments, advertising and promotion of food to children, and food labelling. It is essential that children receive consistent messages about healthy eating at home, in school and from food advertisers. Schools and parents should be at the core of health promotion schemes as they are essential for the success of such initiatives.⁴⁶⁰ Environments that encourage healthy eating and active living are also vitally important. The focus of such strategies should be to make it easier for the individual to make healthy choices.
6. The BMA's 2009 report *Early life nutrition and life long health*⁴⁶¹ called for continued and extended efforts to encourage the initiation and prolong the duration of breastfeeding. There is good evidence that interventions which educate women about the benefits and practice of breastfeeding are effective at increasing breastfeeding initiation. Appropriate support for breastfeeding mothers can prolong the duration of breastfeeding. The BMA's 2009 report concluded that human population studies show clear links between early life environment and risks of later ill health and chronic disease. A systematic review of interventions aimed to improve diet in women who are pregnant or of childbearing age suggested that interventions which included elements of education, counselling, support and empowerment can improve nutrition knowledge and behaviour.⁴⁶²

Tobacco

⁴⁵⁸ British Medical Association (2005) *Preventing childhood obesity: a guide for healthcare professionals*. London: British Medical Association.

⁴⁵⁹ National Heart Forum (2009) *Obesity: Recent trends in children aged 2-11y and 12-19y*. London: National Heart Forum.

⁴⁶⁰ Educari (2004) Children, young people and health related decisions: a review of the research literature and discussion of the implications for health education of children and young people. Roehampton: University of Surrey.

⁴⁶¹ British Medical Association (2009) *Early life nutrition and lifelong health*. London: British Medical Association.

⁴⁶² Van Teijlingen ER, Wilson BJ, Barry N et al (1998) *Effectiveness of interventions to promote healthy eating in pregnant women and women of childbearing age: a review*. London: Health Education Authority.

7. Smoking is a major cause of preventable morbidity and mortality in the UK, with approximately 114,000 deaths every year from smoking-related illnesses including cancer, respiratory illness and heart disease.⁴⁶³ Smoking disproportionately affects those already disadvantaged by poverty and is a major contributor to health and premature mortality inequalities.⁴⁶⁴ The BMA has published several reports on tobacco control including *Forever cool: the influence of smoking imagery on young people* (2008), *Breaking the cycle of children's exposure to tobacco smoke* (2007), and *Smoking and reproductive life* (2004).
8. Tobacco control requires a wide range of behaviour change policies. The types of policy which will work depend on current levels of awareness of harms, social norms and willingness to accept more coercive measures. While tobacco control policies in the UK are among the most comprehensive in Europe,^{465, 466} more than one in five adults still smoke,⁴⁶⁷ and people are continuing to take up the habit. The downward trend in smoking prevalence has also slowed in recent years.⁴⁶⁸ Experiences in other countries suggest that if we fail to sustain, refresh and strengthen tobacco control policies, smoking prevalence will not only stop declining but it might start increasing again.
9. In the UK, smokefree legislation and an increase in the minimum age of purchase have now been added to an advertising ban, steady taxation increases, high profile health warnings, and widely available cessation support. The data on smoking prevalence outlined in *Forever cool: the influence of smoking imagery on young people* suggest that these policies are having a positive effect on smoking behaviour. The BMA has called for a range of evidence-based policies including:
 - targeted and adequately funded smoking cessation services
 - increased taxation on tobacco products
 - increased support and advice from healthcare professionals
 - international cooperation on tobacco control
 - improved effectiveness and reach of treatments for nicotine dependence
 - increasing media spend on campaigns directed at triggering cessation attempts
 - concerted community campaigns targeting areas of high prevalence.
10. Young people in the UK continue to be exposed to a wide range of pro-smoking imagery which encourages the initiation and continuance of tobacco use. The BMA believes that action to reduce the influence of pro-smoking imagery must be embedded within a comprehensive and sustained social marketing strategy drawing

⁴⁶³ Peto R, Lopez AD, Boreham J et al (2004) Mortality from smoking in developed countries, 1950-2000. (2nd edition: updated June 2006).

⁴⁶⁴ Jha P, Peto R, Zatonski W et al (2006) Social inequalities in male mortality, and in male mortality from smoking: indirect estimation from national death rates in England and Wales, Poland, and North America. *The Lancet* **368**: 367-70.

⁴⁶⁵ Joossens L & Raw M (2007) Progress in tobacco control in 30 European countries, 2005 to 2007. 4th European Conference on Tobacco or Health, 11-13 October, Basel, Switzerland.

⁴⁶⁶ Joossens L & Raw M (2006) The tobacco control scale: a new scale to measure country activity. *Tobacco Control* **15**: 247-53.

⁴⁶⁷ Office for National Statistics (2008) *General Household Survey, 2006*. London: The Stationery Office.

⁴⁶⁸ British Medical Association (2008) *Forever cool: the influence of smoking imagery on young people*. London: British Medical Association.

together the full range of tobacco control policies and focussing on the explicit intent of making the UK tobacco-free.

Alcohol

- 11.** The cost of alcohol misuse in the UK is substantial, both in direct costs (e.g. costs to hospital services and the criminal justice service) and indirect costs (e.g. loss of productivity and the impact on family and social networks). There is substantial evidence demonstrating that targeted population-wide alcohol control policies can reduce alcohol-related harm. Lessening the burden of alcohol misuse requires strong leadership and the implementation of effective alcohol control policies. The BMA has produced comprehensive policy on alcohol. The 2008 Board of Science report *Alcohol misuse: tackling the UK epidemic*⁴⁶⁹ unifies this work and identifies effective, evidence-based policies for reducing the burden of alcohol misuse in the UK.
- 12.** In the UK, education on the use of alcohol is a statutory requirement through school-based programmes. Reviews of the efficacy of school-based alcohol education programmes have consistently concluded that they can be effective at increasing knowledge and modifying attitudes, but have limited long term effects on drinking behaviours.^{470 471 472} Research has also found that some educational programmes have led to an increase in alcohol consumption among young people.⁴⁷³ It is essential that the disproportionate focus on, and funding of, such measures is redressed. Educational strategies are not effective as a key stand-alone alcohol control policy, but can be useful as a supplement to other policies which are effective at altering drinking behaviour, and can also promote public support for comprehensive alcohol control measures. Only a very small number of credible and well-designed educational programmes have been found to reduce young people's drinking.⁴⁷⁴ There is some evidence that comprehensive school-based programmes in the USA involving individual-level education and family or community-level interventions (e.g. reducing alcohol sales and provision of alcohol to young people) have been effective in reducing drinking among young people, but these reductions have been difficult to sustain.⁴⁷⁵

The role of industry

- 13.** Addressing these key public health concerns requires a comprehensive strategy that promotes individual behaviour change across society as a whole and seeks to remove or mitigate the unhealthy and unhelpful influences on that behaviour. Developing comprehensive policy requires partnership between governmental agencies and organisations throughout the UK. A coordinated approach is required to increase the popularity, understanding and acceptance of such policies among the general public.

⁴⁶⁹ British Medical Association (2008) *Alcohol misuse: tackling the UK epidemic*. London: British Medical Association.

⁴⁷⁰ White D & Pitts M (1998) Educating young people about drugs: a systematic review. *Addiction* **93**: 1475-87.

⁴⁷¹ Tobler N & Stratton H (1997) Effectiveness of school-based drug prevention programs: a meta-analysis of the research. *Journal of Primary Prevention* **18**: 71-128.

⁴⁷² Gorman D (1995) Are school-based resistance skills training programs effective in preventing alcohol misuse? *Journal of Alcohol and Drug Education* **41**: 74-98.

⁴⁷³ Hawthorne G, Garrard J & Dunt D (1995) Does Life Education's drug education programme have a health benefit? *Addiction* **90**: 205-16.

⁴⁷⁴ Foxcroft D, Ireland D, Lister-Sharp DJ et al (2003) Longer-term primary prevention for alcohol misuse in young people: a systematic review. *Addiction* **98**: 397-411.

⁴⁷⁵ Babor T, Caetano R, Casswell et al (2003) *Alcohol: no ordinary commodity*. Oxford: Oxford University Press.

- 14.** The BMA believes that emphasis on partnership with the alcohol, tobacco or food industry and self-regulation has, at its heart, a fundamental conflict of interest that fails to adequately address individual and public health. The alcohol, tobacco and food industry have a clear, vested interest in influencing the development of control policies. It is essential that Government moves away from partnership with industry and looks at effective alternatives to self-regulation to ensure that there is a transparent policy development process.

October 2010

Oral Evidence, 25 January 2011, Q555-574

Evidence Session No. 16. Heard in Public.

Members present:

Lord Crickhowell
Baroness Hilton of Eggardon
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Baroness Perry of Southwark
Earl of Selborne
Lord Warner

Examination of Witnesses

Witnesses: **Professor Lindsey Davies**, [President, UK Faculty for Public Health], **Professor Vivienne Nathanson**, [Head of Science and Ethics, British Medical Association (BMA)], and **Dr Susan Jebb**, [Head of Nutrition and Research, Medical Research Council, and Chair, Cross-Government Expert Advisory Group on Obesity and the Responsibility Deal Food Network].

Q555 The Chairman: Can I welcome the three of you, and thank you very much indeed for coming. I think you were here at the beginning, so you know how it operates. You know that we are being broadcast. What we would like you to do please, individually, is introduce yourselves for the record, and make a short statement if you would like. For timetabling reasons, Lord Krebs is going to begin the questioning and in a slightly different order from what you might have expected, because he has got to leave.

Lord Crickhowell: Can I also add that, if I walk out, it is not because I disapprove of what you are saying? I am keeping a fairly careful eye on the screen, because I wish to intervene on an amendment that is likely to take place at some stage before the House.

Q556 The Chairman: Never take offence if anybody leaves; it is not personal. Would you like to start and just make an initial statement, if you would like to?

Dr Susan Jebb: Dr Susan Jebb; I am a nutrition scientist at the Medical Research Council Human Nutrition Research Unit in Cambridge, where my research group is interested in the role of diet in relation to the prevention and treatment of obesity. I am also Chair of the Government's Expert Advisory Group on Obesity, and I have recently become the co-Chair, with the Secretary of State for Health, of the Food Network, which is one of the five Networks associated with the Responsibility Deal.

Professor Vivienne Nathanson: I am Vivienne Nathanson; I am a physician by training, but I work at the British Medical Association, where I am Director of Professional Activities, which means I am responsible for everything that is not trade union at the BMA. That includes Public Health and Ethics. I am on the Responsibility Deal Alcohol Network, which we may get to deal with at some stage this afternoon.

Professor Lindsey Davies: I am Lindsey Davies. I am the President of the Faculty of Public Health for the UK. The Faculty is the leading professional body for specialists in public health. Our job involves setting and helping specialists attain and maintain high standards of practice, but also we provide advocacy on a range of public health issues. My own background is as a public health doctor. I have worked at district, regional and Department of Health levels over the years. The Faculty itself has a number of concerns at the moment about the current context for public health, which I expect we will come on to during the discussion. We are particularly worried that there may be some loss of understanding about the importance of taking a holistic approach to public health measures. You need to have a range of interventions, basically—some of them around information, some around regulation and at all points in between. We are also very concerned about the potential for disruption and distraction and loss of capacity in the public health workforce generally, arising from the reforms and the cuts that are taking place at the moment. Finally, we are concerned about the general lack of the evidence base around many public health interventions, which we would like to see strengthened.

Q557 The Chairman: Thank you very much indeed. Do either of the other two of you want to make an initial statement or shall we go straight in?

Professor Vivienne Nathanson: I was just going to say that we are involved in really almost all the areas of public health, and concerned about these. It is an area in which doctors see the effect of the choices that people make. The one concern that we have is that there seems to be some concept around, in some elements, that says that we make free choices, almost as if the environment was completely neutral. It does seem to us that one of the key issues here is what can we do about the environment in which we make choices, as well as helping people to understand the implications of the choices they make. As doctors, we would like to see ourselves becoming increasingly unnecessary, because people's health was so good.

Q558 Lord Krebs: I would like to pick up on the Public Health Responsibility Deal, in which at least two of you have said you are involved. I guess that you will have sensed from the first half of this session that there are some elements of scepticism in the Committee about the process of working with industry to achieve public health benefits, particularly where that might cut across the industry's primary responsibility of maximising shareholder value and profit. I just wondered, as people involved in it, perhaps, Susan—you are co-Chair of the steering group, I think you said—what you think will be the factors that the Government should try to take into account when it is trying to work with the food industry to tackle the issue of obesity?

Dr Susan Jebb: The first thing to recognise is that working with industry is not some new idea that has suddenly dawned with the Responsibility Deal. There has been work ongoing for some time, as you are well aware, in relation to salt reduction, for example, which was all done through voluntary agreements with industry. It's an approach that has been advocated by the WHO, and so forth. It's fair to say that individuals' eating is a voluntary

activity, but the decisions that we tend to call “choices” are heavily shaped by the environment in which people live. Business has a huge impact in shaping that environment. There is a very logical theory that it should work better if we work together to encourage healthier choices. What is vital for me is that the goals are set by public health bodies, and that business can be charged with helping to shape the delivery of those goals but not in setting the goals. Secondly, it is also vital that public health bodies and institutions are charged with monitoring and evaluating the success or otherwise of that delivery. I see it as a perfectly reasonable hypothesis—that we ought to be able to make further and faster progress by working together—but I think it is a hypothesis that needs to be tested and it needs to be done within an appropriate framework. What is also really important for me, and I think this is a cautionary note, is that this cannot become the whole of public health. This has to be just one element of a wider public health strategy. There are other aspects of public health, which would be inappropriate for business to be a part of. Smoking is a good example; I don’t see that the tobacco industry should be part of some sort of Responsibility Deal. We actually do not think there should be a tobacco industry. Food is different, because we need a food industry, and therefore I think we need to work with them. Engagement with business should not rule out or reduce the emphasis on those other strategies that are needed to go alongside it, and some of those may be regulatory or some of them may be where Government itself needs to be giving information and advice. There’s a whole spectrum of other activities. This is one strand, and I don’t think it should be allowed to be seen as being “the public health strategy”.

Professor Vivienne Nathanson: I would agree entirely with Dr Jebb. I think alcohol fits very differently to food. Food is an essential; none of us can live without food. We can all live entirely well without alcohol, even though for many of us it may be something we choose not to live without.

Lord Krebs: I beg to differ.

The Chairman: I beg to differ, too.

Professor Vivienne Nathanson: I think there is a problem here, and it is this issue. There is great concern that, by saying that everything is going to be about a Responsibility Deal and about voluntary agreements, there is a feeling among many of the health people involved in the Alcohol Network that there is no possibility of regulation, that the Responsibility Deal is all there is—voluntary codes. The fact is that the industry, which is at least two thirds of the membership of the group, is not motivated so far to really look for things that hurt them. They are looking at completely protecting their bottom line, which I can understand—they are businesses—but from the health side we want to hurt their bottom line. We want to actually see that alcohol harm can be significantly reduced and can be reduced quickly. The good news about alcohol harm is that some of those harms, if we could change people’s drinking patterns, could be reduced almost overnight. There would also be longer-term things that would take years to really emerge. This is a real problem that we have to have Government prepared to say, “If we don’t get a sufficiently challenging-to-the-industry voluntary agreement, then we would be prepared to regulate on the areas that the voluntary agreement should cover, as well as the areas that will only happen through regulation”. That is absolutely essential. We heard today the announcement of some of the figures of liver disease being seen now in 20-year-olds. These are tragedies; they’re individual tragedies, but the scale of increase is very worrying, because it does seem to be almost an exponential rise from a condition we almost never saw in people in their 20s. Yet the industry will still keep saying: “This is a problem of a tiny minority.” It isn’t; it’s a problem of a very large minority, somewhere around 30% of the population. Can we

deliver? The health groups are working together to try to, but we have some very serious concerns about whether it's possible, given the background interests of the industry.

Professor Lindsey Davies: I'm also on the Responsibility Deal steering group and I'm on the Food Network. I had to think very hard about whether I was going to be part of those groups or not, when invited, because as you might imagine there's a breadth of opinion among the members of the Faculty as to whether we should be in or out of the tent. After much thought, we decided it was better to be at the table and part of the discussion, to be trying to influence it. I'm very clear in taking part in those discussions that, although I recognise it as a brave experiment and an experiment worth taking, and I've been part of local discussions with industry in all sorts of ways over the years—which have been quite effective—it is an experiment. We can't just let it drift on and on and on as a substitute for actually taking harder action, because the obesity epidemic can't wait, for example. We can't just wait and hope it'll happen in five years' time and, in the mean time, actually it's not happening. The other thing where there is a real risk is that this will be just a coalition of the initial willing. You've heard some real enthusiasm here today, but there are an awful lot of much smaller operators in the industries, who will find it more difficult to make the change and won't have the same incentives to make the change. The diffusion will take a lot of time, so the evaluation and making sure all that is built in is absolutely crucial.

Q559 Lord Krebs: Thank you. I just wonder whether I could take a more specific example of this approach of working with industry. This is really addressed to Dr Susan Jebb. We were talking earlier about the Great Swapathon with Asda. I've luckily got their booklet now, with a list of products.

Lord May of Oxford: I got the booklet.

Lord Krebs: Thank you. Lord May kindly acquired the booklet. Some of the products look perfectly reasonable as healthy purchases; there are plenty of fruit and vegetable options. There are others that are less clear-cut like cornflakes—I know the Consensus Action on Salt and Health has been critical of the salt content of cornflakes—and various kinds of yoghurts and mayonnaises. I just wondered what your role, Dr Jebb, was in determining this list of products. We heard from the Department of Health that you had signed off the products in the Great Swapathon. I wondered what your perception of that was.

Dr Susan Jebb: That wasn't my perception. I was certainly asked to contribute to the discussions around developing some guidance about what products may or may not be included in the scheme. Firstly I should say this is not part of the Responsibility Deal; this is part of Change4Life and is quite a separate activity. However, I was asked to provide some advice. It was mostly worked on by the nutrition team at the Department of Health, largely by staff who have recently moved from the Food Standards Agency. We discussed a category-by-category approach to be able to identify the healthier end of the market, but in a way that was sufficiently generic that the Change4Life team could then go out and negotiate these agreements. I certainly saw, contributed to and advised on that retail guidance. It was certainly not my responsibility nor was I asked to sign them off in any way. That would be beyond my remit. For cereals I have specifically looked up what the guidance was, and we suggested that reference should be made to the nutrient profiling score that had been developed by the Food Standards Agency for the purposes of restricting advertising to children. The advice and the guidance was that cereals that scored less than four on the nutrient profiling model could be included in the Swapathon. My understanding

is that cornflakes score three. You'll recall that that model integrates their overall nutritional profile, so it looks at fat, sugar, salt and so forth. That's how it comes to fall, I would say, in the middle of the range.

Q560 Lord Crickhowell: From the answers so far, I get the impression that you're feeling your way into pretty unknown territory in some ways. If I go abroad, across the Atlantic, I will see, I know, a very large number of North American citizens who show even more strikingly the effects of obesity than those who we all see here. Are other Governments in other parts of the world feeling their way as well? If so, as we develop these policies, are we trying to find out what they're doing and learning lessons from them?

Dr Susan Jebb: You're absolutely right the US is about 10 years ahead of us in terms of obesity prevalence and that's been tracking fairly consistently for several decades. I think they are, in some aspects, a little behind us in developing these voluntary partnerships with industry. I think again of our salt work, which I think is pretty world-leading. However, there is one area in which they're ahead, which is of particular interest and we're looking at very closely. That is the so-called Healthy Weight Commitment, which is a consortium of large multinational companies, who have come together to agree a calorie-reduction target, effectively taking calories per capita out of supply. That's a very interesting initiative. In the UK, the Food Network has identified three specific topics that we felt were relatively quick wins, which we would work on immediately. But secondly, the next substantive piece of really brand new work we've already identified, should be around calorie reduction. I've been having discussions not only with some of the companies involved in pulling the idea together in the US, but critically also with the people at the University of North Carolina, who have set up the monitoring and evaluation framework for this initiative. As you can imagine, calorie reduction is a pretty bold commitment. If we could realise that, then it would be a huge step forward, but monitoring is an enormous challenge. They've done a lot of good groundwork in the USA, and so we're hoping absolutely to build on that. It's important to me as calorie reduction is close to my own area of research interest and directly relevant to obesity. This is going to be a real test case as to whether we can pull off something in the Responsibility Deal that is substantive enough to make a meaningful impact on public health, and which is broadly shared across the industry. Lindsey's absolutely right; this can't just be a coalition of a few willing companies. It might start there but, if it's going to have real impact, it's got to spread across more companies. The Healthy Weight Committee I think is the best example I know internationally of partnership working. It started about a year ago in the US, so it's too early really to say what's happened, but it hasn't fallen apart yet and that's probably a good start.

Q561 Lord May of Oxford: It's been suggested more than once to us that voluntary agreements, between industry and business, on that which is in the interest of the public health are the way to go, simply because it seems difficult to contemplate other things. I personally think it's interesting to remember that the most effective intervention in public health in Britain in older living memory would be the Second World War, which did wonders for dentistry in this country. That was a rather severe intervention and you can see the difficulty of imitating it, but the general feeling I think we're developing is that voluntary agreements don't work, partly because, as many have said to us, there's an inherent conflict of interest here. One of the people, Professor Nathanson, said we know the tobacco industry was very successful in slowing down legislation on tobacco. We worry

that the food industry may slow down effective policies in the same way. The people before you are two good, well-intentioned people, but they gave us a wonderful display of what I would call sophistry. My question is: given the enormous cost that this is going to put on the NHS as it rolls forward, which is a cost on everybody and so a matter for Government, I take the assumption as given that you agree that these voluntary agreements are not particularly effective. I wonder, is there any thinking being developed as to when something that is more effective might replace them, and what?

Professor Vivienne Nathanson: This is something that the health members of the Alcohol Network have discussed. We believe that, inherently, voluntary agreements won't work and particularly in the alcohol sector. They may have more chance in the food sector—"may" being an important caveat there. The only advantage I see for voluntary agreements is that they could be put in place more quickly, and to me that seems to be about the only advantage, only because we've seen legislation around, for example, tobacco control take a long time to get through. Once it's through, it's then challenged by judicial reviews and so on. If you have voluntary agreements then hopefully you can get them in place more quickly, but those voluntary agreements have got to have teeth, and we have very real doubts that they ever will have, particularly on the alcohol side. We have asked Ministers the questions of, "Will you regulate if we cannot get an agreement that the health people believe will genuinely deal with the growing problem we have from alcohol, and the enormous social and financial cost." The reassurance we've had is that "If it's necessary, we will regulate." The difficulty is how long that will take. How long will we have to wait to see that voluntary agreements don't work? Susan's just said that we're 10 years behind the US in tracking our levels of obesity. We can't afford to wait 10 years, because that's a whole lot of people whose lives are blighted. It's the same with alcohol. The longer we wait before we put in place regulation, if we cannot get real voluntary agreements with teeth, which make the industries hurt, then we are letting lives be blighted, and that to us seems to be tragic. I would go the regulation route. Our work, as I think we've all said, on the voluntary agreements is only in the hope that we can get a quicker deal, but it's going to be very hard work to achieve anything that's really substantial.

Dr Susan Jebb: I would say that, firstly with food, I sometimes wonder what exactly is the regulation that we want to pass. There are some things, as you discussed earlier, that are very logical, such as labelling. I'm not sure how that pans out legally, with UK or EU competences and all that sort of thing, but it ought to be doable. There may also be some things around promotions that ought to be doable. What draws me back from wider regulation is, firstly, how accepting the public would be of some of the things that, as health professionals, we might actually think would be in their interest. I'm not actually sure the public is ready to have their choice restricted in the way that regulation would do. It's all very well for us to go round telling people what would be good for them, but they have a choice in this matter. I was very persuaded by the Nuffield Report on bioethics in public health, and their ladder of intervention, which I think strongly makes the point that you should only go up the ladder when lower tiers haven't worked, and also when you have the evidence that what you're planning to do would be effective. I am a huge supporter of labelling. I think that information is an absolutely necessary prerequisite for behaviour change, but actually labelling alone does not necessarily change behaviour. We have to be a little bit careful that we don't overstate our case. In considering interventions to change food habits regulation should be held as an option, but I'm not sure it should be the first option. We need to work through a ladder that is much more about changing choices and encouraging and incentivising better choices, and that might mean also restricting all the encouragement of the unhealthy choices. But I slightly guard against leaping to regulation.

Q562 The Chairman: Two members of the Committee would like to come in, but can I just pick up with you, because you heard Paul Kelly's response to the Justin King quotation that we gave. Justin King was very clear with this Committee that they would welcome more formal Government intervention as a means to support their own interventions to change consumer behaviour. They actually see formal regulation as having an advantage, as being subject to proper legislative scrutiny and, once agreed, not subject to short-term political whim. Now that came from the industry or at least from a supermarket. It's really important to hear that, and I'd really like to hear Susan particularly, but then, all of you, your response.

Lord May of Oxford: Can I just come in on that, because that was going to, in a sense, be my follow-up? We just heard a moment ago from the two people who, in different ways, were representative of the industry. When unusually forced by Lord Krebs to give an answer, yes or no, they said yes, they would be in favour of enforcing traffic lights. My own worry about all this is that you say you've got to wait until people are ready. I have an analogous thing: one of the quarrels I've lost on the Committee on Climate Change was a discussion on whether to reduce the speed limit. I said that would be a waste of time, because no one takes any notice of it anyway. We could do a hell of a lot of good and improve road safety by enforcing the speed limit though. The answer to that was that nobody would like it, so that was the end of that discussion. I think there comes a time, and having spent five years—I felt rather like a cultural explorer—embedded in the Civil Service, there is a tendency of very well intentioned people to recognise what they want to do but substitute a process that seems to be beginning to think about voluntary agreements, and then say people aren't ready and we have to wait and get the evidence. You have the evidence that the voluntary agreements don't work. You have the evidence that the voluntary agreements about tobacco didn't work. My question is: don't you think, even if you're not yet ready to take on a fight, you ought to at least be thinking of what's the battleground you're going to pick and starting to think about it, instead of waiting until your career is comfortably retired and leaving it to somebody else? There ought to be a bit more courage and emphasis on product, not comfortable process.

Dr Susan Jebb: I'm a scientist. I think about a whole range of options, and I think there is a place for regulation in some instances. I'm just not convinced it's all of them. I think it's horses for courses. The Justin King point; I think there are some specific things where I can absolutely see they would welcome regulation. But I think you would get much less agreement across the supermarkets on which aspects of food policy one wanted regulation on, and even less agreement if you then looked at the manufacturers too. Justin King's other comment that you quoted earlier was a concern about the burden of reporting and monitoring the voluntary agreements, and that's certainly an issue we're absolutely battling with, because actually it can be much more onerous to monitor voluntary agreements. There is not one solution. Obesity in particular, which is my own area of interest, is less easy to regulate than labelling. Tackling obesity is about changing food choices in a subtler way. I'm not yet convinced what the regulation is that would actually reduce obesity.

Q563 Lord May of Oxford: You have a tidal wave approaching the NHS. Are you going to wait until it breaks?

Dr Susan Jebb: Lots of other interventions are needed, but not necessarily regulatory.

Professor Vivienne Nathanson: I believe that regulation may be necessary and it may be necessary straight away to try to change the environment in which we make choices. The education, the pricing, the availability, all of those arguments are often about the way we make choices and how we balance that information, but the environment has an impact and that's where I think we need to look at that regulation, which can include things like advertising bans, it can include many different things. I can reassure you that there is nobody in the Alcohol Network on the health side who isn't looking at this. We are having meetings to say, "What is it that we are pressing for?" We will push for regulation if we can't get a voluntary agreement. None of us is looking at our careers; we're looking at actually reducing the impact of that other tidal wave.

Professor Lindsey Davies: I definitely think there's a role for regulation, as I think would be obvious. What we've got at the moment in terms of movement to voluntary agreements is a good start in the short term. If it works, fine. But, as I've said, I'm worried about diffusion of that and the timeliness of it. I can see a strong argument for the banning of trans-fats. I don't think anybody in the public would stand up and say, "I want a right to eat trans-fats." They don't do them any good, and do do them harm. We put a lot of effort into regulating food, for example on the micro-biological front, and it seems to me extraordinary that we step back from regulating something that clearly is not a good thing to have in food. I think on the trans-fats, on the labelling and on salt, if it really doesn't get embedded very quickly, I would certainly want to see legislation on at least those areas.

Q564 Baroness O'Neill of Bengarve: I appreciate that each of you has taken a rather differentiated view on where voluntary agreements might be useful and where regulation might be useful. I think this is going to seem to you a rather crude question, but I too am capable of asking crude questions, so let me try to formulate it. If you're looking at the reasons that people advance for trying to go round the back door and manipulate choice rather than prohibit choice, that does not seem to me very convincing, but if we're going to try choice-based interventions first, how long do you think we should find it acceptable to continue the strategy, if it is not bearing fruit? Two years? Five years? 10 years? A lifetime?

Dr Susan Jebb: I would go in with a well planned experimental setup, where you look at the results and make a decision.

Q565 Baroness O'Neill of Bengarve: So simply as long as the experiment took? If after two years, five years—

Dr Susan Jebb: You have to think carefully about what the outcomes are. Are you trying to change the fairly proximal behaviours, which might be what people put into their shopping trolley, changing the way people choose in a supermarket. If that is your outcome you can actually measure that extremely quickly. You can do it over a matter of weeks or months. You can look at whether changing the choice architecture in the supermarket changes what people put in their basket. What you cannot do is to say: does that make people less likely to be obese? One has to be very focused about what the evaluation's looking at but, if it's not working, you have to move on to something else. I don't think these ideas that are being talked about, about shifting choice, are the sorts of things where you are going to be evaluating that alone, over a lifetime, because these interventions are not being run alone; they're being run as part of an overarching strategy.

Professor Lindsey Davies: I'd agree absolutely that we need to have a very clear evaluative framework. That needs to have some proxy measures as well as the longer-term outcomes. The idea of saying, "We'll wait to see if it reduces obesity and then we'll decide whether it's working or not," is just bonkers really. What I would like to do is have an evaluative framework that says, first, we're going to look at how much the industry is changing and in what way. We're also going to look at consumer choices and we're going to look at outcomes in health. They will be over different timescales and, frankly, if industry isn't changing pretty quickly, then I would want to move to something stronger.

Q566 Earl of Selborne: I want to be quite clear in my own mind about what you're advocating in the place for regulation. In alcohol, I can quite see that there is a place for regulation. When it comes to calorie reduction, when it comes to obesity, I'm not at all clear what is being propounded. Regulation, we've agreed, restricts choice. We've agreed also that what you're trying to regulate is the environment in which we make this choice. Are you going to regulate just the advertising industry? Are you going to somehow regulate my choice of calorie intake?

Professor Vivienne Nathanson: We can't regulate your choice of calorie intake and nor should we. What we should try to do is regulate the environment within which you choose what calories you're going to take in and the nature of those calories. That's where I would come from. I would say that might mean looking at advertising. It might look at certain contents, for example around salt. There may be other things, trans-fats being another good example. It might be about labelling; it might be about advertising, particularly advertising that's accessed by children, because we know that pester power is an enormous problem for young mums in the supermarkets. Those kinds of areas can change the environment within which they make choices. There will still be people who make bad choices and that is something we have to live with, not to say that we give up on them but to say that we try to help them make better choices by other means. Probably those means will not be regulatory. To me, the regulatory framework is about trying to change the environment so that your education, support, pricing policies, position amid supermarket shelving, all those things help people to make choices that are better, and accepting that we all have the right to make bad choices. We have the right to drive our cars badly. We have the right to speed. It may be wrong, but that's something that we all have the right to do.

Q567 Earl of Selborne: Don't we have to be a bit careful on this? For some, a high-protein diet for example might be highly appropriate? Are we not in danger of determining the common mean, what the average would want? We're going to make it quite difficult to advertise products that for some would be highly desirable.

Professor Vivienne Nathanson: Not necessarily, because you're not necessarily banning advertising. You're looking in a much more complex way at saying what the impact of advertising on particular groups is. The fact is that, if you are somebody who, for a particular reason, needs a diet that is high in whatever it is, any issue, there is usually huge amounts of information available from disease support groups, your own doctor, the health service and all sorts of other people that tell you how to find that particular thing. There's a good example of things that we're all short of: calcium and vitamin D at the moment. It's all over the newspaper. There's plenty of information about that and there should be. Nor should we make it impossible for people to access that information, but we should help them to be able to look online and say, "That information is balanced information. That is

from an organisation that is likely to have information that's more or less right. That is information that is poor information." Particularly, we should take away the opportunity for people to market foods that nobody would argue are good for anyone. They should be at the red end of the spectrum—things you think of as the occasional treat. We should be stopping those from being advertised, particularly to the people who are vulnerable and not as able to make logical choices, based upon education and good information.

Q568 Earl of Selborne: There would be some products that you would, by regulation, forbid people to sell.

Professor Vivienne Nathanson: No, you would limit their ability to advertise them and particularly to certain vulnerable groups, which largely means children.

Q569 Baroness Hilton of Eggardon: We heard from a number of civil servants that Government policy is now evidence-based, rather to our astonishment. Just for one moment, if I may go back to traffic lights, there does seem to be evidence that that does change behaviour and yet the Government is not willing: they may have difficulty in regulating that. We certainly heard from Sainsbury's that people's behaviour has changed as a result of traffic lights. I want to make a more general point about obesity, which is that it's a multi-factorial problem. It's all sorts of things like social class, which we claim not to want to talk about in this country. It's to do with watching too much television, not enough exercise, family habits, what people mainly buy and so on. I wonder what other factors apart from nutrition, which most of us seem to have been talking about, you think the Government should be tackling in the way of changing people's behaviour?

Dr Susan Jebb: That's a big question, but a really important one because, when we get into discussions about obesity, probably rightly we talk a lot about diet and physical activity, which are the very immediate proximal behaviours.

The Chairman: You're almost inaudible again. I'm awfully sorry. It's one of these boring things about the sound system in here. Can you speak up? Sorry.

Dr Susan Jebb: We do tend to focus on diet and physical activity, but it's incredibly important that we also spend some time thinking about what it is that leads people to that particular diet or to that particular level of physical activity. Those of you who have seen the Foresight map, looking at the complex determinants of obesity, will see that the causes of obesity go well beyond just diet and physical activity. Michael Marmot expressed lots of this in thinking about the social determinants of ill health, and obesity's very much a part of that. One area where I feel that Government is beginning to think but hasn't yet really fully formed its ideas is around parenting in the broader context, because very often the food that children end up consuming is very caught up in much broader issues about family interactions and family dynamics—whether food is used as a reward, whether food is used as a convenient pit-stop or whether it's actually integrated into the social life of the family. That's an area where we're beginning to look a lot harder, but it's very difficult to gather the evidence around these things and about the impact on children's weight. The further you get away from the very immediate determinants of food intake, the harder it becomes to study and certainly the harder it is to relate it to obesity. This Government—I suspect every Government these days, certainly the previous Government—talks very much about evidence-based strategies. In reality it's much more about being informed about the evidence, but there's a very big question about what we consider to be evidence. It clearly

cannot be just randomised control trials, but how far down the road do you go towards case studies, best practice and so forth in really trying to develop and draw on what works, particularly when one's thinking not at a national strategy level, but at the level of local communities or indeed families? The evidence families need about how to change their children's behaviour is probably based on reports from their peers as much as it is on anything else. It's certainly not coming from NICE guidance. But NICE does offer important evidence for national policy making.

Professor Vivienne Nathanson: We know the fact is as well that if you want to change the likelihood of a child becoming obese, you need to deal with the mother before she becomes pregnant and certainly during pregnancy, and with her nutrition at that stage-over-nutrition and under-nutrition in pregnancy both being equally harmful to the child and, therefore, their lifetime expectancy. There are many things that we need to do and we need to recognise they're inter-generational. In a practical sense, one of the things that we're doing at the BMA is hosting a conference a week on Thursday. We still have some seats available. Because Michael Marmot is our President at the moment, we're looking at the social determinants and the practical things that people are doing that are working, which are reducing these inequalities. Most of these are not medical. The consequences may be medical but the effects are not medical, and they're not open to doctor intervention in a classic manner. We want to see what as doctors we can do, how we can work with society and so on. It's a mixture of people from all sorts of different backgrounds. I think that's incredibly important, because we've got to look at all the life expectancy, wellness expectancy, health expectancy of people in different groups of society and say, "What can we do to change that?" I find it very depressing that, in so many of our sink estates, young people who you're trying to talk to about their diet, their alcohol intake, their drug use, their smoking and so on are not interested because they expect that they will be dead at 60, because that is what has happened to everyone throughout the generations, in their family and in their neighbours. It's very difficult to say you could extend your life by making these changes, and we just need to deal with that, as well as everything else. The good news is that some of these joined-up approaches may actually make a significant difference to many things, including people's motivation to look at diet in a long-term way, exercise in a long-term way and other things that are harming their health in the same way.

Professor Lindsey Davies: I'd add to that a couple of things. One is around wellbeing, self-esteem and the importance of that. The work around mental health generally is also very important. Also, coming back to the environment point, we should consider the importance of local councils, particularly thinking about planning and how they use their ability to perhaps restrict the availability of some products in some places, but also green space, access to green space, transport policies that allow people who do not have a lot of money for getting around to be able to get to places where they can buy fresh fruit and vegetables. Very simple practical things like that are terribly important.

Q570 Baroness Hilton of Eggardon: Last year we heard a lot about nudging. Is nudging still in vogue or has that been dropped off the Government policies?

Professor Vivienne Nathanson: I think "nudge" is absolutely the word that everybody is using on the agenda, slightly missing the fact sometimes that when you actually read the books about nudging, they talk about the environment within which you nudge someone. That's exactly what I think all three of us are saying: you have to change the environment.

You've got to have an environment that allows your nudge to have a chance of having an effect.

Q571 Baroness Perry of Southwark: Just a quick thought really, and I have been puzzling about it more and more as I listen to you. 30 years ago it was very unusual to see people jog in our parks and our public places. Then, not only in this country but in the United States, there was a huge campaign, from health education councils to government and so on, to explain to people about the benefit of exercise. Certainly in America they used very much the fear thing—heart attacks are now the commonest cause of death—and so on. But you can get rid of them by jogging. We've had an absolute outbreak of jogging since then. Now both in the States and here, it's regular in early mornings to have our parks and public places full of people jogging away and yet, over that period, that 20-30 years, we've had the epidemic of obesity. Something has been happening at the same time. I'd be amazed that they're not cause and effect, but somehow there needs to be some real digging at the evidence. That campaign for physical activity certainly has been effective in the sense that people do now jog, but in fact the opposite has happened: obesity has increased rather than decreased.

Professor Vivienne Nathanson: Some of the evidence also shows that the exercise epidemic, the positive side of it, has particularly affected people in higher socioeconomic groups. That's almost certainly why we're seeing this stretching of the differences between different ends of the spectrum, in terms of health, life expectancy and so on. If you go into most gyms, particularly the commercial ones but also, to a certain extent, local authority owned, it's predominantly the people from the higher socioeconomic groups. Their health has improved significantly more, although the health of everyone has improved. That's one major factor. If you actually are very poor, you cannot afford to pay for your children to go to the public swimming baths and so on. It's been very welcome when local authorities have made sports facilities free, during school holidays in particular. Also if you're wealthier, you tend to have a garden. You're more likely to have a garden or your own private safe green space, so your kids can run around, play football or whatever it is they want to do. If you're at the top of a high rise, you don't, and it's very likely that the shared space is not safe for your children to run around. There's also, at the same time as the issue of people taking exercise, a real epidemic of stranger-danger stories, despite the fact that we know that most people who are harmed, other than by road traffic accidents, which is a major issue, are harmed by people in their family or people their family know. There are so many different factors confounding the opportunities for people to take exercise. The other side of it is there is an element that exercise is great but you need to be fit to go jogging. We have to find a way to get people who are deeply unfit to get a little bit fitter, so that they can do something. That's one of the reasons the BMA has loved Change4Life, particularly the advert addressed to the middle-aged man who finds a spare tyre around his middle. It's very nice, very elegant, quite witty and very gentle, making the point that just a little bit of exercise—it doesn't have to be really difficult—will make you feel fitter and better. That's a really positive life-affirming message for individuals.

Q572 Baroness Perry of Southwark: Isn't there a real lesson in this, if I may? If the campaign to get out and jog, when after all you don't need specialised facilities or money to just jog across your local streets, doesn't reach the poorer classes, what kind of messages

do? Otherwise we're just going to go on making one class of people fitter and fitter, and the others getting less and less so.

Professor Lindsey Davies: We have seen quite a lot of success, or we were seeing quite a few years ago quite a lot of success, in really poor housing estates, with the Healthy Living Centres. Many of them were encouraging, for example, walking clubs, walking groups, getting mums out together and giving them the confidence of just walking the streets in groups, getting out and getting in the habit of it. Then that became more embedded. It does need support and help. People don't naturally do it all on their own. It was working. The problem is that short-term funding for those activities disappears, things are not quite as embedded as they should be and people sit back on the sofa. That is the real worry, I think.

Q573 Baroness O'Neill of Bengarve: We have one more question, which is really about the reorganisation of public health and the reorganisations in the NHS. Do you have any estimate on the impact they're likely to have on efforts to tackle obesity? It's a huge question, but you might be better placed to tell us something than almost anyone else.

Professor Lindsey Davies: It is an enormous question. I think being specific about the impacts is difficult at this stage, because quite honestly we don't really know what the reforms are yet, and there's such a lot of detail still to happen. We are already seeing, just taking a fairly parochial look at public health as a speciality, for example, and given that they are the people who go out and do a lot of the encouraging and the enthusing, that there are reductions being proposed in capacity of a very significant order. I heard one area recently, which had given redundancy notices—and the consultation period is still going on—to two thirds of its public health staff. That is an awful lot of capacity and expertise that we risk losing. That sort of thing, if replicated around the country, could give real lasting damage. I think there are other worries. Just distracting, taking people's mind off the war at the moment, I was talking to a Director of Public Health yesterday, who said that she's really not able to spend more than about one session of her time, out of 10 sessions a week, on public health. She's doing HR for the rest of it, at the moment, planning structures and reorganising. There's the capacity, which is a problem. The Faculty did a survey of its members and we found that a significant proportion of them, about 17%, were thinking seriously of just leaving, retiring early, just stopping. This again takes out the very experienced people, so we're concerned about that. Fundamentally good public health activity depends on relationships, which are built over time and grounded over time, whether it's with local industry or whether it's with other public sector people or whoever. There are real concerns that they'll be fractured as a result of some of this. Finally, we do not yet know how GP commissioning is going to work or what kind of advice and support they are going to get to enable them to commission effectively on behalf of their whole population. Obviously we very much hope that they get the right sort of expertise in there. So there are a number of concerns. That said, we have a Government that says it is interested in public health, and these reforms are designed to improve and strengthen public health. We have to take comfort from that, and a lot of our members are very enthusiastic about the move to local authorities, because they can see, provided they still have access to influencing the NHS, that they'll be able to have a huge, huge impact there, across a lot of different agendas.

Dr Susan Jebb: Lindsey's voiced a number of the concerns, and I think that's true if you're going to have any kind of restructuring, and certainly if you're going to have resources

squeezed. Valid as those issues are, we have to separate them from the consideration about whether public health will be better with closer links into the local authorities than when you have PCTs separated from local authorities. There are some real opportunities here, when one's talking about the prevention of obesity. We've talked about all the much wider determinants of obesity. We've touched earlier today on the importance of getting the planners involved, of getting the local transport system involved and all of these other issues. It ought to be possible to actually make that happen more effectively if you've got a much, much closer integration of local authorities, and if local authorities do reach the point of recognising that they have a real role in preventing obesity. How one makes that happen of course is trickier. The secret is perhaps going to be in not trying to sell obesity as an end in itself, but as part of a much more holistic package of interventions, which are about developing healthy places, healthier communities, where health is something that is about physical wellbeing, ticking off obesity and related non-communicable diseases, but also about mental health as well. We've got to seize that opportunity, but it is going to be incredibly challenging in the face of structural change and very, very tight resources. I don't think anybody underestimates the challenge.

Professor Lindsey Davies: Acknowledging the new role for local authorities, that they really do have new responsibilities for health, and helping them to understand that and be confident in taking that forward is a huge opportunity, as you say. Whether they have the resources and capacity to do it is big question mark, but it would be great if it really does start to get some traction.

Professor Vivienne Nathanson: To tie together education, housing, transport and all of those things that they can actually have an impact in could be extremely exciting, but the risk in the short term is of fragmentation and of actually just the loss of a really expert resource. That's just one of those things that we have to all work together to try to avoid.

Professor Lindsey Davies: Another very brief practical example, if I may, is around Change4Life, which we've mentioned already today. The people on the ground, Directors of Public Health and their teams, were really active in Change4Life, liked it, were really getting on with it. As far as they're concerned, they've heard nothing about it lately. The regional coordinators, whom they relied on to encourage, exhort and transmit messages, have all gone. They now are not getting any messages down from the Department of Health. They've had to go on the web themselves and try to find out what the Swapathon is, and have struggled, as many of us have, to actually get the detail. Once it's there, they're happy to get behind it and have a go, but it's not the same anymore.

Q574 The Chairman: Can I just add to that? One of the issues that has been raised elsewhere about reorganisation in the health service more generally is that you then have a period where there's chaos, so not a lot happens. Is that a fear that you have with public health? Or is the fact that it will move in with local authorities and will then be able to influence transport, housing, etc, as you, Vivienne, have said—is that, if you like, such a great benefit that the reorganisation costs are worth bearing?

Professor Lindsey Davies: It's a real risk. The impact of that will vary hugely around the country, because a lot of local authorities are already working very closely with PCTs and they have jointly appointed Directors of Public Health. Some of them, I know, have already made arrangements for their DPH to become a more official senior officer to pick up some local authority responsibilities, and really to get motoring very quickly. In those areas, I think it will move on. The cuts are still going to have an impact, but the potential will be

The Chairman: Thank you very much indeed. I think we need to stop. Can I thank you very much indeed for coming to give evidence to us? It has been very helpful. You will get a transcript in about 10 days' time. Please do look at that. If you want to add anything that you don't think you've said, please do so at the time. We are very grateful to you. I can't remember whether you said you were going to send us something but, if anybody said they were going to send us anything, please do. I'm not sure that you did but, if there's anything you would like to send us additionally, please do. Thank you very much indeed.

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Written evidence from Professor Phil Goodwin, University of the West of England (BC 133)

The evidence here is solely my personal statement.

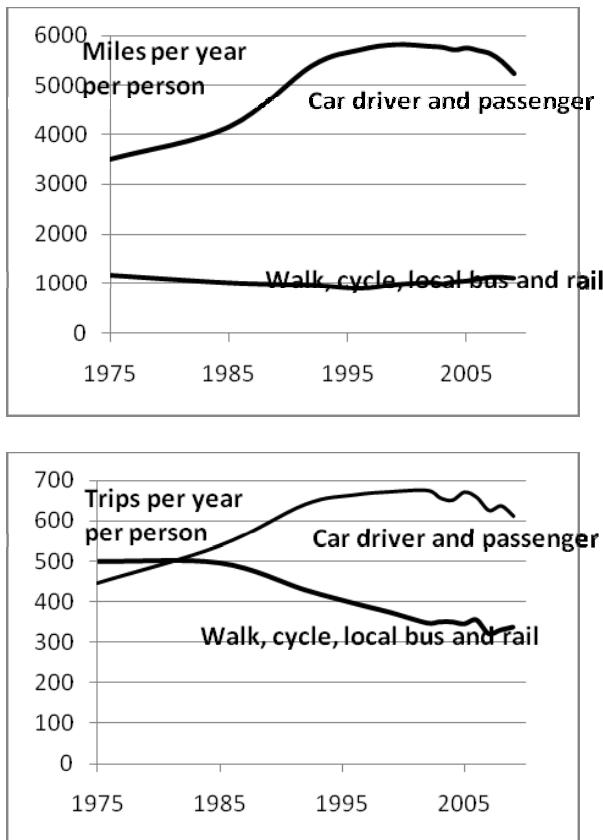
Summary

1. My evidence focuses on four propositions
 - (a) Travel behaviour choices are very much more flexible and volatile than is acknowledged in the received wisdom that they are stable and difficult to change. An excessively pessimistic interpretation has arisen from reliance on cross-section and repeated cross-section data, and equilibrium forecasting models, instead of the longitudinal data and dynamic models which alone enable behaviour change to be understood.
 - (b) The empirical evidence from case studies, and UK and overseas experience, provide a much richer data base than is usually used – some thousands of practical initiatives whose results are crucial.
 - (c) ‘Mode choice’ can itself be a misleading indicator. This is because choice of mode takes place within a context of many other related decisions – some 20 or more closely related dimensions of travel choice, as well as wider choices about social and economic activities and life-style. Ignoring these leads to mistaken policy interpretations, of which a characteristic example is the idea that only very short distance car trips are in scope for transfer to walk. But mode choice is associated with destination choice – take the choice to travel by car to an out of town shopping centre: the alternatives are not to go by bus to the same centre, but to do some shopping on-line and get it delivered, and other shopping by walking to the local shops.
 - (d) Although there are still serious research questions to be answered, lack of knowledge and experience is not now the main barrier for an expansion of highly successful initiatives: very much is known about what works. The problem is political will, consistency of purpose, and priority in the allocation of constrained budgets.
2. Taken together, these three propositions suggest that there is scope for greater and swifter change than is usually assumed, though unintended and unexpected effects are common, effects take time to build up, and there is an ever-present danger that perfectly effective policies can be undermined by other policies with inconsistent pressures.

The Policy and National Context

3. Policies to reduce the use of cars in towns did not start in the *Low Carbon Transport Strategy* of 2009, or even in *A New Deal for Transport*, the White Paper of 1998. The decisive turning point putting them at the heart of urban transport policy was probably in the period 1992-1994, as part of the re-appraisal of strategy after *Roads for Prosperity* in 1989, *This Common Inheritance*, and the UK’s support for what had previously been seen as mainly European policies of town centre pedestrianisation

and traffic calming. The dates are important when looking at the overall trends in the balance between modes over the whole period. Figures 1 and 2 show car use and (for simplicity) the total of what are often thought of as the 'sustainable modes' walk, cycle, local bus and rail, in series constructed by chaining together the National Travel Survey results from 1999, 2004 and 2010. The first shows miles per person per year, and the second shows trips made.



4. The turning point in the growth curve seems to date from about 1992 – ie during the previous Conservative administration, at about the time that it was abandoning 'predict and provide' as its policy intention - and was reinforced during the Labour administration in spite of the fact that most people (including me) did not really consider that the policy measures to reduce car use were substantial enough to have an effect.
5. By now there is some sign that the very long downward trend in walk, cycle and public transport use has bottomed out, and just started to increase, though the turn was later, and smaller, than the reversal in the car trend. From 1999 to 2009 the miles travelled by car per person reduced by 500 miles a year, while the miles travelled by walk, cycle, local bus and rail only increased by 133 miles a year, suggesting that a little over a quarter of the decline in car use could have been accounted for by a like-for-like mode transfer of journeys, the rest being accounted by a shortening of journey distance and the abandonment of some car trips altogether. So people were changing their destination choice and propensity to make car trips, not only their modes of travel.

6. It should be said that there is not yet consensus on the reasons for these important changes in trend, or, therefore, on the future prospects. One theory (usually associated with the DfT's former chief scientist, Professor David Metz) is that car use is now saturating and will show little further growth whatever the policies. Another, which I have tentatively suggested under the label 'peak car', is that for wider social reasons car use is now on a declining trend, as a historic shift in patterns of mobility. A third, which I think is the current official DfT view, is that the shifts are a temporary blip for economic reasons with an expected resumption of long term growth.
7. A recent short review of the evidence on this by the author (Goodwin 2010) particularly cited the following examples:
"Kiron Chatterjee and Geoff Dudley a year ago gave a seminar at the University of Manchester where they reported that from 1992 to 2007 driving license holding had decreased from 48% to 38% for 17-20 year olds, and from 75% to 66% for 21-29 year olds. Their proportion of trips as car driver had correspondingly reduced. David Metz, in his letter to LTT of 9th July, wrote that in London "peak car use came and went at least 15 years ago, when none of us noticed". There was a decline in private transport's share of trips since at least 1993, 50%, to 41% in 2008. He pointed out that "Historically, car use has invariably increased as incomes have risen. So it is remarkable that this trend has gone into reverse in London, a prosperous world city with a growing population." In the Sustainable Travel Towns report by Lynn Sloman and colleagues, car driver trips per person went down by 9%, and car driver distance per person by 5% to 7%, from 2004 to 2008. But interestingly, when Sally Cairns compared these results with the National Travel Survey results for other towns of similar size, she found that the car use had gone down there as well, though not as much: car driver trips per person by 1.2% and car driver distance per person by 0.9%. Studies by Carmen Hass-Klau of the impact of building new urban tram systems in European cities found that car ownership was reduced in the neighbourhood of the trams, by an average of 13%, even though these areas were also affected by gentrification and increased property values as a result of the same improvements: they became richer".
8. A broader view of the available evidence base is summarised in the table below.

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Selected Key References with Overviews and Synthesis of Empirical Evidence on implemented Transport Initiatives and their Effects

Citation and date	Sources used	Coverage	Comments
European Conference of Ministers of Transport (2007) Cutting Transport CO2 Emissions: What Progress, OECD Publishing, Paris (Book, 263 pp)	63 references and a review of progress in 51 OECD and ECMT member countries	All modes, including freight, shipping and aviation	Identifies 400 measures, with orientation to efficiency and supply-side measures.
Balcombe R (editor) et al (2004) The demand for public transport: a practical guide, TRL593, Transport Research Laboratory, Crowthorne. (Book, 237 pp) www.demandforpublictransport.co.uk/TRL593.pdf	About 600 references, including good coverage of grey literature.	Public transport fares elasticities by area, purpose, time of day and other dimensions; quality of service, income, car ownership, and various policy impacts.	Replaces an influential earlier work (Webster & Bly, editors, 1980). Good on short term/long term distinctions.
Cairns S, Hass-Klau C, Goodwin PI (1998) Traffic impact of Highway Capacity Reductions: Assessment of the Evidence, Landor Publications, London (Book, 259 pp)	About 150 references, inc. many semi-published, some non-English (notably German), and original material from interviews with local authorities.	Effects of reducing road capacity by pedestrianisation, bus lanes, and also evidence from accidents, disasters, maintenance etc.(nb designed as the complement of SACTRA report on induced traffic, ie about 'disappearing' traffic	Updated in a short paper Cairns et al (2002) Also contains useful summary of literature on dimensions and dynamics of changing behaviour. Demonstrated that volume of traffic often reduces by 25% or more following pedestrianisation and similar policies, though this can be reversed by inconsistent policies elsewhere.
Cairns et al (2004) Smarter Choices: Changing the Way We Travel, DfT, (Book, 676 pp) www.dft.gov.uk/	About 300 references plus citations from sets of interviews in 24	Workplace and school travel plans, personalised travel planning, public	(Sometimes called the 'soft factors' report) Concluded that there is potential for Smarter Choices to reduce traffic volumes by 11% nationally, maybe 20% in peak period urban

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pgr/sustainable/smarterchoices/ctwwr	case study locations. Includes many sources in public domain, but not easily accessible.	transport information & marketing, travel awareness campaigns, car clubs, car sharing, teleworking, teleconferencing, home shopping	conditions, with a ten year build up and serious commitment.
Commission for Integrated Transport (CfIT) (2007) Transport and Climate Change, HMSO (Booklet, 105pp)	About 120 references	Contribution of transport to carbon reduction	UK statutory advisory body.
Goodwin (2007) Practical evidence on the effectiveness of transport policies in reducing car travel, in Threats to the Quality of Urban Life from Car Traffic Problems, Causes, and Solutions, edited by T Gärling & L Steg, Elsevier, 2007	Shorter version of 'Changing Travel Behaviour', produced by the ESRC Transport Studies Unit 2004	Overview of potential for reducing car use	This was a major research programme undertaken as the core theme of an ESRC 'designated research centre' 1994-2004. Included analysis of the natural 'churn' in choices such that over a five to ten year period such a high proportion of the population had experienced 'life-events' that their travel behaviour was easier to change than in the short run.
Goodwin, Dargay & Hanly (2004) Elasticities of Road Traffic and Fuel Consumption with respect to price and income: a review, <i>Transport Reviews</i> , 24 (3). Detailed results in www.cts.ucl.ac.uk/tsu/elastfinweb.pdf	About 85 references in last ten years. Source literature about 500 references).	Road traffic and fuel consumption (includes some freight indirectly, but mostly personal)	Companion paper to Graham and Glaister in same journal, updating earlier literature reviews by Goodwin (1992) and Oum et al (1992). Other reviews by Espey, and Sterner & Dahl. Reinforced earlier conclusion that long term effects about twice as great as short term (one year) effects from econometric evidence.
RAC (1995) Car Dependence, RAC Foundation for Motoring and the Environment, London (Book 153 pp)	About 85 references	Overview of factors causing car dependence, and possibilities of reducing it.	Suggested that the proportion of truly car-dependent trips was significant, and growing, but 20% or more of car trips were relatively easily diverted.
Cairns S, Atkins S, Goodwin P	18 references,	Updating extra	Broadly consistent with earlier report above.

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Disappearing Traffic: the story so far. Municipal Engineer 151 (1), March 2002, pp13-22.	mostly UK	information related to Cairns, Hass-Klau & Goodwin (1998) see above	
Avineri E & Goodwin P (editors) Individual Behaviour Change: evidence in transport and public health Department for Transport, January 2010 www.dft.gov.uk/pgr/science/research/social/behaviour-changes/pdf/transport-and-health.pdf	122 references	Comparison of experience, theory and evidence on behaviour change in two different sectors, health and transport. Includes discussion of 'nudge' methods	<i>"an approach which recognises non-economic as well as economic motivations for behaviour must be able to give better insights into how change works; policy interventions can therefore be more successful as well as less intrusive. Nudge approaches are advocated as a cheap and uncontroversial alternative to more challenging public initiatives, however, advantages sometimes claimed are almost certainly overstated; we judge it unlikely that there is a large latent body of easy, cheap, hardly noticed initiatives that will have big effects without the need to consider more substantial intervention. The real promise seems rather to help to design the bigger initiatives better, that is to add 'nudges' to improve or speed up the effects rather than as a replacement for other interventions"</i>
Sloman L, Cairns S, Newson C, Anable J, Pridmore A, Goodwin P, (2010) Effects of Smarter Choices Programmes in the Sustainable Travel Towns, Department for Transport, http://www.dft.gov.uk/pgr/sustainable/smarterchoices/smarterchoiceprogrammes/pdf/effects.pdf	Empirical analysis of data, not literature review, so references only as sources for analysis	Impacts of initiatives in Darlington, Peterborough and Worcester	Found car trip reductions of 9% and increases in walk, bus and cycle trips of up to 30% (different balance in each town), less than 'Smarter Choices' report but for less expenditure over a shorter period, so broadly consistent.

9. It is worth mentioning also another type of greatly underused evidence, namely the international pooling of data from local initiatives and schemes. Two sources stand out (though there are many more). These are (a) the ongoing Victoria Transport Policy Institute On-line TDM Encyclopedia, at www.vtpi.org/tdm/index.php, essentially the work of one very well-read individual, Todd Littman, which is a portal to much of the world's literature on the subject (albeit rather north American in its practical orientation), and (b) ELTIS (European Local Transport Network Information Service) at www.eltis.org which as at January 2011, contains summary descriptions of 1275 transport initiatives in European cities. Updated frequently, though detailed information then needs to be gained from the contacts given there. Note that much of the German, French and Spanish experience is not reported in English and is therefore inaccessible to many British researchers though can be gained with a little effort. After a period in which Germany was widely recognised as the leading country for sustainable urban practice, that lead has probably now passed to France, whose policies are radical and effective especially in the reallocation of road capacity from cars to sustainable modes and walking space, though little known in the UK apart from the Paris Velib' scheme which was the model (though considerably bigger) for London's 'Boris Bikes'.

Observations on the Robustness of the Evidence Base

10. The empirical evidence available is of three types:

Case Studies

11. There is now a huge body of ex post evidence of the effects of particular policy interventions in specific cities – maybe 3000 studies, though nobody has counted them. Occasionally these are supported by and compared with forecasts made in advance, but usually not: they have not been designed to test forecasts, or to test theories, but to provide key statistics in a political context showing whether (or, sometimes, that) the intervention has been successful. In a number of cases the initiatives themselves have been forced through by determined politicians who have disregarded or disbelieved the forecasts given to them. The bigger initiatives are sometimes accompanied by academic studies done about the same time, eg a PhD thesis in the local University, with more focussed aims but dependent on the time scale and content of the real policy. The style is commonly that of a narrative case-study, quantitative, and complex. There are almost no cases of carefully controlled 'experimental design' eg making one change at a time (therefore reducing the possibility of attributing effects to each specific element of a policy package) and none that I know of in which all the available policy instruments are implemented consistently in a coherent total package (therefore reducing the possibility of testing synergy, though interactions of a subset of policies are well recorded eg simultaneous implementation of pedestrianisation of city centres and improvements to public transport). The literature is international, and not all in English. There are some literature reviews of particular types of intervention, and some comprehensive web-based listings, but no single considered evidence base.

Econometric Studies

12. There is a large literature of several hundred econometric studies of demand elasticities and associated 'easy-to-quantify' parameters forming distinct parts of an appraisal framework. This is relatively well reviewed elsewhere and sometimes synthesised (albeit with some unfortunate experiences in synthesis by means of inappropriate formal meta-analysis of disparate studies, cf concessionary bus fares).

Behavioural and psychological theories

13. The behavioural and psychological approaches mentioned do have a smaller academic literature of formal testing by means of surveys or quasi-experimental scientific methodologies, but usually only on quite specific narrow hypotheses (such as, for example, evidence that people attribute higher value to changes for the worse than equal and opposite changes for the better). This body of evidence is indicative but not of itself sufficient to construct a coherent overall framework. It is notable that much of the behavioural economics discussion has provided useful (and entirely credible) anecdotal explanations about interesting social observations, rather than quantified parameters and elasticities. This seems especially true of ideas of 'nudge' which provide nice examples but not remotely a comprehensive approach.

Policy Content

14. In terms of policy content, the new evidence available includes the following key 'archetypical' studies (as well as more detailed case studies on a very wide variety of locally specific initiatives):
15. The *pedestrianisation of large areas of city centre*. This may be counted as one of the great success stories of transport and land-use policy in recent decades, with many hundreds of cases, very well embedded in cities, with the UK experience supporting but mostly being somewhat less ambitious than the best European examples. There is good (and bad) practice on how public transport and parking policies can strengthen or weaken the impacts, and it is possible to give well attested rules of thumb about orders of magnitude of impacts and the conditions and dynamics of public support, but there has been much less successful interest in detailed modelling, forecasts, and formal ex ante or ex post appraisal, using either classical or behavioural theories.
16. The evolution of ideas about *traffic calming, shared space, and quality design* mostly in residential areas, ranging from entirely new principles of street layout and design in (for example) some Dutch suburban areas, to the cheapest and nastiest (but sometimes effective) retrofitting of speed humps in traditional local streets.
17. A substantial body of experience about *public transport*, including high speed long distance rail services, and local street-running metro systems with reserved or priority track access. (This evidence includes important classical analyses such as effects on local property markets, which are usually positive and can be quite large, eg 10%-20% house price premiums); also effects of bus priorities, busways, bus marketing initiatives and other promotions.
18. *Cycling* initiatives are now widely and long enough established to identify cases of reversing a long term downward trend and replacing it by very substantial growth
19. There are separate bodies of empirical study about *individual choices and behaviour*, of which the most widespread have been:
20. Repeated cross-section studies before and after a policy intervention (eg ranging from studies of the effects of reducing *public transport fares* in the 1980s, studies of both increasing and reducing *road capacity* in the 1990s, monitoring *road pricing* in London and Stockholm, and the range of *smarter choices* initiatives including workplace and school travel planning, personalised travel advice, marketing, car sharing or pooling or clubs.

21. Qualitative and quantitative studies of attitudes about existing behaviour and intentions or aspirations about future changes in behaviour, usually finding quite large minorities declaring themselves willing to change their choices for a wide variety of reasons (including health as much as, sometimes more than, traditional transport objectives), and with more or less strongly expressed caveats and conditions about the quality of alternatives provided. (This body of work usually finds a minority, but significant numbers, of people who say they would like to drive less than they currently do, which is a potentially important section of the public in early responses). There are reservations about whether there is a gap between intention and actual behaviour, and very little evidence to test whether the people who say they would like to change their behaviour are actually the ones who do so. This critical evidence gap arises because there are no known longitudinal attitude studies of any scale, though there have been some small-scale pilot studies with helpful results.
22. There is a very important but usually ignored evidence base of longitudinal studies of reported behaviour, including ten years or more of data of how commuting trips in particular change over time for specific individuals. This enables measurement of 'churn' and the volatility of choice from day to day or from year to year. It is crucial in understanding the potential for future change, because of the axiom that analysis of change must proceed from evidence on change, not evidence on states. (Most of the received wisdom that 'travel choices are too difficult to change' stems from this misinterpretation).
23. In general the evidence suggests that responses are often rather small in the short run, but build up to very much more flexible life-style choices in the longer run, defined as the period 5-10 years and in some cases longer, in which habits are eroded and new ones form. There is a very large volume of empirical and case study evidence about the effect of changes in price, speed of travel, quality, information, new infrastructure, better use of existing infrastructure, planning, and other factors which can be influenced by public or private interventions. The evidence available is rich concerning reductions in car use up to about 20%-30%, but very sparse, at the present time, for changes greater than that.

Conclusion on Data Robustness

24. In judging this evidence base, I would say that the empirical evidence which informs about policy impacts is considerably in excess of the evidence suitable for in depth behavioural understanding, and the evidence and insight on understanding is itself in excess of the type of evidence which can easily be incorporated into standard modelling practice (in some cases due to constraints in the ability of existing model structures to accommodate different types of links).
25. This suggests that there will need to be a period of rather pragmatic 'doing what has worked elsewhere', plus some carefully considered innovation which can be quite large scale (ie not just minor research experiments) but with year-by-year monitoring for problems, unexpected effects and fine-tuning. There will be only limited availability of detailed forecasts based on a comprehensive theory, already fully tested, and with a high degree of quantitative accuracy. The claims for precision will be less than some current assessments, but the confidence in their success will be greater.

Mode choice within a broader choice context

26. Although political, media and professional discussion of transport policy often focuses on mode switching within an implicitly fixed existing pattern of trips, this is not the only choice people make, and in many circumstances it may not be the most important. Many

other choices which will affect people's travel patterns and the resulting conditions in the city as a whole. These are all embedded within a wider context of choices about life-style, work, leisure and activity patterns which will change over time, and may themselves be influenced by transport considerations. The transport behaviours themselves include:

- *route choice;*
- *mode choice* (including *walking* and *cycling*, considered separately from each other); *destination choice* for each different journey purpose (and with interaction with mode choice so that for example short distance walk journeys can sometimes substitute for long distance car journeys);
- *the number or frequency of trips;*
- *the time of day to travel;*
- *combining different modes* for the same journey or 'tour' of several journeys;
- *pooling or sharing* travel arrangements;
- *form of financial payment* (buying, leasing, hiring, season tickets, single tickets);
- *parking;*
- *interchange;*
- *driving styles* eg speed, acceleration, braking, overtaking;
- *choice of where to live and work;*
- *consolidating or reallocating journeys* within the household;
- *the number, type and characteristics of cars to own* (especially for 2nd and 3rd household cars) and their acquisition and disposal;
- *arrangements and frequency of maintenance;*
- *acquisition of driving license* and responses to its control and disposal;
- *substitution of electronic activities;*
- and for all of these choices, there are further choices about their *variability or stability.*

27. None of these choices can be assumed as fixed in response to changes in conditions over a period of time. Since the individual choices, aggregated for the whole population, affect the resulting traffic volumes and travel conditions, there will then also be feedback effects on subsequent choices, in a cycle which may not settle down swiftly or permanently.
28. In summary, there are many different interacting dimensions of choice, not all of which are currently taken into account when appraising policies. Generally, the more dimensions of choice considered, the bigger (but more complex) will be the response to transport policies. Hence a fuller appraisal of policies depends on consideration of a wider scope of their effects on choice. This is especially important as assumptions that choices between modes of transport are contained within a fixed total number and average distance of journeys will be misleading

Motives for Change

29. It is clear (and this is not a topic of disagreement between users of established or newer methodologies) that choices are influenced not only by speed and cost, but also by comfort (both psychological and physical), reliability, and engineering design. In turn this can mean that economic considerations like the value of time spent travelling are modified by considerations of the quality of that time, for example by in-vehicle music systems, and opportunities for other activities such as work, reading or day-dreaming. Requirements for reliability and predictability can sometimes mean that there are perceived advantages in slower, but less variable, travel conditions.

30. People vary in their motivations, constraints, desires and needs as between each other, and from year to year or day to day – sometimes even from hour to hour (reasons for preferring one mode of transport in the morning may be quite different from those favouring a different mode in the evening, though one can be trapped by earlier choices into unattractive later ones).
31. These variations are not only because people are different from each other: also, each individual tends to have a number of different social roles (eg as parent, resident, employee, activist, hobbyist) and therefore the attitudes and choices of the same person can be different according to which role they are playing at a particular time. Expressed preferences can also vary according to the transport role people are playing – most people travel by a variety of modes, and their preferences during times that they are walking are not necessarily the same as those during the time they are driving (or, as a driver on a main road and on a side road).
32. Motivations for changing (or not changing) choices can be influenced not only by personal preferences but also by the views of others: family members⁴⁷⁶, neighbours, colleagues, and a perception of social acceptability and the ‘in-thing’ which can be based on the apparent choices of role models, celebrities, community leaders, viral networks, or hearsay.
33. They may also be based on an interaction of ‘selfish’ (eg personal time, cost and convenience) values, and ‘altruistic’ ones (eg loyalty, concern for the environment, the interests of a loved one), or values which straddle both selfish and altruistic aspects such as maintenance of health and fitness.
34. All these interactions in turn may be rather stable personality traits specific to each individual, or change in accordance with introspection or social norms.
35. A special case of the influence of perceived social attitudes is the emergence of some policies which seem able to command a very high degree of public acceptance in polls, relatively stable over time. In recent years this has applied notably to improvements to public transport, and reduction of traffic speed and volume in residential areas, even where these may require or result in restrictions in car movement. However, other policies have remained divisive and controversial over a long period of time, notably road pricing and new road construction, even where official appraisals suggest that there will be large overall benefits. (In these cases the claims of benefits are contested)⁴⁷⁷. Yet unpopularity can be softened by a perception of inevitability.
36. Ex post approval does not always resemble ex ante surveys, but is modified if there is a difference between expectations and outcome: with a successful policy which makes conditions better, ex post attitudes can therefore be more favourable.
37. It is notable that attitude surveys carried out by stakeholders very frequently appear to use this property in order to establish that their own preferred policy is already popular,

⁴⁷⁶ Remembering that this is not only a classical process of the values of parents being transmitted to their children; there are widespread suggestions that in the case of environmentally-oriented choices the influence can be from children to parents.

⁴⁷⁷ It may be the case that there is an attitudinal predisposition to believe official claims of benefit in the former case, and disbelieve them in the second, though it is not clear whether the claims are themselves of different credibility. Some analytical work suggests that certain modelling approaches tend to overestimate the benefits of additional road capacity and underestimate the benefits of increased public transport, walking and cycling resulting from a reallocation of road capacity, so this may have some validity.

and hence should become more so: such evidence should be viewed with caution as it can create an illusion of consensus when it is not really there. It is known that apparently rather minor changes in the wording of surveys and framing of questions can have disproportionate effects on the apparent 'public view' in the answers.

Conclusion

38. Taking these together, my assessment is that information, knowledge and experience is not now the crucial barrier to successful expansion of sustainable transport policies in towns. Broadly speaking, we know what works and how to do it. The barriers are political will, consistency of purpose, and understanding about how to handle the current pressures of financial stringency. There are worrying indications that when cuts are made, 'fringe' areas like smarter choices get cut more and in some places almost vanish. The last report of the Commission for Integrated Transport (2010), before its abolition with other quangos, recommended the opposite, saying:

'Even with reduced spending limits, a good deal more net benefit could be generated by rebalancing the residual spend away from road capacity, to be focused instead on lower cost, high return schemes. These include road safety, and travel behaviour change through "smarter choices" measures, like school and workplace travel plans, car clubs, cycling, teleworking and internet shopping'.

21 January 2011

Oral Evidence, 1 February 2011, Q575-594

Evidence Session No.17. Heard in Public.

Members present:

Lord Alderdice
Lord Crickhowell
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Baroness Perry of Southwark
Earl of Selborne
Lord Warner

Examination of Witnesses:

Witnesses: **Dr Stephen Skippon**, [Principal Scientist, Shell Global Solutions], **Dr Jillian Anable**, [Centre for Transport Research, University of Aberdeen], and **Professor Phillip Goodwin**, [Centre for Transport and Society, University of the West of England].

Q575 The Chairman: Welcome. First, we're really delighted you've come to give evidence. Second, I think you should know, from speaking at the seminar, that everybody here has said that the seminar was really terrific, and we're really, really grateful. To add to that, you may think that we are sounding a bit weird when we ask you questions that you have already talked about and answered at the seminar, but we need to do so in order to get what you say on the public record as formally part of the Select Committee proceedings. What I am going to ask you to do is each to introduce yourselves in turn for the record and, if you want to, make a short opening statement. Once you have done that, I will start and then members of the Committee will take over asking questions. We have got probably just under an hour if that is okay. Who would like to start?

Dr Stephen Skippon: I am Dr Stephen Skippon. I am with the research and development part of Shell. My area of interest is the behavioural aspects of sustainable mobility and transport.

The Chairman: Thank you very much indeed.

Professor Phillip Goodwin: Phil Goodwin. I am Professor of Transport Policy at the University of West of England and Emeritus Professor at University College London, and I have been mainly involved in policy assessment, both in this field and in what used to be called mainstream transport policies as well.

Dr Jillian Anable: Dr Jillian Anable from the Centre for Transport Research at the University of Aberdeen. Particularly in recent years my research has been looking at the contribution that the transport sector, and in particular behavioural measures, can make in reducing carbon emissions from the transport sector. That is using social psychology, marketing, economics: a range of

Dr Stephen Skippon, Dr Jillian Anable and Professor Phillip Goodwin

disciplines because I come from the view that there is no one particular disciplinary perspective that can give us all the answers.

Q576 The Chairman: Thank you very much. There are two things that I should have said to you and indeed to members of the public here. We are being webcast and there is an information note for members of the public which contains our interests, amongst other things. The other thing to say is that this room has appalling acoustics. You may have thought it was bad in the seminar; this is worse. So can you please just keep speaking up, and that is even with the microphones; it is a real issue in here. It is particularly difficult for people behind you. I am going to start by asking all of you about what you think the most effective way is to reduce car use across the population. That is taking into account considerations both of long-term impact and cost-effectiveness. Who would like to start?

Professor Phillip Goodwin: I suppose all of us are thinking what a challenging question—"the most effective method"—when I think we would probably all find common cause in saying any attempt to find a single instrument or method is almost certain to be doomed to failure, because you have to take multiple policy instruments, you have to affect the relative prices, the relative attractiveness of different modes of transport, you have to consider the nature of the destinations that people want to go to, the alternatives to movement in fulfilling people's social needs, and a general social expectation about what movement is about. We'll need to talk, I am sure, about all those things separately, but I think the main thing to do to start out with is saying you have got to take a multi-objective, multi-stranded approach, or it is not going to work.

Dr Jillian Anable: I would like to make a distinction in terms of what effectiveness means. My distinction would be whether we are talking about policies or groups of policies which are effective in changing small groups of people and changing their behaviour, versus interventions which have a much larger scale effect, and end up altering and achieving objectives across the whole population; I think in the question that you framed for us you talked about the whole population.

The Chairman: Yes.

Dr Jillian Anable: If I do take those two distinctions, and in terms of thinking about effective policies that have an impact on smaller groups of the population, I would say there is a whole wealth of evidence—again, not specifically pointing at one policy at a time and being able to rank policies—at the local level around small scale interventions, usually involving investment in some form of infrastructures and or service improvement and the promotion of that improvement. But coming to the second point, looking at where we can achieve larger scale change, I would say that almost without exception we cannot think about reducing car use without restraining car use. It cannot be done without the equivalent amount of road space being taken away, road space reallocation, or some kind of restraint of car use. That is an essential ingredient.

Q577 The Chairman: Could you give us some examples of how you would talk about restraint of road use? I think that is quite important.

Dr Jillian Anable: There are regulatory measures, legal measures and hard measures. Taking road space away can involve closing roads, local scale pedestrianisation and so on. Fiscal instruments: road user charging, making car use more expensive; included in that can also come parking charges, which are a very underused and under-mentioned intervention. There can be legal and regulatory measures that disallow certain types of vehicle and so on in certain locations.

Dr Stephen Skippon: One of the things that makes behaviour change in transport really important is that it potentially is something that can be achieved quickly, and it can start to have

an impact on limiting carbon emissions from transport much sooner than a lot of the technological changes that take decades to play out. One of the factors that influence effectiveness from that perspective is how quickly interventions can be made material. That view of effectiveness suggests that anything that can be done quickly has some advantages over structural changes that take longer. I would like to focus my answer not so much on specific measures but on what the principles are that allow you to do something quickly. I think there are two. One of them is to target those people who are most likely to change in any case. I talked a little bit at the seminar about competition between goals, so, when reducing car use is aligned with other goals that a person has, they are more likely to be motivated to change. For lots of people, however, car use aligns with lots of other motivations, and so they are very unlikely to be persuaded. It is a wasted effort to try and use persuasive measures on those sorts of people. So an important thing is to target those who are already somewhat disposed towards reducing their car use. That halves the available population of people, and one of the things that you need to do is to be able to identify them. There is then evidence that people who are disposed to reduce their car use, but have high habitual car use, are the ones with whom the most change can be effected. There was a study done by Garvill, Marell and Nordlund in 2003, which I will give you the reference to.

The Chairman: That would be very helpful, I was just about to ask you.

Dr Stephen Skippon: They did an intervention that was designed to encourage deliberation over mode choice for people who had either a weak or strong habitual use of a car. It was a controlled study, so quite a high-quality study. They found that both their control group and their weak and strong habit groups, over the course of the study, reduced their percentage car use by the same amount, but the habitual car users were travelling three times as much in the car as the weak ones, the control group, so the amount of reduction of car travel was greater in the strong habit group. That is quite good evidence, albeit in a single high-quality study, that focussing on people who are motivated, engaged with environmental issues, but currently use the car a lot are a good target group to focus at. That is one principle. The other is: when do you break habits? You break habits at moments when they change anyway. Examples would be changes in family composition: a child goes to university, a child is born, that kind of thing. Relocation: changing job, changing house, those are good moments. There is another good study that was done by Bamberg in 2006, who tested an intervention to provide information and incentives to use public transport to people who had just relocated. What they found—again, it is a controlled study—was that people in the control group reduced their car use after moving house by 10%, and that is probably about familiarity; as you learn the ropes in the new place you can use the car less. But people in the intervention group, who got the extra information, reduced theirs by 17%. So there is a targeted intervention that resulted in a net change of 7%. I think if you combine those two principles, targeting habit-breaking moments and aiming at people who are disposed to reduce their car use for environmental motivations and who have strong car use habits, then you have the basis for interventions that do not have to be structural, costly and take a long time, but can be done relatively quickly.

Q578 The Chairman: Thank you. Professor Goodwin, you identified pedestrianisation as quite an effective way of changing behaviour, but why do you think that Government, and that is including local government, does not employ pedestrianisation more widely, particularly given European parallels?

Professor Phillip Goodwin: It is one of the great mysteries of the British transport scene, how long it took us to catch up with two particular European concepts of transport planning: pedestrianisation of town centres, initially the German experience. There is a sort of pilgrimage that transport planners go on around the best cases of Europe, and any transport planner worth

their salt will have visited Freiburg and, surprisingly to some, Nuremberg, which has got some extraordinarily effective interventions. There is also traffic calming, mainly from the Dutch experience. France is probably now taking over from both of those as the leading country. We seem to be about 20 years behind. There does seem to be a repeated dynamic in raising questions of pedestrianisation in particular. There are two oppositions, one from some types of traffic engineer supported by the media, saying “There’ll be traffic chaos, the network cannot cope”, and the other from the retailers in the affected area who mostly say that their trade will collapse, mostly it seems because they have an exaggerated perception of how much of their trade depends on the passing car user and how much of it on the rest of the population. Those two oppositions, in some European experience and in quite a lot of UK experience, are enough to stop the initiative happening in the first place, and you sometimes need quite a deal of political bravery, mainly on the local but also sometimes on the national level, to override those objections, which seem to be universal. And if you can keep that going—make it run for two, three years, let it bed in—the experience is, most remarkably, very frequently it’s the retailers in the affected area who are then campaigning for an expansion of the affected area because the ones on the fringe are the ones who actually lose out from the increased footfall. The general principle seems to be that making an area attractive is a more powerful instrument than making it easier to access by car, and the reduction in some use of the centre, because it is more difficult to get there by car, is outweighed by an order of two or three times by the fact that it is a more attractive area when you get there. And we seem to find it astonishingly difficult to learn that.

Dr Jillian Anable: May I just add something to that, which may be jumping the gun a bit because it is talking actually about evaluation? When it comes to talking about what we should evaluate and measure I will be the first to say we measure a lot of things that are measurable and they are not necessarily the most important things⁴⁷⁸. But in the case of pedestrianisation, what I think is important to talk about is the fact that we do not measure walking very well. We just do not count it very well at all. So there are issues around how we count it, but also where we count it. Just about everybody walks, obviously not everybody, but just about everybody walks. There is an awful lot of walking done in neighbourhoods; it is a very important mode of transport. But because we do not measure and count it, we do not know how much people actually do. I think it is important just to raise that in case it gets lost in the broader discussion.

Q579 The Chairman: So then you cannot calculate it into the value of pedestrianisation?

Professor Phillip Goodwin: If I could just add one point on that, the metric is terribly important. There has been a domination of choosing passenger kilometres as the core metric of travel behaviour and travel success, and that is certainly valid when you are looking at emissions and when you are looking at traffic impacts, but it is absolutely not the most useful metric when you are looking at the satisfaction of individual, family and social demands when journeys is a much more useful one.

Q580 Lord May of Oxford: Why is it not meaningful for emissions when typically the carbon per kilometre is going to be much higher in a city than it is going to be on the open road?

Professor Phillip Goodwin: Absolutely, I take the point: in any given condition, clearly, the greater the vehicle kilometres travelled under those conditions, the greater will be the emissions and the congestion impacts. The location is undoubtedly important, so you get different impacts in suburban, central and rural areas, and of course one of the big debates in sustainable transport

⁴⁷⁸ Most of the time we measure things that are easy to measure just because we can measure them, when they may not actually be useful metrics. In the case of walking, it is relatively easy to measure and useful, yet in this case we fail to measure it adequately.

policy is how much the whole thing is about mode shift of an existing pattern of car dominated journeys, or how much you can shift the pattern of journeys themselves to replace at least a proportion of medium and longer distance car journeys by shorter distance walk journeys. That is going to have a proportionally bigger effect on both the congestion and the emissions impact.

Q581 Lord Crickhowell: Firstly, Mr Goodwin's comment about metrics is the convenient peg to ask a question I was coming to anyway. I was not at the seminar, and I am conscious of the fact that our questions keep addressing car use. There is very little that I can see in the papers about how we drive our cars and two things strike me about that. One of the most interesting developments has been the installation in cars of something on your dashboard that tells you your fuel consumption and your average fuel consumption. I think that can have the effect of stimulating a competition; in other words, people wanting to lower, and therefore lowering, their driving speed, which can be an enormous factor. The other point is that in the United States people on the whole keep to speed limits. That may be because it is better policed, but you can drive huge distances across the United States with no-one driving at over 50 miles per hour, and in this country no-one seems to be constrained to keep down to a speed limit of 70mph. Can you therefore comment a little; ought we to be directing more of our effort as to how we drive and how we change people's driving habits, not just to the kilometres they drive.

Dr Stephen Skippon: That is an area of current research for us. I think there are two ways in which driving style impacts on emissions. If you think about urban driving or dynamic driving where there are lots of speed changes, it is driving styles that make use of a lot of acceleration and then a lot of braking. And then in extra urban driving it is all about speed, so the difference in emissions between 70 and 50 miles an hour is mostly dominated by the drag term, which goes as the velocity squared. So it is almost double. So yes, there is quite a lot of potential for emissions reduction through impacting on those two aspects of driving style. Having said that, driving style for drivers is very often about signalling stuff about yourself to other people. And so for the half of people for whom that matters there is very little chance of impacting on their driving style through persuasive measures. For those people for whom there is some motivation to change driving style, then the evidence is rather limited, mostly from uncontrolled studies, but it tends to suggest there is about a 10% saving in carbon emissions available from interventions that teach people better driving styles or give them feedback in the car.

Q582 Lord Crickhowell: But if fuel prices are very high and you have something on your screen which actually indicates that you are saving money by going slower, isn't that an incentive?

Dr Stephen Skippon: I think that is rather poorly researched. There is qualitative research that suggests that most drivers do not understand the link between their driving style and fuel economy. Most drivers will tell you "it's the car I choose that determines that," and few understand the link between their own driving style and emissions and costs. Most of the studies have not looked at feeding back cost; they have only looked at feeding back something like fuel economy, which is a bit more of an abstract concept. And there is no research that I am aware of that looks at "what is the best form of feedback?" Is the best form of feedback at the end of a regular journey, or is it at the end of a day or is it instantaneous? Perhaps it is not instantaneous, because if you are doing some dynamic thing like accelerating, you are attending to something on the road, so you cannot be attending to the feedback. So there is obviously some optimum feedback time, and that is not very well researched. That is an area where research is poor. We attempted to do a systematic review of the literature; we did not find enough literature of high enough quality to be able to review. So it is a really weak area.

Q583 Lord May of Oxford: If I can just make a very quick key point; again, the carbon footprint does not go like the velocity squared, that is to say the power demand goes like the velocity squared, but the journey time on the open road goes inversely with the velocity, so it goes with the velocity, which is still a big factor and a real reason for enforcing speed limits.

Professor Phillip Goodwin: Yes, and there does seem to be some evidence that, in terms of value for money, you do get a disproportionately good impact for rather small input. There is some very interesting econometric evidence that fuel consumption is more sensitive to fuel price than journey distance travelled is. If you try and work out the inferences from that, the most plausible one is that, consciously or unconsciously, people are finding ways to adjust their travel behaviour, both to economise when prices are high and also to be profligate when they are low.

Dr Jillian Anable: Just to come to the question directly, whether or not in-car feedback might make a difference, Steve's right that the evidence on that is not entirely clear, but there are two things that I would draw upon to illustrate that. Firstly, during the fuel crisis in 2001, when there was a fuel shortage, speeding on the road reduced. People automatically started to stick to the speed limit. What that suggests is that this is not a matter of people not knowing. I appreciate they might not know the degree to which they could actually save fuel by just dropping from 80 to 70, for instance, but it is not necessarily a matter of people not knowing, and therefore there is an indication that perhaps they do not care. The other thing is just around the metric of miles per gallon. There is quite a lot of evidence trying to understand what metrics consumers understand when they are buying cars etc. In fact, we have just been involved in quite a large-scale quantitative study about something else and asked people to tell us the fuel consumption of their current car; 15% of people just could not indicate what that was, and it has been higher actually in other studies. This was a tick box study, so there will be a proportion of people that just guess, but people do not necessarily really know or care about the metric, so it is not a simple matter of just giving feedback.

Q584 Earl of Selborne: You have already told us that any attempt to find a single method of changing behaviour in car use is doomed to failure, and I think we recognise that a multi-stranded approach, a need for a combination of interventions, is more likely to work. But I am still going to ask whether you would like to give us a proportion that you might expect from use of nudges, from a change of infrastructure and from pricing and restrictions on car use in isolation. Do you think any of those is going to show any reduction in isolation?

Professor Phillip Goodwin: Yes, I am sure that is true. There is quite a lot of evidence on pricing not due primarily to policy interventions but because we have a lot of time series evidence on what people do when prices are high and what they do when prices are low. Certainly as a rule of thumb one can say that each 10% increase in fuel price probably reduces distance travelled by 1.5% in the short run and by about double that in the longer run, by which I mean five to 10 years. So you can gross that up to about 30% or 40%; once you start talking about 100% there are non-linearities, probably, but what that means is you can get a 10% variation in total vehicle mileage due only to fuel prices within a moderate range of the sort of observations that we have had. Smarter choices interventions: we have, in non-ideal circumstances, sufficient evidence now to know that we can talk about between 5% and 15% car reduction as achieved reality. There is always a little bit of a problem of attribution because there are complicating factors. Our estimate in 2004, in the big evidence review we did at that stage, was that a full-scale national rollout of smarter choice interventions, at a level that might cost say, in current currency, around £20 per head, would probably result in about 10% reduction in national traffic levels, and about 20% in urban peak period traffic level. That is really quite substantial. The general feeling is that the types of interventions which are exhortations without any change in the underlying circumstances are likely to be very small. You have got to

have something to sell in order to market it well. The other main instrument that Jillian mentioned is road space reallocation. It depends how drastic they are, but the reallocation of road space to pedestrians and bus lanes and cycle lanes and so on is generally associated with somewhere between a 5% and 15% reduction of car use. So what we can say is that we have got a lot of evidence about the range plus or minus 30%, and once you go beyond that you are into inference and speculation and sometimes almost philosophy rather than hard evidence.

Dr Jillian Anable: Without being annoying and wanting to define terms all the time, while I do not disagree with anything Phil's just said, I am not sure that I would classify all the sorts of measures and interventions he has measured as "nudge". Maybe it does not matter—

Q585 The Chairman: It would be quite helpful for us to try and tease that out.

Dr Jillian Anable: Okay, I will do it through a "for instance". Smarter choices, which some of you may know I have been quite involved with, in evaluating and so on seems to me to be equated an awful lot of the time with nudge. So, in other words, smarter choices used to be called "soft measures"; a softly, softly approach, about encouragement and letting people know about their choices, perhaps giving them a little bit of extra choice. In other words, no real coercion is what smarter choices is about. I would disagree, so in the literature that we have gathered and when we have come to some conclusions about the potential scale of smarter choices to change behaviour, and over a 10 year period of intensive application, we have concluded that anywhere up to about 20% of car travel can be reduced in urban areas at peak periods. Is that nudge? I would suggest that it is not, because when we have made those conclusions we have said that that potential can only be realised if it happens alongside a locking in of those policies and that the best chance of those behavioural changes happening is where there is some level of coercion; for instance, where there are parking charges mixed in. But the more important thing I wanted to say was that what smarter choices is meant to be about is a completely different approach to transport policy. It is about putting behaviour change at the centre of transport policy and understanding what motivates behaviour, what target groups are most malleable to behaviour change and what they respond to. It is about constant evaluation, not just before and after but also during, responding along the way, changing, reacting. It has elements of nudge but in essence it is not just about going with the grain of behaviour. It is also about changing behaviour and changing social practices and the approach to policy. So I would suggest that in order to quantify it, in my view nudging will achieve nothing—I will put my hands up and I will say nothing—over the longer term at the bigger scale, which is what we need to be talking about. But if we are talking about smarter choices and a new approach to policy, we can achieve an awful lot.

Q586 Earl of Selborne: That is a very precise figure, and it answers my question. Let me now go to the other extreme. Let's suppose somebody has put together a mutually reinforcing package; we have got Government, business, local authority, the community, and also your lock-in, if you like. Now then, what are we talking about in terms of percentages of car use reduction?

Dr Stephen Skippon: If you are interested in impact on environment issues, just focusing on car use reduction is somewhat the wrong metric because carbon emissions are the metric you need to look at. If the people who reduce their car use are the ones I have talked about, the ones who have motivation to address environmental issues anyway, they tend to be the ones who are driving the more efficient cars in the first place. So if you just use average figures for car use reduction and average figures for emissions from vehicles, you overestimate the carbon reduction. You also need to take into account the extra carbon emissions from additional

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vehicle journeys in the modes that transfer happens to. So if people give up car journeys and go onto somewhat empty buses, that makes the bus per passenger more efficient, but if extra bus journeys are added then you have to take that off the result.

Q587 Earl of Selborne: The extra bus will be added only if they are full, surely.

Dr Stephen Skippon: Yes, so it is completely dependent on the load factor of the bus. Bus load factors vary during the day, and at peak times they are already high. So the carbon saving is very dependent on that. Our modelling suggests that if you look at the carbon impact of the suite of soft measures, smarter choices kind of measures, there are various different scenarios you can model, but our centre figure is about 7% reduction in carbon emissions. If you adopt structural measures, including the kinds of limits on speed limits that we have talked about and measures to disincentivise buying high-emitting vehicles, you might get to more than double that in terms of reducing annual carbon emissions.

Professor Phillip Goodwin: I would like to push that number up a bit. It is about the dynamic of what is going on. The timescale seems to me to be enormously important, and because the timescale is important the underlying social trends, norms, the way in which land use works out and so on become important. It is known that the housing stock, for example, probably changes only by 1% or so a year and therefore it is usually discounted as a planning term in the short term. Once one is talking about 20 to 30 years, that starts to have an enormous impact on the way in which settlements develop. I would have said, quite separately from the question "How big a carbon effect will this have?", the question is "What is a realistic scenario—if you wanted to adopt it—of reduced car use? We can work out a track which would get you 30% in about 25 years, without great social upheaval and enormous expense". The point then is, of course, if that were to happen, then in 25 years' time you are in a totally different policy and psychological and political context than we are now. We do not know where that would lead but transport modes rise and fall; they have done so for hundreds of years, and I do not see any reason for assuming that the dominant experience of the past half century, which is the half century of the car, is the only one that human societies are ever going to experience.

The Chairman: We are going to have to speed up, because we are otherwise going to run out of time. Quick points from Lord Krebs and Lady O'Neill, and then we are going to move on to Lord May.

Q588 Lord Krebs: Thank you Chairman, I think I can be very brief. I have a factual question. Where did the notion of smarter choices come from? Is it a Government initiative or is it from the research community? And my second question to Phil Goodwin, building on his last comment, was regarding this 30% reduction. That must relate to a particular baseline figure. Can you just explain what you meant by that in terms of baseline figure? If you were in a different country, where there is a baseline figure that is much higher, would you also achieve a 30% reduction?

Dr Jillian Anable: I am not sure that I can give a satisfactory answer to that. I think the term "smarter choices" came from the fact that the Department for Transport did not want the word "soft" written on the front of one of their reports, so they ditched the term "soft measures" and turned it into smarter choices. Phil may be able to answer that better than me.

Professor Phillip Goodwin: It was not even the Department for Transport, it was a Minister. This was at the time when the report of a research project that had been running for two years and had been called "the Soft Measures Report" quite happily for all that period got to the stage

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of being absolutely complete. All the text was agreed but then there was some midnight oil burning and a brilliant title Smarter Choices was devised.

Lord Krebs: Because it's meaningless.

Professor Phillip Goodwin: It's meaningless, but in a very approving sort of way. What could be better?

Lord Krebs: Feel good and meaningless.

Professor Phillip Goodwin: Before that, there had been quite widespread use of the phrase "soft measures" for about five to 10 years, not stemming from any one particular source and not used in any common sense. Sometimes it meant soft by comparison with hard—that is soft meaning easy—and in other cases it meant soft in a disciplinary sense. It was about psychology and marketing as distinct from engineering and economics. I am not aware that anybody has, as it were, the IPR on that. It was an evolution of a whole variety of different initiatives from a wide variety of different disciplines and contexts. The baseline, you are absolutely right: I suppose my 30% is the UK now, and it is based on a sort of assessment of our experience over the last 25 years and an observation of what has been achieved in the best contexts elsewhere. My feeling is that the higher the level of car use in a country the more difficult it may be to make the turn but the more potential for reduction you then have. The lower it is, percentages then do not actually mean very much any more.

The Chairman: We are running out of time, so Lady O'Neill, you wanted to come in quickly, and then Lord May.

Q589 Baroness O'Neill of Bengarve: Is one of the instruments or levers that you look at changes in zoning? Much of the travel that people find themselves constrained to do is because of the separation under contemporary conditions of work and home, which was not always the case, but you try opening a shop in your house and you discover that there are regulations.

Professor Phillip Goodwin: I think the received wisdom now is that, for anything with a timescale of longer than 15 to 20 years, land use planning has an enormous influence on the whole pattern of journeys. That is why mode choice may not be the best metric to use. It is about the journey length distribution.

Q590 Lord May of Oxford: I have a general question and two specificities.

The Chairman: We have got about five minutes for this.

Lord May of Oxford: The general question is: how strong is the evidence base for the effectiveness of interventions that change travel behaviour? What do you think are weaknesses and what do you think can be done about it? You might care to illustrate it in relation to the statement that travel behaviours are habitual; one of the specificities.

Dr Jillian Anable: The habitual issue is a key issue. One of the reasons I regard it as being key is this whole notion that travel behaviour is difficult to change and slow to change. As Steve said, we ought to be viewing behaviour change as something that we can do quite quickly. I say that not because I discount habitual behaviour as being important but because I believe that travel behaviour is changing all the time. We have spoken about life change moments—that term usually means things like changing jobs, residences and so on—but I am talking about day-to-day disruptions: car breaks down, illness, bereavement, divorce, and so on. All those kinds of things can be life changing but are also much more common and force people to re-evaluate their routines. What we do not do in the evidence base is understand what happens around those moments. We do not measure change generally in cross-sectional surveys. We measure what it

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is happening at any given point in time, and because we measure it like that, when we look at the statistics in the aggregate, it looks like not a lot is changing. But if we could understand more about what happens in day-to-day behaviour and the fact that there is a lot of change taking place, I think we could understand a lot more how to shift people out of their routines. I will call them routines rather than habits, which often has a meaning to it as though people are locked in psychologically to different patterns of behaviour. But I actually think behaviour is much more changeable than is often thought.

Professor Phillip Goodwin: If I could just add, the evidence base is enormous but it is not research driven. That is the key thing. There are huge numbers of practical experiences that have to be read in detail and places visited. The number of research studies is fewer—I hope some good ones—and the big weakness I would say is longitudinal monitoring of individuals. That is the gap in the research base.

Q591 Lord May of Oxford: There is a second specificity, which I think is an important one. We have heard, and it is plausible enough after all, that longer journeys are responsible for a much greater proportion of emissions. Yet it seems to me just from common sense that it is much easier to get people out of cars—it is much easier to get me out of cars—in town. I use the underground in London. But it's longer journeys that people take. Am I right that, in very general terms, the more important change you would like to effect is in fact the more difficult one?

Dr Stephen Skippon: Much of the carbon emitted actually comes from those longer journeys. In Europe I think it is 40% to 60%. The longer journeys are more important from the carbon perspective. Much of the research, however, is focused on behaviour change in urban driving.

Q592 Lord May of Oxford: What is the proportion in Britain?

Dr Stephen Skippon: I am not sure of the figure, but the DfT has these things.

Lord May of Oxford: That is a critical number, isn't it?

Dr Stephen Skippon: I imagine it is rather similar to the rest of Europe, so it is probably in the order that I have just said. Much of the evidence base—as Phil says, there is a big pile of it—is focused more on the urban than the extra-urban. Its other weakness, as I think Phil has said, is that it has mostly not been driven by research objectives. In the systematic review that we have just done with Sussex, which has quite tight research criteria, we looked at 77 evaluations—47 of which were uncontrolled studies—from which it is very difficult to draw any conclusions. So the methodological quality of a lot of the research base is poorer than you might think.

Professor Phillip Goodwin: On the journey length, though, what we found in the three sustainable travel towns, which I think you will be talking more about in your next session, is that there was a bigger percentage change, about twice as big, in the reduction of shorter car journeys as the longer car journeys. But the reduction in the total car mileage travelled came disproportionately from the smaller reduction in the longer journeys. So the game is worth the candle for the longer journeys.

The Chairman: We're going to have to move on.

Q593 Lord Crickhowell: What is the best way of evaluating? A clear disagreement seems to have opened up at the seminar. I think that Professor Goodwin takes one view about control trials on an individual basis and others argue that, because we are dealing with so many inputs

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and so on at one time, those forms of assessment will not work. How well have interventions been evaluated and what if anything should be done to evaluate them better?

Professor Phillip Goodwin: I am all in favour of control trials. I just think that to make a fetish out of it and to say that unless it is a control trial it does not count as evidence is a completely unrealistic view of the world as it exists when you are dealing with social research in human societies and human behaviour. You make use of all the evidence you can get: controlled, uncontrolled, time series, cross-section, econometric methods, psychological methods and pure reason. I would say that the argument “We don’t know what to do next because the evidence isn’t good enough” is not one I accept. There are enough unresolved research questions to keep us and our successors busy for generations to come, but we do know enough from what has already happened to have a pretty good steer on what we ought to be doing.

Dr Jillian Anable: Can I just agree with that? One of the sound bites I would possibly like to throw in is “the best is the enemy of the good”. I do think we know enough, as Phil has said, to do an awful lot. That is not to say that there are not still things that we need to do better, but in terms of evaluation and monitoring, the smarter choices type agenda has been made to jump through so many more hoops than many of the other interventions that are on the table and cost a lot more money in this area of policy. I think that the justification for pushing for more and more monitoring and waiting until we have all of the answers is not there. There is no justification for that happening. Having said that, there are some gaps in the evidence. One of the gaps has been alluded to already. It is about target groups and how to optimise the interventions and design them in a way that targets people who initially are most likely to change—and change may grow out from there. For instance, in most of the policies that you’ve heard us mention, we may have a good handle on the evidence on some of the scale of change that is possible in the short-term at least, but we do not know who has changed behaviour so far in the sustainable travel towns. We do not know whether it was a small number of people that changed a lot or a lot of people that changed a little bit. That matters an awful lot in trying to measure potential. From a psychological perspective, we do not understand all the time why people changed and therefore how to make it happen more often. And another gap that I would say is that because some of the sample sizes and so on are often so limited, from a socioeconomic perspective we also do not understand quite the degree to which the people who would benefit the most from the interventions—possibly lower income groups or more sedentary groups who would benefit from physical activity—are the ones who are actually changing behaviour. So we have some gaps in the detail about who is changing and why, but we have plenty of evidence to know that it does work.

Dr Stephen Skippon: If I may—

The Chairman: Very quickly.

Dr Stephen Skippon: I think the alternative emphasis deserves a little bit of airing. I am not one of those who uses “gold standard” for a randomised control trial as a term of abuse. When we looked in our systematic review, we found that the 17 medium quality methodologies all found quite substantial effects and in the 12 high quality control trials only half of them did. I think there is something going on there, which is that the less control you have and the poorer quality the methodology in the study, the more chance there is that confounding variables will confound the answer. It is true, we should take into account all the evidence, but we should weight it according to the methodological quality, and the high quality studies are few and far between. More needs to be done.

Q594 Lord Krebs: My question neatly follows from that. Whilst it can always be said more needs to be done, there is a certain evidence base at the moment. To what extent is the

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available evidence being used to influence policy interventions? Are those local authorities or others alive to the evidence and deploying it to good effect?

Professor Phillip Goodwin: I think the international evidence is vastly underused. The national evidence tends to be used to good effect when it comes with a kitemark of support from the Department for Transport and an assurance that applications based on it will receive favourable ear, but otherwise few local authorities will feel brave enough to go ahead on their reading of the evidence if it does not have that mark of approval.

Dr Jillian Anable: It seems to me that a lot is lost in translation, whether it is evidence that comes from big research studies or smaller evaluations of policy interventions. There seem to be inconvenient truths that are often buried in that evidence. That leads to a dumbing down of what that evidence is saying. So with smarter choices, for instance, there has been, as I say, as much evidence gathered if not more on the potential for those policies than on the technical potential of electric vehicles and likely consumer uptake of electric vehicles. But when you look at the low carbon impact plan that assesses the potential for different policies, smarter choices was severely dumbed down in its potential. There was, as I say, a lot that was lost. So there are bigger questions here about the quality of the evidence versus how it is received when it is given.

The Chairman: Thank you very much indeed. We do not have time to get from you examples of interventions that have been designed to influence behaviour, both those that have been well designed and based on good evidence and those that have not been terribly well designed or not based on good evidence. If you could submit those to use, that would be enormously valuable. I think you very much for an absolutely excellent evidence session. We are very grateful to you. You will get a transcript; you get the chance to look at it, and if you think there is anything that you did not say please amend it; but also if there is anything that you want to add, and particularly references that you have cited today, we would be enormously grateful. Thank you very much indeed.

Supplementary written evidence from Dr Steve Skippon, Shell Global Solutions (BC 164)

The available evidence on the effectiveness of interventions to reduce car use

About this submission

This submission is a summary of the findings of a systematic review of the available evidence on the effectiveness of interventions to reduce car use. The review was funded by Shell and a paper describing it is due for publication in the journal *Transportation Research Part A: Policy and Practice* (Graham-Rowe, Skippon, Gardner & Abraham, 2011).

Introduction

Global temperature rises depend not only annual emission rates of CO₂, but also on cumulative CO₂ in the atmosphere (Allen, Frame, Huntingford, Jones, Lowe & Meinshausen, 2009; Matthews, Gillett, Stott & Zickfeld, 2009; Meinshausen et al., 2009). Modelling by Shell, which Dr. Skippon outlined at the travel behaviour seminar, suggests that in the road transport sector, technological solutions, while essential, and able to contribute substantially to reducing annual emission rates by 2050, will take effect too slowly in relation to cumulative emissions. A study co-sponsored by Shell showed that changes in travel behaviour could potentially deliver reductions in road transport CO₂ emissions in the USA on shorter timescales (Cambridge Systematics, 2009), resulting in substantial impact on cumulative CO₂ in the atmosphere. This suggests that policies and interventions aimed at behavioural changes that improve the efficiency of road transport, or reduce road transport demand, have an important role to play, and that we need to understand what policies and interventions are likely to be most effective.

There have been a number of narrative reviews by experts in this field. However narrative reviews reflect the perspectives, subjectivities and selections of their authors, and do not necessarily yield an objective view of the state of evidence in a field. Systematic reviews, on the other hand, provide an objective consideration of all the available evidence within a clearly defined area, and typically an evaluation of the methodological quality of that evidence (Higgins & Green, 2008; Petticrew & Roberts, 2005). We carried out a systematic review, focussed on the effectiveness of interventions aimed at reducing private car use. The review used a two-stage procedure, starting with relevant reviews published between 2000 and 2009, then searching for primary studies cited in them. We included primary studies published in English, that were publically available either on-line or via the British library, and reported car-use reduction data. Papers that reported increased uptake of alternative modes, but did not report car-use reduction, were not included, because increased use of alternative modes may increase overall travel rather than specifically decrease car travel. We identified 47 primary publications, which reported 77 interventions.

Quality of the evidence base

A key finding of the review was that, taken overall, the quality of the evidence base was much weaker than might be expected. Of the 77 evaluations, only 12 used high quality methodologies (using experimental, quasi-experimental or cohort analytic designs, with pre-and post-intervention measures from intervention and control groups). Of the 12 high quality evaluations, only six found statistically significant car use reduction. 48 of the evaluations used low methodological quality designs, without control groups for comparison. It is difficult to draw valid conclusions from such studies as the effects of potential confounding variables are not

controlled for. In 30% of the studies, no change metric could be calculated from the reported data. Only 7 of the 77 reported both means and standard deviations of outcome measures for both intervention and control groups, enabling effect size calculation.

Further, there was a great diversity in outcome measures. These fell into four broad classes: distance travelled; number of trips or frequency of car use; time spent in a car; and modal shift away from car use or away from single occupancy. The 77 primary evaluations between them used 153 outcome measures across these classes. This made comparison and synthesis across the evidence base difficult; and meta-analysis was not possible.

What works? The evidence from high methodological quality studies

Focussing on people with strong car use habits

Garvill, Marell and Nordlund (2003) evaluated an intervention to increase awareness of alternative travel modes and encourage deliberation on mode choice. They found that the intervention was more effective for people with strong car use habits than those with weak car use habits.

Eriksson, Garvill and Nordlund (2008) evaluated an intervention to disrupt habitual car use by offering personalised reduction strategies based on prospective weekly travel diaries. Overall the intervention was not effective, but the authors did find that the sub-set of participants who had both strong car use habits, and strong morally-guided motivations to reduce their car use, were significantly more likely to reduce their car use.

These results suggest that identifying and focussing interventions on people with strong car use habits, but who have morally-guided motivations to reduce their usage, might be an effective strategy.

Relocation: moving home or workplace

Bamberg (2006) assessed whether moving home provides an opportunity to change peoples' travel behaviour. People who had just moved home were provided with a free public transport ticket and personalised schedule information. Their car use was reduced by 12% relative to that of a control group who had also just moved home but received neither the free ticket nor personalised schedule information.

Mullins and Mullins (1995) reported a reduction in car use for an intervention group of employees of a large bank who were moved to the branch closest to their home, compared to a group who were not moved.

The potential effectiveness of targeting people who have just relocated is also supported by a cross-sectional questionnaire study by Verplanken, Walker, Davis and Jurasak (2008) (not included in the review because it did not include an evaluation of an intervention). They found that employees of a UK university who had relocated within the past year, and who had strong pro-environmental values, used their cars less for commuting to work than employees who had similar values but had not relocated recently.

Other life changes, such as changes of job or household composition (birth of a child, child leaving home, moving in together, separation, retirement, etc.) may also lead to "habit discontinuities" which provide temporal windows when habitual car use may be re-evaluated; these might also prove to be fruitful occasions to target for interventions.

Financial incentives/disincentives

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Jakobsson, Fujii & Garling (2002) reported reductions in distance travelled as a result of interventions in which households were provided with a financial disincentive in the form of a reduction in a financial reward for each 10km of household car use. The intervention was more effective when combined with a self-constructed travel plan. However the authors concluded that the car use reduction disappeared when the disincentive was removed.

Foxx and Hake (1977) found that cash and non-cash prizes for achieving personalised car use reduction goals were effective at reducing car use. Foxx and Schaeffer (1981) reported that an intervention based on entry into lotteries and a grand draw for participants who achieved mileage reductions, also achieved car use reductions that disappeared once the incentive was removed.

Intervening to delay uptake of driving licences among young people

Although outside the scope of our review, because it was aimed not at reducing car use but at delaying it from happening, a high methodological quality evaluation by Fujii (2007) is also of interest. In this randomised controlled trial, young people were provided with different forms of information about the negative aspects of car use including cost, risk of accidents and stress due to traffic. On follow-up 18 months later, fewer members of the intervention groups had taken up driving licences compared to members of the control group.

What might work? The evidence from medium methodological quality studies

Personalised Travel Planning Interventions (PTPIs) have been used with a variety of different target groups. Few evaluations of PTPIs found in our search included control groups, so their findings must be interpreted with considerable caution. Overall, these studies suggest that PTPIs can be effective in reducing car use, but that effect sizes are modest. Effect sizes were smaller in the few controlled studies than in those without control groups: a clear warning of the risks involved in giving the same weight to lower methodological quality studies. PTPIs may be more effective if combined with real improvements in alternative, public transport and campaigns that raise awareness of these improvements (Department for Transport, 2007).

What doesn't seem to work? The evidence from high methodological quality studies

Incentives for using public transport

Fujii and Kitamura (2003) provided members of their intervention group (university students who used cars) with a free bus pass for one month. The intervention was not effective.

Providing information

Tertoolen, van Krevel and Verstraten (1998) found that providing participants with information on the financial impact, environmental impact or both, of car use had no measurable impact on car use.

Hodgson, May, Tight and Conner (1998) investigated the effect of a travel awareness campaign which aimed to raise public awareness and change perceptions of travel behaviour. The intervention was not found to be effective.

Fujii and Taniguchi (2005) evaluated an intervention in which families were offered a standard travel feedback programme and asked to make their own travel behavioural plans. The intervention was not found to be effective.

Membership of car sharing schemes

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Cervero (2002) compared car use between people who had signed up for, but not yet joined, a car sharing scheme, with people who were members of the scheme. Both groups reduced their usage over the study period, so the study did not demonstrate a positive effect for membership.

Conclusions

Evidence for the effectiveness of interventions to reduce car use is much weaker than might be expected. Few studies have used high quality research designs, and uncontrolled studies from which it is difficult to draw valid conclusions are common. More research using rigorous methods, such as randomised controlled trials, is needed to strengthen our confidence in effectiveness data. In addition, there is a great diversity in outcome measures used in this research: agreement on common outcome measures would greatly facilitate synthesis and help us understand better the relative effectiveness of different interventions.

Some types of interventions do appear to be effective. These include targeting drivers who have a strong driving habit and a strong moral motivation to reduce car use; targeting people who have just moved home; and where feasible, relocating employees to reduce commuting time. Targeting people who have just experienced some other habit-discontinuity life-change may also be effective, and this should be further researched. Intervening to delay young peoples' uptake of driving licences also appears to be an effective policy. These findings provide a useful starting point for future research and application.

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25 March 2011

Dr Lorraine Whitmarsh, Professor Peter Bonsall, Sustainable Development Commission and Professor David Banister

Dr Lorraine Whitmarsh, Professor Peter Bonsall, Sustainable Development Commission and Professor David Banister
Written evidence from the ESRC Centre for Business Relationships, Accountability, Sustainability and Society (BRASS) (BC 46)

In this brief submission to the Select Committee's Call for Evidence on 'Behaviour Change', we will address a number of the questions described in the call for evidence. The authors jointly have expertise and experience in social marketing, and have been responsible for a considerable amount of theory development and capacity building in social marketing and in initiatives to extend its use from conventional health applications and into other areas. This work has been conducted within the ESRC-funded Centre for Business Relationships, Accountability, Sustainability and Society (BRASS) whose research programme includes work on promoting healthy and sustainable lifestyles and behaviours amongst individuals and communities.

The BRASS work related to the application of social marketing also draws on the psychology of behaviour change research and experience of colleagues Dr Lorraine Whitmarsh & Prof. Nick Pidgeon. They have also contributed to a separate submission from Cardiff's School of Psychology considering evidence relating to behaviour change drawn from experimental research and experience in the field of psychology.

2. What are the policy implications of recent developments in research on behaviour change?

One approach to the application of behaviour change theory and evidence to create behaviour change interventions is the discipline and process of '*social marketing*'. This approach has largely been applied to issues of personal health, and has a longer track record of use in the USA, Canada and Australia than in the UK. It has been shown to be a highly effective approach to behaviour change. Research conducted at Stirling University to provide systematic reviews of social marketing interventions in fields such as smoking cessation and physical activity promotion, found "*that interventions adopting social marketing principles could be effective across a range of behaviours, with a range of target groups, in different settings, and can influence policy and professional practice as well as individuals.*"⁴⁷⁹

The targeted nature of social marketing interventions, which use commercial marketing principles of segmentation and targeting to vary the 'proposition' made to significantly different groups within the target audience means that it has been shown to be effective in reaching and influencing '*hard to reach*' groups. Such groups go beyond the socially disadvantaged and can include groups who are hard to influence because they tend towards conservatism or are in some ways outside of the mainstream. Social marketing interventions for example have been shown to be effective in reaching groups such as farmers⁴⁸⁰.

In recent years the BRASS Research Centre at Cardiff has looked at widening the application of social marketing techniques to promote behaviour change in fields including consumption reduction, low-carbon behaviours, anti-social behaviours and ethical consumption. A 2010 social marketing project partnership between South Wales Fire and Rescue Services and BRASS also

⁴⁷⁹ Stead, M., Gordon, R., Angus, K. and McDermott, L. (2007), 'A systematic review of social marketing effectiveness', *Health Education*, 107 (2), pp. 126-191

⁴⁸⁰Sorensen, J.A. et al. (2008), Encouraging the installation of rollover protective structures in New York State: the design of a social marketing intervention, *Scandinavian Journal of Public Health*, 36 (8), pp. 859-869

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demonstrated how the application of social marketing approaches to tackling a behaviour change (in this case deliberate grassfire-setting behaviours in South Wales communities) can enhance the effectiveness of working practices within public sector organisations and between stakeholder organisations (in this case the Police Service and Forestry Commission)⁴⁸¹.

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

In the use of social marketing to promote behaviour change, the UK has benefitted from the establishment of the National Social Marketing Centre in 2006. The NSMC has rapidly moved Britain to the forefront of research and practice in behaviour change for public good by sponsoring and publishing research, and by developing resources for practitioners, trainers and researchers. It has played a crucial role in developing UK capacity by providing critical mass in terms of support and by acting as a focus around which evidence, research and professional standards could be developed and drawn together. The establishment of a 'one stop shop' research support service and the reorganisation of the NSMC's 'Showcase' examples of best practice to highlight different stages in the social marketing planning process will aid researchers and highlight good practice in evaluation.

One of the advantages of social marketing interventions as an approach to achieving behavioural change is that evaluation is a core part of the social marketing project methodology as promoted by the NSMC. This helps to overcome the tendency amongst some public sector organisations to give evaluation a relatively low profile within projects.

In addition to considering the funding of evaluation, it may be helpful for the committee to consider the issue of attitudes towards evaluations within policy organisations. There is currently a policy culture which creates pressure to insist that all policies are a success and a cost-effective investment (unless that position becomes completely untenable). This mitigates against innovation and social experimentation (with their inherent potential for failure as well as success) and against a positive attitude towards rigorous evaluation.

5. What should be classified as a behaviour change intervention?

Ultimately all forms of policy-based activity aim to motivate, prevent, modify or reinforce a behaviour on the part of a some form of stakeholder including the general public, businesses, investors, public servants or organisations. However, for the purposes of this exercise, it would probably be most helpful to classify a behavioural change intervention as one whose conduct and structure is explicitly based upon, and informed by, behaviour change theories and models.

The NSMC's benchmark criteria for social marketing provides a systematic classification for behaviour change interventions which represent bona fide social marketing intervention⁴⁸². These were developed to help separate rigorous social marketing interventions from those which simply use the label or certain aspects of the approach. A less specific but similar set of criteria could be used to delineate behaviour change interventions for policy purposes.

⁴⁸¹ Final evaluation reports from this project are currently being prepared. A report relating to its initial scoping phase is available at: http://www.southwales-fire.gov.uk/English/bernie/Documents/4899%20Social%20Marketing%20Report%20Summary_ENGLISH_SCREEN.pdf

⁴⁸² Available at: <http://www.nsmcentre.org.uk/component/repository/Tools-and-Guides/Social-Marketing-Benchmark-Criteria-tool>

7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

In terms of achieving behavioural change through social marketing, although in some cases it is possible to achieve change by providing the appropriate information or incentives for individuals, there is frequently a need to facilitate the behaviour change through a range of policy interventions. For example successful interventions in encouraging greater uptake of cycling in other countries have required schemes to make cycle ownership affordable, better signposting, improved cycling infrastructure and the provision of customised information about home-to-work cycle routes⁴⁸³.

Social marketing's original relatively simple formulation as a 'consumer facing' discipline has been superseded by the NSMC's model of 'Strategic Social Marketing'. This seeks to complement 'downstream' efforts aimed directly at the target audience with 'upstream' efforts to reinforce the behaviour change through changes amongst key stakeholder organisations. It also seeks to integrate a range of different policy levers that can influence behaviour through five domains of: information, education, support design solutions, and control measures. Effective interventions are developed by ensuring that measures from each of these domains reinforce the desired behaviour change in an integrated way.

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

Social marketing interventions to achieve behaviour change are, by nature, evidence based. The application of the social marketing methodology involves both reviewing existing evidence and theory to develop the theoretical basis for the intervention, and it also depends upon the use of primary '*marketing research*' to generate actionable insights from the knowledge, attitudes, motivations and behaviours of the target audience. There have been a series of systematic reviews of evidence relating to the effectiveness of social marketing and other behaviour change interventions conducted by the Institute for Social Marketing at Stirling University. These include reviews on:

- Food and diet⁴⁸⁴;
- Alcohol⁴⁸⁵;
- Smoking cessation;⁴⁸⁶
- Activity promotion;⁴⁸⁷

These systematic reviews have generally demonstrated both the effectiveness and cost-effectiveness of such interventions.

⁴⁸³ Bhattachary, D. et al. (2008), 'Selling Sustainability: Seven lessons from advertising and marketing to sell low-carbon living'. NESTA: London. Available at: <http://www.nesta.org.uk/library/documents/selling-sustainability-v5.pdf>

⁴⁸⁴ Several studies including the FSA 'Hastings Review' available at: http://www.ism.stir.ac.uk/projects_food.htm

⁴⁸⁵ Stead, M., Gordon, R., Holme, I., Moodie, C., Hastings, G. and Angus, K. (2009), 'Changing attitudes, knowledge and behaviour: A review of successful initiatives', Joseph Rowntree Foundation. Available at: <http://www.jrf.org.uk/sites/files/jrf/alcohol-attitudes-behaviour-full.pdf>

⁴⁸⁶ Stead, M., Gordon, R., Angus, K. and McDermott, L. (2007), 'A systematic review of social marketing effectiveness', *Health Education*, 107 (2), pp. 126-191

⁴⁸⁷ Op cit.

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The ‘Showcase’ examples provided by the NSMC also provide case-study based evidence of specific instances of effective interventions and good practice⁴⁸⁸. A cost effectiveness analysis tool is also currently being developed by the NSMC and should provide a level of standardisation which will aid the process of effective valuation.

10. What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

The resources provided by the NSMC (particularly the recently developed ‘Toolbox’⁴⁸⁹) provide considerable support for public sector organisations seeking to design, implement and evaluate behavioural change interventions. There are also a range of international online resources available from the USA, Canada and Australia such as the Canadian ‘Tools of Change’ website⁴⁹⁰ and the Community-Based Social Marketing resources on ‘Fostering Sustainable Behavior’ website⁴⁹¹.

However, experience suggests that it is important to have some support from someone with specific expertise in managing such interventions when first beginning the process.

At local level capacity could be boosted the development of programmes along the lines of Florida’s Prevention Research Centre at the University of South Florida and their *Community-Based Prevention Programme*. This brings community coalitions of stakeholders together with experienced marketers to help them develop a community based social marketing intervention to achieve behaviour change. This helps to build community networks to tackle problems and builds capacity and knowledge relating to behaviour change and social marketing which has been shown to be effective (in programme evaluations) and has the potential to be applied to behaviours beyond the health field.

In terms of understanding the cultural changes which are important to achieve within public sector organisations in order to effectively support behaviour change interventions, this is an embryonic field of knowledge. It is an area where further research is likely to prove helpful. The recent development of published professional standards in social marketing should help both to help those within public service to better understand the nature and potential of social marketing and to provide a degree of standardisation and quality assurance for some of the support available to them.

14. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted?

Social marketing as an approach to behaviour change adopts the commercial marketing philosophy of treating the members of the public who are the targets of the behaviour change as a ‘target

⁴⁸⁸ <http://www.nsms.org.uk/showcase-case-studies.html>

⁴⁸⁹ <http://www.socialmarketing-toolbox.com/>

⁴⁹⁰ <http://www.toolsofchange.com/en/home/>

⁴⁹¹ <http://www.cbsm.com/public/world.lasso>

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market' and developing a '*proposition*' for behaviour change which motivates them. This motivation could be through the promise of either positive benefits or the avoidance of costs, just as toothpaste manufacturers market to us through the positive benefits of a bright and attractive smile, and through avoiding the negative costs of bad breath or gum disease. It also operates by engaging with all those organisations that have a '*stake*' in the particular behaviour. Therefore it provides a methodological approach through which public involvement and the involvement of a wide range of stakeholder organisations is both guaranteed and central to ensuring that the interventions are effective.

16. The Committee would particularly welcome submissions on behaviour change interventions designed to tackle obesity

Obesity interventions tackled by targeting eating behaviours, exercise or both represent one of the major applications for social marketing both nationally and internationally. If the committee wishes to understand the potential for social marketing interventions to tackle obesity (particularly in children and young people) we would recommend reviewing

- The Healthy Weight for Children Hub's database of interventions⁴⁹².
- The US Government's '*Let's move*' campaign promoted by Michelle Obama⁴⁹³ which represents a large scale behaviour intervention seeking to tackle exercise, diet, food culture and infrastructure in an integrated programme.
- Obesity related social marketing interventions detailed in the blog of the leading American social marketing expert Craig Lefebvre.⁴⁹⁴

This is however a particularly challenging area to develop effective implications, and if the committee wish to fully understand this challenge and both the limitations and achievements of interventions, we would recommend reviewing the meta-analysis of obesity prevention programs for children and adolescents conducted by Stice et al. (2006).⁴⁹⁵

7 October 2010

⁴⁹² <http://www.healthyweight4children.org.uk/>

⁴⁹³ <http://www.letsmove.gov/>

⁴⁹⁴ http://socialmarketing.blogs.com/r_craig_lefebvre_social/obesity_prevention/

⁴⁹⁵ Stice, E., Shaw, H. & Marti, N. (2006), A Meta-Analytic Review of Obesity Prevention Programs for Children and Adolescents: The Skinny on Interventions that Work, *Psychology Bulletin*, 132 (5), pp. 667-691. Available at:
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1876697/>

Supplementary written evidence from the ESRC Centre for Business Relationships, Accountability, Sustainability and Society (BRASS) and the School of City and Regional Planning, Cardiff University (BC 135)

- I. In this brief submission to the House of Lords Science and Technology Select Committee Call for Evidence on behaviour change interventions targeting travel mode choice, we will address a number of the questions described in the call for evidence. The authors jointly have considerable expertise in the psychology of attitudes and behaviour change and in social marketing, with a particular focus on the promotion of sustainable behaviour. The first three authors are based in the ESRC-funded Centre for Business Relationships, Accountability, Sustainability and Society (BRASS) whose research programme includes work on promoting sustainable lifestyles and behaviours amongst individuals and communities. Dr Lee is based in Cardiff University's School of City and Regional Planning, and her research includes work on transport planning and sustainable travel choices.
 - a. **What are the most influential drivers of behaviour affecting an individual's choice of mode of travel?**
 2. The literature on travel mode choice highlights that travel behaviours are the outcome of a number of different factors (for a review see Whitmarsh & Kohler, 2011⁴⁹⁶). Transport behaviour may be a product of multiple motivations or of unconscious habit. The reasons for the disparity between the widespread awareness of transport problems and limited adoption of sustainable travel behaviours are in part to do with the multiple determinants of travel behaviour, and in part to do with the barriers to low-carbon lifestyle change.
 3. First, travel behaviour is not simply (indeed, not often) determined by environmental considerations. Rather, it is an outcome of a complex set of psychological, social, economic, and infrastructural factors⁴⁹⁷, and very often strongly habitual. Personal preferences for comfort, convenience, autonomy and so on, clearly play a role in transport choices, as do less conscious determinants, such as social identity, symbolism and status associated with vehicle choice and use. Income and pricing of transport options are also important (transport demand tends to increase with GDP, although transport is often found to be a very economically inelastic behaviour in high-income societies⁴⁹⁸), as are infrastructure and availability of alternatives; those living in rural areas are most likely to drive because there are few alternatives available to them, and recent policies concerning public services centralisation only exacerbate the problem, with additional impact on the health and well-being on these populations⁴⁹⁹. Where individuals choose to switch to low-carbon alternatives to driving, this is more often out of a desire to save money or for reasons of convenience or health benefits than out of environmental concern (though this may be a secondary reason).
 4. Second, there are various barriers to changing lifestyles that prevent awareness of transport problems manifesting in behaviour change. While precise knowledge of the

⁴⁹⁶ Whitmarsh, L. & Köhler, J. (in press). Climate change and cars in the EU: the roles of auto firms, consumers, and policy in responding to global environmental change. *Cambridge Journal of Regions, Economy and Society*.

⁴⁹⁷ e.g., Cao & Mokhtarian, (2005). How do individuals adapt their personal travel? Objective and subjective influences on the consideration of travel-related strategies for San Francisco Bay Area commuters. *Transport Policy*, 12 (4), 291-302.

⁴⁹⁸ However, it is possible that by increasing comfort, speed and lowering prices for alternative transportation modes one can influence price elasticity of a transport mode (see: Victoria Transport Policy Institute: Transportation Elasticities, available from www.vtpi.org/elasticities.pdf).

⁴⁹⁹ Ipsos (2008) Impact of Post Office Closures on Local Communities: Summary Report. *Report for the National Audit Office*, (7 November 2008).

relative impacts of different transport modes may be one factor, knowledge deficit is by no means the most important. Institutions and infrastructures serve to lock in carbon-intensive lifestyles, including car dependency. On the social and cultural side, norms and conventions serve to reinforce the assumption that car ownership is a precondition of quality of life and the value of automobility. At the same time, the built environment has developed around – and perpetuated – car dependence, with increasingly low-density and dispersed forms of development contributing to widespread perceptions of limited (or unattractive) alternatives to driving. The term ‘behavioural lock-in’ has also been coined to describe the role of habits in restricting lifestyle change. Travel behaviour is often habitual, and as such difficult to change: individuals with strong car use habits do not consciously deliberate over travel choices or pay attention to information about alternative modes. This works against the effectiveness of information campaigns. Furthermore, where car use becomes a strong habit, individuals tend to exaggerate the poor quality of alternatives and the journey times they involve.

b. What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?

5. Urban form that has developed around roads and cars has created a strong lock-in to automobiles as the primary form of personal transport in wealthy societies.⁵⁰⁰ Furthermore, changes in infrastructure – either naturally-occurring or policy-led – can play a critical role in breaking travel habits. For example, Fujii and colleagues⁵⁰¹ found that a freeway closure significantly changed habits beyond the duration of the closure; once drivers were forced to try an alternative mode they realised it was not only feasible but also more attractive than driving.
6. Even minor changes to infrastructure such as improved signage for cycling and walking routes can impact behaviour. Australian research demonstrated that parental perceptions of the sufficiency of traffic lights and pedestrian crossings in a neighbourhood significantly impacted the likelihood of older children walking or cycling to schools⁵⁰².
7. The impact of infrastructure investment is not always straightforward, however. Urban light rail investments, primarily aimed at peak-hour modal shift from automobiles to rail, have in the UK actually led to modal shift occurring primarily between public transport modes, thus reducing overall carbon savings from this infrastructure investment.⁵⁰³ This is in stark contrast with French and German cities where far more positive impacts of new rail schemes on both car ownership and modal shift have been evidenced. The key differences that offer explanations for the contrasting outcomes include i) the relatively low-density land use patterns in UK cities, ii) the limited (rail) service coverage, iii) higher fares and iv) the paucity of complementary (traffic restraint) measures. Rail schemes in the UK cities outside London are primarily designed to serve trips to the city centre. However, the degree of job decentralisation in UK cities means that, while the city centre

⁵⁰⁰ Köhler, J. (2006). Transport and the environment: the need for policy for long-term radical change: A literature review for the DTI FORESIGHT project on Intelligent Infrastructure Systems. *IEE Proc. Intelligent Transport Systems*, 153(4).

⁵⁰¹ Fujii, S. et al. (2001). Changes in drivers' perceptions and use of public transport during a freeway closure: Effects of temporary structural change on cooperation in a real-life social dilemma. *Environment and Behavior*, 33(6), 796-808.

⁵⁰² Hume, C. et al. (2009). Walking and Cycling to School: Predictors of Increases Among Children and Adolescents. *American Journal of Preventive Medicine*, 36(3), 195-200

⁵⁰³ Whereas the rail share along the rail corridors increased considerably when the work journeys to city centre were exclusively considered, the overall impacts of the rail schemes on city-wide journeys-to-work were much less clear with most of the shift to rail coming from buses rather than cars. See: Lee, S. & Senior, M. (2011). Using Census data to examine the impacts on work mode choice and car ownership of English light rail schemes opened between 1991 and 2001. *Transport Planning and Technology* (under review).

is still the most popular trip destination, it now attracts only a very modest proportion of total work trips in the city (e.g., the ward covering Cardiff's City Centre received about 17% of the city's work trips in 2001⁵⁰⁴).

c. What are the latest developments in the evidence-base in relation to changing travel-mode choice and the implications of those developments for policy?

8. As we mentioned in our response to the first call for evidence – and is particularly relevant to travel behaviours – the role of habit is a promising and growing field of research. Habitual behaviour is automatic, and responds to contextual ‘cues’ rather than explicit instructions. Two ongoing DEFRA-funded projects are applying the novel theoretical insights on breaking and creating habits of Verplanken and colleagues⁵⁰⁵ (directly linking behaviour change research with policy-relevant goals). Their ‘Habit Discontinuity’ hypothesis states that, because habits are ‘cued’ by the context in which behaviour takes place (e.g., using the car whenever one leaves the house to go to work), so habits can be disrupted at particular moments in time when the context changes (e.g., moving house, changing job). Researchers in Germany have tested the ‘habit discontinuity hypothesis’ using an intervention targeted at those who had recently moved home. Bamberg⁵⁰⁶ provided tailored public transport (PT) information and a one-day bus pass to recent movers (six weeks post-relocation) and to a control group and found the intervention was significantly more effective for recent movers (increasing PT use by 29%) than for existing residents. Even without an intervention, UK researchers have found that moving house makes people more likely to act in keeping with their environmental values; recent movers with high pro-environmental values are more likely to use sustainable travel modes than those with high pro-environmental values who have not recently moved.⁵⁰⁷
9. Research evidence also suggests that although factors such as infrastructure, location, life-stage, lifestyle and even weather are powerful influences on travel choices and behaviours, there are clear differences in attitudinal factors amongst people which can be used to segment the population into groups who differ in their transport mode choices, the distances they travel and how they will respond to different types of behavioural intervention.⁵⁰⁸

d. What are the most appropriate type and level of interventions to change travel-mode choice?

10. There is good evidence that behaviour change interventions work best when they are combined with other policy interventions. As well as ‘downstream’ interventions (i.e. changing individual behaviours or attitudes), there is a great deal of scope for ‘upstream’ interventions to contribute to behaviour change⁵⁰⁹. Upstream interventions attempt to promote the conditions that shape and sustain desired habits or behaviours. This is

⁵⁰⁴ Lee, S. (2011). Does it matter where you work? The effect of trip destination on mode choice. Working Paper, School of City and Regional Planning, Cardiff University.

⁵⁰⁵ Verplanken, B. & Wood, W. (2006). Interventions to break and create consumer habits. *Journal of Public Policy and Marketing*, 25, 90-103; Verplanken, B., et al. (2008). Context change and travel mode choice: Combining the habit discontinuity and self-activation hypotheses. *Journal of Environmental Psychology*, 28, 121-127

⁵⁰⁶ Bamberg, S. (2006). Is a residential relocation a good opportunity to change people's travel behavior? Results from a theory-driven intervention study. *Environment and Behavior*, 38, 820-840.

⁵⁰⁷ Verplanken, B. et al. (2008). Context change and travel mode choice: Combining the habit discontinuity and self-activation hypotheses. *Journal of Environmental Psychology* 28,121-127.

⁵⁰⁸ Hunecke, M. et al. (2010). Attitude-based target groups to reduce the ecological impact of daily mobility behavior. *Environment and Behavior*, 42(1), 3-43.

⁵⁰⁹ Maio, G.R., et al. (2007). Social psychological factors in lifestyle change and their relevance to policy. *Journal of Social Issues and Policy Review*, 1, 99-137

because social/structural barriers often discourage behaviour change, despite good intentions. For example, aiming for more sustainable transport behaviour is difficult when public transport or safe walking/cycling routes are not readily available. Many of the most effective interventions designed to produce changes in lifestyles and behaviours use a combination of both downstream and upstream strategies. In addition, such strategies can greatly benefit from market-segmentation;⁵¹⁰ for instance, car owners appear to be less susceptible to change than non owners⁵¹¹, and thus customised approaches are necessary. Personalised travel planning is one such (downstream) approach to providing tailored information (often with incentives)⁵¹², but for many segments structural barriers may also need to be removed (through upstream approaches).

11. An example of good practice comes from the 'Choose How You Move'⁵¹³ social marketing intervention developed in Worcester largely through a partnership between the Council and SusTrans. This research-led intervention involved direct contact through households along with partnerships with schools and employers to reach individuals. It combined information and communication initiatives to tackle low levels of awareness and misconceptions about alternatives to car use with positive incentives, changes to physical infrastructure, to public transport services, to Council information services and to employers' working time practices. It has been used as an example of good practice for local authorities by both the Department for Transport and the National Social Marketing Centre.
12. Research on the effectiveness of alternative interventions and real world experience so far form a clear message that pricing can deter excessive driving. In contrast, investments in public transport or other facilities for alternative modes alone ('pull' measures in the absence of 'push' measures) see only limited effects. Similarly, the effectiveness of higher density development with enhanced access to alternative modes (such as neo-traditional neighbourhoods or Transit-Oriented Developments as more conspicuously experimented in the USA) are less than convincing when implemented in the absence of significant car restraint measures. May and colleagues⁵¹⁴ illustrate various interactions among transport policy interventions, including 'complementary' and 'synergetic' relationships among others, and highlight the importance of policy integration.

e. Who are the most effective agents for the delivery of behaviour interventions to change travel-mode choice?

13. Various stakeholders may be effective agents for delivering behaviour change: this includes employers (in developing employee travel plans); local authorities, ideally in combination with public transport firms (for personalised travel marketing including free bus tickets); as well as national government (larger infrastructure changes, economic policies, etc.). Evidence from both the UK and Europe suggests that partnership approaches between these stakeholders are particularly effective since government at national and local level and transport providers both have considerable influence over the travel options, whilst

⁵¹⁰ Cao & Mokhtarian, (2005). How do individuals adapt their personal travel? Objective and subjective influences on the consideration of travel-related strategies for San Francisco Bay Area commuters. *Transport Policy*, 12 (4), 291-302

⁵¹¹ Thøgersen, J. (2006). Understanding repetitive travel mode choices in a stable context: A panel study approach. *Transportation Research Part A* 40, 621–638.

⁵¹² DfT (2005). Evaluation of 14 pilots part funded by DfT. Operational Research Unit, DfT (22nd June 2005). Retrieved 19/01/2011 from <http://www.dft.gov.uk/pgr/sustainable/travelplans/ptp/personalisedtravelplanningev5774>

⁵¹³ See: <http://thensmc.com/component/nsmc casestudy/?task=view&id=68>

⁵¹⁴ May, A. D., Kelly, C. and Shepherd, S. (2006), The principles of integration in urban transport strategies. *Transport Policy* 13, 319-327.

schools, employers and retailers have considerable influence over the perceived costs and benefits of travel choices for individuals linked to particular types of journey, and represent a potential channel through which to reach and influence individuals. So for example whether an employer offers storage and showering facilities for cyclists, what it charges for car parking, whether it provides particular travel incentives and flexible working practices can all influence employee behaviours⁵¹⁵.

14. The public may also be considered a delivery ‘agent’, given that public acceptability is clearly a major challenge to various forms of road pricing, one of the few transport intervention types with proven effects on reduced car use. London’s case well illustrates how important it is to involve various stakeholders in the decision process⁵¹⁶. Substantial use of penalties on driving will likely affect people’s perception of the quality of life, given the prevailing preference for private motor vehicles. For those who are ‘priced out’, their quality of life will greatly depend on the availability and quality of alternative transport modes. Restraint measures are thus undesirable if they are implemented without ensuring the latter and will lead a segment of the population to considerable dissatisfaction and even frustration.
15. A further challenge comes from the fact that the implementation of these restraint measures is up to local authorities and any significant charging schemes can affect the relative competitiveness of the city. This was not a real concern for London, but is likely to be one for many other UK cities. One way to address the issue of local competition is to scale up (e.g., centralise) decision-making with respect to the extent of traffic restraint measures to be used, possibly relating it to city size, economic status, and the existing level of congestion. This will have implications for relative performance of each city (e.g., in terms of the quality of life) as cities have varying supplies of alternative transport systems. However, if all large cities are subject to congestion charging, for instance, the quality of life would vary more significantly with the level and quality of public transport service provided in the city. Cities then might compete through the provision of public transport service, which could lead to harmonisation of the service standards over time.

f. How do current behaviour change interventions seek to change travel-mode choice and what use is made of available scientific evidence?

g. Are current policy interventions addressing both psychological and environmental barriers to change?

h. Are policy interventions appropriately designed and evaluated?

16. Given the multiple – and often unconscious, habitual – drivers of travel behaviour, it is unsurprising that past informational and economic approaches to encouraging transport behaviour change have met with limited success. Information will be ignored in the presence of strong habits; and economic motivations are only one amongst many reasons for people’s transport choices. Indeed, where economic measures are inappropriately applied, they can lead to public protests, as in the case of the fuel duty protests in the UK in 2001, where hauliers blockaded oil refineries leading to major disruption. Greater success has been seen for transport demand management policies which are at once equitably enforced and provide viable alternatives to car use. The UK hauliers’ protest was in large part due to their perception that the increased duty was unfair to businesses who

⁵¹⁵ Enoch, M.P. & Rye, T. (2006), ‘Travel Plans: Using Good Practice to Inform Future Policy’, in B. Jourquin, P. Rietveld and K. Westin (eds), *Towards Better Performing Transport Networks* (Oxon: Routledge), 157–77.

⁵¹⁶ Lee, S., (2008), Transferring London Congestion Charging to US cities – how might the likelihood of successful transfer be increased? In H.W. Richardson & C.-H. C. Bae (eds.), *Congestion Pricing: Lessons from Europe and Implications for the United States*. Cheltenham: Edward Elgar Publishers (Chapter 11) Pp. 212-231.

relied on road transport, a perception that was widely shared by the public who perceived alternative modes to be unfeasible or unattractive and did not in any case accept the rationale for a rise in duty. Revenues from the London Congestion Charge have been used to enhance public transport within the city, thus providing attractive alternatives to car use. The scheme has largely been seen as a success, having reduced congestion without negatively affecting business, and (since its introduction) receiving support from much of the public⁵¹⁷. It is clear that fairness is a key characteristic of acceptable transport policies⁵¹⁸.

17. Also, as already discussed, current interventions tend not to be targeted effectively. This targeting includes to *different groups and individuals* (e.g., using market segmentation; providing personalised travel plans), and to *points in time* where interventions are likely to be most effective because individuals are reconsidering their transport choices, and therefore ‘unfreezing’ their habits (e.g., relocation, changing job, starting a family, etc.)

j. What lessons can be learnt from interventions employed in other countries?

18. As mentioned, there is good evidence from German research⁵¹⁹ that targeting travel mode choice interventions to ‘windows of opportunity’ when habits are naturally disrupted (e.g., relocation) can significantly increase their efficacy.
19. Other work highlights the pioneering transport policies implemented in Freiburg, Germany which has adopted a long-term integrated approach incorporating early stage citizen engagement with land use planning, infrastructure development commensurate with the expansion of the urban fabric, improvement of existing alternatives (especially public transport infrastructure upgrades), implementation of traffic calming measures and construction of continuous cycle routes⁵²⁰. Starting in the 1970s the combination of the above measures has so far delivered a modal split of over 50% non-motorised trips (walking and cycling), 20% public transport and 30% shared or private car trips with plans for further reduction of the latter⁵²¹. This highlights the need for long-term consistent and integrated policies if significant and lasting results are to be achieved.

21 January 2011

⁵¹⁷ Richards, M. G. (2006). Congestion Charging in London. The Policy and the Politics, Palgrave Macmillan.

⁵¹⁸ King, S., et al. (2009). Exploring public attitudes to climate change and travel choices: deliberative research. Final report for DfT <http://www.dft.gov.uk/pgr/scienceresearch/social/climatechange/attitudesclimategchange.pdf>. People Science & Policy Ltd & ITS, Leeds.

⁵¹⁹ Bamberg, S. 2006. Is a residential relocation a good opportunity to change people's travel behavior? Results from a theory-driven intervention study. Environment and Behavior, vol. 38, 820-840.

⁵²⁰ City of Freiburg im Breisgau Sustainability Office (2008). Freiburg green city: approaches to sustainability Retrieved 20/01/2011 from http://www.messe-freiburg.de/servlet/PB/show/1199617_12/GreenCity.pdf.

⁵²¹ Modal Split in Freiburg. Freiburg planning office. Retrieved 20/01/2011 from <http://www.freiburg.de/servlet/PB/show/1234663/Modal%20Split%2082%2099%202020%20BV.pdf>

Written evidence from Professor Peter Bonsall, University of Leeds (BC 125)

Professor of Transport Planning (responding as an individual)

Institute for Transport Studies, University of Leeds (winner of the 2010 Queen's Anniversary Award for Higher and Further Education for "Sustained Excellence in Transport Research")

Questions (in the Second Call)

a. What are the most influential drivers of behaviour affecting an individual's choice of mode of travel?

1. Familiarity, cost, duration of journey, predictability of duration, perceived ease of use, comfort and social acceptability. The importance of these factors varies between individuals and, for a given individual will depend on the specific circumstances⁵²².
2. **Familiarity** is often overlooked as a driver of choice but it is well established as the prime factor in most routine journeys – most people will only consider changing their routine if it becomes manifestly sub-optimal and, as a result, most observed behaviour actually reflects conditions at some past point in time.
3. **Cost** and **duration** of journey are generally well understood and are the “classic” levers of travel demand management. However, there is evidence⁵²³ to suggest that responses to pricing are often far from straightforward and to question the traditional assumption that richer people are less sensitive to price.
4. **Predictability of journey duration** can be as important as (average) duration itself⁵²⁴ – particularly for journeys in which lateness would bring significant costs or other disbenefit. Unfortunately the absence of a clear metric for predictability has resulted in its exclusion from standard appraisals.
5. **Perceived ease of use** here refers to the effort required to find out about, and make use of, a given mode of transport. It thus reflects factors such as the amount of information provided and any inherent complications, complexities or physical barriers facing users. Such barriers and complexities can be of crucial importance for some potential users but may be a trivial concern to others.
6. **Comfort**, as distinct from perceived ease of use, is probably the least important of the seven drivers listed above but can often tip the balance for a given choice.
7. The importance of **social acceptability** is increasingly recognised by policy analysts but is rarely fully understood. The concept includes the related, overlapping and sometimes conflicting ideas of “behavioural norms” (behaviour which is normal and expected for a particular group, and which may include an element of what might be deemed an instinct to copy others), emulation of opinion-leaders’ behaviour (being influenced by behaviour of celebrities and respected individuals), altruistic adherence to a moral code (doing what one believes to be right even if it is not in one’s own short term interest), and adherence to all relevant rules and regulations.

⁵²² Bonsall, P, Conner, M. Marsden G and Darnton, A (2009) Thinkpieces on behavioural change 1:Influencing Individual Citizens, <http://www.dft.gov.uk/pgr/scienceresearch/social/behaviour-changes/pdf/thinkpiece1.pdf> 2: Influencing Organisations, <http://www.dft.gov.uk/pgr/scienceresearch/social/behaviour-changes/pdf/thinkpiece2.pdf> 3: What Works for Engaging Local Delivery Partners in Delivering Behaviour Change Interventions? <http://www.dft.gov.uk/pgr/scienceresearch/social/behaviour-changes/pdf/thinkpiece3.pdf>

⁵²³ Bonsall P, Shires J, Matthews B, Maule J and Beale J.(2007) “Responses to Complex Pricing Signals: Theory, Evidence and Implications for Road Pricing”, Transportation Research A 41 (A), 672-683.

⁵²⁴ Bonsall P (2004), Traveller Behavior: Decision making in an unpredictable world. Journal of Intelligent Transport Systems, Vol 8 (1), 45-60.

b. What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?

8. In certain cases (e.g. use of a high speed train), the infrastructure requirement is clear, inescapable and expensive. In other cases (e.g. walking or cycling) it is more modest but still cannot be ignored if a significant increase in usage is sought (in which case some investment in cycle or pedestrian priority measures as well as in cycle storage, workplace showers and associated facilities would be useful). Although some increase in bus use may be achieved without any investment in infrastructure, any significant increase is likely to require some investment in additional capacity, bus priority measures, smart ticketing technology, information displays, etc.
9. Even when not strictly necessary to carry the increased load, any investment in visible infrastructure sends a positive message to potential users which may help to persuade them to adopt the relevant behaviour. Put more negatively, absence of an obvious investment in relevant infrastructure can undermine attempts to promote a mode shift. But this is dangerous ground – conspicuous investment in unnecessary infrastructure can lead to resentment and negativity.

c. What are the latest developments in the evidence-base in relation to changing travel-mode choice and the implications of those developments for policy?

10. Probably the most important information is that (from the National Travel Survey and elsewhere) on trends in the use of each mode and on the costs and speeds of trips by each mode. Although not “new”, this data source provides invaluable information on choices and on some of the factors which underlie them. The NTS data also identifies trends in overall trip rates and so, together with data on working hours and Internet use (e.g. from the Labour Force Survey and the ONS Opinions Survey respectively), reveals the fundamental importance of trends towards the replacement of travel by telecommunications and the increased use of alternatives to traditional commuting patterns which seem likely to make a more significant contribution to the reduction of car use in towns and cities than any initiative to change mode use.
11. I would also single out the evidence on trends in attitudes to different modes as reported in regular surveys such as The British Social Attitudes Survey. These are important because they document some of the emerging trends in the attitudes, opinions and norms which influence individual decisions.
12. Recent evidence on the performance of individual initiatives (such as the Smarter Choices initiatives) does not, in my opinion as an auditor of one such study and as an observer of others, meet the standards of robustness one would like to see as the basis of evidence-based policy. However, the reports do include useful insights on the types of measures which appear to have worked well in the specified circumstances.

d. What are the most appropriate type and level of interventions to change travel-mode choice?

13. Extending the definition of types put forward in the original Call for Evidence, I conclude that there is a role for fiscal measures, legislation, provision of infrastructure, education and information – but that the appropriate mix of tools, both sticks and carrots, is very context dependent.
14. **Fiscal measures** are undoubtedly the most effective means of influencing mode choice. The most prominent examples being the introduction of parking charges and of road user charges (whether as a congestion charge or a road user fee). The effectiveness of these measures is well documented from case studies around the world. It is also clear that

mode choice can be influenced by the magnitude of fuel taxes – although most of the evidence comes from changes in fuel costs attributable to changes in oil prices or in engine efficiency rather than to any deliberate change in fuel taxes. Some of the evidence on the effect of price on mode choice comes from short term impacts of major changes in fuel price but much of it is deduced from analysis of the long term trends in the relative costs of travel by car and bus.

15. There is ample evidence to suggest that increases in price have more impact on behaviour than equivalent reductions in price. More people will be persuaded to stop using public transport when the fares rise than would be attracted to it if they were to fall. This effect is explained by theories on the psychology of choice.
16. The effectiveness of price rises is not in doubt, the issue is rather the strength of political will to use so emotive an instrument to bring about a real reduction in car travel. This is evidenced by the lack of serious interest by local authorities outside London in taking up the power to introduce road charges and by the retreat of successive governments from serious and sustained increases in fuel tax – despite its efficiency as a fiscal instrument. Increased fuel taxes would, of course, fall disproportionately on rural motorists but this effect could be mitigated by using part of the revenue to subsidise the provision of rural services (post offices, local schools, broadband, travelling libraries, etc) which would reduce the need for rural travel.
17. **Legislation** can impact on individual mode choice decisions by constraining or enhancing the choices available. The power given to local authorities to restrict the amount of parking on-street and in new developments – which makes car travel much less attractive than would otherwise be the case – is a prime example of legislation which acts by constraining the choices available. The power given to London (but to no other local authority) to plan its public transport services and the powers given to local authorities to require new developments to be accessible by public transport are examples of legislation which seeks to enhance the range of choices on offer.
18. Legislation has a well-documented impact on carbon emissions – via the requirements on vehicle manufacturers not to exceed specified fleet emission averages and via the ban on vehicles whose emissions exceed specified limits - but these are perhaps out of scope for the current enquiry.
19. The role of the **provision of infrastructure** was dealt with in the answer to Question b above.
20. **Education and propaganda** undoubtedly have a role in achieving long term shift in mode choices but their impact is difficult, arguably impossible, ever to prove. Their impact is achieved gradually by changing the climate of opinion in which individual decisions are made and most particularly by changing the perception of what constitutes socially acceptable behaviour. Changes in expressed attitudes have been revealed via periodic surveys and it has now become the norm, in polite society at least, to espouse a concern for the environment. The fact that many commercial organisations go out of their way to claim green credentials is both a marker of the fact that such values have become mainstream and a contributor to their wider acceptance by the public. A certain milestone was reached when high-end holiday travel companies began to offer information about rail as an alternative means of accessing European holiday destinations and to stress that their researchers had done their resort visits by train rather than by car or plane.

21. The provision of **targeted information** can be a very cost-effective means of influencing mode choice – provided that the service being advertised is attractive and was not previously fully known. Thus the effectiveness of advertising new bus, train or coach services which offer good value for money is not in doubt. The provision of information about existing public transport via websites and travel planning tools (e.g. Transport Direct), or more traditionally via telephone help-lines or printed leaflets, is also judged to be worthwhile on the basis of data on the number of visits, calls and requests. Attitudinal studies suggest that information about local options for cycling and walking have a small but positive effect. There is, however, some evidence⁵²⁵ to suggest that advertising can have a negative effect if it draws attention to a service which is not really attractive or if it inadvertently emphasises attributes which are off-putting to certain groups.

e. Who are the most effective agents for the delivery of behaviour interventions to change travel-mode choice?

22. Some of the potentially most effective fiscal measures are best implemented at a national scale. Although it would be possible to increase fuel taxes only in urban areas, the administrative costs of so doing would be greater and the effectiveness of the policy would be undermined by the generation of refuelling trips to adjacent areas with cheaper prices. Local authorities have generally been reluctant to fully exploit the potential offered by parking policy or to introduce road user charges in their own bailey wick because they are concerned that their economy would be disadvantaged relative to that of competing cities.

23. London showed how, using a fiscal measure (the Congestion Charge) and a legislative framework which allows revenue to be targeted on improvements to public transport infrastructure and allows coordinated planning of public transport, a powerful and progressive local authority was able to achieve an impressive change in modal split. Other local authorities have looked with envy at the powers made available to London and, in the main, have had to endure a continuing downward spiral in the use of buses while achieving relatively modest successes with local initiatives to encourage cycling or walking.

24. A number of success stories attest to what can be achieved by forward looking employers and community groups (e.g. via reduced travel schemes, car-sharing schemes, and “walking-buses” to replace the school run) without any major investment in infrastructure or change in infrastructure. Close examination of these success stories unfailingly reveals the importance of individual champions whose energy and enthusiasm has goaded others into action. Unfortunately, anecdotal evidence suggests that many such initiatives are fairly fragile and may not survive the departure of the original champion or the removal of funding.

25. In summary, there is considerable untapped enthusiasm and potential within local authorities, companies, community groups and other local organisations to contribute to the desired shift towards reduced use of the most carbon-emitting and congestion-causing modes of transport, but that potential cannot be tapped unless those organisations, and the individual champions within them, are given appropriate powers, support and funding¹.

f. How do current behaviour change interventions seek to change travel-mode choice and what use is made of available scientific evidence?

⁵²⁵ Beale J and Bonsall P (2007) Psychological aspects of response to marketing in the bus industry, *Transportation Research F* 10, (4) 271-287.

26. The Smarter Choices initiatives have sought to influence mode choice through a combination of tools which focus on local needs and circumstances. Typical components include:

- infrastructure provision - generally quite modest in scale and typically focussing on facilities for cyclists and pedestrians and a range of bus priority measures;
- new services – typically including car sharing schemes, car clubs and a range of community transport services;
- education and propaganda – including cycling proficiency schemes, “bus-buddy” or “cycle-buddy” schemes and information targeted on local facilities and services;
- an emphasis on community involvement through active engagement of schools, hospitals, doctors surgeries, retailers, local employers and community groups; and
- an attempt to engage individual citizens via consultation exercises, competitions, newsletters and regular feedback on progress and developments.

27. The combination of provision of opportunities (infrastructure and services) with education, propaganda, community involvement and attempts to achieve individual engagement is fully in line with the latest thinking on the factors affecting behavioural choice – including the importance of social norms and of “nudge” factors.

g. Are current policy interventions addressing both psychological and environmental barriers to change?

28. Most seek to do so - in as far as they can. However, some of the factors which have the greatest influence on mode choice decisions have been deemed off-limits and, in some cases are being allowed to move in the “wrong” direction”. Thus, outside London, bus travel is rarely a “rational” choice for someone who has access to a car; the journey will often be more expensive and more time consuming than driving and this, unsurprisingly, is a major obstacle to any attempt to encourage a shift from car to bus.

29. There are several reasons for this but the following should perhaps be highlighted:

- public transport fares have been rising relative to the costs of driving for many years and this trend now looks likely to accelerate;
- local authorities outside London lack the power to ensure a high standard of bus service at an affordable price with appropriate scheduling and efficient off-bus ticketing;
- local authorities have been reluctant to provide effective priority for buses during peak periods, or to implement road user charges or higher parking charges in city centres, for fear of competition from other cities or out-of-town retail parks; and
- Governments have been reluctant to increase the cost of car use via further increases in tax on fuel or introduction of nationwide road user charges.

30. Attempts to change public attitudes to the available modes are set back by high profile references to a “war against the motorist” as much as they were by the famous utterance by a former prime minister that one should regard oneself as having failed in life if one was still using buses beyond childhood or the comment by a former transport minister, all be it meant in jest, that one is wont to meet an inferior class of person on buses. This contrasts with the remarkable way in which the example set by some prominent politicians has helped rid cycling of its previously rather unattractive image.

h. Are policy interventions appropriately designed and evaluated?

31. The Smarter Choices interventions have been designed as demonstration schemes. The emphasis has been on showing what can be achieved with different packages of measures in a range of circumstances. Unfortunately the emphasis on packages of measures, while

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perfectly sound in the interests of achieving maximum impact, has made it impossible objectively to determine the contribution of individual elements of each package⁵²⁶.

32. More seriously, as an auditor of some of the schemes, I had to conclude that the overall impacts which were reported did not always stand up to close examination, that insufficient care had been taken to establish the counterfactual, and that the possibility of biased reporting could not be dismissed. More generally, it was clear that the long term impacts of the interventions would be difficult to establish.
33. Although some of the evaluation problems could be overcome with greater preparation and some change in methodology, it is unlikely ever to be possible to apply full scientific rigour to the assessment of behavioural change initiatives⁵²⁷.
34. Practitioners in the field of transport behaviour change can make use of specialist guidelines, reports, workshops, conferences and a network of fellow practitioners to help them plan new interventions. There is, however, a shortage of independent agencies capable of an objective assessment of the effectiveness of these interventions.

i. What lessons have been learnt and applied as a result of the evaluation of policy?

35. Increased focus on achieving community engagement with behaviour change initiatives.
36. Increased use of a multi-agency approach including public bodies, private organisations and voluntary agencies coordinated by a local authority champion (noting that feared cuts in small grant funding and in the “peripheral” functions of local authorities may make it more difficult to capitalise on interest and enthusiasm within local companies and other organisations).
37. The need for a multi-faceted approach including real improvements in facilities and services alongside increased publicity and information.

j. What lessons can be learnt from interventions employed in other countries?

38. Numerous:
 - Switzerland’s success with high quality public transport (the importance of reliability)
 - Switzerland’s success with Car Clubs (the role of new technologies, the importance of scale, the involvement of partners)
 - Dutch and Danish experience with cycling (the importance of critical mass and the benefits of dedicated infrastructure)
 - Canadian and Australian success with the use of busways as an alternative to rail-based modes

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⁵²⁶ Chatterjee K and Bonsall, P (2009) Special Issue on Evaluation of programmes promoting voluntary change in travel behaviour, Journal of Transport Policy, 16 (6), 279-280.

⁵²⁷ Bonsall, P (2009) “Do we know whether personal travel planning really works?” Journal of Transport Policy 16 (6), 306-314.

Dr Lorraine Whitmarsh, Professor Peter Bonsall, Sustainable Development Commission and Professor David Banister

Written evidence from the Sustainable Development Commission (SDC) (BC 83)

Background and summary

The Sustainable Development Commission (SDC) is the Government's independent adviser on sustainable development, reporting to the Prime Minister, the First Ministers of Scotland and Wales and the First Minister and Deputy First Minister of Northern Ireland. Through advocacy, advice and appraisal, we help put sustainable development at the heart of Government policy.

The SDC has a strong track record of developing evidence based advice to Government on behaviour change. This is in the context of enabling people to live more sustainable lives as part of a society that is just, healthy and fair, and that lives within environmental limits. Our lead Commissioner in this field is Tim Jackson, Professor of Sustainable Development at Surrey University and Director of the Research group on Lifestyles, Values and Environment.

Enabling people to live more sustainable lives is a priority for government to address. Our evidence finds that government has been too timid in respect of enabling sustainable behaviours, and that current solutions do not address the scale of the challenge.

In November 2010 we shall publish key findings and recommendations on this subject to Ministers. Our evidence includes qualitative research with government officials and experts outside government that we undertook in summer 2010, in order to understand the barriers and needs of government and others. We refer to this research in our submission and intend to make this available to the Committee.

SDC's previous work in this area includes *I Will if You Will* (2006), the report of the UK Sustainable Consumption Roundtable which SDC co-hosted. This identified people's homes, travel and food as the priority areas for reducing environmental impacts (including climate change), while also improving social outcomes such as health and wellbeing. It also made clear that the scale of transformation needed to address the major challenges of climate change, obesity and global sustainability cannot be achieved by 'green' consumers alone. Government policies and business practices need to ensure that sustainable choices are the easy choices for everyone. Our subsequent work has advised on sustainable diets (*Setting the Table*, 2009); sustainable travel (*Smarter Moves*, 2009) and homes and communities (*Stock Take*, 2006; *The Future is Local*, 2010). We have also showcased ideas that could have a transformative effect on the sustainability of the economy, places and people's lives (*Breakthroughs for the 21st Century*, 2009) and advised DECC on a public facing narrative on climate change (*Creating visible support for climate change*, July 2009). In addition, SDC Scotland was commissioned by Scottish Government to encourage networking between community projects funded through the Climate Challenge Fund, and to provide access to advice and support.

This submission draws on all of this experience, and focuses on behaviour change in the context of enabling sustainable lifestyles rather than behaviour change more broadly. We include some information in relation to community interventions given the Committee's potential interest in this area, and would welcome opportunity to provide more specific input based on our experience of Scotland's Climate Change Fund, if requested. We also include a short response on obesity.

Key Points

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1 All policy interventions impact on behaviour in some way. Behaviour change needs to be seen as an outcome, and not an intervention in itself.

2 Enabling sustainable behaviours is particularly challenging due to the disconnect people face between the current benefits of their behaviours and lifestyles and the longer term negative impacts on the environment and society. While a growing number of consumers are prepared to make the more difficult, expensive or outside the norm ‘green’ choice, the majority cannot or will not. It is therefore essential for policy makers to consider how all people can be ‘enabled’ to live more sustainable lives.

3 The evidence that ‘changing contexts’ – the environment in which we make decisions – is more effective than ‘changing minds’ is well documented. Despite this evidence, we continue to see ‘personal responsibility’ advocated by many politicians and commentators as a favoured approach to behaviour change. SDC strongly considers that policy needs to be driven by the findings of relevant evidence and experience, rather than driven by ideological approaches to behaviour change.

4 There is a need for better evaluation of what works, and a sharing of this information across government and with others.

5 Government needs to have the right skills and structures in place to support the effective application of behavioural science to policy.

6 The whole spectrum of interventions can be used to effect a change in behaviour as illustrated by the 4E’s model of behaviour change: of engaging, exemplifying, enabling and encouraging. These range from roles for government including regulation, the provision of incentives, economic levers, standard setting etc., as well as interventions by businesses, communities and public facing campaigns. Interventions – or packages of intervention – need to be ‘fit for purpose’ and designed according to the audience and intended outcome.

7 Government has a key enabling role to play in the realisation of more sustainable lives. This involves providing leadership, setting out a clear strategic direction, legislating where necessary, and providing the right regulatory framework that requires, supports or allows others to take action. Sustainable behaviours need to be made the ‘easy’ choices for everyone. This means considering how the context and environment of people’s lives can be changed so that sustainable choices become the norm.

Research and development

I. what is known about how behaviour can be influenced?

I.I There is a large and growing body of research on understanding behaviour, and how behaviour can be influenced. Much of this evidence is summarised in Thaler and Sunstein’s 2008 book *Nudge*.⁵²⁸ The Institute for Government’s *MINDSPACE*⁵²⁹ report, commissioned by the Cabinet Office, recently brought some of this understanding together in a UK context. In the area of sustainable behaviours, Defra’s Sustainable Behaviours Unit has commissioned a wealth of research and action-based programmes in order to better understand behaviour and how it can be influenced to bring about more pro-environmental behaviours.

⁵²⁸ Richard H Thaler and Cass R Sunstein (2008) *Nudge: Improving Decisions About Health, Wealth and Happiness*

⁵²⁹ Institute for Government (2010) *MINDSPACE: Influencing behaviour through public policy*.

I.2 The key is understanding that human behaviour is complex, and an individual's actions are influenced by a wide range of motivations and barriers, such as social norms, self esteem, habit, incentives, access etc. Pro-environmental behaviours are particularly challenging to encourage directly due to the disconnect people face between their individual behaviours and lifestyles, and longer term impacts on the environment. Whatever people's motivations, we have found that the key factor for influencing sustainable behaviours is how easy it is.⁵³⁰ Currently many pro-environmental behaviours are more difficult, expensive, or outside the norm. While a growing number of 'green' consumers are prepared, or able to make the more difficult choice, the majority cannot or will not. Hence a policy reliance on 'personal choice' in respect of behaviour change will have limited impact. It is therefore essential for policy makers to consider how all people can be 'enabled' to live more sustainable lives. This means considering how the context and environment of people's lives needs to be changed so sustainable choices become the norm.

I.3 There are many successful examples to illustrate this approach to altering the 'choice architecture' in respect of sustainable behaviours. For example, rates of recycling have increased dramatically since the introduction of kerb-side collection schemes by local authorities; mandatory A-G efficiency standards for white goods, and their 'choice editing' by retailers to only stock higher efficiency models have driven the production and purchase of 'greener' white goods; the phasing out of incandescent light bulbs means that inefficient lighting is no longer an option; vehicle carbon emission standards have been linked to road tax rates to encourage the purchase of 'greener' vehicles; and businesses have begun to develop products that support sustainable behaviours, such as washing powders that are just as effective at lower temperatures.

2 What are the policy implications of recent developments in research on behaviour change?

2.I The evidence that 'changing contexts' – the environment in which we make decisions – is more effective than 'changing minds' is well documented in the Cabinet Office report, *MINDSPACE*.⁵³¹ Despite this evidence, we continue to see 'personal responsibility' being used as a favoured approach to behaviour change. SDC's *I will if you will*⁵³² report made clear that the scale of transformation needed to address the major challenges of climate change, obesity and global sustainability cannot be achieved by the personal choice of willing 'green' consumers. Government policies (and business practices) need to change the context of our lives to ensure that the sustainable choices are the 'norm' and hence the easy choices for all people. Therefore, SDC strongly considers that policy needs to be driven by the findings of relevant evidence and experience rather than driven by ideological approaches to behaviour change.

3 Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions?

Is there sufficient funding for the evaluation of behaviour change interventions?

3.I Our engagement with government and academics indicates that there is a strong research base in the UK on behavioural science (psychology, behavioural economics, sociology, etc) and there is growing interest in its application to sustainable lives. There is also a growing body of

⁵³⁰ SDC/NCC (2006) *I Will if You Will*. Report of the UK Sustainable Consumption Roundtable.

⁵³¹ Institute for Government (2010) op cit

⁵³² SDC/NCC (2006) op cit

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evidence and ‘good practice’ relevant to enabling sustainable lives, but our research with stakeholders inside and outside government, considered this evidence is not always applied to policy development. Academics, in particular, felt there was a gap between evidence and its use by policy makers. At the same time Government officials pointed out that academic research is not always well designed or its findings communicated in ways that support policy professionals. Policy teams need the expertise to interpret academic research and apply it in a policy context, and to make better connections between the knowledge base on behavioural science and the design of behaviour change interventions.

3.2 Our research identified the need for better evidence, understanding and evaluation of what works (and what does not) as a priority for government and other participants. Comments focused on a number of areas including the need to understand where people are, how to engage better, how to incentivise people to change, and how to drive the market. In particular the need to evaluate initiatives and approaches came across strongly. We therefore recommend more evaluation and understanding of what interventions work best in practice, e.g. which levers (and which combination of levers) are more effective in different situations, and who is best to deliver these. This will require closer working between government, business, civil society and academia.

Translation

4 Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

4.1 As stated in answer to question 3, there is an apparent gap between evidence and its use by policy makers. To help address this gap, we recommend better connection between the existing knowledge base and the design of interventions; i.e. between academia and policy makers, and for the sharing of research findings more widely across government. This will require people with skills and expertise within government and the public sector to support the transition of research developments into policy interventions.

4.2 Our research found that Government needs a better knowledge base and the skills to deliver effective sustainable behaviour change interventions. The following quote from our research illustrates this in practice: “Skills and capacity on behaviour change is lacking in government – the most relevant expertise is comms and marketing” (Research participant, 2010).

4.3 While there is some expertise, particularly in social research teams and communications and marketing functions, there has been an absence of structures to enable the sharing of this expertise across government, and with others. A further challenge is that behaviour change has often largely been seen as a communications task and not part of policy development. Social science expertise is essential and best practice sees this integrated into policy making teams.

4.4 HMT’s recent launch of the Behavioural Science Government Network, the creation of a new Behavioural Insights Team in the Strategy Unit of the Cabinet Office, and steps by the National School of Government to integrate behavioural science into core policy training, are all important developments, which may help to address the knowledge gap and strengthen government capability over time. The SDC urges government to adequately resource these initiatives, and for the initiatives themselves to actively engage with colleagues inside and outside

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government, in particular business, civil society and academia. At the current time, when ‘behaviour change’ and ‘behavioural science’ are the buzzwords across government, and new teams and initiatives are being created, it is also important to ensure there is coherence and coordination between these various initiatives.

4.5 In respect of sustainable behaviours, Defra is the lead department and has recently created a new ‘Centre of Expertise on Influencing Behaviours’. The ‘Centre’ will act as a single co-ordinating port of call for evidence based advice and support on influencing the behaviours of citizens, businesses, organisations and their customers across the department. We welcome this focus within Defra; however as sustainable behaviours are relevant to a number of government departments (including CLG, DECC, DfT, DH), it is unclear whether Defra has the role to convene and initiate a more co-ordinated and evidence-based approach cross-government, which is needed.

4.6 As local authorities and communities are increasingly being recognised as key players in enabling people to live more sustainable lives, we are concerned that a spectrum of organisations including community groups, co-operatives, development trusts, social enterprises, parish councils, local authorities and local strategic partnerships are too often hindered by a lack of support (mentoring, technical, organisational) and poor access to finance (especially for seed funding and core costs) (*The Future is Local*, SDC, 2010⁵³³).

4.7 There is similar evidence from community groups involved in Scotland’s Climate Challenge Fund (CCF), who identified a lack of access to the right people or the right information, especially in local authorities, as a barrier to progress. In learning from the CCF we recommend that community groups should be brought into closer working partnerships with local government. This would strengthen the dissemination of the learning from different initiatives and an accessible, visible constituency of support might also encourage local authorities to be bolder in tackling the transition to policies for carbon emissions reduction.

Policy design and evaluation

General

5 What should be classified as a behaviour change intervention?

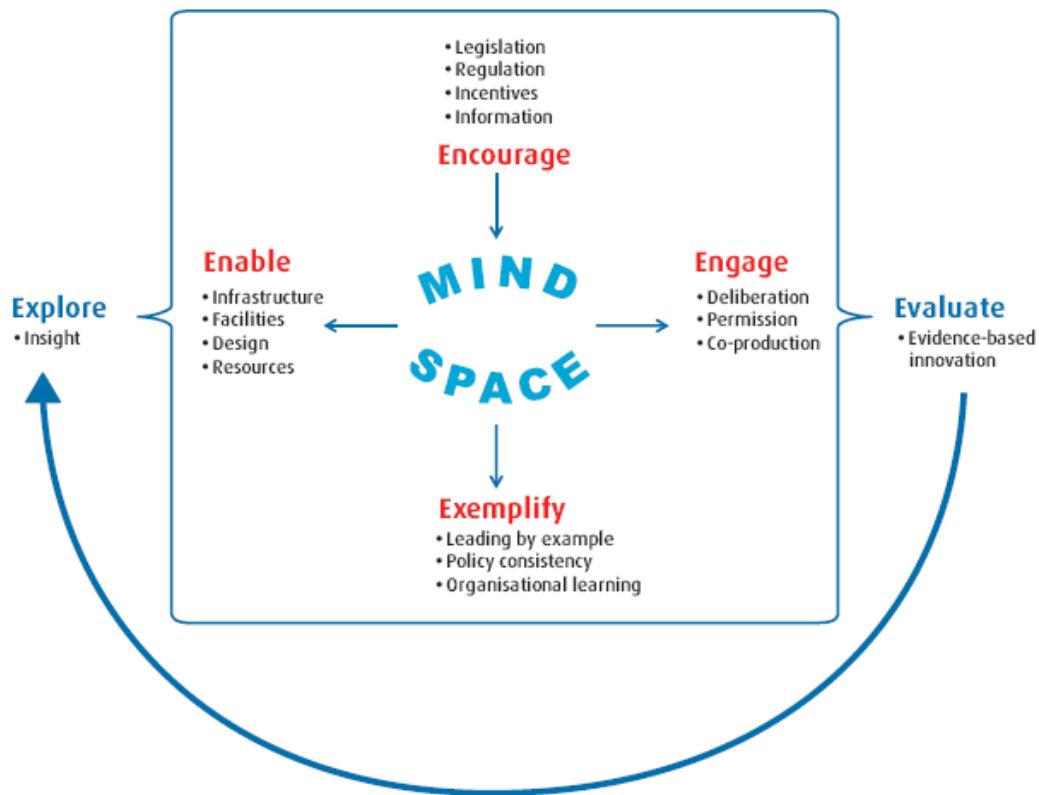
5.1 All public policy has an impact on behaviour, whether directly or indirectly, as do interventions by business and civil society. As such, a wide range of interventions can be described as behaviour change interventions. Defra’s ‘4Es model of behaviour change’,⁵³⁴ identified the need to enable, encourage and engage people and communities, and for government to lead by example as the main ways in which behaviour can be influenced. These different approaches work best when they are delivered as part of a package. The MINDSPACE⁵³⁵ report built on this model by adding ‘explore’ (i.e. gaining insight) and ‘evaluation’ (Fig.I) to the framework within which the tools of influencing behaviour can be used (**M**essenger, **I**ncentives, **N**orms, **D**efaults, **S**alience, **P**riming, **A**ffect, **C**ommitments and **E**go).

Fig.I The 6Es framework for applying MINDSPACE

⁵³³ SDC (2010) *The Future is Local: Empowering communities to improve their neighbourhoods*

⁵³⁴ UK Government Sustainable Development Strategy, *Securing the Future* (2005)

⁵³⁵ Institute for Government (2010) MINDSPACE: Influencing behaviour through public policy.



5.2 Interventions include information provision, awareness raising, providing incentives or disincentives, setting standards or legislating, voluntary agreements with business, and altering the systems or environments which lead people to certain behaviours, i.e. the choices that are available to consumers, or the way place influences travel behaviour. Box A illustrates the range of interventions that can be classified as ‘behaviour change’ interventions in relation to the adoption of sustainable lifestyles.

Box A Examples of behaviour change interventions in relation to enabling sustainable lives

- Regulatory e.g. Energy Performance Certificates, Carbon Emissions Reduction Target (CERT)
- Standard setting e.g. Product standards- energy efficiency of white goods, vehicle standards
- Fiscal incentives e.g. boiler scrappage scheme, Landfill Tax, feed-in tariffs
- Voluntary agreements with business e.g. Courtauld Commitment
- Community-based initiatives e.g. DECC's Low Carbon Communities Challenge, Sustainable Travel Towns, Transition Towns, Scottish Government's Climate Challenge Fund
- City initiatives e.g. European Covenant of Mayors
- Local authority initiatives e.g. waste and recycling schemes, Smarter Choices Smarter Places travel initiatives
- Industry initiatives e.g. M&S Plan A, EDF Green Britain Challenge
- Public health campaigns e.g. Change4Life

- Mass media campaigns e.g. Act on CO₂, THINK! Road safety campaign, Mr Earth and Go Greener campaigns in Scotland
- Assurance schemes e.g. Fairtrade, Marine Stewardship Council, Forestry Stewardship Council
- Labelling schemes e.g. A-G energy labels, front of pack nutrition labelling
- Product initiatives e.g. Defra's product roadmapping, industry product developments
- NGO campaigns e.g. 10:10
- Partnerships between government, business and others e.g. We Will if You Will
- Information provision e.g. DirectGov Greener Living site.

6 How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

6.1 Our research acknowledges the complexity of influencing behaviour, and the need for a combination of interventions that are designed to take account of individual motivations and barriers. These are best delivered as part of a mutually reinforcing package, involving different levels (government, business, local authorities, communities etc) dependant on which is best placed to deliver.

6.2 SDC's 'triangle of change' model⁵³⁶ recognises the important roles for government, business and civil society and people to work together in synergy to enable people to live more sustainable lives. The different role that each player takes will depend on the intended outcome, the intervention and the audience. For example, government is best placed to deliver a regulatory framework and incentives while removing barriers; businesses can develop and market more sustainable products and services; and mechanisms to encourage individuals to change behaviour are often best delivered at a community or organisational level, making use of networks of trust and influence. The Department of Health's Change4Life⁵³⁷ campaign to encourage the uptake of healthier lifestyles was developed by government and delivered through partner organisations, including local authorities, supermarkets, energy companies, schools, community groups, hospitals, etc, with the aim of creating a societal movement. The following quote from our research also illustrates this in practice: "All have a role to play, for example, on CERT (Carbon Emissions Reductions Target) it's a government requirement, delivered by energy companies, in partnership with local authorities, and needs engagement with customers and with housing companies/landlords..." (Business interview, June 2010).

6.3 The demand for action can also come from different parts of the triangle of change. For example, consumer pressure has prompted business action on the reduction of plastic bags, and in Ireland has provided government with the confidence to introduce a charge.

6.4 EU A-G energy labels for white goods also illustrate the successful combination of different levers and players. Although the ratings were introduced in 1993, they had little impact on shifting the consumer market until 2000 when the UK government's Energy Efficiency Commitment (EEC) required energy suppliers to encourage energy efficiency in homes. This resulted in agreements between retailers and energy suppliers, moving the price of A-rated products into an average consumer price range.

⁵³⁶ SDC/NCC (2006) op cit

⁵³⁷ www.nhs.uk/change4life/Pages/change-for-life.aspx

7 Should behaviour change interventions be used in isolation or in combination with other policy interventions?

See response to Qs 6

Practical application

8 Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

8.1 Our research identified the need for more effective evaluation as a priority and for this to influence future policy (see response to Q3 above).

8.2 The SDC has not undertaken its own evaluations of publicly funded behaviour change interventions. Participants in our research considered that government behaviour change programmes presented a mixed picture. While Change4Life⁵³⁸ (a Department for Health campaign to encourage uptake of healthier lifestyles through improved diet and exercise) was generally viewed positively, due to its use of relevant messengers to deliver the campaign and supportive tools, the Act on CO2 campaign⁵³⁹ was viewed less positively. It was criticised for failing to communicate effectively with the public, for being too negative in its messages, and for not including any supporting interventions to address the barriers to adopting lower carbon behaviours. The following quote from our research illustrates this: “What they’ve done on health and nutrition has been good, but on environmental issues they’ve tended to shock and scare people and we know this doesn’t work”. (Business participant, June 2010).

8.3 Independent evaluation is taking place for the Scottish Climate Challenge Fund, which has engaged around 260 community groups on over 300 projects to cut carbon emissions. The report will be available in summer 2011. There is also an evaluation planned on DECC’s Low Carbon Communities Challenge.

9 Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

9.1 To date, there has not been a systematic mechanism in place for sharing learning across government on behaviour change interventions; it has been more *ad hoc*. The new structures detailed in response to Q4 may help to address this sharing of information although it is unclear how this will influence the design of future interventions.

9.2 There is also a substantial body of experience from industry and the voluntary sector on behaviour change activities. While some of this is shared with government and others, on the whole there is potential for sectors to work better together, to develop more effective partnerships, and learn from each other.

⁵³⁸ www.nhs.uk/change4life/Pages/change-for-life.aspx

⁵³⁹ <http://actonco2.direct.gov.uk/home.html>

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10 What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

10.1 To our knowledge, there are no general mechanisms in place to provide support and advice at national or local government level on behaviour change interventions relating to enabling sustainable lives. Defra's new 'Centre of Expertise on Influencing Behaviours' is intended to provide expertise across the department though it is unclear how this will work with other government departments or the public sector more broadly.

10.2 Some advice and support has been provided to organisations involved with specific funding initiatives, such as Nesta's Big Green Challenge, Defra's Greener Living Fund and Scotland's Climate Change Fund. The National Social Marketing Centre has built social marketing capabilities focussing on public health.

Cross-government coordination

11 What mechanisms exist within government to coordinate and implement cross-departmental change policy interventions?

See response to Q4

12 What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?

See response to Q4

Ethical considerations

13 When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

13.1 As stated in response to question 5, it is important to recognise that government is already in the business of 'behaviour change' as existing systems and policy influences behaviour either directly or indirectly.

13.2 There are a number of cases where it is appropriate, or indeed necessary, for the state to intervene to influence behaviour. As David Cameron has recognised: "My belief in social responsibility is not a laissez- faire manifesto. I believe that government has a vital role to play in changing social behaviour". These cases include:

— Where there is a need to manage and respond to long term challenges to safeguard current and future generations. This role is significant given that human behaviour (and consequently business behaviour) naturally seeks more immediate gains. Climate change is one example where

there is a need for government to intervene to secure long term benefit, where the costs and benefits of an individual's actions are not as immediately visible.

- Where the risks of not taking action are too great to leave to markets or personal choice; for example the prohibition of hazardous substances in products that would otherwise present a health risk, or the banning of CFCs in aerosols to prevent ozone depletion.
- Where it is identified that action at that level will be more effective, taking account of the triangle of change, behavioural science, and the 4Es model in the design of interventions.
- Where there is a need for clear signals from government to enable others to act. For example, providing a regulatory framework so there is certainty for business to allow strategic planning and investment.
- Where interventions at other levels have not delivered the necessary outcomes; for example the failure of voluntary agreements, or market failures, as was the case in the pricing of carbon.
- Where there is a strategic case to initiate or kickstart a change, for example investment in new technologies.

13.3 Government clearly has an important role to play in enabling people to live more sustainable lives. Participants in our survey saw this as including the provision of clear messages and the right framework for others to deliver within, leading and exemplifying, providing the right incentives and regulation where appropriate, and working in partnership with business and other trusted partners.

13.4 Regulation is one of the main levers available to government. Although the current political philosophy is for fewer bureaucratic interventions, our research stressed the importance, particularly for the business community, of having a regulatory framework in place that supports and enables change, that lets the market deliver, and that creates a level playing field. An example that illustrates the value of regulation is the case of vehicle emission standards. The EU introduced mandatory emission reduction targets after a voluntary approach had failed to drive sufficient change. Within this framework the car industry is able to innovate and bring new products to the market. As one business participant in our research put it: "Government's role is getting things done behind the scenes to enable front of house changes to happen. It has to look down on the market place and see what it needs to do to let others get on with it, and step back." (Business participant, June 2010).

13.5 Although participants in our research thought that government needed to set out clear messages on sustainable lives - in particular around the importance of taking action – they agreed that government is not necessarily the best messenger. Government was seen to be less good at communicating with the general public than other players, including local authorities, NGOs, businesses and community organisations, and it was felt that more of an impact could be made by working through these trusted partners. The 2020 Climate Change group in Scotland is an example of how the Scottish Government are looking to business, civil society and academia to provide inspiration for the desired behaviour and act as role models. The Department for Health's *Change4Life* campaign is another example (see above). The importance of choosing the right messenger is evidenced in behavioural sciences literature, and was brought out in the Institute for Government's MINDSPACE report.⁵⁴⁰

⁵⁴⁰ Institute for Government (2010) op cit

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13.6 As highlighted by the triangle of change model (see response to question 6), government does not act in isolation, and there are cases where it is more appropriate, or where it will be more effective, for the commercial or voluntary sector or others to intervene. Determining who in the triangle of change is best placed to act will depend on the desired behaviour change, the audience, and the intervention. Given the current administration's focus on localism, smaller government and 'Big Society', there will be a greater role for business and others. However, actions at other levels should be synergistic with government action, not a replacement.

13.7 The government is making increasing use of 'responsibility deals' with businesses to some success. For example the Courtauld Commitment on reducing packaging and waste has successfully engaged major retailers and manufacturers. Targets have been extended to allow for continuing progress and importantly, WRAP provides expertise and support. Responsibility deals can be successful where businesses and government can agree shared goals and businesses can see benefits. Where there is less agreement or clear benefits, or there is an urgent need for action, responsibility deals are less likely to be successful and regulatory approaches may be appropriate. For example the Landfill Tax has been an important driver to support the increase in recycling.

13.8 The SDC report *The Future is Local*⁵⁴¹ highlights that long-term shifts in behaviour are most likely to be achieved where communities have a strong role. The example of Todmorden in Yorkshire is one example used in the report to illustrate how communities come together, initially around a single issue (in this case local food growing), to build a stronger more cohesive society and enable people to make more sustainable choices in their day-to-day living. The Transition Town movement, DECC's low carbon communities, and Scotland's Climate Challenge Fund projects are also examples from which to learn.

14 Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

14.1 Any intervention aimed at changing behaviour therefore needs to start from an understanding of where people are (not where policy makers think they are), and take account of motivations and barriers, while also recognising that people's acceptance of change is often dependent on how involved they feel they have been in the decision. Therefore this insight should be informed by meaningful engagement with the target audience, and can be gained thorough a range of techniques including pilots, field trials, consultation, and codesign of schemes.

14.2 The above point is supported at the community level, where it has been found that behaviour change is best enabled when projects engage with participants to identify all their latent motivations in order to address barriers and drivers. Information emerging from the review of Scotland's CCF, which will be available in summer 2011, illustrates this. One particular project, Zero Carbon Dunbar 2025, is recognised for having tapped into latent motivations – in this case the localism agenda (getting a local community owned bakery up and running, getting local produce into the greengrocer, mapping local resources to boost knowledge and community pride/ sense of place/ownership etc) – to involve the whole community in reducing carbon

⁵⁴¹ SDC(2010) *The Future is Local* op cit

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emissions. As a founding member of the project team puts it, the project is about engaging “the collective genius of our community in creating a positive vision of a sustainable and resilient, zero carbon future”.

14.3 Policy-makers will increasingly be presented with complex issues of strategic importance, which need to be dealt with as whole systems rather than single issues, taking into account conflicting departmental objectives. A full ‘public engagement’ programme can enable significant shifts in policy and action. Engagement also generates shared ownership and responsibility across society for addressing difficult issues, and will raise the likelihood of successful outcomes. Omitting proper engagement can leave government in a defensive position searching for ‘quick-fix’ measures which are more likely to fail and to be a waste of resources.

International comparisons

15 What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?

15.1 Valuable lessons can always be learned from others’ experience, including from other countries, but to be most effective, behaviour change interventions need to be designed with the target audience in mind. So while there are many benefits of sharing experience, the interventions would need to be tailored to the specific circumstances i.e. culture, society, environment. Examples include the development of the London Barclays Cycle Hire Scheme, which learned from the successful schemes in Paris and Lyon; or the experience of creating a cycle friendly city in Odense⁵⁴² (Denmark) which is now being replicated elsewhere in Europe. We therefore recommend that UK government is fully engaged with other countries to learn from best practice on enabling sustainable lives, and that it encourages and provides support for others e.g. local authorities and communities, to engage and learn from experience elsewhere. The European Covenant of Mayors and European Energy Cities Network are examples of networks providing opportunities for learning and sharing of experience.

Case Study: Tackling Obesity

16 The Department for Health’s *Change4Life* campaign is a good example of how different partners have worked with government to address the challenge of obesity, and how behavioural science has been integrated into the design of the different interventions.

17 From the SDC’s perspective, solutions to obesity need to take a whole systems approach. One government strategy that delivered on this approach was the Department for Children, Schools and Families *Play Strategy*. Rather than looking at play through a very narrow focus i.e. through the provision of play equipment, it looked more broadly, considering how play could contribute to preventing and reducing obesity in children through increased activity, allowing for ‘free play’, as well as structured play, and the reasons play areas may not be used, such as their accessibility and how safely they could be reached on foot. This led to local Play Teams working with Transport Planners to ensure access routes were improved, the number of play areas were increased, and the use of natural materials and spaces for play. Although this strategy has now been withdrawn, we believe the idea of what it was trying to achieve and the thinking that went

⁵⁴² Cycling Embassy of Denmark www.cycling-embassy.dk/

into its development and delivery grasped the concept of influencing behaviour through systems change.

I8 Scotland's 'Route map towards healthy weight' is also taking a wider focus on the society we live in and the kind of lives it encourages. It aims to create a 'cross-portfolio and cross-sector collaboration and investment to make deep, sustainable changes to the living environment, in order to shift it from one that promotes weight gain to one that supports healthy choices and healthy weight for all.' This is to be done by focusing on four areas:

- Energy consumption – controlling exposure to, demand for and consumption of excessive quantities of high calorific foods and drinks
- Energy expenditure – increasing opportunities for and uptake of walking, cycling and other physical activity in our daily lives and minimising sedentary behaviour
- Early years – establishing life-long habits and skills for positive health behaviour through early life interventions
- Working lives – increasing responsibility of organisations for the health and wellbeing of their employees.

I9 Efforts which focus on individualisation of responsibility are often unsuccessful as they fail to address the broader systems and structures that create an obesogenic environment. For example, incorporating walking and cycling into everyday routine is acknowledged to be a simple preventative measure for obesity. However, promotional activities alone will not necessarily change behaviour – it requires the right infrastructure to be available through the provision of safe walking and cycling routes. This is supported by evidence, which shows that lack of access to green spaces and safe walking and cycling routes contribute to high levels of obesity and mental ill health,⁵⁴³ and that those who live in high-walkable neighbourhoods (classified according to density and layout) take more steps per day than those who live in low-walkable neighbourhoods.⁵⁴⁴

October 2010

⁵⁴³ SDC (2010) The Future is Local: Empowering communities to improve their neighbourhoods

⁵⁴⁴ www.sustrans.org.uk/assets/files/AT/Publications/PDFs/FH14_activetravel_and_obesity.pdf

Written evidence from Professor David Banister, University of Oxford (BC 119)

1. Introduction

Most of the submissions will be looking at economic and technological factors in facilitating behavioural change and modal shift. The argument and evidence cited in this paper examines the important role that spatial planning can play in enhancing other impacts, and in encouraging shorter trips (even by car). Shorter trips are in turn related to the higher usage of walk and cycle, and public transport, and the potential is substantial, as illustrated in the distribution of trips in London (Table 1).

Table 1: Trip Distance and Modal Split in London LATS Survey

Modal Split – Trips		Distance – Trips		
Car	44.4%	<1 km	31.7%	58.3% of all trips are under 3 km in length – of these 48.6% are walk and 3.6 % are cycle (with 37.4% by car and 10.4% by PT).
Bus	10.9%	1-3 km	26.6%	12.9% of all trips are between 3-5 km in length – of these 60% are car and 30% PT (with 4% walk and 6% cycle).
UG/DLR	6.3%	3-5 km	12.9%	
Rail	4.6%	5-10 km	14.6%	
Walk	29.2%	>10 km		
Cycle	4.6%		14.1%	
Total trips	176,453	Trips <3 km 102894		28.8% of all trips are over 5 km in length – of these 52% are car and 41% PT (with 1% walk and 6% cycle).
		Trips 3-5 km 22837		
		Trips >5 km 50722		

LATS - London Area Transport Survey 2001 - Interviewer administered sample survey of 30,000 London households, carried out for TfL between January 2001 and April 2002. The survey included a one-day travel diary to collect data on London's residents' weekday travel patterns. The data have been expanded to represent the household population of Greater London as measured by the 2010 Census of Population. UG/DLR are underground and Docklands Light Railway and PT is all forms of Public Transport.

2. Spatial Planning and Travel

A substantial amount of research in both the UK and the US has tried to establish links between travel, land use and urban form. This ranges from simple analyses of trip generation and attraction characteristics of particular land uses (e.g. residential and shopping) to more detailed analyses of travel (and energy use) in locations with distinctly different characteristics. The verdict on this empirical work is mixed. For example, Anderson et al (1996) concluded that the current level of understanding of the influence of urban form on the generation of emissions and the use of energy is weak. But others (e.g. Stead, 2001; Hickman, 2007) have found far more significant relationships between land use and transport (Table 2). But even here, the socio economic variables explain substantially more of the variation in trip making activities than the land use factors.

Table 2: Explanation of Travel from Land Use Factors

Stead (2001) – The most extensive UK study used regression analysis on NTS data. Here, it was concluded that socio-economic factors are more important than land-use factors, explaining between 23-55% of the variation in the amount of travel by wards (there are some 8,400 wards in England) at the aggregate level. The most important
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socio-economic factors are car ownership, socio-economic group and employment. Land-use characteristics explain up to 27% of the variation in trip making – this includes density, settlement size, and public transport accessibility.

Hickman (2007) and Hickman and Banister (2007) – Household data was collected from new housing developments in Surrey (1998). Land use and socio economic variables together explain 60% of the variation in the travel patterns of households, and individually the levels were 9% for land use and 28% for socio economic variables.

Three main elements encapsulate the impact of spatial planning on travel:

2.1 Density of Development

Density and development has an important effect on the distances travelled, the modes used and the energy profiles. The most cited research here has been carried out over the last 15 years by Newman and Kenworthy (1989a, 1989b, 1999) in their comparison of the transport energy profiles of 84 cities. The powerful conclusion reached was that when urban density in the 58 wealthier cities was correlated with car passenger kilometres (kms), urban density explained 84% of the variance (Kenworthy and Laube, 1999; Kenworthy, 2007). When energy use was correlated with activity intensity (persons and jobs per hectare), 77% of the variance was explained. Despite concerns over the methods used and the quality of the data, clear relationships have been established at the city level. A general conclusion is that an increase of 10% in local density results in a 0.5% decrease in vehicle trips and vehicle miles travelled (Ewing and Cervero, 2002 and Table 4).

Settlement size is also important in influencing both modal shares and the distance travelled, as use of public transport and walking increases with population size (Dargay and Hanly, 2004). Diseconomies of scale may feed in with the largest cities, which have a complexity of movement that is substantially greater than the smaller monocentric cities, as circumferential trips become as important as radial trips (Banister, 1997).

The US literature is also variable in its findings. Ewing (1997) estimated that a doubling of density resulted in a 25-30% lower level of vehicle miles travelled (VMT), whilst Holtzclaw (1994) concluded that the difference between 50 dwellings/hectare (urban densities) and 12.5 dwellings/hectare (suburban densities) was a 40% increase in travel. Overall, the US evidence seems empirically powerful, suggesting that higher density developments can reduce VMT by at least 10-20% as compared with urban sprawl (Litman, 2007).

2.2 Proximity and Quality

Land use patterns in post industrial cities are changing as greater mixed use is the dominant feature. This means that journey lengths can be reduced through the use of local facilities and services. Considerable effort is now being placed in transport development areas (or the similar transit oriented developments in the US), where high quality public transport accessibility can be combined with office development, residential, leisure and retail activities, all in close proximity to each other. The importance of quality is paramount, as these accessible locations become the centre of activity giving possible implications for public transport use. This is a concentration of activity that has beneficial impacts on modal split and the use of local facilities, but it needs to be balanced against the counter trend of dispersal (and sprawl) that has an opposite effect on trip lengths and a greater level of car dependence.

Cervero and Duncan (2006) examined the degree to which job accessibility is associated with reduced work travel, and how closely retail and service accessibility is correlated with miles and hours logged getting to shopping destinations. Based on data from the San Francisco Bay Area, they found that jobs-housing balance reduces travel more, by a substantial margin, than accessibility to shopping. But they also concluded that it is important to look at access to public transport at both ends of the journey. Concentrating 'housing near rail stops will do little to lure commuters to trains and buses unless the other end of the trip – the workplace – is similarly convenient to and conducive to using transit.' (Cervero, 2006, p53).

2.3 Local Neighbourhood and Design

The new urbanism debate encourages more local activity through more walking, direct routing for slow modes of transport, and quieter and narrower streets (Duany and Plater-Zyberk, 1992; Calthorpe, 1993). People travel shorter distances when they move into neighbourhoods with higher accessibility (Krizek, 2003), with median distance increasing from 3.2km in the more accessible neighbourhoods to 8.1km in less accessible neighbourhoods. Street connectivity is also important here as it can reduce distances for slow modes, but cul de sacs are also popular with residents even though they tend to extend travel distances. Main Street programmes in the US (and more recently in the UK) are intended to revitalise town centres by restricting access at certain times and to create vibrant communities day and night (Handy, 2004). Other initiatives to encourage urban living include extensive pedestrianisation, the closure of residential streets, gated communities, and even the removal of freeways (e.g. the Embarcadero Freeway in San Francisco). The issue of parking management is central here.

One of the few detailed empirical studies has been carried out in Toronto (Norman et al., 2006) for city centre apartments (net residential density 150 dwellings/hectare) and suburban detached housing (net residential density 19 dwellings/hectare). Although the GHG emissions and energy density were similar per unit of living space (m^2) for construction materials, building operations and transport, the figures per person are very different (Table 3). This is due to the additional space available per person in the suburban detached housing. The GHG emissions are 2.5 times higher in the suburban than the urban housing. For transport, the figures are stark, with GHG emissions (and energy use) being more than 3.5 times as high in the low density housing for car and 6.5 times as great for public transport. Although the densities used in the Toronto study are different to those used in UK cities, where gross densities average about 20-40 dwellings/hectare (net densities 80-160 dwellings/hectare). For example, the average Inner London (20% of area) gross density is about 45 dwellings/hectare, and that for Outer London (80% of area) is about 15 dwellings/hectare, a 3 to 1 ratio (Banister, 2007).

Table 3: GHG Emissions for Different Housing Types in Toronto

Annual GHG Emissions – kg CO ₂ e/person/year in 1996	Suburban Detached %		Urban Apartments %	
Construction	597	7	391	12
Building operations	2730	32	1510	45
Car travel	5180	60	1420	43
Bus transport	130	1	20	-

Based on Table 4 in Norman et al. (2006)

A large sample of the Great Britain National Travel Survey was taken by Dargay and Hanly (2004) for 1989-1991 and for 1999-2001 to test for the impact of land use characteristics on the

level of mobility and the use of cars. They concluded that land use characteristics (population density, settlement size, local access to shopping and other facilities and accessibility of public transport) play a significant role on car ownership and use of the car. Density has a greater impact than settlement size, and proximity to local facilities encourages walking instead of car travel.

3. Cumulative Effects

Land use effects on travel behaviour tend to be cumulative and mutually reinforcing (Hickman, 2007; Litman, 2007). This effect can be illustrated in two ways. Ewing and Cervero (2002) calculated the elasticity of vehicle trips and travel per capita with respect to four land use variables (Table 4). Their estimates suggest that a doubling of local density reduces car trips by 5% per capita and travel by about the same amount. Although the elasticities are low, Ewing and Cervero (2002) concluded that the land use effects were cumulative, thus giving the potential for 13% and 33% decreases in trips and trip distance respectively.

Table 4: Elasticities of Trips and Travel by Land use Factors

Factor	Description	Trips	Travel (VMT)
Local density	Residents and employees divided by land area	-0.05	-0.05
Local diversity	Jobs/residential population	-0.03	-0.05
Local design	Sidewalk completeness/route directness and street network density	-0.05	-0.03
Regional accessibility	Distance to other activity centres in the region	-	-0.20

Note: VMT = Vehicle miles travelled

Source: Ewing and Cervero (2002)

The second study was by Lawton (2001) using data from Portland Oregon to examine the impact of land use density, mix, and road network connectivity on personal travel. As urbanisation increases, per capita vehicle travel declines significantly from about 20 average daily travel miles per adult (32kms) to just over 6 miles (10kms).

4. Conclusions

The impacts of spatial planning and land use factors on travel distance can be summarised as follows (Hickman and Banister, 2005):

1. At the regional level, the location of new development, particularly housing, should be of a substantial size and located near to or within existing settlements (see also Chapter x in this volume) so that the total population is at least 25,000 and probably nearer to 50,000. The provision of local facilities and services should be phased so as to encourage the development of local travel patterns
2. Density is important and average journey lengths by car are relatively constant (around 12km) at densities over 15 persons per hectare, but at lower densities car journey lengths increase by up to 35%. Similarly, as density increases, the number of trips by car decreases from 72% of all journeys to 51%. Car use in the high density locations is half that in the lowest density locations

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3. Mixed use developments should reduce trip lengths and car dependence. Although research here is limited and concentrates on the work journey, there is considerable potential for enhancing the proximity of housing to all types of facilities and services

4. As settlement size increases, the trips become shorter and the proportion of trips by public transport increases. Diseconomies of size appear for the largest conurbations as trip lengths increase to accommodate the complex structures of these cities

5. Development should be located near to public transport interchanges and corridors so that high levels of accessibility can be provided. But this may also encourage long distance public transport commuting. Free flowing strategic highway networks are likely to encourage the dispersal and sprawl of development and stretch commuting

6. The availability of parking is a key determinant of whether a car is used or not, and appropriate standards should be developed that are linked to accessibility levels.

These points are well summarised by Litman (2007), who concludes that in the US a 10-20% cumulative total saving in VMT is possible through density and mixed design, and a further 20-40% is possible from regional decisions on the location of new development. The figures in the UK are likely to be less, as the trip distances travelled are lower and there is already a much greater use of land use and development controls than in the US. More detail on all of these issues can be obtained from the study commission by the Commission for Integrated Transport (CfIT) (2009), the Cabinet Office (2009a and 2009b) and the US Transportation Research Board (2009).

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18 January 2011

Dr Lorraine Whitmarsh, Professor Peter Bonsall, Sustainable Development Commission and Professor David Banister

Oral Evidence, 1 February 2011, Q595-628

Evidence Session No.18. Heard in Public.

Members present:

Lord Alderdice
Lord Crickhowell
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Baroness Perry of Southwark
Earl of Selborne
Lord Warner

Examination of Witnesses

Witnesses: **Dr Lorraine Whitmarsh**, [Environmental Psychologist, Cardiff University], **Professor Peter Bonsall**, [Professor of Transport Planning, University of Leeds], **Mr Andrew Lee**, [Director, Sustainable Development Commission], and **Professor David Banister**, [Director, Transport Studies Unit, University of Oxford].

Q595 The Chairman: I thank you very, very much indeed for coming. We are delighted to see you here. I don't think you were here for all the previous session, so just so that you know, we are being webcast. There is a note for anybody sitting at the back that has our interests on it, and we would like each of you to introduce yourself in turn and to make a brief opening statement, if that is what you would like to do. We are tight on time—we have to wind up just before 5.45 pm—so if you can keep answers tight, that would be hugely valuable.

Professor David Banister: My name is David Banister. I run the Transport Studies Unit of Oxford University, and my main areas of research are in sustainable transport, energy, carbon and cities.

The Chairman: I am really sorry, but I have just already had Lady Perry say this is a terrible room and it is very difficult to hear. It is particularly awful for the people behind you but it is actually quite bad even here. It is not your fault but you will have to throw your voice, I am afraid.

Professor David Banister: Shall we start again then?

The Chairman: Please do.

Professor David Banister: I am David Banister. I am the Director of the Transport Studies Unit, which is in the School of Geography and the Environment at Oxford University, and my work—our group's work—is mainly sustainable transport in cities, mobility, and energy in carbon reduction in cities.

Q596 The Chairman: If you would like to make an opening statement, please do.

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Professor David Banister: I assumed in my evidence that everybody else would cover all the other areas, and I was very specific in suggesting looking at the role that spatial planning within cities could have in reducing the need to travel, particularly the way in which one can reduce the distances in travel, because as we know over the recent past travel distances, average travel and journey lengths have increased very substantially. As a result people are moving away from what one might call more sustainable forms of transport to less sustainable forms of transport, with the desire to speed up and to travel by motorised forms of transport. So we should look at ways in which we can organise and develop our cities with new developments, but also, more importantly perhaps, how we redevelop existing cities so that we can push people and facilities and locations closer together. We can now have mixed uses that will allow much shorter journeys, and if we encourage shorter journeys we get more people to walk and cycle. That is behavioural change, and it has the second-round effects of health benefits and other sorts of safety benefits, which would be related to the quality of life within the city.

The Chairman: Thank you.

Professor Peter Bonsall: I am Peter Bonsall from the University of Leeds's Institute for Transport Studies. I have been researching travel behaviour, in particular the way that individuals respond to price changes or to other initiatives that seek to change their behaviour and how one evaluates the success of such initiatives. I have spent some time looking at the Smarter Choices projects and at complex pricing signals. I do not feel the need to make an opening statement, I am very happy to be led by the questioning. But I do want to ask whether the emphasis of your inquiry is on mode choice, as it appeared to be, or on carbon reduction, because that focus would influence the way we would respond to your questions.

Dr Lorraine Whitmarsh: Dr Lorraine Whitmarsh. I am a lecturer in psychology at Cardiff University. I am also a research associate of the BRASS Centre, which is the ESRC centre for research on Business Relationships, Accountability, Sustainability and Society.

The Chairman: Wow.

Dr Lorraine Whitmarsh: Yes, I can remember the acronym! And a partner co-ordinator for the Tyndall Centre for Climate Change Research. I am an environmental psychologist, and my research interests lie in perceptions of environmental issues, behaviour and behaviour change in relation to environment issues, with a particular focus on climate change, energy use and transport.

Andrew Lee: My name is Andrew Lee. I apologise for my appalling cough. I am from the Sustainable Development Commission, and our organisation has worked for many years now looking at broader issues to do with behaviour change and sustainable living, starting with work called 'I Will If You Will' in 2006. In fact, the last 14 reports that we have done have all had some elements about behaviour change within them. We have not researched transport and behaviour changes specifically. I think we said in our evidence to the committee, although four of these reports that I mentioned did deal specifically with transport, that we have researched technological solutions to reducing the need to travel, the role of aviation in a sustainable society, how government organises its own approach to travel and travel procurement, and now fairness in transport. So really I am very pleased to be here, and I hope that some of the work that we have done with government departments to look at how they use the science around behaviour change and apply it to the policy-making is of relevance, not just in transport choices but in other choices. We have also just completed some research that included interviewing 50 people from government, business, academia, NGOs and so on, looking at what their attitudes were to using this research and how that was informing the work that they actually do.

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Q597 The Chairman: Thank you very much indeed. To answer Professor Bonsall's question, I think that what we are really talking about is mode choice, but that is one part of reducing car use in order to reduce emissions, but I think that the emphasis is on mode choice and how you change behaviour. I will start, and various members of the committee will chime in. If you could keep answers relatively short, that would be really helpful. I know that is really hard because you want to say everything. The first question is: what do you think the most effective way to reduce car use is across the population, taking into account both the long-term impact and cost-effectiveness? A small question.

Professor Peter Bonsall: Potentially, taxation is the most effective measure. The problem is that political limits on taxation would probably make it unlikely that one could go as far as would be necessary to make the sorts of changes that might be required, so one has to bring in other measures. Improvements to public transport are very expensive. Providing people with opportunities which reduce their need to travel is, I suspect, an underused measure. Those are the three I would identify as having the most potential.

Q598 The Chairman: On what basis? Clearly fiscal measures are very strong. That came through very strongly in your evidence. On what evidence is your citing fiscals as top of the list based?

Professor Peter Bonsall: I think the evidence base is strong for fiscal measures because there is a long history of price changes to look at – some due to fiscal measures some due to changes in underlying prices (e.g. oil prices). I think the other measures, particularly the softer measures, are unlikely to achieve the scale of change that could be achieved by fiscal measures. I think the evidence makes this the inevitable conclusion.

Professor David Banister: I would add to that that different sorts of measures can be used, some of which have quite an immediate impact, so if you raise fuel costs or introduce congestion charging areas or something in cities, that would have an impact, as we have seen in London, overnight effectively. Other types of measures, which are perhaps the ones that you are more interested in and which I think introduces the concepts of complexity into this, are the ones that happen over a longer period of time. People might react in one way over a shorter period of time to higher prices or something. Over a longer period of time you might need other measures that would help reinforce those to make sure that the benefits are actually kept rather than diluted over time, because we have quite commonly had dilution effects, but also so we can begin to get people to see that the quality of life within urban areas is also improving because there is less car travel around, and that again might have a positive reinforcing effect. The question that I suppose I am interested in is actually who owns the street? Who is the street actually there for? Is it for motorists or is it for other users? We have ways now as well through technology of actually being quite creative in the way in which that street space can be used at different times of day or different days of the week. Trying to think of this in the broader context of the quality of life, and the quality that the city actually affords its residents—with the example of transport—is really the focus here. If I just might add one other thing here, I think we are actually seeing signs of that. You were asking for the evidence of that, and in London quite a lot of evidence suggests for instance that car ownership levels in London are much lower than they are elsewhere in the country. I think that just over 40% of households own cars in London, whilst nationally 75% do. So in London, where there are higher levels of income, you have lower levels of car ownership. In addition to that, you have lower levels of car use in London than you do elsewhere. People do not use their cars as much as they do elsewhere because, or partly because, a good quality public transport system is available to use in London, and a wide range of different locations where you can do your shopping, where your

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kids can go to school, et cetera. So things are actually working quite well in some of our cities, and there are good examples that you can cite in your evidence in your final report that would use that sort of evidence.

Q599 The Chairman: You've been very strong in your evidence about the importance of spatial planning. Can you give us some sort of guidance as to over what period introducing planning changes can make a great difference to the space? What sort of timescale are you talking about where this would make a real difference?

Professor David Banister: It depends upon the area you are actually looking at, but if we look at, say, the neighbourhood scale, things can be done almost immediately. For instance, we can close off space outside schools—this happens quite a lot—during the times at which school kids come in and from school, so it creates an access by foot only type of area. It improves the quality there and safety, and that sort of thing, and then the street can be used for other purposes at other times of the day—streets can be used for street markets. It happens quite commonly at that sort of level. Evidence elsewhere in, say, the Netherlands, with the woonerfs and other types of area, makes it clear that the cars are there on sufferance and that this is a space for people in which people can move around. Cars have to go very slowly there, there's limited parking and that sort of thing, so it is actually creating an environment that is clear so kids can play in the street, and this again gives them a feeling of ownership of that space, and they will then have a greater ability to invest in the quality of that space. The street is not a barrier; it is enabling people to get together rather than the other way around.

Q600 The Chairman: And the timescale, roughly?

Professor David Banister: Those sorts of things can be done very, very quickly.

The Chairman: Those are quick?

Professor David Banister: Those sorts of things are. When we talk more strategically about, say, where we put new housing or where we locate shops, whether it is in the periphery or the centre of cities, those sorts of things have implications. Some are quite short term, but some are over a longer term because people's shopping patterns will change over time and when people move into new locations their lifestyles will evolve around that. One is trying to reduce the level of car dependence within those new estates, so we suggest that when those new estates are available, they are there with public transport services and local facilities, so that we do not have to have the problem of the car. Once people get into that sort of routine, it becomes enormously difficult to get them to move away from that behavioural pattern.

Dr Lorraine Whitmarsh: Going back to some of the points that were raised in the previous session, I would reiterate the need for multiple interventions and a combination of approaches, because we know that there are multiple influences on travel behaviour. Certainly prices are an important factor, but they are not the only factor. Obviously you have to have the alternatives in place to encourage people to shift away from car use to other modes, and there is good evidence to suggest there are interactions between these different interventions, so they can have a combined, larger effect. The other most effective way to change travel behaviour is targeting people's attitudes and values. Again, this was mentioned to some extent before. Obviously people have very different attitudes and values in relation to travel and transport and the environment and so on. We know that convenience, cost and health are important factors that motivate people's travel choices. The environment is probably a secondary factor. But we can certainly segment the population according to their attitudes and values and have greater

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effectiveness in targeting interventions to what we know motivates them. So that is part of targeting. The other part is the timing. Habits were mentioned before as being important. An area that I would really like to stress as being important is that travel is very often a strongly habitual behaviour, so it is not very often consciously thought about and deliberated over. Therefore, the most effective types of intervention need to be targeted at people who have weak car use habits or at times in people's lives where their habits are naturally disrupted—they are relocating or whatever. There is a growing body of evidence about how to break car use habits and how to create more sustainable travel habits. I would definitely say that we can get much more bang for our buck targeting interventions to those sorts of people and points in time.

Andrew Lee: We found, working with the previous Government in 2005 and developing the Sustainable Development Strategy, that the most useful tool was what we called the four Es—enabling, engaging, encouraging and exemplifying. I think this is in our evidence. If not, I will send a copy. Really, it reinforces what many of the other speakers have said; if you're looking at transport, unless you do all four of those you are not going to get the maximum effect. Enabling is about infrastructure changes, but it is also about messaging and getting it consistent. Is it about a war on motorists or about driving less? What is the message here? Engaging is about actually co-designing with people and businesses, locally, such as the Sustainable Travel Towns project or some of the NHS case studies, as we have heard—ways of changing travel patterns by actually engaging people. In a way, I do not know which is the most effective, but the two that Governments tend to struggle a little bit to want to do are to encourage and exemplify. Encourage of course is really a shorthand for price signals and regulation, and one of the key messages from us is that it is important to make decisions about using regulation and price signals that are based on evidence, not on ideology or nervousness about doing it. But exemplifying is equally important, and one of the pieces of work that we do is looking at the enormous potential there is in public procurement and the supply chain, from central government and local authorities, the public sector, the NHS and so on. And actually, if some of the money spent on ACT ON CO₂ was actually spent on sustainable procurement—in this case on travel—it would have an enormous knock-on effect. Doing all those together—enabling, engaging, encouraging, exemplifying—will create a multiplier effect that will exceed the ability of any one on its own to do that. Some of the evidence that has been provided by experts on the specific case of transport does actually bear this out quite well.

Q601 The Chairman: Thank you very much indeed. Just one quick supplementary question. Have you observed a serious crossover in the policy objectives on sustainable living and health in government terms, and did you see much cross-departmental working to cheer you that two objectives were being taken together?

Andrew Lee: Not enough, I think. On health, we've used Change4Life, which I know you've looked at in detail at here in the committee as a good example that happens to overlap with transport anyway; there are health and transport links within it. There are very good examples of government departments doing this, but there is not nearly enough connecting up between the Cabinet Office and Defra, which have now developed quite a lot of expertise in this area. We had a lot of feedback in our work about officials not knowing where the evidence was or what other people were doing, or were unsure about how to bring some of this evidence into policy-making and getting Ministers to make some of these slightly tough decisions. There's a big issue there. I might mention again later how those different things in government are co-ordinated.

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Q602 Baroness Perry of Southwark: One question is whether you can, or have any evidence to, quantify the difference in behaviour that these various interventions—for example, the Government's much-loved nudges—might make. In a sense, changes to infrastructure are a nudge, are they not? They do not actually, in themselves, change people's behaviour; they simply make it easier for them to change their behaviour. What sort of percentage change might nudges or changes to infrastructure or the really hard things like pricing and restrictions on car use result in, which we have evidence for? I would be interested to know.

Professor Peter Bonsall: I think I would use a more restricted definition of "nudge". I would certainly not include significant expenditure in infrastructure. Under my definition of "nudge", which I will elucidate if you wish, "nudge" alone will achieve no more than 2% or 3% in the short term, and even that will probably disappear later. Nudge alone is not going to be very helpful but if combined with other things it can be the lubricant; it can make the other things work. I suspect that any well-designed policy has to have an element of nudge in it. If it does not, it is not going to work unless it is very "hard". A well-designed package of politically feasible fiscal measures, combined with a bit of nudge might achieve perhaps 20%. If one were seeking to achieve change simply by provision of facilities, without anything other than nudge, one might achieve perhaps 10%, 15%. If one were reducing the need to travel, perhaps 20% might be achieved. (I am referring to reductions in the amount of car travel).

Baroness Perry of Southwark: I understand.

Professor Peter Bonsall: If alone uses several measures together, the combined effect is not the sum of the parts but it is greater than any one of them alone. Perhaps an ideal package might, in practice, achieve 25% or so.

Q603 Baroness Perry of Southwark: So you are saying that if all of those things were added together, you would get a 25% reduction?

Professor Peter Bonsall: In a total package, yes. Of course, it is always possible to get beyond that, but only by employing politically difficult taxation, which in theory could achieve more but, in practice, the required levels of taxation probably have to be ruled out.

Q604 Baroness Perry of Southwark: Given that we have had not only congestion charging in London but pretty steep increases in fuel charges and so on, is there any hard evidence as to a percentage of change in behaviour? Do they leave their car at home?

Professor Peter Bonsall: Well yes, the London evidence is pretty clear. In the slightly longer term, you have to put increases in the price of fuel alongside the increases in the price of using buses, for example. The price of using a bus has gone up—

Baroness Perry of Southwark: Just as much, yes.

Professor Peter Bonsall: —more than the price of using a car. The long-term trend has been for buses to be getting more expensive and cars to be getting cheaper. At a very aggregate level, there is no surprise that car use has been increasing because it is so cheap historically—even now it is historically very cheap.

Professor David Banister: The congestion charging is quite an apposite case, because, as I would see it, the actual charge was just one part of a package of measures, and it should be realised. Roughly at the same time as the Oyster card was introduced, which some people would argue was more important than the congestion charge, parking was reviewed. There was also heavy investment in new buses, so the alternative was there. Space was reallocated within the

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congestion charging area to give, in the initial stages, buses and cyclists more priority. So this is where, with a creative grouping of measures, one can actually begin to achieve initially quite large-scale impacts—of the order of 20% or something like that.

Q605 Baroness Perry of Southwark: But that has not been sustained, has it?

Professor David Banister: In a sense, but they have had to keep raising the price and things, and then we had the dilution effect with extending the area, so it is again very difficult to actually begin to isolate the longer-term effects. You are right that over time these effects tend to be diluted, which comes back to what Lorraine was saying. There are other, more fundamental issues; you need to be able to communicate with people what it is all about and why this scheme is being introduced. We are trying again to improve the overall operations of the transport system, and we are trying to get people to reconsider more fundamentally their travel behaviours and the way in which they actually come into the centre of London and use that transport system. We are questioning, in the extreme sense, whether there is a need to bring a car into the centre of London at all. Haven't we sufficient alternatives to suggest that people could take taxis if they wished or use the public transport system? What is the role of the car in the city? To my mind, in the central part of the city, that is the fundamental question that needs to be asked.

Q606 Lord Crickhowell: Specifically on London congestion, I wonder if any analysis has been done of the huge impact that it is had on shifting people's shopping days. What actually happens is that they do not bring their cars in unless they have to for work on a work day, but they all come, in staggering numbers, on Saturdays and Sundays when they do not have to pay the congestion charge. Anyone who actually lives in London gets out of London now on Saturdays and Sundays, if they have any sense, because everyone from miles around is bringing themselves in.

Professor David Banister: Yes.

Lord Crickhowell: I wonder whether any analysis has been done of that sort of countereffect.

Professor David Banister: I understand that some analysis was done initially with John Lewis by people at Imperial College. You may refer to that if you wish to, because the large shopping outlets were concerned that they were going to lose trade. I understand that the work was followed up and they found that initially that they thought there was a problem, and subsequently that there was no problem. I do not know whether they looked at the Saturday—the out-of-hours, as it were—shopping times, but the data set was very good. They had all shopping transactions within the John Lewis stores, both inside and around the congestion charge area, by time of day. So they had the data, but I do not know whether the analysis was actually done. One another thing—again, this comes back to people's perceptions—is that if you do not live in London and do not know the scheme, the impression is often that the congestion charging scheme is across the whole of London and operates all the time. You get signs as you come into London that this is happening. So again, there is a communication issue here. Why is not it well known exactly the areas that it covers and the limits of it? Perhaps this is because most people do not drive in London.

Professor Peter Bonsall: Another nice example is what someone has called “the forbidden fruit” or “expensive fruit” syndrome: introducing a charge to go into London during a weekday makes the idea of going into central London more attractive. It is more valuable, so when you can do it for nothing it seems more worth doing. That is one of the many examples of the kind

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of counterintuitive effect that you sometimes get when pricing makes the thing more valuable. It is one of several examples of unexpected “nudge” effects.

Dr Lorraine Whitmarsh: Could I say something about nudge?

The Chairman: Please.

Dr Lorraine Whitmarsh: My comment on that was that the nudge approach is quite a well-established set of psychological principles about how people make decisions and how they behave that has many decades of research to support it, but it is still quite a narrow set of tools and so while it acknowledges that we are biased in our decision-making—that there are social influences that inform our choices—it does not really get to grips with the issue of habits, for example. It does not really say that we should be targeting points at which habits are disrupted and that, critically, information provision, which seems to be quite a central tenet of the nudge approach, is not very effective when people have strong habits. In fact, people do not really look at information about, say, public transport, if they are a habitual car user. It is quite an important thing that is not factored into the nudge approach, not to mention the broader infrastructure changes, which of course are needed as well.

Q607 Lord Warner: We have had a pretty mixed bag of submissions on the issue of the effectiveness of interventions to change travel behaviour. Some have argued that there is good evidence, and others that there is less good evidence. How strong do you collectively think the evidence base for the effectiveness of interventions to change travel behaviour is? What do you think the weaknesses of the evidence base are? What needs to be done to tackle those weaknesses?

Professor Peter Bonsall: Are we talking particularly about the Smarter Choices-type interventions?

Lord Warner: Some people have been saying that there's very extensive and well-researched evidence in this whole area of changing travel behaviour, and others have been much more sceptical about that. I think we are trying to get a feel for where the balance of weight actually rests, so we are kind of handing it over to you to make sense of this.

Professor Peter Bonsall: The evidence is very strong for some measures, and the fiscal ones can be put into that camp. But when one is dealing with the packages—as is the case with most Smarter Choices interventions—it becomes very much more difficult to ascertain what actually caused any effect that was observed. Another difficulty needs to be considered whenever one is dealing with a socially desirable phenomenon (—reducing travel has become synonymous with “this is what we ought to do”—that battle has been won)—people do not like to admit that they are not doing whatever it is. And that has effects on people's willingness to answer questions and on quite how they answer those questions, so there are a number of biases affecting the process of gathering information. To my taste, rather too many of these initiatives have been evaluated predominantly by self-reported behaviour, which is just a recipe for disaster. Also, a number have been evaluated by the same team who did the work, and that is unsatisfactory. It raises issues even if there is nothing that anybody should be ashamed of. It is just not as clean as one would like it to be.

Q608 Lord Warner: That is a poor evaluation argument, is it?

Professor Peter Bonsall: I think it is poor evaluation. That is not to say that it is possible to solve those problems, because a number of them, particularly establishing the counterfactual in a

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control study, are very difficult, and particularly because these packages will always involve things about which some people say “That is not really part of what I am looking at”. But is it? The edges of what is being observed become rather fuzzy, and that all adds to the difficulty of taking the evidence. The frequently quoted 10% reduction is, I fear, an overestimate, partly due to the fact that these are the earlier schemes that are targeted at the most likely respondents, quite properly, so to extrapolate that to the rest of the world is not appropriate. My feeling is that we are not actually going to achieve the 10% that is widely quoted, were one to reproduce the interventions on a larger scale.

Andrew Lee: I see two different issues in terms of evidence. One is about the actual quality of the evidence base, which certainly other people who have given evidence here have a great deal more knowledge of than I do. I suppose the other issue for me is why the evidence is not being translated into policy and decision-making. That is an area that we would be quite interested in. Certainly in the work that we have just done, people in government said to us that they were not aware of the research; that they thought there was a risk of duplicating research in different departments, for instance with commissioned research that was already available somewhere else; and that they were concerned about the costs of monitoring and evaluation in some of these schemes, even though it is absolutely vital and needs to be more sharing. Their own capacity and skill to commission and then understand the evidence that was being brought to bear was an issue. So the other comment I would make that lack of evidence is often cited as a barrier for doing something when actually the reasons are elsewhere. It steps into the psychology inside government and of decision-making. Making sure there's a robust and good enough evidence base for taking policy action is important, but other factors such as political courage and willingness to be unpopular come in occasionally as well. The part about how you translate that evidence into policy-making is as important—not more important, but as important—as the actual quality of the evidence itself.

Q609 The Chairman: What would you do to push government a bit?

Andrew Lee: There are some very good signs now. The fact that the Cabinet Office has now set up a Behavioural Insight Team, a sort of nudge unit, whatever we think of nudge, is good. The fact that Defra has quite detailed research is good. There is a practitioners' network across the Civil Service on behaviour change issues now. Those things need to be connected together much more effectively so that departments are learning from each other, testing what works and building in that feedback and sharing that information. I think that could be done. Also, the National School of Government, in the support and the kind of competency building that it provides for civil servants, could be bringing forward this whole issue of psychology of behaviour change, which is so fundamental to all sorts of aspects of sustainability, climate change, health and everything else. It is a vital tool for government to understand, so I think there are little kernels of expertise, but they are not necessarily yet all joined together. I spoke to DECC last year and it had no idea about the Defra behavioural change stuff. On the other hand, it commissioned some research into messaging on climate change and which messages would be best received by people, which was completely different to what was being done on ACT ON CO₂. There is definitely some room for improvement here, I think.

Q610 Lord Warner: Two things. You were saying earlier—I do not know whether others have the same view—that there was a reluctance in government to spend money on evaluation. Is that a bit of a showstopper? It is not much good everyone being interested if we do not have any well-evaluated pieces of research coming out of all this activity.

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Andrew Lee: Others will know better. I know that Change4Life, for example, was—is—being well-evaluated, and quite a significant percentage of the expenditure is going into it. I know that we found with climate change and community action that there seems to be much more enthusiasm about creating more pilot projects and more schemes on the ground than just learning and extracting the lessons from the existing work that has been done. That is true of the Low Carbon Communities in England and also the Climate Change Challenge Fund in Scotland, so that suggests there is a tendency to press for a new initiative rather than actually to learn from what has already been done sometimes.

Dr Lorraine Whitmarsh: I would say that some of the stuff that Defra's Sustainable Behaviours Unit is doing—the action-based research and the Greener Living Fund—has a huge amount of evaluation going on there.

Andrew Lee: Yes, that is good.

Dr Lorraine Whitmarsh: Lots of different methods and different organisations are involved in evaluations.

Andrew Lee: Yes, that is the way to go.

Dr Lorraine Whitmarsh: That is quite an encouraging use of evaluation.

Q611 Baroness O'Neill of Bengarve: It is fairly continuous. In some ways there is a problem if there's no evaluation, but there is a second problem I would like to go a bit closer to, which is the question of inadequate evaluation or poor evaluation. On the whole we have been hearing that a package of interventions is what is most likely to work, but equally that it is not likely that you can decompose the effects of each of the component interventions, and that synergies might be put together in some packages that do not exist in others, and so on. Given that situation, do you actually regard the RCT as the fundamental approach to good evaluation? Can it be done?

Dr Lorraine Whitmarsh: My view is if you can do it, it is obviously the best form of evidence that we have, and it is not used as much as it could be. I just mentioned some of the work that the Sustainable Behaviours Unit is doing. It at least uses control groups in a lot of that evaluation work, so that is encouraging. There are some really nice examples—the Bamberg study was mentioned earlier actually. He's a German researcher, but he did use a randomised control trial to look at the relative efficacy of targeting interventions to change travel behaviour among people who have just moved house, compared with people who have not, and that showed a 30% increase in travel.

Q612 Baroness O'Neill of Bengarve: That is, as it were, looking at single variable. I see that one can do an RCT when one is looking at a single variable, but can one hope to do it with these interventions—which on the whole I think you have been commending—where packages of interventions are used and it may be impossible to do sufficient trials to see how every possible arrangement of the various interventions could work together or may indeed by stymieing one another?

Professor Peter Bonsall: I think it is impossible ever to untangle the particular effects of the different components. One can only talk about the packages and draw inference from the effect of different packages. To me, a bigger problem is, "Where is the edge of the package?", because typically the intervention will be introduced in a community where there might be changes in

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other things (e.g. the bus service) at the same time. These changes are not actually part of the package, but they happened, and maybe we did not know they were going to happen.

Q613 Baroness O'Neill of Bengarve: Maybe there's heavy rain for three weeks?

Professor Peter Bonsall: Yes, exactly, and if that heavy rain happened during the survey period, that is even more of a problem. I think we could do better. Some mistakes are all too common in evaluations, but I do not much believe that we can ever get a perfect evaluation on the basis of which we could say, "This now proves it beyond any doubt whatsoever".

Q614 Baroness O'Neill of Bengarve: But if you wanted to improve the standards of evaluations, granted that there are these imperfections, and in particular the standards of intervention or the standards of evaluation for pilot studies or government-funded interventions of a more general sort, what measures would you think most important for improving those evaluations?

Professor Peter Bonsall: I would say having a source of information that is not self-reported behaviour.

Baroness O'Neill of Bengarve: Yes.

Professor Peter Bonsall: I would say having an adequate control. I would say having adequate—again, this is part of control, however one defines it—"before, during, after and beyond" elements to the evaluation, and having an independent evaluator. I think those things are simple and ought to be done—and could be done.

Q615 Baroness O'Neill of Bengarve: What are the factors that lead people not to have, or not to choose to have, independent evaluators?

Professor Peter Bonsall: I think there has been a shortage of the suitable people who are available to do these kinds of evaluations. To some extent that has become less of a problem as more and more companies and institutions have become involved in the field, so maybe that is less of a problem now than it was in the early days.

Q616 Baroness O'Neill of Bengarve: My impression is that it is a very crowded field. I remember speaking to the International Society of Evaluators at Queen Elizabeth House and being astonished at the vast hordes of evaluators who are running around our world.

Professor Peter Bonsall: They tended to be those who have specialised in evaluating behaviour change, and they have, particularly in the early days, been the same as those who have specialised in "doing" behaviour change or producing behaviour change.

Q617 Baroness O'Neill of Bengarve: So in short there has been a sheer conflict of interest that has made things look rosier than they are?

Professor Peter Bonsall: I am not suggesting that is necessarily the case. I am saying that because it was often the same people evaluating and "doing", some people are going to assume that may have been the case, and that would obviously be an unfortunate position to be in. It would have been better if there had been independent evaluation, but actually I think a bigger problem has been the reliance on self-reported behaviour; I think that is absolutely the wrong

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way to go about evaluating something that has within it, as one of its components, people's attitudes, motivations and wishes to do the right thing.

Dr Lorraine Whitmarsh: Yes.

The Chairman: Because people are bound to want to please to some extent.

Q618 Baroness Perry of Southwark: I think a part of my question has been answered, but can I just make sure that I have got it right? Are you really saying that, despite the lack of really very hard evaluation, good evaluation, and your message has been very strongly that packages of interventions are most effective, a package that missed out the regulatory and the fiscal—in other words, the hard stuff—would probably not work? That is the message that I am hearing from you. Is that right? That these are really the most effective, and that if you make it really expensive and difficult for people and you have regulations, that is the way their behaviour changes—a force majeure, so to speak?

Professor Peter Bonsall: I think what I am saying is that unless the price is right, as it were, other attempts to change things are going to be frustrated. That does not mean we've got to change the price, because it might have been right already, but if, for instance, the trends in the relative prices are going the wrong way, we are going to struggle to keep up by trying to use other measures because there is this massive instrument pointing people in another direction.

Andrew Lee: There are a lot of examples from other areas of sustainable living. Take three: home insulation and building standards for new buildings; product specifications—white goods such as washing machines; and waste and recycling. Without the landfill tax, without the EU regulations on product standards and without very clear fiscal measures targeted at households—remember that we now have the Green Deal and the Feed-In Tariff and so on—you are pushing up against a brick wall. You can't nudge my teenage sons into putting their devices on standby, but you can design it in. Some learning from that can be applied within the field of sustainable transport. We should be looking at what we already know, because some of these things were tried in order to avoid regulation in the first place. Actually, they were based on the idea that we would all become green consumers and we would shop and choose our way into sustainable consumption. It is not going to happen, not on its own.

The Chairman: It is not how people are.

Professor David Banister: I do not want there to be a misunderstanding. You were saying that the two harder measures are the ones that are effective, but I think we shouldn't forget that they need to be complemented by these others. They don't work exclusively.

Baroness Perry of Southwark: I understand what you are saying; it needs to be a whole.

Professor Peter Bonsall: But one does have to look at ways of communicating a positive message to balance any negative message; many of the interventions are otherwise likely to be seen as negative rather than positive. Anything else would be a wrong impression.

Q619 Baroness Perry of Southwark: No, I did say. My message was really that, if you had a beautiful package of encouraging people and appealing to their better nature and all the rest of it, but without the something that was the harder end of it, it probably wouldn't work. That is the message I was getting at.

Professor Peter Bonsall: If by that you mean you have to have a negative aspect, I am not sure you do. The intervention is going to work a lot better if you do have a negative aspect but you

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can achieve something by being purely positive, provided that the pricing and general convenience do not negate the effect that is being sought.

Q620 Baroness Perry of Southwark: I would call pricing the hard end as well, but I think you are also saying, and I accept that, that the hard bit—pricing and regulation alone—is not as effective as a package that includes persuading people and giving them reasons to behave differently, so that they do not just do it when they are being watched or fined.

Professor Peter Bonsall: Part of it is about giving a consistent message. That message can come through publicity, obviously, but it also comes through manifest policy, pricing, regulation and enforcement. Unless those things are all pointing in the same direction, people are going to think, “What am I supposed to do?”.

Baroness Perry of Southwark: No, that is very clear.

Q621 Lord Crickhowell: I am just going to preface my question by saying that we are always seeking examples. I would comment, and I am sure Mr Lee is aware of this, that the main committee met this morning in an inquiry about how we achieve innovation through procurement. As we listened to Mr Lee, I think that smiles appeared. He identified some of the progress in some areas. He also identified some of the difficulties—expertise being one—at the rights points, and knowledge. His comment about the Department of Transport and achieving things wasn’t entirely the impression that we have gained in that inquiry. My question—because we always like examples—is about examples of intervention, good and bad. Can you give us some, and please do not all simply say Sustainable Travel Towns, because a lot of people have said that it is a good one? Do you agree, and are there any other successful examples, or really bad examples, that you would like to identify?

Professor Peter Bonsall: I think that one of the problems—if, by bad examples, one means things that did not work—is that nobody talks about them. The project may get pulled before it is finished. If it is clearly not working, the funding may well be stopped. In whose interest is it to write that up?

Q622 Baroness O'Neill of Bengarve: It is in the interests of everybody.

Professor Peter Bonsall: Oh yes, I absolutely agree.

Baroness O'Neill of Bengarve: It is like failing to write up negative results in a clinical trial.

The Chairman: —which is actually very shocking.

Professor Peter Bonsall: Yes, I was being deliberately provocative!

Q623 Lord Crickhowell: Having said that, of course I understand that, but all four of you are very knowledgeable about what is going on in this field, and I do not believe that some of the bad ones have not come to your attention. So, good and bad please: the evidence.

Professor Peter Bonsall: There were some examples of Smarter Choices interventions in the southern part of Australia—I forget whether it was Adelaide or Melbourne—where the result was actually negative; that Smarter Choices, when actually monitored, seemed to suggest an increase in the use of cars! Now that one kind of did not get talked about.

The Chairman: Thank you. That is very useful.

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Professor Peter Bonsall: Then, as you say, there were some Sustainable Towns examples. I am particularly familiar with the Darlington one because I was an auditor for it. I think there were some very nice examples of the way things were done and appearing to work. I do not think that the evaluation methodology was entirely successful, but in terms of what they did, it was a good example.

Q624 Lord Crickhowell: With all this activity, you must surely be able to give me more than a single example. We do like evidence.

Professor Peter Bonsall: I am also aware of one very close to my base in Leeds where a project was started and was not completed because it did not appear to be working very well.

The Chairman: You can't give us chapter and verse on that, presumably?

Professor Peter Bonsall: No. It was never published.

The Chairman: It did not go far?

Professor Peter Bonsall: By the local authority.

Lord Crickhowell: Let's have some good ones.

Andrew Lee: Can I throw in a couple? In terms of the good ones, you have looked at Change4Life, I know. We have run, with the NHS, the Good Corporate Citizenship programme, which it has designed in fact for many years now. Sandwell PCT won last year. We have the case study. It is written up, and I can refer the committee to it. There are some very good examples of NHS trusts having actually taken the travel dimension, the food and some of the other—

Q625 Lord Crickhowell: It would be quite useful if we could have some details on that, please.

Andrew Lee: I could certainly supply some information afterwards.

The Chairman: That would be very helpful.

Lord Crickhowell: Particularly with the travel. We have heard from others in our inquiry about obesity, but not about travel and so forth.

Andrew Lee: I think a lot of them have looked at travel. It is been one of the components of looking at good corporate citizenship locally. I know I am cracking on, but ACT ON CO2 needs a good kicking actually in some of the aspects related to travel. I would be interested to know what the other panel members have said about this, because none of the "take your golf clubs out of the car boot" advert and the little engine beep-beeping around was built on what we seem to already know and understand about what motivates people to change their behaviour. That was not an impressive example, and I have not seen a comprehensive evaluation of it; I do not know whether there is one. It seems to me like a marketing campaign—let's be seen to be doing something.

Q626 Baroness Perry of Southwark: Was that the Department of Transport?

Andrew Lee: It actually started with Defra but it became a brand across government, and DfT was in fact the first to start advertising under ACT ON CO2 on tyre pressures—"take your golf clubs out of the boot".

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Professor David Banister: If you are looking at larger-scale things, there are many examples. I cite one in my evidence about Toronto, which looks at suburban versus non-suburban living and what effect this has on both the difference in modes of transport and the energy actually used. There's a factor three in the difference.

The Chairman: You need to speak up, I am sorry.

Professor David Banister: Sorry. There's a factor three between the people who live in the city centre, which is normalised for different types of space and their energy use in the home and in transport compared with people in the suburbs who are using three times as much energy as the people living in the city centre are using. London is one city that has had a modal split; 4%—I think it is even more than that now—more people travelling via public transport than five years ago. I do not know if it is unique. It is something that is the result of a range of different strategies and different elements of the policy, some of which have been sticks, some of which have been carrots. There has been huge investment in the buses. If you look at European cities, many of those have a modal share of over 50% of trips by walk and cycle, and that may be a sort of benchmark. Copenhagen is one example, as is Freiburg. Hundreds of cities in Europe have really moved away from the dependence on the car within the cities. Much of my experience is based in those sorts of environments, but I am sure the same can be said here.

Q627 Lord Crickhowell: Can I ask a question, Professor Banister. I have been longing to ask all day and it is based on my experience as Secretary of State for Wales. You have been talking about cities, a nice sort of solid round. I had to try and deal with industrial change, with the collapse of mining and steel in communities stretched over a vast area. We were blessed, luckily, with a good railway system, but the sort of schemes that you are talking about do not apply quite so easily in those kind of diffuse old industrial areas, or indeed in some of the new growth areas where you are trying to get a hub around high technology and other things in order to change. Do we have any examples of work being done in those wider, more difficult, industrial environments, or is it all in cosy places such as Oxford or even London?

Professor David Banister: I would not necessarily call London a cosy place.

Lord Crickhowell: Compared with industrial south Wales, it is.

Professor David Banister: Even in London, most of the trips for about 70% of the people who live in London are under 5 kilometres in length. Why do you need to use a car for that journey? If we are looking for alternatives, they are there, and they have—and we haven't really touched upon this yet—very substantial co-benefits that are not normally considered within the transport paradigm. Those are the health benefits, the safety benefits, the benefits of less noise and less air pollution; all these factors should really be factored into our evaluation of things, and tend to be forgotten. I am not saying it is easy to do it. In places such as Detroit, it has been enormously difficult to do anything, and some people are now suggesting that Detroit should be reformed as a series of multi-centres and that the old centre should be forgotten because it is beyond salvation, as it were. I do not say it is easy to actually do it, but there are examples, even in places that are not a core city, such as the Randstad in the Netherlands where you have a ring of cities around a heartland that are well connected by public transport. People from these smaller centres can get from one to another by public transport, yet within them they can use walk and cycle to get around.

Q628 Lord Crickhowell: I am looking for good initiatives, if you can give us the evidence.

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Professor David Banister: Many, many cities have actually, in a sense, reinvented themselves in some way. Maybe I am exaggerating a little bit, but there are many good examples of where cities have turned a corner in being able to make the quality of the urban environment probably better than it was, certainly during the industrial period.

The Chairman: We do have to stop. I am really sorry. There are a couple of things that we would have desperately liked to ask you, so we would like any more examples you can cite. That would be very helpful. Good and bad examples, and even ones where you can say “We can’t give a source but you know about one that”. That would be very helpful. The other thing we really would like to know—maybe any of you who are willing could add this—is whether you think local authorities have got the expertise to evaluate this kind of evidence, because of course a lot of this lies with local authorities. That would be really helpful. You will get the chance to look at the transcript, and, if you do not think it is completely right, to add to it. We would particularly like from you anything additional on local authorities and any additional examples, good and bad⁵⁴⁵. We are hugely grateful. It has been a really, really good double session and we are really grateful to all of you for coming. Thank you very much indeed.

⁵⁴⁵ When invited to comment on the transcript, Dr Lorraine Whitmarsh added: In our written response, we provided several good and bad examples. Additional good examples of integrated strategies that combine infrastructural improvements, incentives, information, demand management, and use of planning decisions: Worcester’s ‘Choose how you move’ campaign; Smarter Travel Sutton; Members of the car free cities movement like Freiburg and Copenhagen; Australia’s Travel Smart campaign; and Civitas in Preston. Even using ‘soft measures’ alone, such as in Global Action Plan’s Ecoteams Community Lifestyles Campaign, can lead to 16% less fuel for transportation as a result of involvement (see: Gershon, D. & Gilman, R., 1991. Household ecoteam workbook: A six month program to bring your household into environmental balance. Uxbridge, Ontario).

In terms of bad examples, research shows some schemes generate transport demand in the longer-term, because they tackle congestion/car use in a piecemeal way (e.g., park-and-ride schemes can increase inter-urban car use; light rail services can take demand from bus services; see: Goodwin, P et al., 2004, Changing travel behaviour, Presentation given at the Bloomsbury Theatre, London; Lee, S. & Senior, M. Using Census data to examine the impacts on work mode choice and car ownership of English light rail schemes opened between 1991 and 2001. Transport Planning and Technology, under review).

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Supplementary written evidence from Professor Peter Bonsall, University of Leeds (BC 155)

Two requests were made at the end of the session on Tuesday 1 February 2011.

One was a request for examples of initiatives which had not yielded the "usual" results. I mentioned during the Session on Tuesday that I was aware of one from "the southern part of Australia" which had yielded negative results. I said I would forward details. It turns out that there are examples in Adelaide, Melbourne and Canberra. The details are in footnotes 8 and 9 of my paper in the Journal of Transport Policy, which was referenced in my written evidence.

On a general point, I would recommend that the papers which I referenced be looked at because they do include a wealth of examples. (I would be happy to send copies if you require them - but three are on the DfT website).

The second was a request for opinion on the ability of local authorities to conduct rigorous monitoring and analysis of the kind that would be required to produce robust evidence. My opinion is that few local authorities have the resources (or the knowledge) to conduct a rigorous evaluation in-house.

A number of consultancy companies do have the necessary skills but care would be needed to ensure that they are disinterested observers (and, as I noted several times on Tuesday, that they do not rely on self-reported behaviour). I should also repeat that I do not believe that any conceivable budget will ever be sufficient to "prove" the scale of effect beyond all doubt.

Finally, had time not run out on Tuesday, I would have raised issue with the opinion seemingly expressed by Andrew Lee to the effect that the "golf clubs in the boot" and "correct tyre pressures" campaign messages were bad interventions. I would hold that they will have contributed to the long term aim of changing perceptions about peoples' ability to make a personal contribution to energy/carbon saving (and perhaps to a shift in social norms about what people "should" do). As such there impact will be diffuse and hard to identify but may none the less be beneficial. This is an example of the kind of effect which is likely to be impossible ever to quantify.

2 February 2011

Department for Transport, Darlington Council, Worcestershire Council and Transport for Quality of Life

Written evidence from the Department for Transport (BC 138)

Summary

1. DfT is not anti-car and recognises that the car has an important role in promoting economic competitiveness and in helping people meet their transport needs. Rather than forcing people out of their cars, we aim to promote choice by making travelling on foot, by bike or on public transport more attractive. DfT recognises the potential and importance of behavioural science. Insights from behavioural science are already reflected in the way a range of DfT policies are designed and delivered, and we are also making extensive efforts to further embed these insights in the policy-making process.
2. The key influences on transport behaviour, including modal choice, are a combination of objective (structural or environmental) and subjective (eg attitudinal, social or cultural) factors, namely:
 - the monetary and time costs associated with different modes
 - people's household income
 - where people live and the available transport infrastructure
 - the habitual nature of much travel behaviour
 - the relative centrality of the car to people's identity, status and lifestyle
 - how people understand and compare the relative costs of different modes
 - the convenience of the car and the perceived downsides associated with using public transport, including fear of crime
3. On their own, concerns about the environmental impacts of driving do not emerge as a key influence on modal choice due to the primacy of the factors highlighted above.
4. Infrastructure has an important role to play in shaping modal choice, but, no matter how favourable the infrastructure conditions, some powerful psychological and normative barriers can prevent behaviour change.
5. Evaluation and other evidence from the UK and internationally demonstrates that important implications for developing successful policies aimed at changing people's transport behaviours are:
 - starting with a detailed understanding of peoples' key motivators and barriers in relation to the behaviour in question, and differences between different groups of people
 - using a combination of hard and soft measures to address these as part of a co-ordinated rather than piece-meal approach
 - emphasising the individual, rather than national or global benefits of a potential change in behaviour
 - providing personalised information that enables people to reflect on their current behaviour and gives them the knowledge necessary to change it.

- facilitating people to make a public commitment to change their behaviour, and ensuring they have access to ongoing motivation and support from others in order to 'lock in' the benefits of change
6. The complex nature of influences on travel mode choice and the importance of local infrastructure means that packages of measures aimed at behaviour change at the local level are likely to be the most effective.
 7. Central government influences, but does not control the environment in which people make choices about how they travel. Enabling changes in transport behaviour will often require the active involvement of third parties, in the private sector and working locally.

Introduction

1. DfT is not anti-car and recognises that the car has an important role in promoting economic competitiveness and in helping people meet their transport needs. DfT is committed to promoting economic growth and sustainable local travel by making public transport and cycling and walking more attractive and effective, promoting lower carbon transport and tackling local road congestion through a range of instruments and policy measures⁵⁴⁶. Measures include supporting low carbon technologies, ecodriving, promoting better design and management of local roads, as well as encouraging the use of more sustainable modes.
2. DfT recognises the potential and importance of behavioural science both in understanding why people make the choices they make and maximising the effectiveness of its policies. The Department has a very successful track record in the field of behaviour change in relation to road safety. Most areas of transport policy influence the choices people make about whether, when and how to travel; sometimes this is conscious and intended, sometimes not.
3. DfT already has a range of policies aimed at enabling behaviour change (see answer f). But we are also making extensive efforts to understand what further insights behavioural science has to offer for transport policy⁵⁴⁷, and are working to embed these insights into day to day policy making and implementation.

Response to questions posed by the committee

- a ***What are the most influential drivers of behaviour affecting an individual's choice of mode of travel.***
4. The key drivers of transport behaviour are a combination of objective (structural or environmental) and subjective (eg attitudinal, social or cultural) factors⁵⁴⁸ and these are set out below.
 5. Objective drivers of transport behaviour:

⁵⁴⁶ Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen – White Paper, DfT, 2011
<http://www.dft.gov.uk/pgr/regional/sustainabletransport/>

⁵⁴⁷ For example, in order to facilitate cross Departmental and cross Whitehall learning on behaviour change six 'think pieces' were commissioned and published in 2010. These can be found at: <http://www.dft.gov.uk/pgr/scienceresearch/social/behaviour-changes>

⁵⁴⁸ Anable, J et al. An evidence base review of public attitudes to climate change and transport behaviour, DfT, 2006
<http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgr/sustainable/climatechange/iewofpublicattitudestoc15730.pdf>

Cost: The monetary cost of different transport modes is an important influence on how people choose to travel. For example, attitudinal evidence has identified cost as a key barrier to rail travel amongst non-users⁵⁴⁹, and rail users also rate 'value for money' as their highest priority for improvement⁵⁵⁰.

Journey Time: The 'time' costs of travelling by different modes have also been shown to be a strong influence on the transport choices people make – both in terms of how long journeys take and how predictable this is. For example, research into demand for bus travel found the two most important considerations for a sample of car and bus users were reliability and service frequency⁵⁵¹ - factors that impact directly on journey duration and predictability. Existing bus users also identify reliability as their highest priority for improvement⁵⁵². In addition, the most common reason people give for not walking to work or education is that it takes too long to walk or that it is quicker by car⁵⁵³.

Household income: In 2009, people in the highest household income quintile group made 29 per cent more trips than those in the lowest income quintile group⁵⁵⁴. Higher income groups travel more frequently by car and train and less frequently by bus than lower income groups.

Household type: Households with children typically make more trips than households without children. On average in 2009, more trips were made by people in households containing two adults with children than any other household type (1,076 trips per person per year)⁵⁵⁵.

Car availability: Having access to a car in their household is another determinant of whether or not an individual will make a large proportion of their journeys by car, either as a driver or passenger. On average in 2009, members of car-owning households made 40 per cent more trips than people living in non car-owning households and travelled two and a half times as far⁵⁵⁶.

Area of residence: People living in rural areas are more likely to travel by car and less likely to use alternative modes. In 2009, on average those living in rural areas made more trips (521 trips per person per year) by car as a driver than those living in any other type of area (213 in London Boroughs to 464 in small urban areas)⁵⁵⁷.

Public transport provision (discussed in more detail under question b):

When asked about their journey to work, the most common reason given for why people did not commute by bus was that bus services did not run where or when they wanted to

⁵⁴⁹ Public experiences of and attitudes towards rail travel: 2006 and 2009, DfT, 2009

<http://www.dft.gov.uk/adobepdf/162469/221412/221513/336278-/railtravel2009.pdf>

⁵⁵⁰ Passengers' priorities for improvements in rail services, Passenger Focus, 2010

www.passengerfocus.org.uk

⁵⁵¹ Aecom, The Role of Soft Measures in Influencing Patronage Growth and Modal Split in the Bus Market in England, DfT, 2010
<http://www.dft.gov.uk/pgr/regional/buses/busmarketfactors/pdf/report.pdf>

⁵⁵² Bus Passenger Priorities for Improvement, Passenger Focus, 2010

www.passengerfocus.org.uk

⁵⁵³ Thornton, A. et al, Climate Change and Travel Choices: Segmentation Study – Interim Report, DfT, 2010

<http://www.dft.gov.uk/pgr/scienceresearch/social/climatechangetransportchoices/>

⁵⁵⁴ 2009 National Travel Survey, DfT, 2010 <http://www.dft.gov.uk/pgr/statistics/datatablespublications/nts>

⁵⁵⁵ Ibid

⁵⁵⁶ Ibid

⁵⁵⁷ 2009 National Travel Survey, DfT, 2010 <http://www.dft.gov.uk/pgr/statistics/datatablespublications/nts>

travel. Similarly the most frequently mentioned reason for not commuting by rail was not having train services covering the journey they needed to make⁵⁵⁸.

Volume and speed of traffic: Safety concerns are a key barrier to cycling in particular and are linked to a perceived lack of dedicated cycling infrastructure. Of those who are able to cycle, 60% say that it is ‘too dangerous to cycle on the roads’ (60%) and that they ‘would cycle (more) if there were more dedicated cycle paths’ (52%)⁵⁵⁹. Although bicycle ownership is relatively high (42%), nationally only 2% of trips are made by bicycle⁵⁶⁰. For both walking and cycling, safety concerns are exacerbated by fast or heavy traffic⁵⁶¹.

6. Subjective drivers of transport behaviour:

Habit: Many trips are made repeatedly (e.g. journey to work or school) and over time people do not consciously weigh up the relative costs and benefits of different modes each time they undertake the trip. In a recent national survey, over two-thirds of drivers agreed with the statement that ‘travelling by car is something I do automatically’⁵⁶².

Centrality of the car to individuals’ identity, status and lifestyle: Previous research by DfT has highlighted the importance that many drivers attach to the car, both as a means of conducting their day to day lives, and because of the more intangible sense of ‘freedom’, ‘independence’ and social status it represents⁵⁶³.

Enjoyment of driving: Nearly three quarters (73%) of those with a driving license agree with ‘I enjoy driving’ (just 13% disagree) and 65% of current drivers agree with ‘I enjoy driving on my own’ (15% disagree)⁵⁶⁴.

Social norms: As in other areas, the perceived behaviour of others can be a strong influence on the transport behaviour of individuals. In a recent national survey just over half of respondents (52%) agreed that ‘successful people tend to travel by car rather than by bus’. This proportion was lower amongst respondents in London (42%), where bus use is less restricted to lower income groups. Evidence indicates that social norms represent less of a barrier to rail travel. In the same survey, nationally only 27% agreed with the statement ‘successful people tend to travel by car rather than by train’⁵⁶⁵.

Understanding and perceptions of cost: Fuel costs are poorly understood and qualitative research has indicated many people are unable to accurately compare car journey costs against other modes. Few people think in terms of the costs of individual car journeys when making decisions about whether and how to travel⁵⁶⁶. Previous research in relation to

⁵⁵⁸ Thornton, A. et al, Climate Change and Travel Choices: Segmentation Study – Interim Report, DfT, 2010
<http://www.dft.gov.uk/pgr/scienceresearch/social/climatechangetransportchoices/>

⁵⁵⁹ Ibid

⁵⁶⁰ National Travel Survey, DfT, 2010

<http://www.dft.gov.uk/pgr/statistics/datablespublications/nts/>

⁵⁶¹ P L Jacobsen, F Racioppi and H Rutter (2009) Who owns the roads? How motorised traffic discourages walking and bicycling. Journal of Injury Prevention, 15: 369-373

⁵⁶² Thornton, A. et al, Climate Change and Travel Choices: Segmentation Study – Interim Report, DfT, 2010
<http://www.dft.gov.uk/pgr/scienceresearch/social/climatechangetransportchoices/>

⁵⁶³ Lyons, G. et al, Public attitudes to transport: Knowledge review of existing evidence, DfT, 2008
<http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgr/scienceresearch/social/evidence.pdf>

⁵⁶⁴ Thornton, A. et al, Climate Change and Travel Choices: Segmentation Study – Interim Report, DfT, 2010
<http://www.dft.gov.uk/pgr/scienceresearch/social/climatechangetransportchoices/>

⁵⁶⁵ Ibid

⁵⁶⁶ Bonsall, P. et al, Consumer behaviour and pricing structures: final report on qualitative research, DfT, 2006

road pricing has also highlighted that a significant proportion of consumers 'disengage' if they perceive cost structures to be too complex; this disengagement sometimes leads them to avoid exposure to that cost but sometimes leads them simply to pay-up regardless⁵⁶⁷.

Perceived downsides associated with public transport: Where people are aware it is possible to undertake a journey by public transport they are often still deterred from doing so by the perceived 'hassle' associated with planning and paying for the journey, and then in interchanging between modes to complete it. Non-users also consistently cite concerns about being the victim of crime as a barrier to using public transport⁵⁶⁸. In comparison, driving - and the ability to complete a door to door journey without any need to interchange - is in general perceived as more convenient, safer and quicker⁵⁶⁹. Through its End-to-end Round Table, Government is taking the lead on challenging the train, bus, cycling and car hire industries to consider what improvement measures they can put in place as quickly as possible to enhance the whole journey experience. The Government is also committed to delivering, with operators and public sector bodies, the infrastructure to enable most public transport journeys to be undertaken using smart ticketing technology by December 2014⁵⁷⁰.

7. The evidence suggests that no one objective or subjective factor can be singled out as most influential across the population as a whole, and that the transport behaviour of different segments is a reflection of the particular combination of factors relevant to the characteristics and attitudes of that segment. Objective and subjective factors can also interact. For example, a lack of public transport provision is cited by many drivers as an objective barrier to using alternatives to the car. The habitual nature of driving (a more subjective factor) also means regular car users are unlikely to seek out information about public transport in their area and may not be fully aware of their choices.

b What is the role of infrastructure in encouraging and facilitating changes in travel mode choice

8. Neither Government nor any other body can directly change people's behaviour - people change their own behaviour in response to the world around them and their perceptions of it. However, changes in infrastructure, delivered by Government and others, do have a clear role in shaping the choices people have about how they travel.
9. DfT recognises that the car has an important role in promoting economic competitiveness and in helping people meet their transport needs. DfT's policy, therefore, is to promote choice and the Department recognises that this is particularly appropriate in towns and cities where there are often a range of options available.
10. People **perceive** infrastructure as an important barrier to using alternatives to the car. A significant proportion of people (46%) agree that if they could they would prefer to drive less than they do⁵⁷¹. But 52% of people with a car or van in their household agree that 'For me,

<http://www.mvaconsultancy.com/papers/C3415800%20-%20Consumer%20behaviour%20and%20pricing%20structures%20final%20report%20on%20qualitative%20research.pdf>

⁵⁶⁷ Ibid

⁵⁶⁸ Lyons, G. et al, Public attitudes to transport: Knowledge review of existing evidence, DfT, 2008

<http://webarchive.nationalarchives.gov.uk/+/http://www.dft.gov.uk/pgr/scienceresearch/social/evidence.pdf>

⁵⁶⁹ Integrated Transport: Perception and Reality, Passenger Focus, 2010 www.passengerfocus.org.uk

⁵⁷⁰ Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen – White Paper, DfT, 2011

<http://www.dft.gov.uk/pgr/regional/sustainabletransport/>

⁵⁷¹ Thornton, A. et al, Climate Change and Travel Choices: Segmentation Study – Interim Report, DfT, 2010

<http://www.dft.gov.uk/pgr/scienceresearch/social/climatechangetransportchoices/>

there are no practical alternatives to travelling by car⁵⁷². Lack of availability (particularly direct routes at convenient times) is the most commonly cited reason for not travelling by bus or train.⁵⁷³ More convenient/direct/better routes is the factor that people are most likely to suggest would encourage them to use public transport more (46% of those who say that changes to public transport would encourage them to use it)⁵⁷⁴.

11. DfT's core accessibility indicators, which measure accessibility to a composite of key services, appear to back up the attitudinal evidence, indicating a link between levels of accessibility and car use. Areas with very good (over 80%) levels of accessibility have lower levels of car use and higher proportions of public transport use, walking and cycling⁵⁷⁵.
12. The wider evidence base, however, suggests a more complex picture. Research looking at the long-term picture suggests that car use grew during the twentieth century due to an iterative relationship between infrastructure (including the location of services, jobs and homes, as well as transport) and people's travel choices and behaviour, resulting in large scale changes to both over time⁵⁷⁶.
13. DfT's own experience confirms that the relationship between improvements to public transport infrastructure and modal shift is complex. It is highly dependent on the (local) transport network which the infrastructure forms part of. The extent of mode shift from car depends upon the relative attractiveness of road and public transport in the corridor where the scheme is being considered and on the relative shares of each mode. For example, if rail already has a large share, the scope for further mode shift is less. And if the costs, including journey times and convenience, of two modes are fairly close for many of the trips people make, then the potential for shift will be greater than in a situation where one mode is clearly superior for most trips. Complementary or conflicting (local) policies, such as the availability and cost of town centre car parking, joint ticketing and transport information will also be a factor influencing the degree of modal shift.
14. Any improvements to public transport infrastructure are therefore likely to have a range of outcomes, including shift between public transport modes, increased travel overall or shift from walking/cycling to the new infrastructure. Modal shift specifically from car to public transport generally represents just part of the equation. For example estimates of the impacts of rail improvements on patronage levels, based on DfT's National Travel Model, shows that for every 100 passenger miles generated by an improvement in a typical rail service, there are 26 fewer car miles driven. In other words, just over a quarter of the demand generated by a scheme is a transfer from the car driver mode⁵⁷⁷.
15. The building of new public transport infrastructure, such as light rail or tram lines in urban centres outside London, has demonstrated similar shifts from car. For example, 30% of journeys on Nottingham's first tram line came from mode shift from car and park and ride.

⁵⁷² Ibid

⁵⁷³ Ibid

⁵⁷⁴ Ibid

⁵⁷⁵ DfT National Core Accessibility Indicators, 2004; NTS, 2002-06 http://www.plan4sustainabletravel.org/data_trends/

⁵⁷⁶ Lucas, K and Jones, P. The Car in British Society, RAC Foundation, 2009

http://www.racfoundation.org/assets/rac_foundation/content/downloadables/car%20in%20british%20society%20-%20lucas%20et%20al%20-20170409%20-%20report.pdf

⁵⁷⁷ Transport Analysis Guidance (TAG) Unit 3.13.2 Guidance on Rail Appraisal: External costs of car use, DfT, 2007 <http://www.dft.gov.uk/webtag/documents/expert/pdf/unit3.13.2.pdf>

The equivalent figure for the initial Manchester Metrolink was around 27%, and about 20% for Sheffield Supertram⁵⁷⁸.

16. The evidence suggests that infrastructure on its own may not be enough to enable choice. No matter how favourable the infrastructure conditions, some powerful psychological and normative barriers can prevent behaviour change⁵⁷⁹. This suggests the value of packages of interventions, like DfT's Sustainable Travel Towns, that tackle both the structural and the attitudinal factors affecting change.⁵⁸⁰ The shift to Low Emission Vehicles will also derive carbon benefits, without the need for modal shift.
17. ICT infrastructure also has a role to play in facilitating changes in travel behaviour, by reducing or removing the need to travel through the use of video or teleconferencing, remote working, providing training or seminars online, or through the expansion of online shopping. BIS and DCMS are currently developing a broadband strategy to improve the coverage and speed of broadband in the UK by 2015. Again the impacts on travel are likely to be complex.

c What are the latest developments in the evidence base in relation to changing travel mode choice and the implications of those developments for policy

18. Important recent sources of evidence include DfT's six 'think pieces'⁵⁸¹, commissioned to facilitate cross Departmental and cross Whitehall learning on behaviour change and published early 2010 and the interim report of DfT's segmentation study on Climate Change and Travel Choices⁵⁸².
19. Habit has emerged as an important driver of peoples modal choices - many people do not put effort into thinking consciously about how they are going to make a journey - they simply jump into their car⁵⁸³. This is a difficult factor to challenge. Recent evidence shows the degree to which people may relapse into their old behaviour once they have tried a change, suggesting that for every three people who try alternatives to travelling to work by car, two will probably revert to using their car or van⁵⁸⁴. We need more evidence on why people revert, but the evidence indicates the value of ongoing support or demand management in enabling people to sustain a change of behaviour.
20. Earlier research identified the **gap** between individuals' attitudes and behaviour in relation to transport⁵⁸⁵. Recent evidence demonstrates in more detail how this differs between different groups of people. For example, overall, better educated groups tend to hold more 'pro-environmental' attitudes, while higher income groups show less sustainable transport behaviour. The links between education and income therefore mean that high income, well-

⁵⁷⁸ Balcombe, R. et al, The demand for public transport: A practical guide, TRL, 2004

⁵⁷⁹ Christmas, S. Nine Big Questions about Behaviour Change, DfT, 2010

<http://www.dft.gov.uk/pgr/scienceresearch/social/behaviour-changes/doc/questions.rtf>

⁵⁸⁰ See for example http://www.dft.gov.uk/cyclingengland/site/wp-content/uploads/2010/05/making_a_cycling_town_qualitative_report1.pdf

⁵⁸¹ In order to help to facilitate cross Departmental and cross Whitehall learning on behaviour change six 'think pieces' were commissioned and published in 2010. These can be found at: <http://www.dft.gov.uk/pgr/scienceresearch/social/behaviour-changes>

⁵⁸² Thornton, A. et al, Climate Change and Travel Choices: Segmentation Study – Interim Report, DfT, 2010

<http://www.dft.gov.uk/pgr/scienceresearch/social/climatechangetransportchoices/>

⁵⁸³ Ibid

⁵⁸⁴ Ibid

⁵⁸⁵ Anable, J et al. An evidence base review of public attitudes to climate change and transport behaviour, DfT, 2006
<http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgr/sustainable/climatechange/iewofpublicattitudestoc15730.pdf>

educated individuals tend to hold more pro-environmental attitudes but exhibit less sustainable transport behaviour; in turn, low income, less-well educated individuals tend to hold fewer pro-environmental attitudes but exhibit more sustainable transport behaviour⁵⁸⁶. The implication is that policies and initiatives nationally and/or locally should ideally be underpinned by a good understanding of the attitudes and behaviours of the different ‘target’ groups for change, for example using segmentation analysis.

21. Recent evidence sheds more light on the relative importance of some of the **subjective factors** that influence behaviour. The car is often central to people's overall identities, lifestyles and aspirations⁵⁸⁷ and most drivers (73%) say they enjoy driving⁵⁸⁸. Some people (particularly younger people in DE SEGs) see it as a status symbol. However, personal norms seem to be even more important with most drivers (69%) saying that driving is something that's typically “me”⁵⁸⁹. It is clear, therefore, that different people are influenced by different considerations when making transport choices, partly reflecting their circumstances and where they have to travel to, but also the underlying differences in the social networks that people operate in, aspirations and attitudes⁵⁹⁰. This suggests the importance of offering people choices and, again, that policy should be underpinned by a good understanding of the attitudes and behaviour of the groups involved.
22. People think in terms of making **door to door journeys** rather than individual legs of journeys, so they will assess the overall time they expect a journey to take and the ‘hassle’ involved⁵⁹¹. Although people report a range of frustrations with using the car, including congestion, road works and bad driving, they also see it as convenient and flexible, particularly compared with public transport⁵⁹². People cite a lack of ‘direct’ services as a key barrier to bus or train travel⁵⁹³. The implication for policy is that in order to be more attractive, journeys by public transport need to be as easy as possible, including factors such as easy access to information before and during journeys, integrated ticketing and good integration between different modes (eg cycling and rail; the pedestrian environment and bus).
23. Recent DfT research has highlighted the potential role of **‘soft’ measures** (such as marketing, real-time information, and customer service training) in increasing levels of bus use. It indicates that these kind of soft improvements can have a positive impact on patronage, once harder factors such as service frequency and reliability have reached a certain threshold. The research estimated that across ten areas the introduction of a package of soft improvements would equate, on average, to a 1.3% fall in car demand and a 4.23% increase in bus demand^{594 595}. Research has also suggested the introduction of smart or integrated ticketing could lead to an estimated increase in public transport journeys of

⁵⁸⁶ Thornton, A. et al, Climate Change and Travel Choices: Segmentation Study – Interim Report, DfT, 2010
<http://www.dft.gov.uk/pgr/scienceresearch/social/climatechangetransportchoices/>

⁵⁸⁷ Lyons, G. et al, Public attitudes to transport: Knowledge review of existing evidence, DfT, 2008
<http://webarchive.nationalarchives.gov.uk/+//http://www.dft.gov.uk/pgr/scienceresearch/social/evidence.pdf>

⁵⁸⁸ Thornton, A. et al, Climate Change and Travel Choices: Segmentation Study – Interim Report, DfT, 2010
<http://www.dft.gov.uk/pgr/scienceresearch/social/climatechangetransportchoices/>

⁵⁸⁹ Ibid

⁵⁹⁰ Ibid

⁵⁹¹ Integrated Transport: Perception and Reality, Passenger Focus, 2010 www.passengerfocus.org.uk

⁵⁹² Ibid

⁵⁹³ Thornton, A. et al, Climate Change and Travel Choices: Segmentation Study – Interim Report, DfT, 2010
<http://www.dft.gov.uk/pgr/scienceresearch/social/climatechangetransportchoices/>

⁵⁹⁴ This is based upon an assumed commuting modal split of car driver + car passenger (65%) and bus (20%).

⁵⁹⁵ Aecom, The Role of Soft Measures in Influencing Patronage Growth and Modal Split in the Bus Market in England, DfT, 2010
<http://www.dft.gov.uk/pgr/regional/buses/busmarketfactors/pdf/report.pdf>

between 5.5% and 8.6%, albeit primarily by existing users⁵⁹⁶. DfT is currently exploring how these softer factors can be incorporated into the modelling and appraisal of transport schemes. In addition, the Sustainable Travel Towns initiative has used a combination of soft and hard measures to effectively enable and lock-in increased use of more sustainable modes. Outcomes include an increase in cycle trips per resident of 26-30% overall, and a reduction in the number of car driver trips (down by 9%) and car driver distance (down by 5%-7%) per resident⁵⁹⁷. More details about the initiative and its outcomes are given under question d.

24. The **relative costs** of different modes are not well understood by many people. Fuel costs in particular seem to be poorly understood – participants in qualitative research were usually unaware of the average mile per gallon of their vehicles or of the amount they spent on fuel for individual journeys⁵⁹⁸. Insight from the field of behavioural economics also tells us that people tend to prioritise short-term costs and benefits over longer-term considerations⁵⁹⁹, eg people and organisations may be deterred from investing in new lower-emission technology despite the long-term savings they could make from reduced fuel costs. The Department has already taken steps to reduce the upfront cost of low emissions vehicles for the consumer through the Plug-in Car Grant⁶⁰⁰. More generally, the implications for policy are that there may be merit in making it easier for individuals to understand and weigh up long-term costs and benefits against short term considerations when they make decisions about their behaviour.
25. Where people use alternatives to the car such as cycling, recent evidence suggests this is motivated by **benefits to the individual** such as saving money or time rather than environmental considerations⁶⁰¹. Even when people acknowledge the associated environmental impact of driving this is rarely enough on its own to motivate a change in driving habits or a change in mode. This partly reflects the strong practical and subjective motivations for driving already discussed, and also the difficulties people have in associating individual actions with societal or global consequences. For example previous attempts to motivate changes in transport behaviour based on a collective message about the consequences of climate change (eg the Are You Doing Your Bit? campaign) have had limited impact⁶⁰². Behavioural science has highlighted that people tend to respond to messages and information that is salient to their personal circumstances and behaviours, suggesting that policies involving more personalized information about the environmental impact of individuals or even individual journeys may be more effective in motivating behaviour change.

⁵⁹⁶ Ipsos Mori, Smart and integrated ticketing, DfT, 2010

<http://www.dft.gov.uk/pgr/regional/policy/smartticketing/pdf/smartticketingtravellerbehaviour.pdf>

⁵⁹⁷ Sloman, L. et al. 'The Effects of Smarter Choice Programmes in the Sustainable Travel Towns', DfT, 2010

<http://www.dft.gov.uk/pgr/sustainable/ltp3planning/travelguide/stresults/>

⁵⁹⁸ Bonsall, P. et al, Consumer behaviour and pricing structures: final report on qualitative research, DfT, 2006

<http://www.mvaconsultancy.com/papers/C3415800%20-%20Consumer%20behaviour%20and%20pricing%20structures%20final%20report%20on%20qualitative%20research.pdf>

⁵⁹⁹ Behavioural Economics: A guide for Economists in Government, Government Economic Service

<http://www.civilservice.gov.uk/my-civil-service/networks/professional/ges/index2.aspx>

⁶⁰⁰ From January 2011 motorists purchasing a qualifying ultra-low emission car can receive a grant of 25% towards the cost of the vehicle (up to a maximum of £5,000) through the new Plug-in Car Grant. For more details see:

<http://www.dft.gov.uk/pgr/sustainable/olev/grant/>

⁶⁰¹ Thornton, A. et al, Climate Change and Travel Choices: Segmentation Study – Interim Report, DfT, 2010

<http://www.dft.gov.uk/pgr/scienceresearch/social/climatechangetransportchoices/>

⁶⁰² Avineri, E et al. Individual Behaviour Change: Evidence in transport and public health, DfT, 2010

<http://www.dft.gov.uk/pgr/scienceresearch/social/behaviour-changes/pdf/transport-and-health.pdf>

26. ‘Nudge’⁶⁰³ suggests relatively minor aspects of the design of physical environments, processes and the presentation of information can influence people to make different choices about their behaviour. There are, however, some limitations in the application of Nudges in relation to modal choice, due to the range and complexity of factors that influence modal choice described above. In reality bringing about behaviour change usually requires a package of interventions of which Nudge, delivered through third parties, who are more usually the ‘choice architects’, rather than directly by Government, could be one aspect.

27. Overall, and in summary evidence suggests that the key success factors with any behaviour change initiative are whether the new behaviour seems:

- More advantageous – e.g. peoples perceptions of costs and benefits
- More ‘me’ – perceptions of self and aspirations
- More prevalent – awareness of who else is doing it
- More doable – resulting from an individual’s increased confidence in ability to change

OR make their old behaviour seem less of any of the above⁶⁰⁴.

d. What are the most appropriate type and level of interventions to change travel mode choice

28. DfT aims to promote choice by making travelling on foot, by bike or on public transport more attractive. The evidence outlined above points to the need for local solutions to achieve this since no two areas will face the same set of challenges. It is at the local level that most can be done to enable people to make more sustainable transport choices and to enable the mainstream use of more genuinely sustainable transport modes – environmentally as well as fiscally, economically and socially sustainable. This thinking underpins the way in which the new Local Sustainable Transport Fund will be implemented. The Fund gives local transport authorities the opportunity, working in partnership with their communities, to identify the right solutions that meet the particular challenges faced in their areas and deliver the greatest benefits for their communities. A total of £560 million will be made available through the Fund over the next 4 years to 2014-15⁶⁰⁵.

29. Depending on the nature and scale of the challenges it is usually necessary to address both psychological and environmental barriers to change within the same package and this is the intention behind the new Fund mentioned above. For example, measures to encourage cycling in a local area need to first of all be underpinned by an understanding of current prevalence and the key barriers and motivators to cycling in the area. This will often highlight a need to address both infrastructure factors including cycling lanes, road layout etc, safety measures (eg cycle advance stop lines at junctions lead to increased perceptions of safety and convenience) and information and communications activity, as well as cycle training and workplace provision of showers and changing facilities⁶⁰⁶.

30. The Sustainable travel towns (SST) initiative (2004-2009) provides an example of how packages of measures can be effective at the local level. Between 2004 and 2009, Darlington,

⁶⁰³ Thaler, R. and Sunstein, C. Nudge: Improving Decisions About Health, Wealth, and Happiness, Penguin, 2009

⁶⁰⁴ Christmas, S. Nine Big Questions about Behaviour Change, DfT, 2010

<http://www.dft.gov.uk/pgr/scienceresearch/social/behaviour-changes/doc/questions.rtf>

⁶⁰⁵ See Written Ministerial Statement by Norman Baker MP on Local Sustainable Transport Fund, 13 December 2010

<http://www.dft.gov.uk/press/speechesstatements/statements/baker20101213>

⁶⁰⁶ Making a Cycling Town, Department for Transport and Cycling England, 2010 http://www.dft.gov.uk/cyclingengland/site/wp-content/uploads/2010/05/making_a_cycling_town_qualitative_report1.pdf

Peterborough and Worcester – working in partnership with their communities – explored the effectiveness of ‘Smarter Choices’ measures to reduce car use in their areas. Together they spent £15m of which £10m was provided by DfT. Smarter Choices were ‘packages’ of measures tailored to each local area, comprising both ‘soft’ and ‘hard’ measures. Soft measures included personal travel planning, travel awareness campaigns, promotion of walking and cycling, and public transport marketing and information. Hard measures included cycle parking facilities, cycle lanes and signage, traffic management improvements (such as better crossings and dropped kerbs), pedestrianisation of the town centre (in Darlington), bus service improvements, including more frequent buses and real-time information, and bus stop improvements (including new bus shelters, better lighting, an ‘express’ service to and from the park and ride, etc).

31. Across the three towns, the following outcomes were observed:

- A reduction in the number of car driver trips (down by 9%) and car driver distance (down by 5%-7%) per resident.
- An overall reduction in traffic as measured by traffic counts of 2%, increasing to around 8% in inner areas.
- An increase in bus trips per resident of 10-22% overall, and in two out of the three towns.
- An increase in cycle trips per resident of 26-30% overall, and walking trips per resident of 10-13% across the towns.
- Economic analysis suggests relatively large external benefits in the form of increased health benefits and reduced congestion levels, demonstrating high vfm from the SST initiative.

32. Comparing these results to available data on national trends suggested that such outcomes were not observed in similar local authority areas without STT funding⁶⁰⁷.

33. In general, there has been limited evaluation evidence on the effectiveness of interventions (see response to question h), but there is evidence to suggest that interventions involving the provision of practical information at an individual or community level, such as EcoTeams⁶⁰⁸ or personal travel planning initiatives⁶⁰⁹, can be effective. Success factors include the provision of practical personal feedback and giving people the opportunity to reflect on their own behaviour and/or discuss it with others (a social element eg a pledge component can be effective)⁶¹⁰.

e. **Who are the most effective agents for the delivery of behaviour interventions to change travel mode choice**

34. There is no single answer to this question and it depends on the type and scale of change aimed at. Initiatives and packages of measures usually need to be supported by local partnerships bringing in local authorities, and other third parties including public transport operators, transport planners and other choice architects eg schools, employers. An

⁶⁰⁷ Sloman, L. et al. 'The Effects of Smarter Choice Programmes in the Sustainable Travel Towns', DfT, 2010
<http://www.dft.gov.uk/pgr/sustainable/ltp3planning/travelguide/sttresults/>

⁶⁰⁸ Avineri, E et al. Individual Behaviour Change: Evidence in transport and public health, DfT, 2010
<http://www.dft.gov.uk/pgr/scienceresearch/social/behaviour-changes/pdf/transport-and-health.pdf>

⁶⁰⁹ Personalised travel planning: evaluation of 14 pilots part funded by DfT, DfT, 2005
<http://www.dft.gov.uk/pgr/sustainable/travelplans/ptp/personalisedtravelplanningev5774>

⁶¹⁰ Avineri, E et al. Individual Behaviour Change: Evidence in transport and public health, DfT, 2010
<http://www.dft.gov.uk/pgr/scienceresearch/social/behaviour-changes/pdf/transport-and-health.pdf>

'extended salesforce' of individuals and organisations can also help promote and reinforce the attractiveness of alternatives.

35. When the delivery of interventions by Government involves working through third parties, it is important to understand the factors that influence their behaviour. These can include factors like policy fit and funding mechanisms⁶¹¹ and the importance of a strong business case⁶¹².

36. In terms of travel mode choice in towns and cities, the process of behaviour change may require sustained intervention at the local/community level, but national government also has a unique contribution to make in terms of ensuring attractive alternatives are available, such as:

- Providing leadership to a range of other agents
- Setting an example and establishing the importance of an underlying issue eg economic growth or carbon reduction
- Giving local areas the freedom and support to develop local solutions
- Shining a light on good practice, evaluating and learning⁶¹³.

f How do current behaviour change interventions seek to change travel mode choice and what use is made of available scientific evidence

37. The **Cycling City and Towns** programme has built on the first six cycling demonstration towns, which started in 2011. The current programme is increasing investment in cycling in a further 12 areas of England to continental European levels, with the aim of increasing the number of cyclists and frequency of cycling during the funding period (2008-2011) and beyond. The programme involves a knowledge exchange network to share experience and learning.

38. Modal shift from cars to cycling for the school run has been targeted through a package of measures which aim to address structural, educational and perceptual barriers to cycling. Measures include:

- Universal provision of Bikeability (cycle training) to ensure children have the confidence and skills to ride safely on the road, and give parents confidence too that their children will be safe.
- "Bike It" Officers who help schools to make the case for cycling in their school travel plans, support cycling champions in schools, and create a sustainable cycling culture in the school.
- "Go Ride" Officers, who provide high-quality coaching and introduce children to different kinds of cycling such as BMX and mountain biking.
- Increasing the amount of cycle parking at schools, thus addressing a key practical barrier to cycling.
- Improving the safety of cycle routes to schools.
- Out of school activities such as bike clubs⁶¹⁴.

⁶¹¹ Marsden, G and Bonsall, P. What Works for Engaging Local Delivery Partners in Delivering Behaviour Change Interventions, DfT, 2010 <http://www.dft.gov.uk/pgr/scienceresearch/social/behaviour-changes/pdf/thinkpiece3.pdf>

⁶¹² Aecom, Influencing Business to Change, DfT 2010 <http://www.dft.gov.uk/pgr/scienceresearch/social/behaviour-changes/pdf/influencing-business.pdf>

⁶¹³ Christmas, S. Nine Big Questions about Behaviour Change, DfT, 2010 <http://www.dft.gov.uk/pgr/scienceresearch/social/behaviour-changes/doc/questions.rtf>

39. DfT is currently developing policy on **alternatives to travel** – promoting the use of ICT and flexible working to reduce or remove the need to travel. The Department is working with business representatives to develop a joint high-level commitment to taking forward the alternatives to travel agenda with staff and members, and will shortly be issuing a Call for Evidence to further develop the evidence base on the net impact, barriers and enablers of flexible and remote working. Following this a high-level strategy for the medium and long term will be developed.
 40. DfT is not anti-car and recognises that the car has an important role in promoting economic competitiveness and in helping people meet their transport needs. We aim to promote choice, but are also pursuing policies aimed at reducing the negative impacts of cars (and freight vehicles) without reducing car use itself, through promoting new technologies and behavioural interventions. For example, **eco-driving** (or fuel efficient or smarter driving) techniques can make a positive contribution to reducing fuel costs and car emissions through very simple adjustments in driving style. The Driving Standards Agency ensure that new drivers know from the outset how to drive in a safe and efficient way by integrating eco-driving into the driving test. We also currently provide funding to the Energy Saving Trust (EST) to offer short duration smarter driving training to existing drivers. This programme has consistently demonstrated average improvements in fuel efficiency of around 15% per person on the training day.
 41. The **Freight Best Practice** programme has also been effective in promoting safer and more fuel efficient driving in the freight industry, through the provision of practical tools and guidance for freight operators. This has included guides, case studies, software and seminars on topics such as saving fuel, developing skills, equipment and systems, operational efficiency and performance management. It has also allowed freight operators to confidentially compare their performance against others, through the provision of a free online baselining tool⁶¹⁵.
 42. In terms of making use of the scientific evidence going forward, DfT has developed a **Behaviour Change Toolkit** for policy makers within the Department which draws out key messages and insights from the field of behavioural science and applies them to the transport policy making context. We are in the process of actively disseminating the Toolkit in order to embed behavioural science learning and good practice into policy making across the Department. The Department is also striving to encourage the generation of more robust evidence from evaluation (see response to question h).
- g. ***Are current policy interventions addressing both psychological and environmental barriers to change***
43. As the evidence provided above demonstrates, current policy interventions aim to address both psychological and environmental barriers to change.
- h. ***Are policy interventions appropriately designed and evaluated***

⁶¹⁴ Making a Cycling Town, Department for Transport and Cycling England, 2010 http://www.dft.gov.uk/cyclingengland/site/wp-content/uploads/2010/05/making_a_cycling_town_qualitative_report1.pdf

⁶¹⁵ For more details of the Freight Best Practice Programme see: <http://www.dft.gov.uk/pgr/freightbestpracticeprogramme>

44. The aim, for example through implementation of the Department's Behaviour Change Toolkit, is to design policy interventions that take account of the latest evidence from behavioural sciences, as well as evaluation evidence of the type discussed in response to questions d and f above.
45. DfT recognises the importance of evaluation work. Evaluation evidence is needed for a number of reasons including to identify any unanticipated effects and to build up the evidence base on what works.
46. The DfT, DH and Cycling England have commissioned an independent and comprehensive evaluation of increased investment in measures to promote cycling in 11 new cycling towns and the first cycling city (the 2008 CCT programme). The evaluation is assessing the effects of the intervention on cycling and other travel behaviour, physical activity, perceptions of cycling, wider impacts, such as health impacts, and to learn lessons from the delivery experience of the CCTs to inform future implementation and delivery strategies developed by other local authorities.
47. Aside from the evaluations of the large scale initiatives like the CCTs and STTs mentioned above, a 2009 review⁶¹⁶ of the evaluation evidence base for DfT concluded that due to the small scale and relatively low-cost nature of schemes aimed at achieving behavioural change implemented in the past, there has been a lack of comprehensive impact evaluations.
48. The Department has therefore published impact evaluation guidance aimed at scheme promoters and evaluation practitioners to help them choose an evaluation approach which is best suited to their evidence needs and helps them design an evaluation which enables the observed impacts to be attributed to the scheme. More specifically, a framework has been developed for evaluating schemes aimed at encouraging sustainable and active travel behaviours, and this has informed the design of the CCT evaluation described above. Guidance is also provided on how transport impact evaluations can be designed to produce better evidence on attribution. These guidance documents can be found on the [DfT website](#)⁶¹⁷.

i. ***What lessons have been learnt and applied as a result of the evaluation of policy***

49. Key lessons learnt are highlighted in the answers above and can be summarised as:
 - Appealing to concerns about the impact of transport behaviours on issues like the environment or economic growth is not likely to be enough to motivate a change in modal choice on its own. Initiatives have generally reported greatest success in enabling modal shift when structural and psychological barriers have been addressed through a package of hard and soft measures, rather than in isolation.
 - Different groups in the population respond to different interventions or 'nudges', depending on their personal circumstances, attitudes and their local environment. Initiatives that are based on an initial understanding of the key characteristics of their target population are most likely to be successful in enabling changes in behaviour.

⁶¹⁶ <http://www.dft.gov.uk/pgr/evaluation/evaluationguidance/existingnetworks/betteruse.pdf>

⁶¹⁷ <http://www.dft.gov.uk/pgr/evaluation/evaluationguidance/>

- Individuals are often attracted to initiatives that include an element of personalised information provision, that enable or encourage them to reflect on their current transport behaviour, and give them the knowledge necessary to change it.
- Individuals are most likely to make and sustain a change in modal choice where they have made a public commitment to others to do so, and receive ongoing motivation and support in doing so.
- Enabling changes in transport behaviour and offering people choice will often require the active involvement of third parties, such as local authorities, who are better placed to do so than Government. Local solutions, which used a combination of measures tailored to address the particular characteristics of an area, have generally had most success in promoting sustainable travel choices.

j. What lessons can be learnt from interventions employed in other countries

50. The Department has not yet conducted a systematic review of interventions employed in other countries. Lessons can be learned, although the availability and quality of evidence is variable and difficult to extrapolate directly to a UK context.
51. In Europe and parts of the US there are examples of individual cities that have focused on increasing levels of walking and cycling – mainly through a combination of spatial planning, infrastructure improvements and some local promotion. For example, New York has introduced a number of measures to increase pedestrian safety on existing walking infrastructure, and create new pedestrian spaces within the city. Part-time road closures have also been used to encourage walking.
52. Key lessons from New York, Groningen and Portland, where the primary objective has been to increase levels of walking and cycling, include:

Timescale: Because travel behaviour change can take time to achieve a medium-long term strategy is required (eg Groningen, Portland).

Local planning: There are international examples of where planning and implementation instigated and conducted at the local level to tackle specific local travel behaviour has been successful (eg Groningen, Portland).

Combined interventions have been effective in making cycling a more attractive choice, including:

- spatial planning (over time)
- the right kind of infrastructure (eg cyclists prefer segregated cycle paths as in Copenhagen)
- integration with public transport (eg cycle parks at rail stations)
- cycle training, the provision of lockers and showers for cyclists (eg in Portland the municipality has partnered with private sector companies to provide this)
- information and promotional events (eg cycle to work days, family cycling events as in Portland)⁶¹⁸

⁶¹⁸ An Analysis of Urban Transport, Cabinet Office, 2009

http://webarchive.nationalarchives.gov.uk/+http://www.cabinetoffice.gov.uk/strategy/work_areas/urban-transport.aspx

53. In Australia there have also been a number of small and larger scale 'TravelSmart' initiatives which can be seen as broadly equivalent to Smarter Choices initiatives in the UK, in that they have employed a combination of local marketing, engagement and one-to-one support.
54. Key lessons from TravelSmart initiatives in Australia are that the most important factors in securing travel behaviour changes are:
 - Personal engagement:** At a one-to-one, household or local workplace level.
 - Functional materials:** Such as public transport tickets, maps, and timetables – that allow people to explore new travel options, plan and make decisions.
 - Support of local leaders:** From councils, senior company management, school boards.
 - Whole-of-community involvement:** Larger interventions appear to have larger results, suggesting that individuals are supporting and reinforcing each others' behaviour.
55. These findings largely echo lessons learnt from evaluations of transport interventions in the UK, which have been discussed under question i.

21 January 2011

Written evidence from Transport for Quality of Life (BC 127)

Introduction: our experience

1. Transport for Quality of Life specialises in policy and practice to encourage more sustainable travel behaviour. Our experience includes hands-on implementation of behaviour change programmes; development of new types of behaviour change initiative; evaluation of behaviour change initiatives; and policy development. Work of particular relevance to the topic of this Inquiry includes the following:

- We led the evaluation of the largest travel behaviour change programme so far completed in the UK: the English Sustainable Travel Town programme in Darlington, Peterborough and Worcester, which took place between 2004 and 2009 (Sloman et al., 2010);
 - We wrote for the Department for Transport the current standard reference for businesses in implementing travel plans, ‘The Essential Guide to Travel Planning’ (Taylor and Newson, 2008);
 - As a Board Member of Cycling England, Transport for Quality of Life founder Lynn Sloman played a lead role in the Cycling Cities and Towns programme, including advising the cycling towns on their programmes and reporting on the results (Sloman et al., 2009)
 - Beth Hiblin was previously Programme Manager for the Sustainable Travel Town programme in Peterborough, TravelChoice. She also led the evaluation of the outputs of phase 1 of Cycling England’s Cycling Cities and Towns programme, ‘Making a Cycling Town’ (Cycling England 2009)
 - Carey Newson researched and developed the first comprehensive national guidance on first workplace, then school, leisure and residential travel planning: ‘Changing journeys to work’ (Newson, 1997); ‘A safer journey to school’ (Newson, 1999); ‘Tourism without traffic’ (Newson, 2001); ‘Making residential travel plans work’ (Addison, Newson, Matson & Fraser, 2005).
 - We were lead researchers for the original research report for DfT on the potential impact of large scale travel behaviour change programmes ‘Smarter Choices: Changing the Way we Travel’ (Cairns et al. 2004);
 - We have worked on the impacts of land use planning on choice of mode of travel (see for example ‘The Masterplanning Checklist for Sustainable Transport in New Developments’, Taylor and Sloman 2008);
 - Lynn Sloman’s book ‘Car Sick: Solutions for our Car-addicted Culture’ sets out in layperson’s terms the opportunities to reduce our dependence on driving through a combination of ‘nudge’-type techniques, small-scale improvements in services and sustainable transport infrastructure, and sustainable land use planning (Sloman 2006).
2. This evidence has been prepared by Dr Lynn Sloman, Carey Newson, Dr Ian Taylor and Beth Hiblin of Transport for Quality of Life. It incorporates some additional material from Dr Sally Cairns of University College London / TRL and comments from Professor Phil Goodwin of University of the West of England and Dr Jillian Anable of University of Aberdeen with whom we have worked closely on a number of projects. We set out our responses to your questions below. Our evidence concentrates on a particular group of behaviour change interventions, commonly known as ‘smarter choice’ measures, although we acknowledge that these are not the only types of interventions that may be effective in delivering behaviour change, and in particular that legislation / enforcement and economic interventions have important roles to play (see in particular Avineri and Goodwin 2009 for an overview).

What are the most influential drivers of behaviour affecting an individual's choice of mode of travel?

3. We think a key driver of an individual's choice of mode of travel is perceived social norms – i.e. perceptions about what is usually done in a given situation – which have been shown to exert a strong influence on environmental behaviours (Griskevicius et al., 2008; Cialdini et al., 1990; Goldstein et al., 2008). The role of habit is also recognized as a critical influence in determining behavioural choices (Triandis, 1977; Libet, 1993; Ouellette & Wood, 1998) and is particularly relevant to travel choices (Bamberg & Schmidt, 2003; Verplanken et al, 1994), which often involve repeated journeys.

4. Both norms and habits are in turn established and influenced by a range of considerations, both subjective (e.g. the image of alternative modes of transport) and objective (e.g. the price, quality and frequency of the public transport service). The objective quality of non-car modes of transport is, again in turn, affected by contextual factors including settlement location, density and street design, which determine what level of service or facility is viable for any given level of public investment. We summarise the relationship between these various factors in Figure 1 annexed to this evidence.

5. In our experience it is quite common for people, when surveyed, to acknowledge that it would be possible for them to sometimes use more sustainable modes of travel (instead of driving alone) and even to say that they would be willing to use these modes, but the availability of sustainable modes and theoretical willingness to use them does not necessarily translate into action without some stimulus to change. For some journeys and individuals, this may be because of a so-called 'barrier' which could quite easily be resolved – for example, an employee may be deterred from cycling to work because there is nowhere secure to park their bike. For other journeys and individuals, there may be no barrier apart from habit and conformity with a social norm for that workplace or peer group⁶¹⁹.

6. Our experience of travel behaviour change programmes leads us to conclude that they are more effective if they address *all* the factors, as illustrated in Figure 1. If this is done, there is substantial potential for change.

What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?

7. The evaluation of the investment programmes in the Sustainable Travel Towns (Sloman et al. 2010) concluded that interventions intended to increase use of a particular transport mode, such as bus or bike, are most effective when marketing, promotion and information are accompanied by improvements in service quality. Quality improvements *may* require improvements in sustainable transport 'infrastructure' (such as bus lanes or cycle lanes), although many service quality improvements may be achieved without changes to transport infrastructure (for example, by introducing newer buses, cheaper tickets or more frequent services).

⁶¹⁹ For example, surveys carried out by Transport for Quality of Life in the preparation of a workplace travel plan for Gwynedd Council found that at their main offices, 26% of employees who drove alone to work said that they would be willing to sometimes use alternatives to the car, that at least one of four alternatives (walk, cycle, bus, car-share) would be 'very easy' or 'quite easy', and that there were no specific barriers preventing them switching. A further 11% of employees who drove to work said that they would be willing to use an alternative some of the time and that to do so would be 'very' or 'quite' easy, but identified a barrier to change which was in fact quite readily soluble (e.g. by providing a pool car scheme, so that employees did not have to drive to work in case they needed a car during the day; or by provision of showers, lockers and secure cycle parking so that employees were able to get changed and smarten up after cycling to work) (Transport for Quality of Life 2006).

8. Specifically, the STT evaluation found that Darlington had made substantially greater investment in cycle infrastructure than Peterborough or Worcester, alongside investment in marketing and promotion of cycling⁶²⁰. This included developing a network of radial cycle routes and installing a large amount of cycle parking at schools, employment sites and in the town centre. This investment paid off, in that Darlington saw the biggest increase in cycling of the three towns, despite starting from the lowest base⁶²¹. Meanwhile, Peterborough allocated substantially greater effort to enhancing the quality of public transport services, and marketing them, and this also paid off, with Peterborough achieving the most dramatic increases in bus travel⁶²².

9. Marketing and promotion *on their own* appeared to deliver less behaviour change than when accompanied by improvements in quality. This was evidenced by the failure of personal travel planning and other promotional work to reverse the decline in bus use in Darlington in the absence of service quality improvements (which were difficult to achieve due to a climate of competition between the two main operators at the time). It was also demonstrated by the fact that growth in bus patronage in Worcester was not sustained beyond the period in which the main service improvements took place.

10. Similarly, improvements in sustainable transport infrastructure *on their own* are less effective than when accompanied by marketing and promotion. Historically, sustainable transport planning in the UK has tended all too often to adopt what Cycling England has termed a ‘build it and they will come’ approach – that is, to build new cycle infrastructure without basing its design on a proper consideration of the needs of the ‘target audience’, and without promoting its use to that audience once it is complete. It is unsurprising that the effects of this approach have been limited.

11. The STT evaluation concluded that an effective behaviour change programme must address both service quality (including, where appropriate, improvements in infrastructure), and information, marketing and promotion, and is therefore likely to require a combination of capital investment and revenue support. Evaluation of the Cycling Demonstration Towns reached a similar conclusion.

12. It is notable that ‘infrastructure improvements’ do not have to be large scale projects. For example, our work on school travel has highlighted the positive effects of small changes such as a safer crossing across a busy road; opening a new entrance onto a school site (relieving parents of a long detour round the school field); or adding a short-cut footpath through a nearby housing estate.

What are the latest developments in the evidence-base in relation to changing travel-mode choice and the implications of those developments for policy?

13. We believe that the evidence collected through the Sustainable Travel Towns evaluation (Sloman et al. 2010) has some important policy implications, detailed below.

- **We should focus more on medium-length trips**

⁶²⁰ Darlington was both a Sustainable Travel Town and a Cycling Demonstration Town.

⁶²¹ Cycle trips in Darlington increased from 4.5 to 9.6, or +5.1, per 100 persons per day between 2004 and 2008; compared to Peterborough where the increase was from 15.1 to 16.7 or +1.5; and Worcester where the increase was from 7.6 to 9.4 or +1.7. Data derived from analysis of 2004 and 2008 household travel surveys, using weighted dataset, trips of <50km.

⁶²² Bus trips in Peterborough increased from 14.8 to 20.1, or +5.3, per 100 persons per day between 2004 and 2008; compared to Darlington where bus use by residents of the town fell slightly (despite substantial marketing effort, notably through a town-wide personal travel planning programme), and Worcester where bus trips increased from 13.7 to 16.0, or +2.3, per 100 persons per day. Data derived from analysis of 2004 and 2008 household travel surveys, using weighted dataset, trips of <50km.

14. The behaviour change programmes in the Sustainable Travel Towns focussed almost entirely on within-town trips, and consequently had a larger effect on short car driver trips than on medium and longer trips⁶²³.

15. Despite the focus of the STT programme on within-town trips, the *absolute* contribution to mileage and carbon reduction from medium-length trips (in the 10-50km distance band) was large. That is, about 45% of the total reduction in car driver kilometres recorded by the household travel surveys was the result of the small reduction in car driver trips of 10-50 km⁶²⁴.

16. This is not to under-estimate the importance of behaviour change programmes targeted at short car driver trips in urban areas. Such programmes can deliver substantial benefits in relation to physical activity and congestion relief. However, it suggests that behaviour change programmes that are primarily intended to reduce carbon emissions may do better to focus on influencing medium- and longer-distance trips, and trips between a town and its surrounding sub-region. There is no reason to believe that these medium and longer trips are any more innately car-dependent, or any more difficult to influence, than short car trips – it is just that there has not so far been an equivalent effort to design a behaviour change programme to target them. We believe that it would be helpful if the Department for Transport were to initiate just such a practical programme, to demonstrate how mode choice (and, indeed, destination choice or consideration of ‘virtual’ travel options) for such trips may be influenced.

17. The need for greater focus on these trips is supported by recent work from the Commission for Integrated Transport (2010a).

- **We need to find more effective ways to influence commuter travel**

18. Travel to and from work was the dominant journey purpose in the three Sustainable Travel Towns, accounting for 43% of all car driver mileage by residents of the three towns at the beginning of the STT programme. While all three towns attempted to engage employers in interventions to reduce driving to work, their success was fairly modest. They experienced some difficulty in engaging local employers in the programme, despite fairly strenuous efforts, and the change that was achieved was less than might have been anticipated from experience elsewhere.

19. From other research (Cairns et al. 2002; Cairns et al. 2004) we know that at the level of the individual workplace, well-designed travel behaviour change programmes (or ‘workplace travel plans’) typically reduce car commuting by around 10-30%, with mean reductions of around 18%. The types of interventions that are effective are well known and have been thoroughly studied⁶²⁵.

20. However, exemplar workplace travel plans are strongly dependent upon the existence of a ‘champion’ within the organisation who is in a position to implement and sustain an effective combination of measures. The project teams in the three Sustainable Travel Towns appear not to have been able to offer employers in their towns sufficient incentive to gain the vigorous engagement of more than a few.

⁶²³ Taking all three towns together, there was a reduction of 20% in car driver trips of less than a kilometre; 15% for trips of 1-3km; 10% for trips of 3-5km; and 5% for trips of 5-10km (these representing the distances of the majority of trips that stayed within the towns). There was also a reduction of about 3% in car driver trips for longer journeys of 10-50km, this being the distance corresponding with trips between the towns and their surrounding sub-regions. There was little or no reduction in car driver trips over 50km.

⁶²⁴ Strictly, 45% of the reduction in car driver distance *for trips of <50km* was from trips in the 10-50km distance band. A further 40% was from trips of 3-10km; and 15% was from trips of <3km.

⁶²⁵ They generally involve a combination of new services (e.g. new bus services, or car-sharing networks), new facilities (e.g. showers and lockers for cyclists), incentives and rewards for sustainable travel, and management of car parking (e.g. giving parking priority to car-sharers).

21. In order to take advantage of the considerable potential carbon savings from workplace travel behaviour change programmes, we need to find ways to make it much more attractive for employers to become engaged in such programmes. We think that the Government has a role to play in identifying mechanisms for engaging employers. The exclusion of travel from the Carbon Reduction Commitment, and, separately, the relatively limited mention of travel in the DEFRA guidance to organisations on greenhouse gas reporting⁶²⁶ (such that only emissions from travel in vehicles owned by the organisation are included in scope 1 emissions, and there are no travel inclusions in scope 2 emissions) are a cause for concern. Some of the tax breaks introduced for workplace travel plans in 2002 have clearly had positive effects – however, one of our recent studies suggests that the latest changes to the national cycle-to-work scheme have been detrimental. Developing a coherent Government strategy around this topic would be extremely valuable.

- **We need long-term, large scale roll-out**

22. The Sustainable Travel Towns offered excellent value for money. Estimated outturn costs were £10 per person per year (£11 in 2009 prices). In four years, this produced a reduction in car driver distance travelled by residents of 5%~7% for journeys under 50km. The cost per vehicle kilometre removed was 3.6p (4p in 2009 prices), and this gave an estimated congestion-only benefit cost ratio of 4.5. If other benefits (carbon reduction, increased physical activity) were taken into account, the BCR would be higher.

23. Recent work by the Commission for Integrated Transport (2010b), based in part on an analysis by Prof Phil Goodwin (2010), concluded that travel behaviour change programmes of this type offer very high value for money and recommended the roll-out of such programmes nationally. We therefore very much welcome the Department for Transport's announcement of a Local Sustainable Transport Fund, offering £560 million over four years to local authorities to enable them to implement such schemes. We particularly welcome the fact that the Fund will include a substantial proportion of revenue funding (£350 million) as well as capital (£210 million), since the evidence from the Sustainable Travel Towns clearly shows that both revenue and capital investment are required to achieve the greatest behaviour change effect.

24. Ministers have indicated that the priority for the Local Sustainable Transport Fund is to encourage a high proportion of local authorities (around two-thirds of the total) to implement what are now becoming 'tried and tested' approaches to encourage sustainable travel, and we support this. However, we are conscious that many local authorities have fairly limited experience of designing and implementing behaviour change programmes, and that it is likely to take some time (of the order of a year) for them to recruit staff teams to deliver the programmes and for those staff to get up to speed. We therefore believe that it would be helpful if the Government were to signal at an early stage that they are committed to continue the Local Sustainable Transport Fund beyond the initial four-year period.

What are the most appropriate type and level of interventions to change travel-mode choice?

25. Travel behaviour change interventions are best delivered at the level of the individual workplace, school, leisure destination, public transport corridor or neighbourhood, but in a choreographed way across a wide area which may be a conurbation, or a town and its surrounding suburbs and villages, or some other geographical area with which the target

⁶²⁶ <http://www.defra.gov.uk/environment/business/reporting/pdf/ghg-guidance.pdf>

audience (usually but not always residents) strongly identifies. ‘Choreography’ of a behaviour change programme includes the development of a menu of ‘services’ which the delivery body, usually the local authority, can offer to individual schools, workplaces etc; the development of a unifying awareness campaign which links the different interventions together so that they appear to the target audience as one part of a larger whole; and consistency in relation to issues such as pricing and parking. To be effective, these interventions must take place in a long-term context of planning for sustainable travel – that is, new developments should be located and designed so as to facilitate access by sustainable modes rather than by car, and capacity of sustainable modes of transport may need to be increased.

Who are the most effective agents for delivery of interventions to change travel-mode choice?

26. Generally, local transport authorities are best-placed to *design* and then *choreograph the delivery* of behaviour change interventions, because they are able to ensure that these are coordinated with improvements in sustainable transport infrastructure (e.g. running a public transport marketing campaign along specific corridors as new services and bus priority measures are installed), and also to modify their sustainable transport infrastructure investment programme in the light of information gained from the behaviour change interventions. However, for some places it may be more effective for the transport authority to work closely with a more local body, such as the district council or the national park authority.

27. *Hands-on delivery* of behaviour change interventions may be carried out by the local authority, or by contractors or voluntary organisations, some of whom have developed considerable expertise.

28. However, it is a concern that local authorities commonly lack the skilled staff to design large-scale behaviour change programmes, and consequently may rely (over-)heavily on consultants who are actually in the business of selling their ‘product’ (such as a personal travel planning campaign, or a specific school or workplace travel intervention) rather than thinking through what might be the most effective strategy for the town or area in question. It is unfortunately still common for ‘smarter travel’ or other behaviour change teams in local authorities to be employed on short term contracts rather than becoming part of the permanent staff, and this prevents local authorities from building up the necessary in-house strategic expertise to enable them to design effective programmes. Local government officers may also experience difficulty in gaining political support for funding and implementation of behaviour change programmes. For all these reasons, we believe that Government (or expert bodies such as Cycling England) has a crucial role to play in stimulating collaboration, learning and information exchange between local authorities; in evaluating effectiveness; and in providing guidance. In our experience, these functions are generally welcomed by local authorities.

How do current behaviour change interventions seek to change travel-mode choice and what use is made of available scientific evidence?

29. The most effective behaviour change interventions combine the following elements:

- Identification of a specific target audience (e.g. commuters travelling to work, or school pupils);
- Identifying and then removing the barriers that prevent the target audience from using sustainable travel options;
- Creating incentives for the target audience to try using these options;
- Shifting social norms towards use of these options, at least temporarily (e.g. through a cycling festival or car-free day; sustainable travel loyalty schemes; and positive promotional strategies

- ‘Rewarding’ people who already use sustainable travel options some of the time.

30. Whether intentionally or not, many of the more effective behaviour change interventions have been designed in ways that accord well with the available scientific evidence. A good example is the use of packages of measures in school and workplace travel plans. This means that a raft of initiatives are introduced in parallel, so addressing many of the multiple factors that have been identified in psychological theory and research as determining behaviour – e.g. both social factors and external conditions. An employer who provides high quality cycle parking close to the main entrance of the building, and backs this up with well-appointed cyclists’ showers located en route to the work area, is encouraging cycling on many levels: by improving external conditions; signalling positive regard for cyclists with implications for status and image; ensuring that those who cycle are visible to others, so helping to establish a new social norm; and building cycling into the daily routine so that it may become embedded as a new habit.

31. Nevertheless, practitioners could usefully take more systematic account of the psychological literature and its implications. For example:

- ***Focusing on eliciting behaviour rather than influencing attitudes***

32. There is evidence that, rather than our behaviour being invariably determined by our attitudes, as is often assumed, we sometimes infer our own attitudes by observing our own behaviour (Bem, 1972). One implication is that if people can be persuaded to actively engage in sustainable travel for whatever reason, even on an occasional basis, then they will be more likely to adopt a positive attitude to this travel choice in future, and repeat the experience. The success of some interventions bears this out. For example, Fujii & Kitamura (2003) found that habitual drivers given a one-month free bus ticket became more positive towards public transport and used it more, even after the intervention.

- ***Fully recognising the role of social norms in encouraging behaviour***

33. This is especially important because people often under-estimate the extent to which their own or others’ actions are influenced by observing other people’s behaviour in a given situation. Consequently (as pointed out by Griskevicius et al., 2008), some campaigns score the own-goal of modelling an environmentally damaging behaviour in a way that makes it appear ubiquitous, rather than presenting a pro-environmental behaviour as something that is normally done. The practical implications are illustrated in an experiment by Goldstein et al. (2008). This study found that hotel guests, asked to save energy by reusing their towels, were most compliant when the request stated that the majority of other guests had done this. It is relatively easy for practitioners to adjust their interventions so that they convey the message that others are participating in sustainable travel. It may well be that this was a component of the success in the Sustainable Travel Towns: for instance, in Peterborough, a ‘thank you campaign’ rewarded residents for travelling sustainably with small gifts, so emphasising good levels of participation. Similarly, it is arguable that calling Darlington a ‘cycling town’ helped to introduce and establish cycling as a social norm, and that the town’s sustainable transport loyalty scheme also helped in creating a community in which travelling sustainably was perceived to be a popular option.

- ***Making the most of opportunities when habits are disrupted***

34. There is evidence that at times when people’s habits are disrupted – for example, by moving job, moving home or starting college – they will be more responsive to interventions designed to encourage behaviour change. For example, one study showed that amongst environmentally

concerned university employees, those that had recently moved house were more willing to reduce their car commuting (Verplanken et al, 2008). Our research in the Sustainable Travel Towns also supports this. Household travel surveys conducted across the three towns by Socialdata/Sustrans⁶²⁷ showed that, comparing different samples at the outset and later in the intervention, (2004 and 2008) there were comparatively larger reductions in car use amongst college students, job seekers and the recently retired. This suggests that there is likely to be added value in interventions that target these groups, for example, through promotions and incentives to individuals, coupled with high quality services and infrastructure in the developments that serve them. An event such as a highway closure may also provide a window of opportunity in which an alert local authority can take steps to ensure that those new to sustainable travel receive a persuasively positive experience.

Are current policy interventions addressing both psychological and environmental barriers to change?

35. In our experience, while there are many examples where smarter choice measures have been implemented with success, even good practice is rarely exemplary. For example, it is quite common to find that an organisation has an active travel plan but does not have a protocol for routinely giving sustainable travel directions to visitors; or that a local authority is engaged in promoting cycling but has not provided cycling infrastructure on the main routes used through the town.

36. Consequently, we see a great deal of scope for further improving the quality and effectiveness of existing policy interventions by addressing both psychological and environmental barriers with greater consistency. These aspirations will be much more realisable where the land use planning system and transport planning provide a supportive context, reducing car dependence and the need to travel.

Are policy interventions appropriately designed and evaluated?

37. At present, most interventions are still designed on a small scale due to lack of staff resource, funding and local level political support. This limits their impact, compared to the more comprehensive ‘programmes’ of activities that have been developed in the Sustainable Travel Towns and Cycling Cities and Towns.

38. As the scale of investment in travel behaviour change has increased, there has been correspondingly more effort to evaluate their impact. Examples of this include our own work for the Department for Transport to evaluate the Sustainable Travel Towns programme, the ongoing evaluation of Cycling England’s Cycling Cities and Towns programme and Scotland’s Smarter Choices Smarter Places programme. Through the STT research, we were able to make several recommendations designed to improve monitoring and evaluation arrangements for future interventions.

39. However, there remains some scepticism about the efficacy of behaviour change interventions. We are unconvinced that this is because the evidence for this policy area is any weaker than for other policy areas. Nor do we feel that more, or more detailed, evaluation would necessarily diminish this scepticism. The committee might usefully explore what DfT feels would be required in order for it to significantly re-orient its activities towards travel behaviour change programmes. We feel that ‘just one more convincing evaluation...’ is not really the missing factor.

⁶²⁷ There were over 4,000 respondents in each town for each survey.

What lessons have been learnt and applied as a result of the evaluation of policy?

40. Key lessons are that:

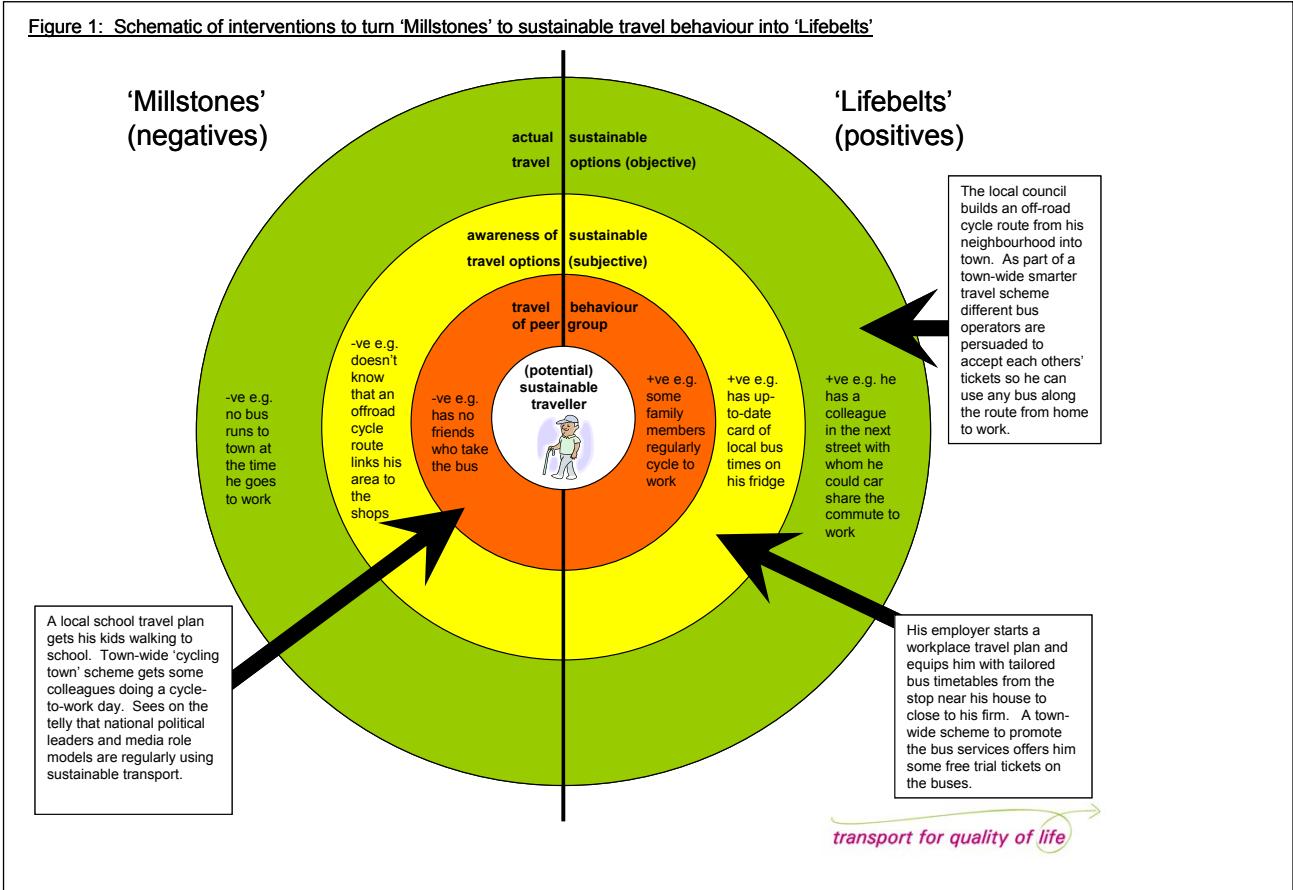
- delivery of effective large-scale smarter travel programmes is staff-intensive (for example, the Sustainable Travel Town programmes each employed between 6 and 10 fte staff);
- it takes time to recruit an effective team and bring new recruits up to speed (typically between 6 months and a year) and so it is important to plan for a long-term programme rather than expecting to achieve results in a couple of years;
- there are clear synergies from a broad smarter travel programme in which a variety of audiences and locations are targeted under a common branding;
- both revenue and capital investment are required, and programmes which focus solely on infrastructure (i.e. capital schemes) or solely on information and publicity are not as effective as programmes which combine both;
- programmes should be focussed on a defined target audience, identifying the ‘hubs’ where these groups can be reached; and should be based on local context, priorities and opportunities;
- well-designed behaviour change programmes command high levels of public support.

What lessons can be learnt from interventions employed in other countries?

41. It is notable that the UK has often ‘imported’ ideas from abroad (for example, personal travel planning, car clubs, the London bike hire scheme), though often going on to develop initiatives in its own way, and, sometimes, on a larger scale. European funding has sometimes enabled UK local authorities to try more innovative policies that might otherwise have been possible (for example, the HOV lane in Leeds was part of the ICARO project; some of the early personal travel planning work was conducted through VIVALDI in Bristol; Brighton is currently involved in using social networking sites to influence behaviour through CIVITAS etc.) This highlights both the importance of maintaining an international perspective, and, separately, perhaps, the need for more national funding for more innovative ideas.

Department for Transport, Darlington Council, Worcestershire Council and Transport for Quality of Life

Figure 1: Schematic of interventions to turn 'Millstones' to sustainable travel behaviour into 'Lifebelts'



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20 January 2011

Oral Evidence, 8 February 2011, Q629-675

Evidence Session No. 19. Heard in Public.

Members present:

Lord Alderdice
Lord Crickhowell
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Baroness Perry of Southwark
Earl of Selborne

Examination of Witnesses

Witnesses: **Mr John Dowie**, [Director of Local Transport, Department for Transport], **Mr Simon Houldsworth**, [Transport Policy Manager, Darlington Council], **Mr Peter Blake**, [Head of Integrated Transport, Worcestershire], and **Dr Lynn Sloman**, [Director, Transport for Quality of Life], gave evidence.

Q629 The Chairman: Welcome to you all. Thank you very much indeed for coming. There are a few things that I need to say to you and to members of the public. First of all, proceedings are being webcast; and secondly, there is an information note available for members of the public, which gives a little bit of background to the inquiry and gives Members' interests so far as they are relevant. For those of you giving evidence, can I just warn you that we may have some votes, which means that once the Division Bell goes we all sort of vanish. It can take quite a long time, so I am really sorry, but it is quite likely this afternoon that that is actually going to happen. In fact, one Member of the Committee has just said, "No—there will be several votes", in which case it will be a bit disruptive. Now, some of you came to the seminar that we held. You may find that you are being asked questions for which you have already given the answers to this particular group of people, but we need you to answer some of the questions just to have them on the record, so I hope that that is alright. The other thing is that there are four of you, quite a lot of us, and possibly a vote, so we need to try and keep proceedings as tight as we can. What we would now like you to do, if that is okay, is introduce yourselves in turn, perhaps starting with Dr Sloman, and if you want to make a brief opening statement, then please do. And then I will start by asking questions and then various Members of the Committee will follow.

Dr Lynn Sloman: My name is Lynn Sloman. I am Director of a small, specialist environmental consultancy called "Transport for Quality of Life."

The Chairman: I am really sorry to stop you, but the sound quality in here—

Dr Lynn Sloman: I will speak up.

The Chairman: You will have to speak up, but also throw your voice. It is really awful.

Dr Lynn Sloman: My name is Lynn Sloman. I am Director of a small, specialist consultancy called Transport for Quality of Life. We were amongst other things involved in the evaluation of the Sustainable Travel Towns programme. I am a Board Member of Cycling England; I know you are taking evidence from Philip Darnton, who is Chair of Cycling England, in the next session, but I have also been quite involved in the Cycling Demonstration Towns and the Cycling Cities and Towns. I won't make an opening statement.

Peter Blake: I am Peter Blake, I am Head of Integrated Transport at Worcestershire County Council, which actually means Head of Highways and Transportation. Worcester was one of the Sustainable Travel Towns project.

Simon Houldsworth: I am Simon Houldsworth. I am a Transport Policy Manager with Darlington Borough Council. We also were a Sustainable Travel Demonstration Town, and, indeed, a Cycling Demonstration Town.

John Dowie: I am John Dowie, Director of Local Transport in the Department for Transport, covering, amongst other things, most forms of Local Authority spending, capital spending, large schemes, but also sustainable travel, cycling and alternatives to travel.

Q630 The Chairman: Okay, thank you very much indeed. I am going to start off, and then others will come in. The Local Transport White Paper states quite firmly that encouraging sustainable transport choices depends on local solutions. What we would like to hear from you—and you may have different views—is, what are the respective roles of local and central Government in encouraging behaviour change to reduce car use and how will a greater emphasis on local provision affect the design, the implementation, and, indeed, the evaluation of interventions to reduce car use. Who would like to start? I think this looks like you, the Department for Transport.

John Dowie: Yes, happy to start, though this is perhaps insufficiently localist; Government has a number of roles, though we are in a period of transition. Clearly, we set overall frameworks; we set regulation, which may affect how bus services operate, so that is a key role and a continuing role that the Department plays. We have also historically done a number of things that I suspect we will do less of in the future. We provide money, often ring-fenced and in very specific pots, for specific purposes, which can include areas that the Committee is dealing with. That has historically been a way that the Department has given emphasis to priority topics. We will be doing less of that because the emphasis is now moving to giving Local Authorities more discretion, which I am sure will be an important issue for discussion during this session. The Local Sustainable Transport Fund, which I am sure we will touch on a couple of times in this discussion, is in many ways a crossover between the past, and this more free, less tied future. That is clearly important. The Department has also historically issued lots of guidance on what you should do and what you should not do. Local transport plans are a statutory requirement. Government also in quite a big way has gone in for performance monitoring, setting targets. All of that last category—the performance management, guidance, requiring Local Authorities to do plans—will be much less of a feature in the future. Certainly, in one or two years' time, things will feel quite different from the way they've felt over the last year or two.

Dr Lynn Sloman: Could I come in? In terms of behaviour change, there are probably about three really important roles that the Department could play; whether it always plays those roles is another matter. The first one is to identify topics, themes or areas where we do not understand how to deliver behaviour change and to stimulate experimentation amongst Local Authorities in how to make behaviour change happen.

Q631 The Chairman: Can I just ask you about that? I think that it is really interesting.

Dr Lynn Sloman: Yes.

The Chairman: Is that because you think that central Government will be better at, or should be better at, finding out how these things work and therefore passing it on to Local Authorities?

Dr Lynn Sloman: Central Government has the advantage of being quite uniquely placed and having the opportunity to see what is going on in lots of different places. It doesn't need to be top-down; it is not about telling Local Authorities what to do. It is about fostering a collaborative learning approach so that we can find out together how to achieve behaviour change. The Sustainable Travel Towns and the Cycling Cities and Towns are both very good examples of actually quite a collaborative approach to understanding some specific problems. How do we reduce car use within towns? How do we get more people cycling? And now we have done those, there are some other issues that we should be turning our minds to, such as how do we get people to reduce their car use for medium to longer journeys? How do we influence car use for commuting, for example? There could be a role for the Department in identifying those issues and saying, "Now, let's really do something to try and solve those". That kind of fostering of experimentation is a role that the Department could very usefully play. The second role that the Department should play is to provide a consistent, long-term direction of travel so that Local Authorities and everybody else knows where they are; knows we are committed to this for the next 10 years, and that we are going to really understand how to make it happen, whether it is getting more people cycling, or reducing car use for commuting. We know we are in this for long enough to carry out an experiment, evaluate the results, learn from it and then roll it out. That consistency is a really important job for Government; sometimes it shows and sometimes it doesn't.

Simon Houldsworth: If I could echo what John and Lynn have said, the new fund is a very welcome feature. What the Department could do though is to consider whether the fund could be carried on for longer to pick up on the idea of long-term commitment; whether that commitment is for 10 years or 15 years could be debated, but it is very much a long-term transition in terms of travel behaviour. In Darlington, we have only really almost got from first gear into second gear. Also, the Department could usefully perhaps—as was said before—put some national messages out promoting local work in travel behaviour, so there is that national consciousness about what needs to be done.

Peter Blake: I would just echo the final point. There have been a lot of examples of road safety, moving into the waste area, of national messages that have then been supported by local initiatives. We want the freedom to innovate, but we do not want to reinvent the wheel. So, if someone has done it before, if someone is better placed to try and assist in getting that message out to Local Authorities, we would welcome it.

Q632 The Chairman: I am just going to hand over to Lord Crickhowell in a moment, but can I just ask: you have all been saying in a sense that there is quite a collaborative approach between, if you like, Local Government and National Government. Where things are being done locally, and if you were having your way over a relatively long-term, would the Local Sustainable Transport Fund have the money to do the evaluation? How much of the budget should be used on evaluation? Because you still need to find out what works, particularly if you're going for this longish-term intervention. Does anybody want to come in on that?

Dr Lynn Sloman: Yes, one does need to carry out evaluation of those things that are new. Some of the work that will happen in Local Authorities, funded by the Local Sustainable Transport Fund, will be a rolling-out of interventions that we actually now understand, getting more people cycling or tackling short car journeys in urban areas. We do not really need to evaluate that again, because we have done it. But if Local Authorities do some things that are innovative, and I would hope that they did, then, yes, we should evaluate those. That again is a role that the Department needs to show a lead in, even if it is not the organisation that is perceived to be in charge.

Q633 Lord Crickhowell: A consistent piece of evidence that has come to us on this Inquiry, and indeed on another Inquiry that the Science and Technology Committee is doing into procurement and innovation, is the lack of expertise and the crucial importance of expertise among those who are doing it. We have just had a memorandum from Peterborough City Council and it comments, “Conversely, we were required to report to the DfT on a monthly basis, however, we received very little feedback to guide the programme. While from one perspective, we feel that this may have aided the programme, i.e. it ensured that we were able to continue to develop tailored solutions for the city, we also feel that we may have missed out on opportunities to learn from others”. Now, as Government disengages and makes more and more things over to local government, how confident are you that Local Authorities can learn from each other and use each other’s expertise? How do you feel—if there’s a difficulty there—it should be resolved?

John Dowie: Perhaps I may comment there. It is a very important issue, and we should not lose sight of the Department’s capacity and capability in these areas because the Department’s resources are disproportionately directed at large-scale infrastructure investment. We have a lot of expertise in rail, highways, but we have much less expertise in some of these kinds of smarter interventions. It will be true at Local Authority level; there will be individual Local Authorities, sometimes the ones who have been part of previous demonstration projects, sometimes others who for local reasons have expertise in this area, but that won’t be true of the generality. Consistent, perhaps, with my opening remarks, there is an enabling role here. Perhaps one of the benefits of moving away from a demonstration approach based on a very small number of places, to an initiative that hopefully will get to far more Local Authorities across the country, is that we build up a bigger family of practitioners. That should build strength in individual Local Authorities that haven’t historically done a lot in this area, but actually builds up a great opportunity for cross-fertilisation across that bigger group. I think, in a way, you just set a bit of an agenda for how the scheme needs to operate when we move beyond the set-up phase.

Q634 Lord Krebs: Just very briefly, to get an idea in my mind of the scale of this Local Sustainable Transport Fund; it is £140 million a year for the next four years—is that correct?

John Dowie: It’s £560 million for the four; it ramps up quite quickly.

Q635 Lord Krebs: And that is divided between the 500 or so Local Authorities?

John Dowie: This is not the precise figure, but I always have in my mind about 120 Local Transport Authorities, which includes Shire counties, unitary authorities and metropolitan boroughs.

Q636 Lord Krebs: So, £140 million divided by, let’s say, 140?

John Dowie: There are 120; not all will get it.

Q637 Lord Krebs: So it is about £1 million each?

Dr Lynn Sloman: Per year.

John Dowie: Per year, yes.

Q638 Lord Krebs: My question to those in the Local Authorities is: does £1 million a year make a difference?

Simon Houldsworth: Very much, yes; the pilot in Darlington was about £700,000 to £750,000 a year. We are looking to go forward with perhaps a value-for-money version of the original bid, taking forward the things that worked well and, for Darlington, leaving the things that worked less well to one side.

Peter Blake: I would agree, but in a sense £1 million a year is focusing on what we would term “revenue interventions”. So it is looking at the promotion, the education, the training. It isn’t about building shiny new infrastructure because £1 million a year simply won’t stretch to that.

John Dowie: This might help to set it in context. Yes, there is a simple division of the pot of money by the 120 Local Authorities. And we could, of course, just have given this money out by some old formula mechanism, if in fact that is all we wanted to do. By going out with, as I said, in many ways quite a traditional central Government approach with this central pot of money, which people bid into, it allows us to distribute the money in a way which is not just purely pro rata. So individual Local Authorities might come up with compelling cases why they should get more than just that formula share, so we can shift resources to where they can be best used.

Q639 The Chairman: So they will not all get it?

John Dowie: They will not all get it. We want a lot to get it, but they will not all get it; and some will get markedly more than others.

Q640 Baroness O'Neill of Bengarve: Does the Department have any sense of which sorts of Local Authorities are likely to be able to make most effective use of these limited resources? For example, do you refrain from giving it to those who have very hilly terrain?

John Dowie: No, this is all about designing interventions that make sense in individual places; I do not know if Sheffield qualifies as hilly, but the Sheffields of this world will hopefully build that into their proposition. There are several different sorts of schemes that might well come forward. Some Local Authorities may come forward with schemes focused on a place, many of them an urban place, so it will very much be the transport into that urban area and movement within it. That will probably include quite a lot of walking and cycling-type interventions complemented by, say, bus interventions. We could see, because this reflects what has happened in recent years, some interventions related to, say, interactions between the strategic road network and the local road network. The Highways Agency has done some interesting things, admittedly on a very small scale, to try and relieve pressure on particular junctions. I would certainly be hopeful that more rural authorities, or authorities with rural parts, will come forward with some quite imaginative ideas on community transport to substitute for traditional, conventional bus services, which, in a more straitened

financial environment, may just not be sustainable. I would hope that there would be quite a variety; and that is perhaps one of the exciting things of this format of “Come bring us your ideas”: that we might get some really good examples of best practice, the sort of thing that Lynn touched on at the beginning.

Q641 The Chairman: Okay, it might just be worth it, Mr Blake, if you could say something about being sure that the extra money will not be spent just on changes to the ordinary infrastructure. Is that right?

Peter Blake: It comes back to the ability to innovate and to decide what is appropriate in the local circumstances. If you are looking at changing behaviour, clearly there are softer elements to that in terms of educating people, offering training, promoting what is already there, and you then move through to the infrastructure elements. Really, it is where we are going to focus the resources. The idea behind the element of bidding encourages Authorities to think slightly differently about that. Worcestershire might not receive anything from the Fund, but there are some distinct benefits from a bidding and innovation process, rather than just sending it out through formula allocation.

Dr Lynn Sloman: But the big worry is that, at a time when Local Authorities are facing severe cutbacks, they will be in a position where they are cutting money for Sunday bus services, socially supported bus services, all sorts of other local transport services, and yet getting funding to promote bus use. We certainly know from the Sustainable Travel Town evaluation that if you have a worsening service, promotion of it isn't going to get more people using it. You actually have to be improving the quality of your “offer” at the same time as encouraging people to use it. That is a real tension that a lot of Local Authorities will be facing.

Q642 The Chairman: Absolutely. Lord Krebs, I assume that was your point?

Lord Krebs: That is exactly the point that I was going to make. The evaluation of the Sustainable Travel Towns showed that marketing and promotion in the absence of improvement of infrastructure has no beneficial effects. So if the £1 million is going to be spent on marketing and promotion it could well be wasted.

Peter Blake: I am not sure I quite—

The Chairman: Let's start with that. Then we must move on because we are going to run out of time.

Peter Blake: One of our experiences in Worcester was that explaining to people what already existed, in terms of existing bus services, walking and cycling opportunities, actually did engender a change in behaviour. You can argue then, if you have your nice shiny bit of new cycle wear, or you have a new bus station, or, indeed, a new bus service, about whether it adds up—clearly it will—but I think there is an element in terms of people understanding what already exists, before something is new or better is added.

John Dowie: Perhaps I could just comment as well. This is a really important issue. The pattern across local transport spend is quite variable. We actually still have, notwithstanding gloomy newspaper headlines, a very substantial local capital programme. We have in the pipeline something of the order of 40-plus major schemes right across the country, which, in very specific local areas, will be capable of changing and radically improving transport networks. So that is still part of the agenda. It is certainly more challenging on the bus front. There is a great danger there for the Fund and more generally for the local transport community of trying to defend things that are fundamentally not defendable and are not

necessarily value for money at the end of the day. The fund provides the opportunity to think more cleverly. There is an opportunity to break from the past now. “What is a better way of meeting the fundamental needs for accessibility in our communities?” That may be through more unconventional provision, which the fund might be able to help with, without the fund being sucked into this black hole of protecting unviable bus services.

Q643 The Chairman: Right, I am going to hand over to Lord Patel, because we have got to move on.

Lord Patel: Thank you, Chairman. My question relates to reduction—attempts at reducing car use by using such things as nudges, by infrastructure changes and by pricing and restrictions of use. What percentage overall can we expect in car use reduction through these different ways of achieving it? What proportion does each contribute? Furthermore, what evidence is there that this will be effective?

Dr Lynn Sloman: Would you like me to say something from the Sustainable Travel Towns evaluation? We know from Sustainable Travel Towns that reduction in car mileage for journeys of under 50km of about 5% to 7% was achieved across the programme, so across the three towns, in a period of four years as a result of a spend that was of the order of £10 per head of population per year.

Q644 Lord Patel: This was an incentive?

Dr Lynn Sloman: This was through a £10 million programme in Darlington, Peterborough and Worcester that involved a comprehensive package of interventions with workplaces, with schools, household-based travel planning, marketing of public transport and improvement of services, promotion of cycling and improvement of the cycling infrastructure and overarching travel awareness campaigns. So a comprehensive package of better infrastructure, better services, and, if you like, nudges, delivered a reduction of 5% to 7% in car mileage.

Q645 Lord Patel: At a cost of £110 million?

Dr Lynn Sloman: No, at a cost of £10 million plus some matched funding from Local Authorities, so the total was £15 million. And that did not reach the limits of what one could achieve in terms of behaviour change in those three towns. So, there was a lot more that one could do. An earlier analysis that I was involved in for the Department for Transport in 2004 estimated that over a period of 10 years, one might expect to reduce car mileage in towns by of the order of 18% as a result of a concerted programme of behaviour change measures. That figure of, let's call it 20%, over 10 years is a reasonable assumption of what one could achieve if we really went for it.

Q646 Lord Patel: In terms of money or mileage, what does that 18% mean?

Dr Lynn Sloman: Our estimate in 2004 was that a 10-year programme at a cost of £20 per head of population per year—so £200 per person spread over 10 years—could achieve that order of magnitude of reduction in car use.

Peter Blake: Perhaps I may give an example of what that meant in Worcester. Worcester's car mileage reduction was about 8%, which equated to just over 19 million kilometres, or 3,900 tonnes of CO₂, so that is the sort of proportion we drew. I am with Lynn on this; we

could perhaps have done more in terms of, for example, being more aggressive in tackling car use, but that was not really what we were aiming for initially as part of a behaviour change project.

Q647 The Chairman: Can we disaggregate this at all? Can you take apart what happens as a result of nudges, or changes to infrastructure, or pricing restrictions on car use? Can you isolate those or is it just a package?

Simon Houldsworth: In Darlington, we were really keen on putting a package in place.

The Chairman: Right, sorry, you're going to have to speak up.

Simon Houldsworth: Infrastructure, training, skills, events: we deliberately went for the package. I am sure you could split out the analysis we have done, but really without the package you will not get the benefits or the value for money that travel behaviour delivers.

Dr Lynn Sloman: You could achieve quite substantial reductions in car use solely through investment in better services and infrastructure without using nudges, but it would cost you more. So, in a sense, it is by combining the better infrastructure, the better services and the encouragement for people to use those that you get more bang for your buck. You achieve more change for each pound you spend because you are not just improving the service, you are telling people about it.

Q648 Lord Patel: That is evidence-based, is it?

Dr Lynn Sloman: It is evidence-based in the sense that the value for money of the Sustainable Travel Towns programme was very high—higher than most other forms of investment in sustainable transport infrastructure.

Q649 Lord Patel: So, has the Department made an evaluation of this?

John Dowie: Yes, in part. The two bits of work referred to, the evaluation of the Sustainable Towns and the evaluation of the Cycling Demonstration project, although the latter is incomplete as of yet, were two critical bits of evidence that the Department spent quite a lot of money in putting on the table because transport tends to operate as a very evidence-led, analytically strong, number-based discipline. It was crucial, if the case for interventions of these sorts were to play strongly when it comes to budgetary decisions, we needed evidence to back it up. As Lynn says, the sorts of figures that are coming out of both Cycling and Sustainable Travel Demonstrations are comparable to other forms of much more expensive, infrastructure-based, service-based interventions. That was a critical factor in Ministers taking the decision that they were going to allot money for this area on the scale that they have.

Q650 Lord Patel: None of you mentioned pricing as a way of behaviour change.

Dr Lynn Sloman: Pricing is effective too; we saw that in London with the congestion charge. The scale of behaviour change seen in London, a reduction of cars entering the central area of probably about 14% when the congestion charge was first introduced, is very substantial. I suspect the benefit/cost ratio, because of the cost of installing the infrastructure, would have been somewhat lower than the Sustainable Travel Towns, but it is clearly a very, very important lever that politicians can apply if they are so minded.

Q651 Lord Patel: So my question was what proportion of this can be achieved through nudges, through infrastructure change, and through pricing? You didn't give it.

Dr Lynn Sloman: One could achieve a comparable scale of behaviour change, through pricing, if one had the political will to do it.

Lord Patel: Right.

Q652 The Chairman: And would that be easier?

John Dowie: It is worth noting—my comments do keep coming back to packages—that London itself was a package. Certainly, a large proportion of the analysis I have seen about the increase in the use of bus travel in London suggests that that was actually due to the improved provision of bus services in terms of frequency, extra capacity on routes. That made buses more attractive. Pricing, by comparison, was a minor part, though it did provide some of the funding for that. We end up with suboptimal outcomes if we have split up into single, one golf club interventions, whatever that club may be.

Dr Lynn Sloman: I very much agree with that. It was absolutely right that the programme in London was a package and the investment in bus services was an important part.

Q653 Baroness O'Neill of Bengarve: I wanted to ask you about a less popular type of intervention, which is restrictions on car use by making parking unavailable, by making driving intolerable, and so on. These seem to me, in the experience of places I know that use bicycles most, or which use public transport the most, to have been very significant things—driving is just intolerable, and hunting for a parking space is unfruitful. Do you have any comparisons to make there?

The Chairman: I can't believe you are silent on that.

Baroness O'Neill of Bengarve: Well—Cambridge or, indeed, London.

The Chairman: London, yes.

Baroness O'Neill of Bengarve: Oxford.

Dr Lynn Sloman: It would be true to say that some of the most successful European cities that have encouraged a modal shift towards cycling, and bus use, and so on, have over time pursued a policy which, relatively speaking, makes driving less attractive and cycling or using the bus more attractive. In, for example, Copenhagen, officials and politicians will tell you that over a period of many years they have reduced the parking supply in the city by 2% or 3% per year. They have taken their local population with them in doing that because they are self-evidently improving the quality of life, the liveability of Copenhagen as a city. This is very much a question of framing. If one says, "Right, we're going to beat up motorists"—any politician who says it does not last very long. But if that politician says, "We're going to create a more liveable, more attractive, quieter, less-polluted city in which you can enjoy having a conversation in the street without being drowned out by cars", people will like it. It may be that part of that is taking car parking spaces out of your central squares or out of your streets; that might be the sensible thing to do. It is all part of the package.

Q654 The Chairman: Right, Lady Perry, Lord Krebs, and then we're going to have to move on because we're going to run out of time like this.

Baroness Perry of Southwark: Mine is just a very quick one really, mainly to Dr Sloman. You said the cost of this programme was £10 per head of population, and with that amount of expenditure you shifted the behaviour of 5% of the population, so if you turn that statistic round and identified the amount that you spent per head of those who changed their behaviour, it would be 20 times £10, wouldn't it?

Dr Lynn Sloman: I did not say that that changed the behaviour of 5% of the population. It reduced car mileage by 5%.

Q655 Baroness Perry of Southwark: It was a reduction of 5%?

Dr Lynn Sloman: Almost certainly that was the result of a change in the behaviour of, I do not know, 20% to 30% of the population. We think that quite a number of people may have made quite small changes in their behaviour.

Q656 Baroness Perry of Southwark: I am sorry, but the arithmetic of that escapes me—how does 5% fewer people using their cars mean 20% of the population?

Dr Lynn Sloman: No, the total car mileage of all the residents of Darlington, Peterborough and Worcester fell by 5% to 7%.

Q657 Baroness Perry of Southwark: Car mileage, not the number of people coming into town?

Dr Lynn Sloman: No, car mileage.

Baroness Perry of Southwark: I see, thank you.

Peter Blake: Just to add to that, there are a few things actually we would not do again because they did not work; the cost was £10 million but if we were having our time again, we would deliver the same amount of benefit at a lower cost because we tried things, we had that ability to innovate and understand what elements delivered the greatest benefits.

Q658 The Chairman: Could you in, say, 30 seconds, just tell us what the things would be that you wouldn't do again? It would be quite helpful.

Peter Blake: We had a formalised car-sharing, where actually we purchased cars and people were able to pre-book. Given the size of Worcester's population of about 93,000 people, it simply could not sustain that. We got an awful lot of mileage, excuse the pun, and publicity on a cycle-sharing scheme; after initial success security issues led to bikes being stolen over the course of the project.

Q659 The Chairman: Lord Krebs, and then we are going to move on.

Lord Krebs: Perhaps, Chairman, I could ask for Lynn to send in the answer to this question in writing to save time. I wondered how you got from the reduction of 5% to 7% by spending £10 a head over four years, up to £40 per person; and if we had we spent £200 per person, we would have got a 20% reduction. I would just be interested to know what assumptions went into that calculation.

Dr Lynn Sloman: I can send you a note about that afterwards.

The Chairman: That would be very helpful.

Lord Patel: In your answer, can you include how you make the assessment that the individual had reduced their car mileage usage?

Dr Lynn Sloman: Yes.

Q660 Earl Selborne: Well, we have already heard a little bit about the Sustainable Travel Towns programme, in particular in Worcester, and I want to pursue some of the lessons learned from the programme. We have learned clearly that you would not do car-sharing again, and you would not do bike-sharing. What are the long-term lessons for the rest of the country that we have learned from the pilot scheme?

Peter Blake: Do you want to start?

Dr Lynn Sloman: No, you start.

Peter Blake: From Worcester's perspective, what worked terribly well were the softer measures, making sure that people understood what was already in existence in their neighbourhood: the cycle provision, making sure they knew about bus services. A lot of this does not sound terribly sexy or exciting—spending time with families, as we did, or making sure that they had introductory packs on all the transport services in their area, over a period of time—but when we undertook the assessment, the families and homes that engaged, showed demonstratively that there was quite a bit more movement in terms of walking and cycling, and bus use increased, as opposed to the families and those that did not. So there was an awful lot of the softer side in Worcester that worked terribly well. As for the harder infrastructure, we have actually started to implement that afterwards to try to lock in some of those benefits, so we ensure that we have the best possible cycling facilities. We are also continuing the bus service promotions. It was very much two phases in Worcester, with a lot on the softer measures in the first instance.

Q661 Earl Selborne: What did you learn from the other two cities, other than your own, that they did better than you?

Peter Blake: They did better in different areas for different reasons and a lot of that, I would suggest, may be down to their sort of starting points—in terms of Darlington, its social-economic situation, and the strong bus market which already existed. Peterborough was a New Town environment and quite a different starting point.

Simon Houldsworth: Picking up on what Peter said, another lesson I think Darlington has learned is the need to communicate or sell the message about the transport product with a strong brand. We styled our programme Local Motion, but we started off with a different brand called "A Town on the Move" which got hijacked, and was used negatively. So a strong message is about the perception—people's desire to want to be involved in travel behaviour; thinking about how they travel; wanting to belong. Reputation was very important, but the other thing is the continuing need for evidence for decision-making. Lynn has spoken about monitoring for new things that you could try in the future. I think it is also important to keep an eye on the things that we know work, but we have to keep making sure they are still effective and the best thing to do. So in Darlington we are still looking at ways to perhaps collect evidence that the Local Authorities traditionally didn't, and getting into travel behaviour that way.

Q662 Earl Selborne: How satisfied are you with the evaluation of these three schemes? We have agreed; I think we all recognise that these interventions work best when they are

part of a portfolio of interventions, both soft and hard measures, so it is therefore difficult sometimes to disaggregate the individual components and determine to what it is attributed. Nevertheless, there has to be some evaluation of the individual components. Given the difficulty of disaggregation, how successful have the evaluations been?

Dr Lynn Sloman: Well, I can't answer that, because I led it. I think John will have to.

John Dowie: I can give a simplified version. Compared to anything we previously got on the stocks, this was a kind of move away from what at times appeared a bit like assertion to something that was more clearly based on practical evidence in particular places. However, it clearly does have limitations. I am very mindful that, because of the drive to get evaluation evidence out, we have not been able to look at what the residual effect in two, five, eight years' time will be, which is a really important issue. Many people ask about these sorts of interventions: what is their half-life? We cannot use the evaluation to respond on that—we will need more evidence later to address that issue—but I certainly felt empowered in a way that I had not been prior to these evaluations in terms of internal, hard-nosed decisions about where money should get spent.

Q663 The Chairman: Can I just pick that up? I think you have just said that you would need more evaluation, possibly more robust evaluation, later. Can you say something about how you would encourage more evaluation later on to see whether the benefits last? I think that would be very helpful to us?

John Dowie: We recognise that evaluation cannot stop here, that the Department itself has a responsibility through the local sustainable transport fund to ensure there is a proper evaluation framework in place. We cannot allow it to be disaggregated across a hundred different places. Equally, I think Lynn was right at the beginning—if for no other reason than pounds and pence, we have to be very selective and focused about further evaluations commitments. So that has to be either the area that Lynn identified, which is where there is a new innovative set of interventions which we particularly want to examine so that we can put them firmly in the tool kit; or it could be trying to get an idea over the timescale of, say, the half-life of interventions. Ultimately, my Ministers will expect advice from me on what this overall programme has done for carbon, say, and it is important that I am in a place to answer that. What I need to avoid, though, is us drowning under evaluators crawling over 100 different projects. I think I would find that quite hard to defend.

Q664 Lord Krebs: Just very briefly, in the evaluation, did you consider the Hawthorne effect?

John Dowie: You have me there.

Lord Krebs: I won't give a long lecture—20 minutes. The Hawthorne effect was discovered by social psychologists some decades ago in the States, which is that the mere act of an intervention causes a behaviour change, irrespective of what the intervention is. In the paradigmatic example, in a factory they adjusted the lighting and productivity went up; when they turned the lighting back to the original, productivity went up again. So it was nothing to do with changing the lighting, it was the fact of an intervention, and that must surely be the baseline assumption in evaluating the efficacy of the proposed or the supposed effects of these particular measures.

Lord May of Oxford: No one has yet tried changing it every week and seeing if it just goes up and up and up?

John Dowie: I take the point. It now rings a bell in some of my business education. Lynn can comment specifically, but I got a sense, although I was arriving late relative to most of the activity on the ground, that at times you had created a bit of a buzz, and that buzz itself must have a return. So I am sure that effect is present.

Dr Lynn Sloman: But that is not a buzz created by the evaluation—that is the intervention. The intervention was precisely about creating buzz, and it is that combination of creating a buzz, revising bus services so that they are better, putting in new cycle lanes, providing “bike it” officers in schools, that we are interested in looking at.

Q665 The Chairman: Could I just pick up on that? Obviously you, Dr Sloman, led the evaluation of this. If this is going to go on in the longer term, and you want to see the longer-term effect of this, do Local Authorities have the ability to do the evaluations themselves?

Dr Lynn Sloman: I do not think so at the moment.

The Chairman: At the moment—thank you very much indeed.

John Dowie: And I am not expecting that they will.

The Chairman: You are not expecting that they will. That is very helpful, thank you very much indeed.

Q666 Lord Krebs: Lynn already referred to lessons from other countries, and I just wanted you to expand on that. We heard that Copenhagen is a paradigmatic example; we have been told before that the spend there, sustained over many years, has, per capita, been four times the spend in the initiative that you evaluated. I just wondered to what extent, either at central or local level, you learn from the lessons of other countries that seem to be far more successful than anywhere in the UK at getting people out of their cars and into other forms of transport. As I understand it, there is nowhere in the UK that is comparable to Copenhagen or many other cities in continental Europe. So do we learn the lessons, and if we do not, why not? And why are we so far behind?

John Dowie: It is an interesting question and we were, before today, asking ourselves that. It goes back to the very first question in terms of capacity; there is a bit of insular about it, and I think there is a bit of capacity. We do not have capacity in the depth and the width that is going to hoover up best practice, real micro best practice, from overseas. In retrospect we probably do take, at a general level over significant periods of time, lessons from abroad. Many of these particular initiatives can be traced back to examples over a number of years, whether the path has been found in Europe or America, but we are not fleet of foot. There are issues probably about whether, if we had more capacity, we might be able to directly learn better and more quickly from overseas. So I do not see it as one of our strong points.

Q667 Lord Krebs: Are there any cases where the Dutch, the Danes, the Germans have looked at what we are doing and said, “Wow, we would love to copy that?” in terms of modal shift in transport?

John Dowie: Well, put it this way, I do seem to host a surprisingly large number of visits from European and Far Eastern countries, but perhaps it is the London theatres that bring them here.

Lord Krebs: They could be saying, “I wonder where you bought your suit, I must remember to avoid that tailor”.

Q668 The Chairman: But not that you know of. Okay. Anything else on that one? Can we move to Lord Crickhowell then?

Lord Crickhowell: We have talked about co-operation between the Department for Transport and Local Authorities and the Local Authorities with each other. What about co-operation with other organisations? We have got an example before us this afternoon, but how far do you think that co-operation between various bodies in this field is important, and can you give us some examples of good or bad?

Dr Lynn Sloman: I have a couple of examples, one from Cycling Cities and Towns and the contribution of voluntary sector organisations that developed particular services. In the case of Sustrans, ‘Bike it’ was an intervention targeted at schools; and the Cyclist Touring Club had a workplace cycle challenge designed to get more people cycling to work. Both were very important, very creative interventions which I do not think Local Authorities would necessarily have devised on their own. So that combination of the Local Authority, the voluntary sector organisations, and actually at that point Cycling England—which, of course, after March will not exist—was a very creative combination that led to more change than would have happened had one simply handwritten a cheque and left the Local Authorities to get on with it. In the case of the Sustainable Travel Towns, I think the role of the bus operators, to some extent in Worcester, and very markedly in Peterborough, was absolutely crucial to getting more people to use buses rather than driving for certain trips.

Q669 Lord Crickhowell: Now, we have heard that in Worcester all the bicycles got stolen. As far as I know that has not been the experience so far in London. Is that because it has been organised and financed perhaps in London by Barclays, and there has been a better organisational backup, or is that not an example of co-operation?

Peter Blake: I am sure that is a good example of co-operation. I think that the issues were more local with the Worcester scheme, in terms of the technology available at the time, and the amount of money that we were putting into it. But I would say that certainly at a very local level, working with large businesses has real potential.

Q670 Lord Crickhowell: What about employers?

Peter Blake: Employers travel plans are very similar to school travel plans where they are actually willing to invest in improvements on their site, be it shower facilities, cycle parking facilities, even access and car parking issues. That can go a long way to making some very local improvements at various parts of our city, and it certainly has with some of our employers.

John Dowie: If I could just add to what Lynn said at the beginning, because I think it is partly an answer to Lord Krebs’s earlier point; I think the intermediaries are a quite crucial source of expertise in a kind of gateway to some of the wider international experience, and, indeed, a means of relaying experience at a UK level from one place to another. We encouraged in the guidance for the new fund that they continue to be part of Local Authorities’ planning for their areas, so that they can get the best out of that. I think the other point, which has just come out of some of the exchanges, is bus operators are quite a crucial player in all of this. I was hearing from one of them last week; they themselves had been on a journey in that maybe 30 years ago they thought the qualification for a bus driver was someone who

can drive a large heavy vehicle, but they have moved quite a long way, because there is the recognition that, at the end of the day, a bus driver is, yes, about moving a lump of metal around, but it is actually about a set of people skills, because it is fundamentally a service. They have changed the way they recruit and train accordingly. So I can see a convergence between their instincts, their business interest, and the wider objectives for the individual places.

Q671 Lord Crickhowell: I have a final question on co-operation between the Department for Transport and the Department of Health, between health initiatives and transport initiatives. I do not know how far any of the initiatives that you have described were in any way linked to health initiatives. We have got a separate inquiry going on on obesity, and surely there is a linkage here?

John Dowie: Absolutely. We have for a number of years now had quite a close relationship with Department for Health colleagues; they have partly funded Cycling England in the past, and it was very striking that a very large proportion of the measurable objectives coming through the evaluation studies related to health benefits. One promising development for the future is the direction of travel in terms of the health sector, in terms of public health, where they will be increasingly focusing health interventions at the upper-tier level in the Local Authority sector, which is exactly the same level as deals with transport. So there is an opportunity to get local join up through the local government sector here.

Q672 The Chairman: So you are saying the changes which take public health into Local Authorities is positively advantageous?

John Dowie: This agenda is a really beneficial change.

Q673 Lord Alderdice: You mentioned one specific intervention to encourage cyclists and gave the example of employers providing shower facilities, places for bicycles and so on, and said that these were very much valued and positive. My own experience in doing this in two employment settings was that the people who were already cyclists valued this enormously, and continued to use it with considerable enthusiasm and give positive reports, but it did not actually increase the number of people who were doing it. Have you any indication by way of figures that these sorts of changes have made a substantial difference to the number of people using the facilities, and, if so, what are the figures, and were they sustained? Or did the people who already were enthusiastic about doing this get better provision? That is a valuable thing in itself, but not behaviour change.

Dr Lynn Sloman: I am not aware of any figures which have looked at the effect of just putting in showers and changing facilities, and, of course, what usually happens is that, if an employer is committed enough to putting in showers and changing facilities, they will also be putting in new cycle parking, and they might be encouraging their staff to cycle through other means. So it is, as always, quite hard to disaggregate. The Workplace Cycle Challenge programme that CTC ran in a number of the Cycling Cities and Towns focused on encouraging individual employees in participating companies to get their peers to try cycling for a fortnight, and to get as many trips as possible by bike. The idea was to engender competition between a number of employers in a town, in Cambridge, Swindon or whatever. That seems to have been quite effective at getting people who previously did not cycle to try cycling, and, of course, if you can just once get somebody to try something, you have broken the habit barrier, and you have also created a new social norm in that

workplace. So my own view is that those types of interventions are a very important part of getting more people to cycle to work, probably coupled with programmes such as bicycle user groups, which, for example, Exeter, one of the Cycling Demonstration Towns, used to great effect with a number of their employers in the city of Exeter. So that is not to say that showers and changing rooms are unimportant, but there is a lot of other work that is needed in order to get a change of culture in an organisation.

Q674 Lord Alderdice: Can I press you a little bit? What you said in terms of breaking this, persuading somebody to cycle half a dozen times over a fortnight, is not actually behavioural change; that is an adventure into something for a fortnight. The question is whether six months later those people were regular cyclists. Giving up smoking is easy—most people have done it lots of times, and similarly with dieting. The question is not whether you can get them on the saddle of a bicycle, but whether six months later they were still regularly using it. What figures do you have on that?

Dr Lynn Sloman: It's not my area directly. I do not think you are taking evidence from CTC, but I think they have evidence from their Workplace Cycle Challenge team, from Thomas Stokell in particular, and he might be the right person to ask about their evidence of that behaviour change being sustained over time.

Q675 The Chairman: Mr Houldsworth, I think you wanted to come in on the previous point?

Simon Houldsworth: Yes, it was just on the health angle. People have different motivations for changing their travel behaviour, and our consultants who are delivering the individualised travel marketing found that health was very much by far the most important motivator for people to change how they travel, followed, as it happened, by saving money.

The Chairman: Thank you very much indeed. I think we have got to stop there. Can I thank you enormously for coming to give evidence? There will be a transcript that will be available to you within about a week or 10 days. Do please just check it for the accuracy of what you said, and if there are things that you want to add, please add a note. I think you have already said, Dr Sloman, you are going to send in some material. If there is anything you wish you had added to what you said but did not have time, we will publish it along with the evidence. So thank you very much indeed. Impeccable timing; we will now go and vote and come back for the next session.

Supplementary written evidence from Transport for Quality of Life (BC 160)

Submitted by Dr Lynn Sloman

I. Evidence on car mileage reduction from behaviour change programmes

At the evidence session on 8 February 2011 (Q659), Lord Krebs asked about the assumptions behind my estimate of the car mileage reduction that might be achieved as a result of different levels of investment in behaviour change measures.

Figures from two studies were quoted in my oral evidence to the Committee:

- **Sloman et al. (2010) *The Effects of Smarter Choice Programmes in the Sustainable Travel Towns***

The investment programme in the Sustainable Travel Towns (Darlington, Peterborough and Worcester) was for a package including **both** service improvements (e.g. better bus services, new cycle lanes), and information and marketing designed in such a way as to ‘nudge’ people towards trying alternatives to the car (although the programmes were implemented before use of this term became widespread).

The evaluation of the STT programme was carried out for the Department for Transport by a team drawn from Transport for Quality of Life, Transport Research Laboratory, Aberdeen University, University of the West of England and AEA. None of these organisations or the individuals in the evaluation team had been involved in programme delivery in the towns.

The evaluation used data from a household travel survey including a one-day travel diary, which was carried out in Autumn 2004 and repeated in Autumn 2008 in all three Sustainable Travel Towns, with over 4,000 respondents in each town for each survey. At the aggregate level, the household survey had sample sizes of over 25,000 people and 75,000 trips, divided between the three towns and the two time periods. The survey was a random sample survey (*not* a panel i.e. respondents at baseline were not specifically followed up in the ex-post surveys). The monitoring data were collected by Sustrans / Socialdata, and they used a weighting system to adjust for potential biases in survey returns (for example, representativeness in terms of age, gender etc). Data were supplied to the evaluation team in two forms, both weighted and unweighted, and most analyses were repeated using both datasets.

Analysis of the household travel survey was supplemented by analysis of other sets of data, including automatic and manual vehicle counts, bus patronage figures, cycle and pedestrian counts, and surveys carried out in workplaces and schools. Thus the study team were able to use independent sources of data, both self-reported and measured on the ground, to triangulate an estimate of the overall impact on behaviour. The picture emerging from all these sets of data was broadly consistent.

At the programme level (i.e. using data from all three towns), analysis of the household travel survey data by the evaluation team suggested that there had been a reduction in *car mileage per person* of the order of 5%~7% (with the lower figure based on the unweighted data and the upper figure based on the weighted data) between 2004 and 2008. This figure is for trips of 50km or less⁶²⁸. Over the same period, car use per head also fell nationally in

⁶²⁸ Figures are quoted for trips of <50km because longer journeys were not the target of the Sustainable Travel Town programme; the inclusion of longer journeys would make any results less comparable with the other data sources (which all measured traffic within the towns); and given the use of a one-day travel diary, the sample of longer distance trips was

comparable (medium-sized) urban areas, but by a smaller amount (0.9%), using data from the National Travel Survey.

The expenditure on behaviour change measures in the three towns was of the order of £10 per person per year. This included both capital and revenue.

It is worth noting that none of the three Sustainable Travel Towns felt that they had exhausted the potential for change. In every case, it was clear that there was more that could be done to reduce car use, including both service improvements and better engagement with key target audiences (e.g. larger employers).

- **Cairns et al. (2004) Smarter Choices: Changing the way we travel**

This study was carried out before the investment in the Sustainable Travel Towns (and indeed, its conclusions were one of the reasons that the Government initiated the Sustainable Travel Town programme).

It involved a review of evidence from the UK and other countries on the effects of 10 types of intervention to change travel behaviour, coupled with 24 detailed case studies of the implementation of these measures on an area-wide basis in 12 local authority areas across the UK. The behaviour change interventions studied were workplace travel plans, school travel plans, personal travel planning, public transport information and marketing, travel awareness campaigns, car clubs, car sharing schemes, teleworking, tele-conferencing and home shopping.

The case studies included detailed interviews with local authority officers responsible for the delivery of the measures in question, which enabled the study team to gather data on the effects or outcomes of the interventions (e.g. travel survey data from workplaces, showing changes in number of cars being driven to work at each location); the coverage or scale of implementation (e.g. number and proportion of workforce in a town that were covered by workplace travel planning programmes); the resources that had been needed to achieve these effects (staff time, revenue and capital funding); and the potential for expansion of the programme over time (taking account of limiting factors e.g. that it might only be possible for the local authority to stimulate the adoption of workplace travel plans by larger organisations). This information was used to make projections of the likely coverage and effect of each type of behaviour change intervention, in urban and non-urban areas, after ten years, under two scenarios: a low intensity scenario and a high intensity scenario.

The low intensity scenario was a projection of current levels of expenditure and commitment to these measures. The high intensity scenario was based on an expansion of activity, commitment and resources to a substantially higher level, such that the activities of many local authorities would be on a par with existing good practice, though still consistent with feasible levels of expenditure and known constraints on implementation.

Thus, combining data on effect and coverage, the study concluded that workplace travel plans might feasibly reduce car journeys to work by 5% (low scenario) or 9% (high scenario) in urban areas following ten years of implementation. Other behaviour change measures (teleworking, personal travel planning, public transport marketing etc) might also be expected to have an effect on commuter car use, and on other journey purposes, and so

much smaller, and therefore subject to random statistical variation shown in large and inconsistent changes in these small numbers. Some additional analysis was done on these longer trips, described in the full report of the study, which does not change the conclusions reported here.

figures were also derived for the contribution of each of the other measures to car use for each journey purpose (travel to school, shopping, business travel etc), with some downward allowance made in order to avoid ‘double counting’. The resulting figures for each individual measure were applied to data from the Department for Transport’s National Transport Model (NTM).

The result of applying these figures to the NTM data was that *under the high intensity scenario*, car use in urban areas might be cut by 18% as a result of a programme built up over a 10 year period. Case study data on costs of each of the behaviour change measures was used to derive a figure for the *current* cost per car km taken off the road, and this was in turn used to estimate the cost of a 10-year programme as being roundly £17 per head of population per year at 2003 prices (£20 at November 2009 prices).

2. What constitutes a ‘nudge’?

Some questions asked by the Committee, during both Evidence Session 19 and previous sessions, indicate an interest in what exactly constitutes a ‘nudge’, and whether interventions such as the Cycling Cities and Towns programme or the Sustainable Travel Towns programme are, or are not, a nudge.

Looking at a micro level at the CCT and STT programmes, they certainly contain instances of ‘nudges’ in action. For example, in Peterborough, a ‘thank you campaign’ rewarded residents for travelling sustainably with small gifts, so emphasising that use of sustainable travel options was both positive and normal. Similarly, it is arguable that calling Darlington a ‘cycling town’ helped to introduce and establish cycling as a social norm, and that the town’s sustainable transport loyalty scheme also helped in creating a community in which travelling sustainably was perceived to be a popular option.

However, these large scale (town-wide) behaviour change programmes are on a substantially greater scale than any of the examples of ‘nudges’ described by Thaler and Sunstein, either in their book or on their website www.nudges.org. The expenditure in the CCT and STT programmes was fairly evenly balanced between service improvements (including, where appropriate, new infrastructure) on the one hand and information and marketing on the other, whereas I have been unable to find any examples of nudges quoted by Thaler and Sunstein which involve expenditure on improving the quality of a service. Thaler and Sunstein also indicate in their book that a ‘nudge’ is very low cost (*...many of [the policies suggested by libertarian paternalism] cost little or nothing; they impose no burden on taxpayers at all* Thaler and Sunstein 2009, p14), and while the STT and CCT programmes offered very high value for money according to assessments carried out by the Department for Transport, and indeed better value for money than most other transport interventions, it would not be true to say that they are zero cost.

It might perhaps be appropriate to think of the STT and CCT programmes as examples of a ‘super-nudge’, taking some of the ideas propounded by Thaler and Sunstein but applying them as part of a larger package of complementary measures.

3. Is there a silver bullet?

The Committee spent some time exploring with witnesses in Evidence Sessions 19 and 20 whether certain types of intervention might be more effective than others in changing travel behaviour. In particular, Committee members asked about the potential reduction in car use that might be achieved from ‘nudging’ alone; from changes to infrastructure; and from pricing and restrictions on car use. In Session 20, Stephen Glaister suggested that fiscal mechanisms

(specifically, road pricing) were the most powerful tools to influence travel choices, and implied that behaviour change programmes were in some sense a sideshow.

Road pricing and increased taxation of fuel are certainly powerful tools to reduce car use, and behaviour change programmes such as those in the STTs and CCTs are made more difficult to the extent that they take place in the absence of such measures. It does seem plausible – although there is no hard evidence to support this – that the reductions in car mileage per capita achieved in the STTs, and the increase in cycling in the CCTs, would have been even greater if these programmes had taken place at the same time as the introduction of road user charging in the towns concerned.

However, we equally strongly believe that there is no single ‘silver bullet’. Road pricing *alone* would be far less effective than road pricing coupled with better bus services, high quality cycle facilities, interventions designed to change travel behaviour in schools and workplaces, and so on. It is precisely this package of measures that has been implemented in London over the last eight years.

Unfortunately, there is little prospect at present of road user charging being implemented outside London, at least for the foreseeable future. In this situation, it would be a counsel of despair to suggest that nothing worthwhile can be done. Like road pricing, behaviour change programmes are no panacea. But they do offer us a way of achieving change in the right direction in the very short term.

There is also the possibility that large-scale behaviour change programmes may help to pave the way for other interventions, including road user charging. They offer a way of taking people with us, rather than trying to beat the public into submission. Psychological theory suggests that rather than our behaviour invariably being determined by our attitudes, as is often assumed, we sometimes infer our own attitudes by observing our own behaviour. This raises the intriguing prospect that by encouraging people to try cycling or bus travel, we may make them more receptive to the idea that it would be good to reduce car use, and hence more supportive of action by local and national government that has the effect of restraining car use. This is not at all to let government ‘off the hook’ with regard to fiscal and regulatory policies – it is desirable for the overall cost of motoring to increase in real terms (instead of falling, as has been the pattern over the last decade notwithstanding recent spikes in fuel prices); and important that land use planning policy is applied in such a way as to reduce car dependency. It is equally important that government shows leadership in explaining why we must act to cut car use, as part of a more clearly articulated discourse about the need for us to adopt lower carbon lifestyles. But well-designed large scale behaviour change programmes offer a profoundly important tool that we can use now, and their importance should not be underestimated.

References

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March 2011

Sustrans, RAC Foundation, Cycling England and Stagecoach UK Bus

Written evidence from Sustrans (BC 1)

Summary and key points

- Sustrans makes this submission based on our experience in the promotion of travel behaviour change, through both environmental and behavioural interventions
- we have experience also in research and evidence collation relating to physical activity and active travel: it is now accepted that travel choice is a major factor in healthy (or unhealthy) lifestyle choice, with an impact on obesity
- **Key point 1: Significant and sustained behaviour change is most likely to be achieved through an integrated package of environmental intervention, information and motivation**
- **Key point 2: Departments and sectors which can share benefits from a certain type of behaviour change should collaborate on joint behaviour change approaches with common messages and shared intervention**
- **Key point 3: Behaviour change targets should be agreed, jointly by all those with an interest in the desired behaviour, and investment should be made proportionate to the targets, for example transport capital investment in proportion to target levels for percentage of trips made by walking and cycling**
- **Recommended case study: Sustrans' TravelSmart programme has helped more than quarter of a million households to change to more active and sustainable travel for local trips since 2001: TravelSmart has been rigorously evaluated and is underpinned by a compelling evidence base**
- we would be delighted, if required, to provide more information – by phone or email or to the Committee in person.

Sustrans background

Sustrans is the UK's leading sustainable transport charity. We deliver national programmes of practical intervention which change travel behaviour, at the individual and the population level, towards regular walking and cycling and the use of public transport. Some of these programmes address the physical environment – for example by building new walking and cycling infrastructure – and others focus on individual or collective behaviour. They raise physical activity levels and improve public health, reduce climate change emissions, improve road safety and enhance wider quality of life.

This submission therefore relates to our experience in addressing physical inactivity and sedentary lifestyles (and hence obesity) through the promotion of behaviour change in travel choice – from private motorised transport towards active modes for all or part of each trip.

We carry out monitoring and evaluation work (generally in partnership with academic and other partners) on our own programmes and those of others, including government programmes such as the Department for Transport (DfT) Sustainable Travel Demonstration Towns and Cycling Demonstration Towns. We also develop and collaborate with independent research partnerships, studying the impact of various approaches to the promotion of more sustainable and healthier travel choices.

This practical and research work underpins our input to official policy and guidance at all levels. Sustrans contributed (inter alia) to the 'Foresight Tackling Obesities'⁽⁶²⁹⁾ report identified by the Committee, to policy such as the 2004 public health white paper⁽⁶³⁰⁾, and to guidance from the National Institute for Health and Clinical Excellence (NICE) such as 'Physical activity and the environment'⁽⁶³¹⁾. We are currently contributing to the development of the forthcoming public health white paper, development of new approaches to physical activity and obesity through Department of Health (DH) Coalition for Better Health groups, and the forthcoming NICE guidance on 'Preventing obesity: a whole systems approach', which seems very relevant to your current work.

Travel behaviour change: Sustrans' experience

Sustrans' mission and strategies are all about behaviour change. We seek to maximise the impact of our limited resources by investigating the potential for change and the reported impact of various approaches, and using this information, from sources such as Foresight and NICE and from our own, published, evidence review⁽⁶³²⁾ as the basis of our strategic and operational planning.

Work that Sustrans has done with the DfT on the Sustainable Travel Demonstration Towns programme quantified a large potential for change from sedentary to active ways of travelling. In the three demonstration towns (Darlington, Peterborough and Worcester) almost 50% of local car trips could have been made by at least one other, more active and sustainable, mode of transport: in many cases, the only obstacle to such a change was lack of information⁽⁶³³⁾.

Sustrans' programmes have a significant impact on behaviour⁽⁶³⁴⁾, although some of them might not fall into the category normally considered as 'behaviour change interventions':

- the National Cycle Network carried 407 million walking and cycling trips in 2009, with over two thirds of users reporting increased activity levels thanks to their local routes
- the 79 local Connect2 projects across the UK, removing or bridging physical and cultural barriers to the choice of active travel, will be within one mile of 6 million people, and are forecast to carry over a million active trips a day
- our Bike It programme trebled daily cycling to school, and has now worked with over 400,000 children
- TravelSmart has helped to change the travel behaviour of over 250,000 households, and consistently shifts between 10% and 14% of car trips to walking, cycling and public transport
- we lead the Travel Actively consortium – all of the national walking and cycling groups jointly delivering 50 projects across England, with a target to get 1.8 million people more active through walking and cycling.

⁶²⁹ Government Office for Science, 2007 Foresight Tackling Obesities: Future Choices project report

⁶³⁰ Department of Health, 2004 Choosing Health: Making healthy choices easier

⁶³¹ National Institute for Health and Clinical Excellence, 2008 Promoting and creating built or natural environments that encourage and support physical activity

⁶³² For example, Sustrans Active Travel information sheets at <http://www.sustrans.org.uk/what-we-do/active-travel/active-travel-publications>

⁶³³ Sustrans, 2005 Travel Behaviour Research Baseline Survey 2004: Sustainable Travel Demonstration Towns

⁶³⁴ Sustrans, 2010 (currently in print) Sustrans monitoring report 2009

Wherever possible we implement these various approaches together as an integrated package. In particular, we regard it as of central importance to address both the environment, through “hard” – generally capital funded – measures, as well as “soft” – generally revenue – approaches.

The importance of the environment in behaviour change

The Foresight obesity report is based on a massive programme of evidence review, analysis and modelling; it is our North Star for strategic planning in this area; and Foresight said “*the top five policy responses assessed as having the greatest average impact on levels of obesity [include] increasing walkability / cyclability of the built environment*”⁽⁶³⁵⁾. In ‘At Least Five a Week’⁽⁶³⁶⁾, the Chief Medical Officer for England made clear that walking and cycling for daily trips represent an accessible and practical way for many inactive people to increase their physical activity levels, while NICE showed that the form of the built environment is an important factor in determining their ability to choose walking or cycling when considering the choices available for any particular trip⁽⁶³⁷⁾.

This perfectly illustrates the first key point that Sustrans wishes to present to the Committee. Individuals and communities have adopted certain patterns of behaviour for a reason, and if programmes of motivation aimed at changing their behaviour conflict with what the environment tells them to do, sustained behaviour change is not likely to result.

Key point 1: Significant and sustained behaviour change is most likely to be achieved through an integrated package of environmental intervention, information and motivation.

In the case of obesity and of government programmes to address it, Sustrans has been an energetic supporter of Change4Life, and has contributed wherever possible to development of the best possible messaging and materials. However, we have a concern that some politicians and officials may believe that the Change4Life campaign will – on its own and without addressing the obesogenic environment – provoke major change. We do not believe this to be true. Regarding some past government campaigns unconnected with environmental intervention, such as the advertising campaign ‘Are you doing your bit?’, we simply are not aware of any evidence of effectiveness that would justify the investment in these campaigns.

Cross governmental collaboration and co-benefits

In Sustrans’ field of operation, there are evident and widely recognised benefits from travel behaviour change, in sectors including climate emissions reduction, physical activity and public health, local environment and community cohesion, road safety and others. The various sectors with interest in a particular type of behaviour change should collaboratively plan interventions, set objectives, measure outcomes, and fund the work. Where parallel interventions address a similar performance target, such as where climate, public health and road safety programmes might all seek to influence travel behaviour, it is important that the messages be common and wherever possible, that the parties intervene jointly to deliver a single, shared message with the greatest possible force.

⁶³⁵ Government Office for Science, 2007 Foresight Tackling Obesities: Future Choices project report

⁶³⁶ Department of Health, 2004 At least five a week. Evidence on the impact of physical activity and its relationship to health. A Report from the Chief Medical Officer

⁶³⁷ National Institute for Health and Clinical Excellence, 2008 Promoting and creating built or natural environments that encourage and support physical activity

Key point 2: Departments and sectors which can share benefits from a certain type of behaviour change should collaborate on joint behaviour change approaches with common messages and shared intervention.

Impact of investment decisions

NICE is an important source of guidance for Sustrans, because of the intensity of evidence review which backs up its pronouncements. In ‘Prevention of cardiovascular disease’⁽⁶³⁸⁾, NICE makes explicit reference to transport investment as a long-lead determinant of behaviour, healthy or otherwise, saying “Apportion part of the local transport plan (LTP) block allocation to promote walking, cycling and other forms of travel that involve physical activity. **The proportion allocated should be in line with growth targets for the use of these modes of transport**” (our emphasis). Around 120 public health and other bodies have made the same call in ‘Take Action on Active Travel’⁽⁶³⁹⁾. Sustrans regards this issue of the scale of engagement as crucial: even a campaign such as Change4Life is small by comparison with the marketing budgets of junk food manufacturers, video game machines and the motor industry. By aligning the objectives of several policy sectors, and the budgets aimed at their achievement, it should be possible to compete more effectively.

Key point 3: Behaviour change targets should be agreed, jointly by all those with an interest in the desired behaviour, and investment should be made proportionate to the targets, for example transport capital investment in proportion to target levels for percentage of trips made by walking and cycling.

This would facilitate the integrated application of environmental change and motivational, behaviour change approaches. For example the local authority departments allocating capital investment to the built environment, such as through the Local Transport Plan funding allocation, could share objectives and investment planning priorities with the public health team investing revenue funds into the commissioning of local behavioural interventions. In our view, this opportunity is of central importance. The scoping and establishment of local public health commissioning systems, and their support from the new Public Health Service, should explicitly direct public health professionals to collaborate with their transport and planning and regeneration peers within the local authority, to establish joint “healthy living” objectives and to create investment plans which integrate the revenue and the capital investment, so that “soft” and “hard” measures jointly promote healthy living.

TravelSmart: a proven and cost-effective travel behaviour change intervention

In our view, the case is now made that changes in travel behaviour from sedentary motorised transport to walking and cycling (including as components in a public transport trip) contribute to raising physical activity levels, and hence to improvements in a wide range of health outcomes including cardiovascular diseases, many forms of cancer, non-insulin dependent diabetes.... and overweight and obesity. As noted above, our experience is that numerous forms of intervention, both environmental and behavioural, are effective in promoting and supporting active travel choices, and we believe that in general a package approach is better. However, Sustrans has direct experience in delivering a major travel behaviour change programme at the household level – TravelSmart – and propose this as a case study.

⁶³⁸ National Institute for Health and Clinical Excellence, 2010 Prevention of cardiovascular disease

⁶³⁹ Association of Directors of Public Health and Sustrans, 2010 Take action on active travel

Of the behaviour change techniques commonly used to influence travel behaviour, Personalised Travel Planning (PTP) has been the most rigorously evaluated and is underpinned by the most compelling evidence base. Sustrans has delivered PTP projects through its TravelSmart programme since 2001. During that time we have provided personalised information and support which has helped more than quarter of a million households to change to more active and sustainable travel for local trips. The TravelSmart programme has delivered almost 30 projects, ranging from 1,500 households over a few weeks to 50,000 households over three years.

All TravelSmart projects are evaluated using area-wide household travel behaviour surveys before and after the behaviour-change campaign delivered by our partners, Socialdata⁽⁶⁴⁰⁾. Every individual in the sample completes a detailed one-day travel diary recording every leg of every trip that they make on their nominated travel day. The sample is split into seven so that respondents provide data for every day of the week. We have collected data from more than 100,000 respondents across the UK since 2001, providing a rich resource for understanding travel behaviour and developing effective behaviour change methods. Evaluation of TravelSmart projects shows consistent area-wide relative reductions of between 10% and 14% in car-as-driver trips, and average increases in time spent travelling actively of up to five minutes per person per day. These findings take account of control group effects (i.e. background changes in travel behaviour due to factors such as fuel price fluctuations are screened out) and include both TravelSmart participants and non-participants from project target areas.

TravelSmart is easily scalable. While it is arguably not cost effective for target populations of less than 1,000 households (where the per-household cost is around £65, or £30 per person) there is no maximum project size. There are significant economies of scale and our larger town or city-wide projects have been delivered at a cost of around £23 per household. Economic appraisal of our city-wide project in Peterborough between 2005 and 2007, targeting 30,000 households, shows a benefit to cost ratio of 7.6:I⁽⁶⁴¹⁾. For even larger projects this ratio could be improved further as per-household costs could be reduced. City-wide projects in very large conurbations could easily be delivered for less than £20 per household.

TravelSmart has been funded from a number of sources, including the DfT Sustainable Travel Demonstration Towns programme, Big Lottery Fund, EU Civitas programme, section 106 planning gain and others. Two of the current projects, totalling 25,000 households, are funded by the Department for Environment, Food and Rural Affairs (Defra) through its Greener Living Fund. Defra's Behaviour Change Strategy addresses 12 areas of behaviour change, of which transport is one, and aside from the predictable direct benefits of the two projects, we have also been able to support closer collaboration between Defra's Sustainable Behaviours Unit and DfT, through policy briefings and cross-provision of project data.

Recommended case study: Sustrans' TravelSmart programme has helped more than quarter of a million households to change to more active and sustainable travel for local trips since 2001: TravelSmart has been rigorously evaluated and is underpinned by a compelling evidence base.

August 2010

⁶⁴⁰ Sustrans, 2009 Travel behaviour research in the Sustainable Travel Towns

⁶⁴¹ Sustrans, 2009 TravelSmart Project Review

Supplementary written evidence from Sustrans (BC 141)

Sustrans is the UK's leading sustainable transport charity.

I. Sustrans and Behaviour Change – A Context

- 1.1 Sustrans is the charity that's enabling people to travel by foot, bike or public transport for more of the journeys we make every day. Our work makes it possible for people to choose healthier, cleaner and cheaper journeys, with better places and spaces to move through and live in.
- 1.2 We welcome the opportunity to respond to the House of Lords Science and Technology Committee's inquiry into Behaviour Change – Travel Mode Choice Interventions to Reduce Car Use in Towns and Cities. As the committee will be aware, in addition to this response to the second call for evidence, Sustrans also responded to the more general first call for evidence which looked more broadly at behaviour change. Although thinking on behavioural change comes from a wide range of policy areas. Its agenda across government is most developed in the policy areas of environment, health, and transport. It is therefore wholly appropriate that the committee look for evidence from the transport sector.
- 1.3 As a charity aspiring for a world in which people choose to travel in ways that benefit their health and the environment, behavioural change has often been at the forefront of our research and evaluation and has helped us to deliver the most effective practical solutions to the challenges and barriers facing the British public when they make transport choices.
- 1.4 Although achieving behavioural change is complex, particularly in relation to travel, the approach offers an effective and low-cost solution to our national and local transport challenges. Significant shifts towards healthy, low-carbon travel can be achieved in a short space of time through proven behaviour change techniques, promoting better use of existing transport networks and reducing the need for new capital investment.
- 1.5 Sustrans⁶⁴² has pioneered some of the most successful travel behaviour change programmes in the UK, at a variety of scales from cities to small market towns, in workplaces and schools and with local communities including hard-to-reach groups. Working with local and national partners, Sustrans schemes have achieved a 10% reduction in car use alongside increases in walking, cycling and public transport use.
- 1.6 The experience of Sustrans and its many partners over the past three decades demonstrates that a range of practical interventions exist with a proven potential quickly and cost-effectively to increase levels of sustainable travel and overcome a number of significant barriers to behaviour change by improving the environment for walking and cycling and promoting these options to specific audiences such as school children, older people, employees and families at home.

2. What are the most influential drivers of behaviour affecting an individual's choice of mode of travel?

⁶⁴² <http://www.sustrans.org.uk/>

- 2.1 Sustrans' TravelSmart⁶⁴³ work has identified that travel choice and behaviour are, on the whole, governed by habit and convenience. In Britain more than half of all journeys of under five miles are made by car, compared with around a third on foot and just two per cent by bike. Research in the Sustainable Travel Towns in 2004 showed that nearly two thirds of all journeys could be made by foot, bike and public transport under existing conditions, and even more with improved infrastructure and better land use planning.
- 2.2 The greatest potential for change lay in increasing cycling, providing a viable alternative to nearly one in three local car journeys, a greater potential than both walking and public transport.
- 2.3 Travel is a notoriously habitual type of behaviour⁶⁴⁴. People typically do not make conscious decisions about which travel mode to use for a particular trip, especially when that trip is routine. As such, key to changing travel behaviour is disruption of habits: making people conscious of behaviours which are normally carried out based on cognitive shortcuts. This requires some form of intervention. Ideally, interventions should: acknowledge that individuals have different motivations and face different barriers to behaviour change; address information gaps and attitudinal barriers; provide opportunities to try new behaviours in a safe and supportive environment; and offer long-term support so that new behaviours can become habitual.

3. What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?

- 3.1 The success of Sustrans' National Cycle Network since its creation in 1995 demonstrates that where you build a safe, pleasant environment focused on the needs of those travelling by foot and bike, you will enable people to choose to walk and cycle for shorter journeys or as part of a longer journey and to leave their cars behind.
- 3.2 The number of journeys on the National Cycle Network has grown every year since Sustrans began recording and monitoring usage in 2000. Over the same period, except for one year, the National Travel Survey has shown a decline in both cycling and walking levels.⁶⁴⁵ Sustrans works with communities to make local streets into spaces for people rather than cars, by redesigning streets to reduce traffic speed and volume, as well as nuisance parking. These concerns prevent people walking and cycling from their front door, and are the main reasons why parents won't allow children to walk and cycle to school or play outside.⁶⁴⁶
- 3.3 Infrastructure plays a vital role in changing travel behaviour and can be the deciding factor for those people less willing to alter their behaviour. The ideal package for behavioural change in terms of effectiveness involves a combination of 'hard measures' (infrastructure, planning, signing and so on) and 'soft measures' or smarter travel interventions such as:
- 3.4 School and workplace travel plans that encourage the use of 'greener' transport modes like walking, cycling and buses.

⁶⁴³ <http://www.sustrans.org.uk/assets/files/travelsmart/TravelSmart%20Project%20Review.pdf>

⁶⁴⁴ For example, Bamberg, S. and Schmidt, P. (2003), 'Incentives, Morality, or Habit? Predicting Students' Car Use for University Routes With the Models of Ajzen, Schwartz and Triandis', *Environment and Behavior*, 35(2), 264-285.

⁶⁴⁵ Sustrans, 2009 The National Cycle Network Route User Monitoring Report – To end 2008

⁶⁴⁶ Sustrans (2006) The Dings Home Zone Information Sheet <http://www.sustrans.org.uk/what-we-do/liveable-neighbourhoods/home-zones/the-dings-home-zone>

- Personalised travel planning which engages with people at home to improve awareness of their travel options through tailored advice, information and incentives
- Cycle training
- Car clubs and car sharing schemes
- Tele-working, teleconferencing and home shopping

3.5 Investment in infrastructure plays an important role in locking-in the benefits of behaviour change bought about by softer measures. Bristol's first TravelSmart project, funded through the city's EU CIVITAS VIVALDI programme, was designed to test the effectiveness of combining TravelSmart with the development of a new Quality Bus Corridor (QBC). The results corroborated evidence from elsewhere - that well-targeted marketing of an improved bus service can dramatically increase its positive impact on patronage, in this case more than doubling the increase in bus use achieved by the QBC alone.⁶⁴⁷

3.6 The reverse also holds true: there is a broad consensus that the effects of Smarter Choices programmes are reinforced by 'hard' traffic restraint measures such as re-allocation of road space, road-user charging, parking controls⁶⁴⁸ Without this, there is a risk that local traffic reductions will be lost in the long term as a result of wider trends towards increased car use.

3.7 Research from the Sustainable Travel Towns concluded that with the right information and some encouragement people could nearly double their use of sustainable modes tomorrow, and in the longer-term targeted investment in infrastructure – such as 20mph zones and safe routes to school, together with more rational land use planning, could enable nine out of ten journeys to be made on foot, by bike or using public transport.

4. What are the latest developments in the evidence-base in relation to changing travel-mode choice and the implications of those developments for policy?

4.1 Research suggests that the potential to change travel behaviour is high. A recent government report on urban transport in England highlights research suggesting that people could replace 78% of their local car journeys under five miles with a journey by foot, bike or public transport⁶⁴⁹. A similar story is told by the data collected from the three Sustainable Travel Demonstration Towns in England.

4.2 Darlington, Peterborough and Worcester are all medium-sized, relatively free-standing towns, located in the north and middle of England. Following a competition, they were designated 'Sustainable Travel Towns', implementing a programme of measures from 2004 to 2009, intended to reduce car use. Taken together they spent £15 million, of which £10 million was special Government funding provided by the Department for Transport. An implied benefit-cost ratio of the achieved outcome in the three towns, allowing only for congestion effects, is in the order of 4.5:1.

4.3 The experience of the English Sustainable Travel Towns provides a wealth of evidence to support the development of similar schemes in Wales and Scotland and provides some

⁶⁴⁷ Socialdata/Sustrans, TravelSmart Bristol (Bishopsworth and Hartcliffe) A report on Bristol's first VIVALDI Individualised Travel Marketing project, September 2005.

⁶⁴⁸ Department for Transport, Smarter Choices – Changing the Way We Travel, October 2004.

⁶⁴⁹ Cabinet Office, 2009. The Future of Urban Transport

insight into the potential to change travel behaviour. This stems in particular from the baseline research conducted by Sustrans and Socialdata across the three towns in 2004, and the findings of follow-up evaluation research carried out in 2008 after the delivery of their smarter choices programmes.

4.4 More than 4,000 people in each of the three towns participated in baseline surveys, and a further 4,000 in each town participated in the final surveys. These surveys used a proven household and individual travel diary approach to obtain statistically robust data on personal travel behaviour⁶⁵⁰. Smaller sub-samples in each town also took part in face-to-face interviews to explore the reasons for their day-to-day travel choices, together with their attitudes towards, and perceptions of local transport.

4.5 The baseline research showed the importance of short, local trips to people's everyday travel behaviour. Some two-thirds or more of people's day-to-day trips were no longer than five kilometres (just over three miles), and around 20% were no longer than one kilometre (0.6 mile). Furthermore, more than three-quarters of all trips were entirely local, i.e. went no further than the outskirts of the respective town or city.

4.6 For the first time in the UK, the research in the English STTs shed light on the significant potential for changing travel behaviour, in particular by addressing the subjective barriers that currently prevent people from making more trips on foot, by bike or by public transport. One of the most important overall findings was that on average nearly half of all car trips within the towns could be replaced using existing facilities by walking, cycling and/or public transport.

4.7 The in-depth research showed that people are swayed in their travel choice by severe misperceptions about the alternatives to the car (especially relating to relative travel times) and a lack of information. For example, on average across the three towns:

- people over-estimated travel time by public transport by around two thirds and for cars under-estimated travel time by one fifth; and
- in around half of all cases where a viable public transport alternative existed for a local journey made by car, people did not know about it.

4.8 Overall, the research showed that while 35% of all trips were already made by sustainable means, there was potential for a further 29% of trips to be shifted from car to walking, cycling or public transport without any infrastructure changes or restrictions on car use. This conclusion in particular gave the STTs confidence that through the coordinated use of 'soft' measures to provide information, motivate or otherwise influence people's daily travel choices, car use could be significantly reduced.

4.9 The research also pointed to further potential for change. Whilst there was significant scope for modal shift without infrastructure changes, improvements to the environment for walking and cycling, and in public transport provision could further increase use of sustainable transport. The surveys showed that for 27% of trips the car was the most practical choice as there was currently no adequate alternative.

4.10 Indeed the research into the reasons for people's travel choices found that only 9% of trips required the use of a car in order to overcome physical constraints e.g. commuting trips made by car only because the car was needed for a subsequent business

⁶⁵⁰ Socialdata/Sustrans, Travel Behaviour Research, Baseline Survey 2004, Sustainable Travel Demonstration Towns

trip; or where there was need to carry heavy luggage. These are trips that would be very difficult to change through either 'soft' measures or transport system improvements, but constitute a very small proportion of all trips.

Case Study: Darlington

As both a Sustainable Travel Town and a Cycling Demonstration Town, Darlington was supported by the Department of Transport to develop a programme of sustainable and active travel measures to encourage a shift away from car use. Measures used included cycle promotion in schools, child cycle training, and increased cycle parking at schools and other key locations, coupled with infrastructure investment to create a city centre 'pedestrian heart' and seven radial cycle routes. This was complemented by a large-scale personal travel planning programmes and travel awareness campaigns, as well promotion of walking and cycling and travel planning at key destinations including schools and employment sites. Partners included the local authority, health trusts, business, Sustrans and Cycling England

Results show significant rises in walking and cycling in Darlington, with cycling increases of up to 113% and walking increases of up to 13%. A reduction in distance driven of 7.1% per capita, led to savings of 50.1kg/CO₂ per person per annum, based on an average sized car. The reduction in car driver journeys of less than 50km resulted in a total saving of 4,293 tonnes CO₂ in 2008. The greatest proportion of carbon savings arose from trips of over 5km.

Proportion of carbon saved in 2008 in each distance band (<50km only)

Less than 1km	0.0%
1.1km to 3km	11.1%
3.1km to 5km	22.7%
5.1km to 10km	31.8%
10.1km to 50km	34.3%

Across the three towns, most savings came from reductions in car driver trips for leisure, shopping and work-related business. Together, these accounted for 88% of the reductions in CO₂. In particular, the journey category responsible for the largest savings was leisure trips in the 10-50km distance band. There were significant savings from the reduction in work trips in the shorter distance bands, though these were eroded by an increase in longer distance journeys to work (between 10 and 50km).]

Sources:

- DfT (March 2010) The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Full Report Part IV. Chapter 18. Effect on carbon emissions
- DfT/DH (February 2010) Active Travel Strategy

5. What are the most appropriate type and level of interventions to change travel-mode choice?

5.1 Modal shift requires tailored and personalised intervention if it is to be as effective as possible. It is unlikely for example that putting flyers all over a town will sufficiently challenge the habits of residents that they reconsider their level of car use. Additionally, the 'willing' are far more likely to be influenced by interventions of any kind. To achieve the greatest modal shift it is therefore recommended that measures are individualised, targeted and bespoke designed to fit their audience.

5.2 However it is apparent that in order to optimise the benefits of these individual measures, they need to be considered – and implemented – as part of an integrated package. At a basic level, for example, it is evident that the behaviour change achieved by a new piece of cycling infrastructure will be greatly enhanced if it is promoted to those who would benefit from using it. By the same token, the impacts of ‘softer’ marketing schemes are more likely to be sustained if they are ‘locked in’ with harder measures to improve the environment for sustainable travel, e.g. the reallocation of road space from private motorised transport to walking and cycling.

5.3 Furthermore, in tackling rising CO₂ emissions, evidence from the most successful behaviour change programmes shows that most have relied on genuine cross-sector collaboration in order to harness supportive contributions from other sectors and professional disciplines. Given its wide-ranging importance to all sectors of the economy and society, a successful transport strategy requires engagement with public sector decision-makers working in health, planning, education, play and regeneration, as well as business, the media and the wider community.

5.4 The most appropriate and effective way to change travel behaviour can be summarised as follows:

- Undertake baseline travel behaviour (and other) research to provide the basis for monitoring evaluation and stakeholder engagement, and to assist with programme planning.
- Address the physical environment, with improvements to infrastructure for walking, cycling and public transport, including ‘informational’ elements such as signage.
- Implement a co-ordinated behaviour change programme consisting of proven smarter choices measures targeting specific audiences.
- Bring forward further “hard” demand management measures to lock in the benefits of the behaviour change programme.

6. Who are the most effective agents for the delivery of behaviour interventions to change travel-mode choice?

6.1 There are a wide range of organisations involved in the delivery of interventions to change travel-mode choice.

6.2 Sustrans is involved in delivering a wide range of projects and initiatives that seek to change travel-mode choice. One of our most successful projects TravelSmart uses a as a part of Individualised Travel Marketing approach to give people the tailor-made information and support they need to walk, cycle and use public transport more often. Since our early pilots, TravelSmart has succeeded in reducing car use wherever it has operated by 10%-14%. It is one of the most successful programmes anywhere in the world in terms of enabling people to leave their car behind and to get about by foot, bike, bus and train.

7. Are current policy interventions addressing both psychological and environmental barriers to change?

Detailed elsewhere in the response.

8. Are policy interventions appropriately designed and evaluated?

Detailed elsewhere in the response.

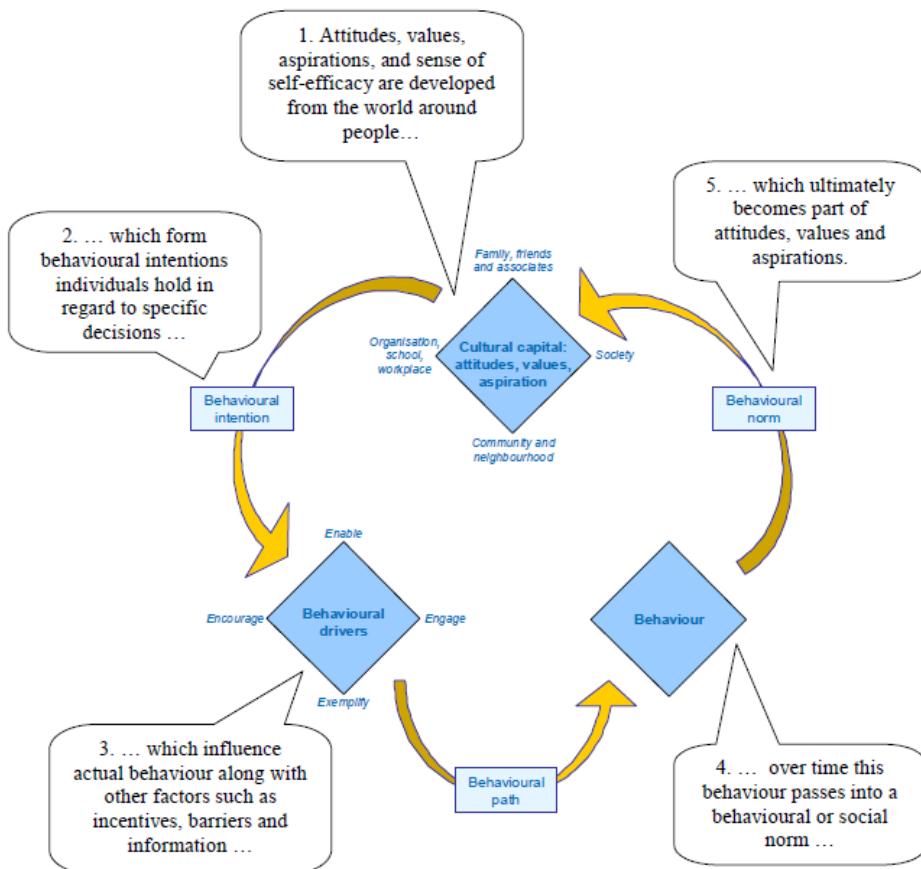
9. What lessons have been learnt and applied as a result of the evaluation of policy?

- 9.1 The Sustainable Travel Towns have contributed towards a far wider understanding of the mechanics of behavioural change relating to travel choices and most specifically in reducing car use. A number of lessons have been learnt and conclusions drawn. It is now time that such measures cease to be 'demonstrative' and enter into mainstream policy and strategy.
- 9.2 It is evident that sustained investment in modal shift is instrumental to effective and continued behavioural change. Short-term funding pots which cease to exist after a certain point have a limited impact in terms of their longer-term impact on behaviour.

10. What lessons can be learnt from interventions employed in other countries?

- 10.1 Although there is a growing understanding of behavioural change, sustained behavioural change implies a cultural or social change which is far more difficult to achieve. In the Behavioural Change Knowledge Review from Government Social Research, David Knott's argument is that social context prevents individuals from changing their behaviour, so interventions must also address social and cultural norms to enable 'catalysis' of behaviour to occur.⁶⁵¹ He uses the model below to illustrate this point.

⁶⁵¹ http://www.civilservice.gov.uk/Assets/Behaviour_change_reference_report_tcm6-9697.pdf



- 10.2 In a number of other countries, modal shift has seen a cultural change which has locked-in a reduction in car use in towns and cities.
 - 10.3 It is regularly asked why there is so much cycling in the Netherlands. A difficult question – although the answer clearly lies in a combination of factors. Fiets Beraad,⁶⁵² the Dutch centre for cycling policy, makes the following summary.
 - 10.4 Morphological and spatial factors are obviously involved: cycling is easier on a flat polder than in a hilly area. And in the compact Dutch cities, many trips can more easily be covered by bicycle because of the short distance. Historical and cultural factors also play a major role. Cycling is so embedded in the Netherlands that virtually every child gets their first bicycle around the fourth birthday – and learns to use it.
 - 10.5 The arguments pro-cycling are overwhelming: it is sustainable, healthy, has zero emissions of everything, is silent and clean, cheap both in purchase as in providing infrastructure, is space and traffic efficient, enhances urban traffic circulation and provides more liveability to residential areas.
 - 10.6 From this perspective, the harsh anti-cycle policy of some foreign towns (see section 1.2) even more regrettable. Despite all this evidence, none of these are the reason for the Dutch to cycle. They just enjoy it, find it relaxing
 - 10.7 Obviously, to make all the advantages of cycling for society work, it is essential to have people cycle. And to have people cycle, therefore, it should be enjoyable, relaxing and safe. This can

⁶⁵² <http://www.fietsberaad.nl/index.cfm?lang=en§ion=Fietsberaad>

be achieved by what is usually called good ‘bicycle policy’. Policy works, bicycle policy works in the Netherlands – that much is abundantly clear the relationship between bicycle use and improving traffic safety is inherently related to policy.

- 10.8 *The results of the benchmarking ‘Fietsbalans’ project conducted by the Fietsersbond (cycling association) reveal a clear link for example between bicycle use in a municipality and the quality of the cycling infrastructure. The quality of the infrastructure has been recorded objectively with measuring equipment and is expressed in the so called bicycle Balance Score.*
- 10.9 *In Dutch municipalities with a high bicycle Balance Score, bicycle use is on average 14% higher than in municipalities with a low bicycle Balance Score.*
- 10.10 *In 2005 a study was completed, giving a very well-founded answer to the question of how to explain municipal differences in bicycle use, and what role (elements of) cycling policy and (wider) traffic policy play in this respect. Research involved 44 factors in its analysis.*
- 10.11 *Very diverse by nature, these factors were selected on the basis of existing knowledge about possible factors influencing bicycle use. The resulting explanation model contains eleven factors – a composition of traffic, spatial-economic, demographic, cultural and geographical factors. About one-third of the explanatory power of this model lays in the four factors denoting something like ‘integral traffic policy’. Almost 73% of the variance in bicycle use among municipalities is explained by these factors. This is considerable, and we can therefore say that this model has great explanatory power.*

11. Conclusion

- 11.1 *The experience of Sustrans and its many partners over the past three decades demonstrates that a range of practical interventions exist with a proven potential to quickly and cost-effectively to increase levels of sustainable travel. Our work has shown that it is possible to overcome many of the barriers to reducing car use in towns and cities, for example by improving the environment for walking and cycling and promoting these options to specific audiences such as school children, older people, employees and families at home.*
- 11.2 *However it is apparent that in order to optimise the benefits of these individual measures, they need to be considered – and implemented – as part of an integrated package. At a basic level, for example, it is evident that the behaviour change achieved by a new piece of cycling infrastructure will be greatly enhanced if it is promoted to those who would benefit from using it. By the same token, the impacts of ‘softer’ marketing schemes are more likely to be sustained if they are ‘locked in’ with harder measures to improve the environment for sustainable travel, e.g. the reallocation of road space from private motorised transport to walking and cycling.*
- 11.3 *Furthermore, in reducing car use in towns and cities, evidence from the most successful behaviour change programmes shows that most have relied on genuine cross-sector collaboration in order to harness supportive contributions from other sectors and professional disciplines. Given its wide-ranging importance to all sectors of the economy and society, a successful transport strategy requires engagement with public sector decision-makers working in health, planning, education, play and regeneration, as well as business, the media and the wider community.*

11.4 As a result our approach to changing travel behaviour can be summarised as follows:

- Undertake baseline travel behaviour (and other) research to provide the basis for monitoring evaluation and stakeholder engagement, and to assist with programme planning.
- Address the physical environment, with improvements to infrastructure for walking, cycling and public transport, including ‘informational’ elements such as signage.
- Implement a co-ordinated behaviour change programme consisting of proven smarter choices measures targeting specific audiences.
- Bring forward further “hard” demand management measures to lock in the benefits of the behaviour change programme.

January 2011

Written evidence from the RAC Foundation (BC 121)

I. Introduction

1.1 The sub-committee is inquiring into interventions that can reduce car use in urban areas and has invited responses to ten questions to assist it in that task. Most of these questions merit substantial, and sometimes complex, responses to give full and convincing answers. For example a thorough assessment of the impacts of public transport fares and service level effects on public transport and car use required a study resulting in a report over two hundred pages in length⁶⁵³. However this note sets down brief comments identifying the key points.

1.2 Reducing car use is not the only means of controlling congestion and emissions in urban Britain and the potential of other measures should not be overlooked. Road improvements and better traffic management can reduce congestion⁶⁵⁴ and accidents; and technological change can reduce the environmental impacts of traffic. Also about a fifth of motorised traffic comprises lorries and vans.

1.3 In Great Britain about 85 percent of all mechanised passenger kilometres (i.e. excluding walking and cycling) are by car⁶⁵⁵. Bus accounts for 5 percent and rail 8 percent. These modal shares vary depending on the degree of urbanisation as is illustrated in Figure 3 below. But even in Greater London, which has the densest public transport system in the country, 60 percent of all mechanised personal trips are by car. One implication is that a given number of individuals switching from car to one of the public transport modes will represent a relatively small proportionate fall in the car trips and a higher proportionate increase in the public transport trips. At the national level, a doubling of public transport trips from 12 to 24 percent of the market, by transfer from car (if that could be achieved somehow) would only achieve a reduction of the share of car from 85 percent to 73 percent.

1.4 Figure 1 illustrates how improved technology has reduced noxious emissions from car traffic over the last ten years.

1.5 To a lesser extent CO₂ emissions are reducing, with fuel consumption rates per vehicle kilometre of petrol engined cars having fallen 20% in the last decade and diesel by 14%⁶⁵⁶. With the shift to more diesel cars⁶⁵⁷ this means that overall average fuel economy (and consequently CO₂ emissions) will have improved by 19% in ten years. Other changes in car technology are afoot⁶⁵⁸ but whilst, over time, these offer significant potential for reducing emissions their effects on traffic congestion are likely to be limited: acceptable low emission vehicles will almost certainly have to have similar performance characteristics to those of conventional internal combustion engined vehicles. So they will cause a similar amount of congestion.

Figure 1: Change in Noxious Pollutants from Cars 1998 - 2008

⁶⁵³ The demand for public transport: a practical guide. Full references are given at the end of this document.

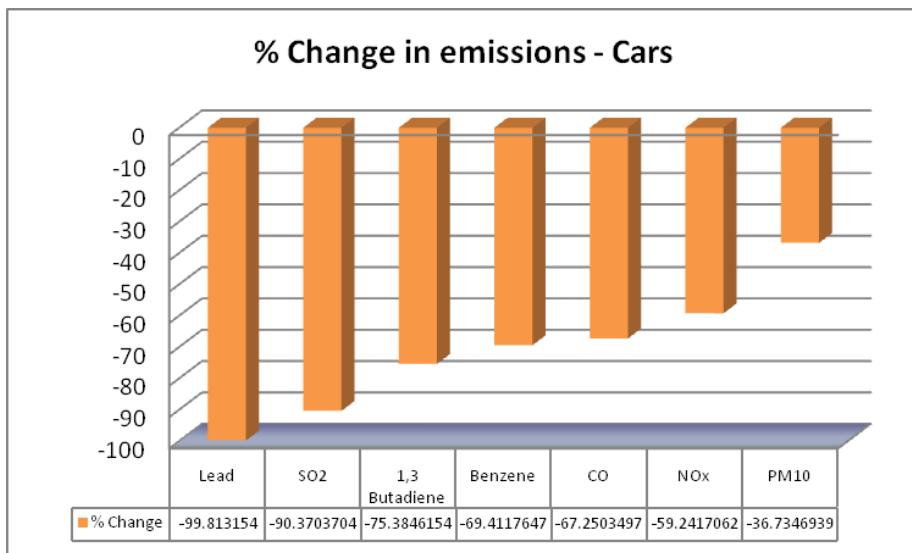
⁶⁵⁴ Road works are estimated to cause 38% of London's congestion: Travel in London Report 3, table 4.4.

⁶⁵⁵ Transport Statistic Great Britain 2010, table TSGB0101.

⁶⁵⁶ TSGB 2010, table ENV0103.

⁶⁵⁷ Vehicle Licensing Statistics 2009, table I3. Diesel cars up from 12% in 1999 to 27% in 2009.

⁶⁵⁸ Market Delivery of Ultra-Low Carbon Vehicles in the UK: An evidence review for the RAC Foundation.



Source: TSGB 2010, table 3.9

2. The most influential drivers of behaviour affecting an individual's choice of mode of travel

2.1 Individuals choice of travel mode is dependent on:

- their personal circumstance (e.g. physical condition, income level, innate preference, time available);
- the type of journey they are making (alone/grouped, baggage, length/duration);
- the choices open to them (mode{including car availability}, price, speed, reliability, frequency, security) and
- the information they have about these choices.

2.2 It would be too simplistic to treat all journeys as being equally susceptible to influences for change, as a car owning family with luggage going on a leisure journey is much less likely to be attracted to public transport than an individual travelling alone to and from work. In a similar vein it is unreasonable to expect someone under time pressure, heavily encumbered or with mobility problems to walk for more than a few hundred metres

2.3 It is convenient to classify measures to change travel behaviour as 'restraining' or 'promoting' and as long ago as in 1972 Thomson identified 35 methods of traffic limitation. Means of traffic restraint include, traffic regulations (e.g. access bans), parking regulations (e.g. yellow lines) and pricing (e.g. parking meters) and direct charging for road use (e.g. the Central London Congestion Charge). Promoting alternatives to car use include service improvements and fares promotions on buses and trains, traffic priorities for buses and cycles, park & ride schemes, cycle hire schemes and a variety of travel planning and management measures. Recently the use of high quality electronic communications has allowed some activities formerly requiring physical movement to be replaced but this can also generate some new journeys (e.g. home deliveries) and make business travel more attractive as being out of the office no longer means being out of touch.

2.4 Policies that provide a direct disincentive to car use are probably the most powerful, but may need to be accompanied by improvements to alternative services to attract sufficient public support. Parking controls can be effective in restricting car access to dense activity areas like town centres but need to cover all forms of parking (public and private, on

street and off street) to get maximum effect. Outside such core areas most parking is freely available⁶⁵⁹ so, as things currently stand, parking controls have only limited potential in these areas. The limitations of 'destination' parking restraint have been addressed to some extent by the provision of powers for Workplace Parking Levies (WPLs) in 2000⁶⁶⁰ but, as yet, no scheme of this kind has been introduced although one is planned for Nottingham, which is scheduled to come into effect in April 2012. The effects of this proposal cannot be known at present but it has been estimated that it daily reduction of 460 to 1230 vehicles inbound during the morning peak period⁶⁶¹.

2.5 A study of WPLs in London however concluded that this would provide less restraint and raise less revenue than congestion charging⁶⁶². Residential parking limitation is also a consideration referred to in the response to question 7.

2.6 Congestion charging in London, despite the high cost of operating the scheme, has generally been regarded as successful.. Traffic entering the charging area was 9% lower in 2007 than prior to its introduction in 2002 and car traffic about 20% lower (about 60 thousand cars a day)⁶⁶³. The extension westward, which was introduced in February 2007, has recently been withdrawn.

2.7 The only other congestion charging scheme in operation in Britain is on a single road in Durham where a £2 charge is levied and traffic has been reduced by about 85%⁶⁶⁴. However there is growing international interest in the use of distance based charging for road for both heavy lorries and more generally⁶⁶⁵.

2.8 Car ownership and use⁶⁶⁶ can also be moderated by vehicle ownership taxes and fuel duties. Indeed this was the aim of the fuel duty escalator introduced in 1993 at 3% each year above inflation - eventually increased to 6% each year above inflation until it was abandoned in 2000. However above inflation increases have returned recently. Whilst this has undoubtedly had an effect on car use this has not been strongly focussed on those journeys that cause the most congestion and pollution. Fuel duty has increased from 47.1p/litre in December 2006 to 58.95p/litre in January 2011 (25%) and, with two out of every three pounds paid at the pumps going in taxes, UK road transport fuels are the most highly taxed in Europe⁶⁶⁷.

2.9 In some countries (e.g. the Bermuda, Hong Kong and Singapore) there are limits on car ownership and Beijing has recently introduced a ration for only 240 thousand new cars to be registered in 2011⁶⁶⁸ (one third the 2010 total). However there must be reservations about such a policy in the UK as, if it restricted the new acquisition of cars, it could bear most heavily on low income families where car ownership growth is greatest⁶⁶⁹. It would also slow down the introduction of the more fuel-efficient modern vehicles in replacement of the oldest and least efficient. An alternative that has been tried in some counties (e.g. Athens) by limiting car use to alternative days according to the nature (odd or even) of the

⁶⁵⁹ Parking is Your Business: Setting the Scene.

⁶⁶⁰ Transport Act 2000, secs 178 - 190.

⁶⁶¹ Workplace Parking Levy: Draft Business Case Appendices.

⁶⁶² Road Charging Options for London: A Technical Assessment, sec. 5.10.

⁶⁶³ Congestion Charging: Impacts Monitoring Sixth Annual Report.

⁶⁶⁴ Sadler Street Road User Charging Scheme Monitoring Report.

⁶⁶⁵ International Scan: Reducing Congestion and Funding Transportation Using Road Pricing.

⁶⁶⁶ The effect of fuel prices on motorists, figure5.

⁶⁶⁷ Weekly Fuel Prices, January 2011.

⁶⁶⁸ Using a lottery system - BBC Asia Pacific News 23rd Dec 2010.

⁶⁶⁹ The Car in British Society, figure 3.8.

vehicles index number. This has been shown to be effective although it has been partly circumvented by car swooping and multi car ownership.

2.10 Banning cars entering busy areas can also have an effect on the appeal of travel by car. However the relatively small size of most restricted areas, and the fact that the days of most visitors being able to drive right up to their town centre destination are long gone, means that this will usually make only a small difference to central area accessibility by car.

2.11 The features of other forms of transport that affect their appeal include, speed, frequency, reliability, price, security, comfort and accessibility. The relative importance of these varies with both the user and the travel context. Thus a pensioner with a concessionary pass may be unconcerned about the fare he/she is forgiven, but be concerned about accessibility and comfort. On the other hand a well paid commuter may be less bothered about fare levels than frequency and reliability. In a small town speed may not be perceived as a major issue as distances travelled as small. At the other extreme in Greater London, with its long commute distances, speed can be an important consideration.

2.12 London is different from other parts of the country in a number of important ways for travel. Its rich rail and Underground networks, extensive bus service, congested roads, concentration of activities in Central London and high residential densities in inner London make public transport, walking and cycling much better aligned to getting people around. Although some other large cities exhibit these characteristics to some extent, none are like London and smaller cities and towns even less so. Care must be taken therefore in transferring experience from London to other urban areas and vice versa.

2.13 Promoting alternatives to travel by car driving can reduce car mileage. These include car sharing, increasing use of buses and trains, more walking and cycling. Whilst restrictions in car driving may lead to direct increases in alternative modes the increased use of alternative modes does not come directly from reduced car traffic. For example more bus travel from more attractive bus services will be a mix of greater use by 'existing' passengers and travel by former pedestrians, cyclists and car passengers as well as switching by car drivers. Table I shows how the use of buses varies with household car ownership and driving status.

2.14 People in households with cars use buses much (70%) less than people in non car owning households and those that can drive even more so (85%). These differences mean that there is more scope for improvements to bus services to attract people from car owning households. Although fares elasticities are below unity⁶⁷⁰ for both types of traveller they are higher for car owners than non car owners. On the basis that main drivers in car owning households make 124kms/year of bus travel if their fares were reduced by a third then using an elasticity of -0.75⁶⁷¹ then their bus travel would increase by 28kms/year. If this were all a substitute for car driving their car use would fall by about ½%. If we do the same calculation for other drivers the figure comes out at 66kms/year and 2½%. Overall then we could expect a fares change of this magnitude to reduce car traffic by order of one percent.

Table I: Bus Travel Rates by Car Ownership & Driving Status

Type of Person	Bus Trips/year	Bus Kms/year
Non Car Owner (NCO)	194	872

⁶⁷⁰ i.e. a 1% reduction in fares leads to an increase in travel of less than 1%.

⁶⁷¹ The demand for public transport: a practical guide, para. 6.9.1.

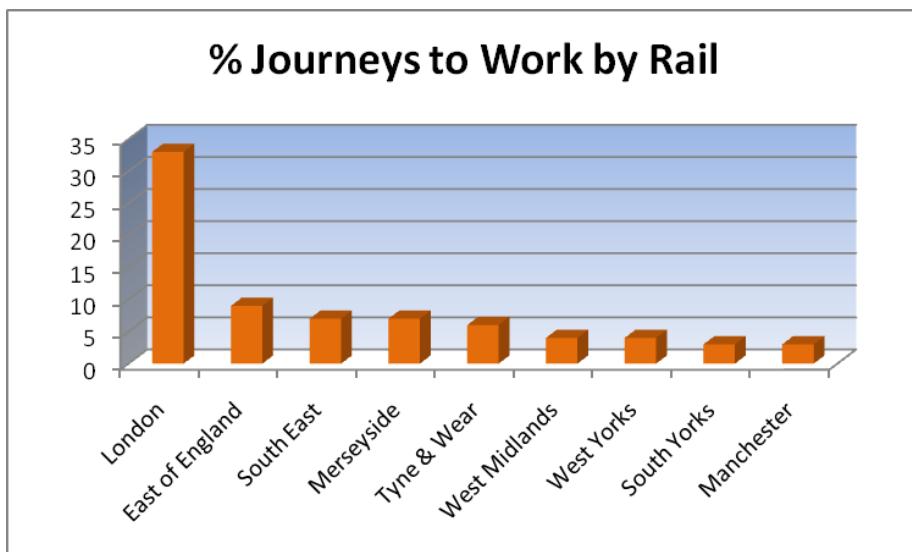
CO Main Driver	15	124
CO Other Driver	46	293
CO Non Driver	73	424
CO All	39	246

Source, NTS 2009, table NTS0702

2.15 This is much less marked for rail as the frequency of rail does not vary that much between car or driving licence ownership. Outside London and a few other large cities urban rail travel is limited. Over half of all national rail journeys are to or from London and its surrounding counties as are all Underground journeys. This is because the rail network is heavily focussed on London. This is illustrated by the use of rail to get to work in different parts of the country as shown in figure 2. In Greater Manchester for example the rail network⁶⁷² has a density of 0.133⁶⁷³ rail stations per square mile whilst Greater London has 1.17⁶⁷⁴, along with about 500 stations outside on the London commuter network⁶⁷⁵.

2.16 Whilst there is some scope for increasing off peak rail use in most of the areas shown above, peak capacity is under pressure as, since 1998/99, national rail use has increased by 26% compared with only a 13% increase in train miles⁶⁷⁶. The public reaction to the fares increases in January 2010⁶⁷⁷ contained claims that many commuters used rail for their journeys to work as a matter of necessity rather than choice.

Figure 2: Use of Rail for the Journey to Work 2009



Source: Regional Tables for Personal Travel, table RAI0001.

2.17 The mix of attributes of service quality (speed, frequency, network density, etc.) make estimating the impacts of service changes more difficult. For all types of traveller, long run bus service elasticities have been estimated to be about +0.66⁶⁷⁸. Assuming again that car driver elasticities are higher than average, if we take the matching figure as for fares

⁶⁷² Including National Rail, Underground/Overground and Light Rail.

⁶⁷³ 170 stations in an area of 1,276 miles².

⁶⁷⁴ 700 stations in an area of 607 miles².

⁶⁷⁵ London Rail Study, table 7.1.

⁶⁷⁶ TSGB 2010, table 6.9.

⁶⁷⁷ See <http://www.bbc.co.uk/news/uk-12109851>.

⁶⁷⁸ The demand for public transport: a practical guide, table 7.5.

(+0.75⁶⁷⁹) then the scale of effect of a one third improvement in bus service levels would be similar to that for fares noted above. These effects reflect the national mix of travel modes. Where the proportion of public transport travel is higher and car travel lower the effects will be greater. The ratios of these modes for different area types are illustrated in figure 3 and in urban areas the effects will be somewhat larger. To repeat these calculations for different types of area is a relatively easy task.

2.18 The proportion of distance travelled by walking and cycling is small for both car owning and non-car owning households (about 3½%).

2.19 Over the last decade or so⁶⁸⁰ there has been growing interest in a range of less traditional measures to change travel behaviour sometimes referred to as 'soft factors' or 'smarter choices'. These comprise a wide range of measures including place based travel plans, promotion of walking and cycling, and better public transport information and marketing. In the three (sustainable travel) towns where these have been introduced between 2004 and 2008 it is estimated that car driver kilometres have been reduced by about 10%⁶⁸¹ and the programmes to achieve this were found to be cost effective.

2.20 However a recent investigation into the effects of concerns about climate change and travel behaviour⁶⁸² concluded that there are a wide variety of challenges to be addressed in order to enable and encourage more sustainable transport behaviour. These challenges varied for different groups of people and different types of locations and overall individuals tended to overstate their willingness to change their transport behaviour and would rather save energy at home. CO₂ emissions were found to be of very low importance in determining transport choices for specific journeys. More trials of this approach are needed to get a reliable feel for the effectiveness and durability of this approach to urban Britain generally.

2.21 In the ten largest English urban areas programmes to reduce congestion have been pursued since 2006/07 supported by a four year £60m Congestion Performance fund. Initial research was unable to establish any measurable impact⁶⁸³ and more recent work⁶⁸⁴ concluded '*There are not yet sufficient evaluations of specific congestion schemes to enable any firm assessment to be made of the effectiveness of congestion policy options. It is clear from this research however that no one single measure will be sufficient to achieve major reductions in urban congestion. An effective policy will depend upon a selection of measures, often packaged in the form of a primary measure supported by one or more complementary measures.*'

2.22 The authors of the report however postulated what measures might have significant impacts and how these could be productively combined. The results are summarised in table 2.

Table 2: Congestion Reduction Impacts from Individual Measures and Combinations.

Category of Measure	Overall	Added Value of Impact
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⁶⁷⁹ The sign changes as higher fares reduce demand whilst higher service levels increase it.

⁶⁸⁰ Started in the 1980s on the Continent, see: Evaluation of voluntary travel behavioural change: Experiences from three continents.

⁶⁸¹ The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Research Report, table 21.1.

⁶⁸² Climate Change and Transport Choices: Segmentation Study – Interim Report: Key Findings.

⁶⁸³ Evaluation of Congestion Performance Fund.

⁶⁸⁴ Evaluation of the Urban Congestion Programme: Final Report, para. 8.5.1.

Main Measure	Impact	SI	SR	SE	DC	DR	DB	DI	DL
Increase in road capacity (SI)	+	+	*	+	++	++	+	+	*
Reallocation of road capacity (SR)	+/-	+	-	+	++	++	+	++	*
More efficient use of road capacity (SE)	+	*	+	*	*	+	*	+	*
Charging (DC)	++	-	+	+	*	+	++	++	++
Regulation (DR)	+	-	+	+	*	*	++	++	++
Behavioural -(DB)	+	-	+	+	+	+	+	++	+
Inducement to other modes (DI)	+	-	+	*	++	+	++	++	++
Land use change (DL)	+	+	+	*	+/-	+/-	++	++	+

Source: *Evaluation of Congestion Performance Fund, table 5.2*

Key: ++ strong positive added value

+ positive added value

+/- mixed impacts - congestion reduction may be partly offset

- negative added value

-- strong negative added value

* small or minimal added value impacts - i.e. are largely independent

2.23 The increased use of telecommunications is also having an impact on travel patterns. The effects of these are unclear as they are varied, widely dispersed and associated with other changes in work, leisure and social habits. With the growth of household internet access from 9% in 1998⁶⁸⁵ to 73% today⁶⁸⁶ and most companies now using the internet, it is likely that the journey to work trip rate has fallen as the number of tele-workers has grown: currently 5% of people work at home - up from 3% a few years ago⁶⁸⁷. We know that internet shopping has grown rapidly of late and this has probably reduced shopping journey rates as these have fallen by 16% over the last ten years⁶⁸⁸. The effect on road traffic level is however less clear as, during this period van traffic has grown by 29%⁶⁸⁹. The government's plans for Britain to have the best superfast broadband network in Europe by 2015⁶⁹⁰ will help these trends to continue but in the short run the scope for public interventions to accelerate these trends is probably limited.

Figure 3: Distance Travelled by Mode and Area Type 2002/03

⁶⁸⁵ Family Expenditure Survey 1998.

⁶⁸⁶ Internet Access 2010: Households and Individuals.

⁶⁸⁷ National Travel Survey 2009, table nts0804.

⁶⁸⁸ National Travel Survey 2009, table nts0403.

⁶⁸⁹ Transport Statistics Great Britain 2010, table TRA9901.

⁶⁹⁰ Britain's Superfast Broadband Future, Exec Summary para. 3.



Source: *Focus on Personal Travel 2005 Edition*, chart 6.10.

2.24 Land use densities and patterns have a strong effect on travel. Figure 3 shows how the volumes and means of travel vary between different types of areas. The general picture is that the larger the urban area the less the amount of personal travel (mainly as a result of shorter rather than fewer journeys) and the greater the proportion using bus and rail (the rail travel includes medium and longer journeys outside the immediate area). However the scope for moving people and jobs between different types of area is very limited in the short run and would not necessarily ease congestion as, although more people in large settlements would mean less car travel, traffic density, and hence congestion, in these area is higher and environmental impacts could also be worse in some respects - as higher densities can mean increased proximity between people and traffic.

2.25 Whilst more local changes to land use patterns can be crafted in shorter timescales what little evidence there is of their effects suggest that these are weak and even these are difficult to achieve quickly. Forecasts from the DfT National Transport Model (incorporating land-use, demographic and economic changes) show that over the next 20 years medium length car trips are forecast to grow faster than short distance trips, but not as fast as long distance trips⁶⁹¹ so the trend appears likely to increase car travel rather than the reverse.

3. The role of infrastructure in encouraging and facilitating changes in travel-mode choice

3.1 The principal short run effects of infrastructure on travel mode choice are the changes that it brings to the cost, accessibility and capacity of travel in the area it serves. These are discussed in the preceding section. However new infrastructure can have effects beyond these. A new high capacity facility such as a new railway or motorway can produce a major increase in capacity in the corridor served. In the short run better (more frequent and more reliable) service and reduced crowding can make the modes benefitting from the new infrastructure more attractive. In the longer run further and more intensive development or redevelopment may well be stimulated in the zones well served by the new infrastructure which could lead to a wider orientation to the modes involved.

⁶⁹¹ Medium-length Trip Patterns: Stage 1 - report & discussion paper.

3.2 A classic example is the successive improvements of rail facilities to the London Docklands area which has enabled large scale development such that in 2005 75 thousand workers entered the area during the morning peak compared with only 15 thousand in 1990 and of these almost three quarters come by rail⁶⁹². As well as direct improvements along the route of a new line or in the vicinity of a new station or interchange, relief may be provided to other parts of the transport network so creating indirect benefits from reduced congestion and crowding. This illustrates an important aspect of infrastructure investment. The 'right' kind of infrastructure can give developers, employers, public agencies and private individuals the confidence to invest in and move to the area it benefits. Thus a new railway is more likely to inspire development or redevelopment than improved bus services on existing streets.

3.3 New and improved transport infrastructure can also provide significantly safer travel and although this is not a major factor in mode choice for most people, it can make a difference for some for whom safety and security is a material factor in their choice of how to travel.

4. The latest developments in the evidence-base in relation to changing travel-mode choice and the implications of those developments for policy

4.1 An extensive and well researched evidence base on factors affecting travel choice has been developed over several decades in the UK. To give an example the 2004 report *The demand for public transport: a practical guide* was an update of a British led international study that reported in 1980⁶⁹³ and it is possible to delve further back into the history of transport studies to find earlier studies of how people choose between alternative travel options⁶⁹⁴.

4.2 It is important to ensure that research of this kind is brought up to date from time to time to reflect changing tastes, contexts, lifestyles and system characteristics (e.g. air conditioning and in vehicle communication aids may change the appeal of certain types of rail travel or in-vehicle satellite navigation encouraging timid drivers to embark on journeys that would otherwise find daunting). However this will usually lead to an evolution of our understanding of people's attitudes to travel, options rather than a revolution.

4.3 Over recent years there have been a number of changes that this traditional research evidence has been less useful in illuminating. One of these is the impacts of telecommunications on travel patterns and another is the impacts of the, sometimes complex, packages of measures that are being used to try and manage urban transport demand. Whilst we know that modern telecommunications affect some aspects of travel; exactly how is less clear. There is some evidence that tele-conferencing replaces some business travel but at the same time the internet has tended to extend business linkages and consequently lengthen supply chains and possibly business trips. Also high quality telecommunication 'on the move' has reduced the disutility of business travel as being out of the office no longer means being out of touch.

4.4 We know that internet shopping has grown substantially in recent years⁶⁹⁵ and in some instances replaces physical transactions (e.g. music, books and airline tickets). But this may have also replaced catalogue, postal and telephone shopping as well as reducing

⁶⁹² London Travel Report 2006, chart 1.4.3.

⁶⁹³ The Demand for Public Transport: Report of the International Collaborative Study of the Factors Affecting Public Transport Patronage.

⁶⁹⁴ For example London Transportation Study Phase III, Appendix 20A.

⁶⁹⁵ Retail Sales: Focus on internet: 25% Nov 2008 - 09 and 37% Nov 2009 - 10.

journeys to the shops. There is some evidence that for certain purchases shoppers still like to view before they buy⁶⁹⁶ and many retail visits are not 'solo' but part of a trip chain which will still be made in a modified form. Also this has been associated with an increase in home delivery traffic; and we now sometimes buy goods from places we were unaware existed before internet access. Whilst parts of the picture of the impacts of improving telecommunications are becoming clearer the picture is far from complete and more research is needed on this issue.

4.5 It has long been a problem for researchers that transport interventions are implemented in packages and the effects of the different components have to be unravelled. Of late the use of packages comprising a significant number of relatively limited impact measures has made this more difficult. In the 'smarter choices' example referred to in the first section of this submission⁶⁹⁷ overall impacts have been identified with some confidence as have the effects of individual elements, however interactions between these are poorly understood (e.g. what effect does a parent changing to car sharing have on the child's participation in a school travel plan?). This is not a criticism of the research in question but rather an identification of the complexities these types of policies present to transport researchers.

4.6 In the monitoring of the urban congestion programme (see para. 2.21) there were eight types of intervention employed to varying extents and intensity with differences within these categories as implemented in the ten locations. The main conclusion of this study was that to obtain any significant effect measure needed to be implemented in complementary packages but improvements to traffic forecasting were needed before reliable comparisons could be made between actual and expected outcomes. Again this points to the need for improvements in analytical techniques rather than throwing any substantial new light on impacts on traffic congestion - except perhaps that as implemented the effects cannot have been large as they would have been clearly detected.

4.7 It is fair to conclude therefore that recent evidence has not yet added a great deal of policy guidance to that which can be gleaned from the large body of research results produced over recent decades. Whilst, as indicated above, more research is needed, existing policy shortcomings usually arise from failure to make best use of existing evidence rather lack of careful inquiry into factors affecting travel choice.

5. The most appropriate type and level of interventions to change travel-mode choice

5.1 The answers to this question derive from the understanding of what influences people's choice as described in the answer to the first question. As the committee's interest is focussed on the reduction of car use in urban areas, it is this aspect of travel mode choice we refer to. The single most effective means of reducing car use to urban centres is probably parking controls or road user charging. Whilst parking controls (charging, and limits on supply and access times) can be very effective in respect of the journeys to which they relate they suffer from much parking being outside public control and they do not restrict through traffic (indeed they can have the reverse effect). If used too vigorously parking controls can also have a negative effect on the economic vitality of town and city centres. They can be very blunt instruments so need to be designed carefully.

⁶⁹⁶ Motoring towards 2050: Shopping and transport policy, page 12.

⁶⁹⁷The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Research Report.

5.2 Public transport improvements (both lower fares and better services) also encourage switching from cars, but they are not focussed on car drivers and have to apply to all users. This means, for example, that to lower prices for a few former car drivers all existing users have to be charged less. This means that policies of this kind are very costly (in terms of increased taxpayer support) ways of achieving modal switching, although they produce benefits for all public transport users. Public transport improvements can be focussed more on car users by the inclusion of park and ride. This is especially effective in respect of rail and there are about 900 commuter/shopper park and ride facilities in Britain of which about 700 are at rail stations and, of these about 550 are on the London and South east network⁶⁹⁸.

5.3 Reallocation of road space to purposes other than for general motor traffic is sometimes advocated as a means of reducing car use. Whilst this may improve conditions for other road users it will only reduce car use at the cost of increased congestion, unless there are associated measures to divert car drivers to other routes or modes of transport. Providing priority lanes for buses can improve service speeds and reliabilities but most of these improvements can be achieved without introducing traffic 'chokes' and, if 'chokes' are introduced the costs of congestion to non bus traffic will usually far outweigh the small benefit (beyond those from uncongesting bus priorities) to buses from the introduction of such 'chokes'.

5.4 A clear message from recent work is that there are strong technical and public acceptability reasons for combining a range of measures to get a policy that is technically sound, makes acceptable demands on the taxpayer and is feasible in practice. Some form of restraint on car use is needed: mainly by pricing rather than rationing by congestion, coupled with improvements to public transport and park and ride (where practicable) which increase the acceptability of the policy as a whole and reinforce the effects of traffic restraint.

6. The most effective agents for the delivery of behaviour interventions to change travel-mode choice

6.1 It is assumed that the term 'behavioural' does not limit the range of interventions covered by this question. There are several types of actors on the urban transport scene who have roles to play in reducing car use and congestion. These include employers, public and private service providers (e.g. retailers, hospitals and operators of leisure facilities), public transport operators, local transport and planning authorities and central government. As a general rule it is to be expected that each type of player will only intervene to reduce car use when it is in their direct interest or in pursuit of their duties. Thus public transport operators will improve services and reduce fares when this is in their commercial interest, employers will introduce parking restrictions or introduce workplace travel plans when they have outgrown existing parking provision or want to develop car parking space for other purposes, or accept this as a condition of getting planning consent. Whilst such initiatives are to be welcomed it would be rash to rely on them as a main driver of reductions in car use. Indeed there will be many occasions where employers or retailers want to increase parking provision to attract labour or customers.

- 6.2 Under section 108 of the Transport Act 2000 local transport authorities must—
- (a) develop policies for the promotion and encouragement of safe, integrated, efficient and economic transport facilities and services to, from and within their area, and
 - (b) carry out their functions so as to implement those policies.

⁶⁹⁸ Park and Ride.net, LRS table 7.1 and PTE websites.

6.3 Under section 16 of the 2004 Traffic Management Act local traffic authority to manage their road network with a view to achieving, so far as may be reasonably practicable having regard to their other obligations, policies and objectives, the following objectives—
(a) securing the expeditious movement of traffic on the authority's road network; and
(b) facilitating the expeditious movement of traffic on road networks for which another authority is the traffic authority.

6.4 So there is little doubt where the main responsibilities lie for transport policy at the urban level. In the former Metropolitan Counties Part 5 of the 2008 Local Transport Act created Integrated Transport Authorities with wider powers than the Passenger Transport Authorities which they superseded. It is local authorities therefore that have a clear duty to manage traffic congestion. Similarly is a clear duty on local authorities to prepare action plans to address air quality deficiencies in their area⁶⁹⁹.

6.5 Local authorities' abilities to act are however constrained by their dependence on funding by central government, the dependence on powers and regulations determined by central government and the need to formulate policies and plans in accordance with central government guidance. Where actions need to be initiated and coordinated at a regional or sub-regional level the demise of the Regional Development Agencies and Regional Funding Allocation arrangements is leaving a lacuna. Whilst central government policy and regulations are usually consistent with local authorities' plans to reduce congestion and promote modal change, the detailed requirements for planning and authorisation can be stifling and prolong timescales. The weakness of local government finance can mean that authorities too often are unable to provide high priority transport improvements and, from time to time, centrally determined policy can restrict local authorities' ability to implement their desired policies.

6.6 An example of this was the introduction of bus deregulation in 1986⁷⁰⁰. Whilst not the only consideration, the difference in bus use in London, where local bus services were not deregulated, and the other English Metropolitan areas where they were, despite the opposition of the Passenger Transport Authorities, indicates that this had a deleterious effect on bus use. In London bus journeys have increased by over 90% since 1986/87 whilst in the other English conurbations they have reduced by 40%. Outside the large cities bus travel has also reduced over this period by 18% in the English shires, 28% in Wales and 30% in Scotland⁷⁰¹.

6.7 Whilst a range of local actors have parts to play in changing travel behaviour in their area it is local authorities who should be best placed to take the lead by setting out relevant policies and plans, setting examples to private organisations, implementing appropriate schemes and helping coordinate the actions of other players. Central government should provide resources and guidance and ensure mechanisms for effective regional coordination where this is needed. Present arrangements fall short of this in a number of respects and need to be improved.

7. How current behaviour change interventions seek to change travel-mode choice and what use is made of available scientific evidence

⁶⁹⁹ Environment Act 2005, secs. 83& 84.

⁷⁰⁰ Transport Act 2005, Part I.

⁷⁰¹ Bus Statistics table BUS0103.

7.1 Reducing congestion and carbon emissions are key aims of most transport policies and the 2004 DfT guidance on⁷⁰² Local Transport Plans required local authorities to set indicators for:

- Accessibility
- Area wide road traffic mileage;
- **Cycling trips;**
- **Mode share of journeys to school;**
- Bus punctuality.
- **Changes in peak period traffic flows to urban centres, for authorities with urban centres populated by more than 100,000 people;**
- Congestion (vehicle delay) , for the plans covering large urban area and
- A target related to air quality.

7.2 With optional indicators for:

- **Mode share of journeys to work;**
- **Mode share of peak period journeys to urban centres;**
- **Proportion of workforce covered by travel plans;**
- Total parking provision;
- Proportion of short stay parking;
- Price differential between long and short stay parking;
- Percentage of planning permission exceeding parking standards.

7.3 Of the fifteen indicators, six (highlighted) deal with aspects of travel mode choice and there can be little doubt that increasing the use of public transport, cycling and walking as alternatives to car use are widely adopted as key elements of local transport policy in Britain today. Local policies often rely heavily on the promoting alternatives to car use rather than policies that restrict car use although there is evidence that well designed restraint measures can be very effective. Often local transport policies advocate better bus services yet, outside London, fares and service levels are determined mainly by private operators.

7.4 Often new transport initiatives cannot be based directly on strict scientific evidence but have to be analysed using mathematical models. Unfortunately these are not always fit for purpose. A review carried out for the Department for Transport in 2009⁷⁰³ concluded that 21 of the 30 models examined were either unsuitable or had unknown suitability for testing any of four policy interventions (highways, public transport, parking and road pricing). In the evaluation of the urban congestion programmes referred to in paragraph 2.21 one of the main issues identified was the systematic overestimation of traffic growth⁷⁰⁴.

7.5 Not all local authorities have the range of professional skills/resources to research and interpret what evidence there is. The DfT provides guidance in the form of Local Transport Notes and Traffic Advisory Leaflets⁷⁰⁵ and the Chartered Institute of Highways and Transportation also publishes well prepared technical guidance on a range of urban transport planning topics⁷⁰⁶. Consultants can help, but their services are not always affordable as local authority budgets tighten. Of course, there is extensive literature in a

⁷⁰² Full Guidance on Local Transport Plans: Second Edition

⁷⁰³Regional and Local Strategic Modelling and Appraisal Capability Final Report.

⁷⁰⁴ Evaluation of the Urban Congestion Programme: Final Report, para. 8.7.2.

⁷⁰⁵ See <http://www.dft.gov.uk/pgr/roads/tpm/ltnotes/> and <http://www.dft.gov.uk/pgr/roads/tpm/tal/>.

⁷⁰⁶ See <http://www.cihgt.org.uk/en/publications/index.cfm>.

wide range of professional and technical journals. However full advantage of these is not always taken.

7.6 Although not directly concerned with changing travel modes there appears to be bias in the government's transport policy against road transport and in favour of rail. The evidence base of benefit:cost ratios for the Eddington Study⁷⁰⁷ showed road schemes generally to have higher benefit:cost ratios than rail and in the recent announcement on strategic roads⁷⁰⁸ the Department states '*The 14 schemes confirmed today will make a major contribution to the development of Britain's economy. For every pound invested, there will be over six pounds worth of public benefits. On some schemes, this figure will be higher than ten. Overall, these schemes will create more than £13bn of public value when completed.*' Yet more is being invested in rail infrastructure than in roads⁷⁰⁹ despite roads carrying almost twelve times as much personal travel as rail⁷¹⁰. A recent reflection of this predisposition to rail is the interest in high speed rail with a benefit:cost ratio of HS2 lying between 2.4:I and 2.7:I⁷¹¹ - below half that of the highway scheme referred to above.

7.7 The picture is therefore a mixed one of a general acceptance to base policies on reliable evidence but occasional disregard for the available evidence(see the speed camera example below), some bias in favour of 'popular' policies and shortcomings in technical analysis.

8. Current policy interventions addressing both psychological and environmental barriers to change

8.1 There is a long history of behavioural research in Britain which embraces those motivational and psychological factors affecting travel behaviour. There is little to suggest that this is not given due weight when evidence is used in transport policy decision. Good public transport marketing has long employed psychological factors in promoting behavioural change and the introduction of period tickets, zonal fares and smartcards all reflect this. The recent emphasis on 'soft factors' indicates a growing interest in more subtle approach to engendering behavioural change. However not all transport authorities have adopted such policies and a focus on environmental leanings is not necessarily the most effective approach⁷¹².

8.2 Change is not only a matter of individual and group behaviour but also of organisational habits. Some local authorities are more progressive than others and relatively little attention has been paid to this aspect of performance of late. In the past there have been investigations of the roles played by individuals, different types of public agencies, pressure groups and other voluntary bodies in decision making processes but this do not appear to attract much attention currently. Nevertheless the interest by the government in increasing the number of directly elected mayors suggest that there may be scope for improving decision making in local government; although this particular initiative appears to be more a political judgement rather than a carefully researched policy.

8.3 Environmental barriers to change arise in two ways. Firstly there are the direct environmental consequences of changes in transport infrastructure and operations. These

⁷⁰⁷ The Eddington Transport Study.

⁷⁰⁸ Investment in Highways Transport Schemes para. 37.

⁷⁰⁹ £25.8bn compared with £23.1bn over the last five years (TSGB 2010, table TSGB0114].

⁷¹⁰ TSGB 2010, table I.1.

⁷¹¹ High Speed Rail London to the West Midlands and Beyond, figure 4.3a.

⁷¹² Climate Change and Transport Choices: Segmentation Study – Interim Report: Key Findings.

receive considerable attention and are often the subject of public objections to new policies. These effects are required to be included in the assessment of transport policies and projects⁷¹³. There is little chance of such effects going unnoticed and generally policy makers and planners are well aware of them.

8.4 The form of the built environment has a powerful influence on travel demand patterns and the potential for the different means of transport in providing an acceptable service. Looking again at figure 3 it is clear that rail has much more potential in London than elsewhere, both because of the density and connectivity of the rail system and because of the density of homes and workplaces. In smaller towns and rural areas the near absence of rail stations means that it can be used for only a proportion of medium and longer distance journeys. In the same vein, even with the denser bus routes, walking and waiting times mean that going on foot or cycle can be quicker for short journeys and for medium and longer journeys cars will usually take less time.

8.5 There is relatively little that can be done to change this except at very high cost. The increase in residential densities of new development in England from 25 dwellings/hectare to 43 between 1999 and 2009 and the increase in development on previously developed land from 28% to 49%⁷¹⁴ is helping to retain accessibility. However with over 22m dwellings⁷¹⁵ and less than 120 thousand new homes completed in 2009/10⁷¹⁶ (about ½% of the stock) the impacts of this policy on transport demand will take many years. Moreover this has been associated with a reduction in family homes (three or more bedrooms) from two thirds of the total to a half since 1999 - which may not be sustainable in future.

8.6 This densification policy was associated with guidance to reduce residential parking provision to help curb car use⁷¹⁷. A tour round many inter-war housing estates or council estates built in the 1950s or 1960s, with their limited off street parking provision, shows just how powerful the desire for people to have a car is; and the unwelcome consequences of not providing decent residential parking accommodation for them. This is confirmed by the small minority who would consider selling their cars if they had no access to residential parking in their area⁷¹⁸. However this policy has recently been scrapped as part of the 'end of the war on motorists'⁷¹⁹ and PPG13 (government planning policy guidance) has been changed accordingly. There have been similar policies to concentrate retail and commercial developments in existing town centres and urban areas for some years, initially through PPG6, PPS6 and more recently PPS4⁷²⁰.

9. The design and evaluation of policy interventions

9.1 The extent to which transport policy initiatives are well designed and evaluated varies considerably in Britain. Good design requires creative thinking, sound professional and political judgements and thorough analysis based on whatever relevant evidence is available. At one extreme great care has gone into the design and assessment of major infrastructure projects. Indeed the extent of scrutiny and review of these types of scheme is an important contributor to the protracted timescale for their implementation. However

⁷¹³ See , Design Manual for Roads and Bridges, Vol. 11 Environmental Assessment.

⁷¹⁴ Housing and Planning Statistics 2010, table 11.3.

⁷¹⁵ Housing and Planning Statistics 2010, table 1.1.

⁷¹⁶ Housing and Planning Statistics 2010, table 2.1.

⁷¹⁷ Planning Policy Guidance 13: Transport & Planning Policy Statement 3: Housing (PPS3).

⁷¹⁸ 6%: Motoring towards 2050: Parking in transport policy, table 1.2.

⁷¹⁹ Pickles and Hammond to end the war on motorists.

⁷²⁰ Planning for Sustainable Economic Growth, Planning Policy Statement 4.

there is evidence that the way some major projects are planned leads to underestimation of costs⁷²¹ and overestimation of their benefits⁷²². This has resulted in the introduction of corrections for 'optimism bias'⁷²³ which makes substantial adjustments to allow for these.

9.2 At the other extreme there are examples of initiatives with little attempt to assess their likely impacts. A recent example of this has been the moves to remove speed cameras. Research for the RAC Foundation⁷²⁴, looking carefully at the available evidence, has shown that if speed cameras were to be decommissioned across Great Britain then about 800 more people per year could be killed or seriously injured.

10. Lessons that have been learnt and applied as a result of policy evaluation

10.1 It is almost impossible to catalogue the lessons that have been learned from an assessment of past policy initiatives. However it is not too unfair to claim that transport planners have been readier to record their successes than their failures. As well as experience being fed into good practice guidance, there is extensive technical literature on transport policies and its impacts. With the growth of information on the internet this has become widely accessible and there are some websites that are specifically dedicated to providing information on the impacts of urban transport initiatives⁷²⁵.

10.2 Where there have been important new initiatives central Government often undertakes reviews such as those referred to above on the impacts of the 'Smarter Travel' and the Urban Congestion Programme. Ex post assessments have also been carried out on 'Park and Ride'⁷²⁶, major rail schemes such as the Jubilee Line extension⁷²⁷ bus deregulation⁷²⁸ and many other policies. As well as reviews by the responsible department of state from time to time the National Audit Office carries out its own reviews such as that into the scheme for relieving congestion on the M25⁷²⁹.

10.3 Whilst there has been a good deal of effort put into learning the lessons from past experience the extent to which these are being applied is less clear. The limited success of light rail scheme in Sheffield and Birmingham does not seem to have deterred other cities from pursuing their own. On the other hand no other authority has taken the step of introducing area wide road charging despite the success of the central London scheme. More disappointing, the government is not only committed to not introducing any form of pay-as-you-go charging for road use but has set its face against even making preparations for what is the most efficient and effective means of dealing with traffic congestion⁷³⁰.

10.4 It is more difficult to point to where lessons have been taken into account as they often become absorbed into standard practice and applied invisibly. There can be no doubt that evaluations of past policies have been so absorbed but where, by whom and to what extent is impossible to say with any precision.

⁷²¹ Department of Transport: Estimating and monitoring the costs of building roads in England.

⁷²² Planning Major Projects.

⁷²³ The British Department for Transport Procedures for Dealing with Optimism Bias in Transport Planning Guidance Document.

⁷²⁴ The Effectiveness of Speed Cameras: A review of evidence.

⁷²⁵ e.g. Knowledgebase on Sustainable Urban Land Use and Transport (KONSULT) and Travel Demand Management Online Encyclopaedia.

⁷²⁶ Travel effects of park and ride.

⁷²⁷ The Jubilee Line Extension Impact Assessment: Summary Report.

⁷²⁸ Buses in London: A comparison with the rest of Great Britain.

⁷²⁹ Procurement of the M25 private finance contract.

⁷³⁰ Motoring towards 2050, Roads and Reality.

11. Lessons to be learnt from interventions employed in other countries

11.1 There is much to be gained from experiences in other countries and British transport planners and policy makers have observed these by overseas visits, comparative research, attending conferences and seminars and participating in international research and study programmes such as the European Commission Framework programmes. These have been running since 1984 and are now in their seventh phase which is allocating €7bn/year for this purpose. These have all contained substantial components relating to urban planning and transportation. In short many British transport planners and some policy makers are generally well informed in lessons from overseas experiences. Another EU collaborative programme is the INTERREG series of which in IVB there is a project, involving Blackpool, Kassel, Nijmegen, Valenciennes and West Flanders looking the scope for using tram-train technology in an area of north west England⁷³¹.

11.2 There are many examples of overseas experience influencing British transport planning. Home zones and shared space schemes are recent examples and London's Crossrail reflects, in part, the success of the RER in Paris. The busway networks in Ottawa and Curitiba have been an inspiration for systems here in the UK and the bicycle hire scheme in Paris and other cities provided a model for that in London. Integrated city wide ticketing systems such as London's Travelcard were introduced in most German cities in the 1970s. There have also been innovations in the opposite direction with British Urban Traffic Control systems having been world leaders since the 1970s and the introduction of competition in public transport service provision in the UK has been followed in many other countries.

11.3 There are several practices overseas which appear to have attractions but which have not been adopted here in Britain. The *versements transports* (a surcharge on employment costs) provide a source of reliable local funding which has enabled many French towns and cities to improve their public transport and construct light rail systems insulated from the vagaries of central financing. Ring roads taking traffic away from inner urban areas are more widely used on the continent. Germany, Austria, Switzerland, Slovakia and the Czech Republic have introduced successful electronic 'Pay As You Go' schemes for lorries whilst were are still in the planning stages with a paper based 'vignette' scheme.

11.4 Many other countries have achieved a greater consistency and continuity of purpose in developing and managing their transport systems than we have here in the UK. A classic example is that of London's Crossrail & Thameslink and the Parisienne RER. Both conceived in the 1960s⁷³² Crossrail was not established as a high priority project until 1989⁷³³ and will not be completed before 2018. In the meantime the RER has seen almost continuous development and now has a five line network with a route length of 625kms⁷³⁴.

11.5 The UK has generally lagged behind the rest of Western Europe in the development of its transport infrastructure as figure 4 illustrates for Motorways. Provision on a per capita basis, always low by continental standards has gradually fallen further behind to the point that we now have the lowest provision in Western Europe with the exception of Norway. Similar pictures are to be found in respect of airport runway capacity in the South East and national railway electrification⁷³⁵.

⁷³¹ SINTROPHER [http://www.nweurope.eu/index.php?act=project_detail&id=3889].

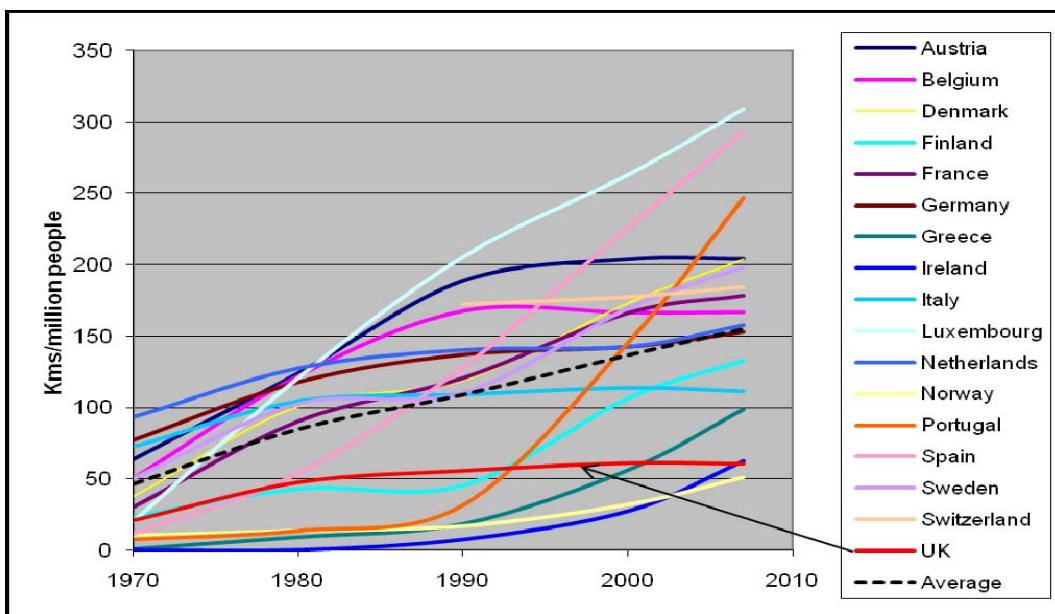
⁷³² London Transportation Study Phase III and Transport In Europe.

⁷³³ Central London Rail Study.

⁷³⁴ http://en.wikipedia.org/wiki/RER_E.

⁷³⁵ 32% compared with 52% for the EU as a whole (EU energy & transport in figures, table 3.5.3).

Figure 4: Motorway Provision in Western European Countries, 1970 - 2007



Source: EU energy and transport and in Figures.

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January 2011

Written evidence from Cycling England (BC 131)

Submitted by Phillip Darnton, Lynn Sloman, Beth Hiblin, Paul Robison and Isobel Stoddart

Introduction

1. Cycling England was established by the Department for Transport in 2005 with the task of getting 'more people cycling, more safely, more often'. It is a unique collaboration bringing together Government, the three main cycling NGOs (British Cycling, CTC and Sustrans) and independent specialists in the fields of sustainable transport, education and public health. At the outset, Cycling England managed a budget of £5 million. Due to the success of its programmes, this was progressively increased reaching £60 million in 2009/10 and 2010/11. The organisation will cease to exist after March 2011, with investment in cycling instead being delivered via the Local Sustainable Transport Fund. We believe that some important lessons about the effective delivery of successful behaviour change programmes may be obtained from Cycling England's experience, and that these are of relevance to all modes of sustainable transport.

2. Before addressing the questions posed by the Committee, we summarise the main programmes which have been delivered by Cycling England, and the data on their effectiveness:

Cycling Demonstration Towns / Cycling Cities and Towns

3. Between 2005 and 2008, six Cycling Demonstration Towns were awarded funding of approximately £5 per head of population per year, matched in each case by the local authority. The grants were invested in a combination of capital and revenue projects intended to increase cycling. These projects included new cycle infrastructure; Bikeability cycle training; intensive programmes targeted at schools and workplaces; initiatives to remove barriers to cycling by providing equipment, building skills and increasing confidence; and awareness-raising campaigns under strong brands. The main elements of the six CDT programmes are fully described in 'Making a Cycling Town' (Cycling England 2009a).

4. In June 2008, the Department for Transport and Cycling England announced continued funding for the six CDTs for the period to March 2011. At the same time, 11 new Cycling Towns and England's first Cycling City were selected and awarded funding – this time at the level of £8 per head per year, again matched by the local authorities – bringing the total number of towns and cities in receipt of funding to 18.

5. Interim results of the investment programme in the first six towns were published in 2009 (Cycling England 2009b; Sloman et al. 2009). In summary, the average increase in cycle counts across all six towns, as measured by automatic cycle counters, was 27% between 2005 and 2009. This represented an annual rate of increase that was comparable to the rate of increase in cycling in London in recent years, and also comparable to rate of increase in the most successful European cycling towns and cities. The proportion of adults doing any cycling in a typical year rose by 14% (from 24.3% to 27.7%). The proportion of adults who took no exercise at all fell by 10% (from 26.2% to 23.6%). At those schools which were the target of most intensive support, the proportion of school pupils who cycled regularly (at least once or twice a week) increased from 12% to 26%. Comparison with data from the National Travel Survey and the Sport England Active People Survey suggested that the increase in cycling seen in the six CDTs bucked the national trend.

Bikeability

6. Bikeability is the Government's flagship cycle training programme for children and young people, designed to give them the skills and confidence to ride on today's roads. It was launched by Cycling England in 2007. Bikeability cycle training is currently being offered to about 300,000 children per year.

7. Research recently carried out by Ipsos MORI for Cycling England (Ipsos MORI 2010) found that Bikeability cycle training is highly valued by both parents and children. Children who have received cycle training feel safer and more confident when riding on the road (86%) and their parents feel more confident in allowing them to do so (87%). Children who have participated also cycle more often after taking part in Bikeability (with 51% of children saying this, and 49% of parents reporting an increase in the frequency with which their child rides). Participation also seems to encourage children to make new types of journey using their bike, with children who have taken part more likely to cycle to get to places (friends' houses and shops) and more likely to say that they always or sometimes cycle on the road than those who have not.

8. Preliminary analysis suggests that there may be a correlation between the proportion of pupils travelling to school by bike and the teaching of Bikeability (with the proportion of pupils reporting cycling as their usual mode of travel to school increasing from 1.48 to 2.43 trips between 2007 and 2010 in Bikeability schools, compared with an increase from 1.0 to 1.26 trips at non-Bikeability schools)⁷³⁶.

Finding New Solutions

9. The Finding New Solutions projects build on what has been learnt from the Cycling Cities and Towns programme: specifically, that successful cycling initiatives require a comprehensive and well integrated plan, focussed on the understanding of three things:

- People – who can be persuaded to take up cycling
- Place – where they want to travel
- Purpose – why they make these journeys.

An efficient way of targeting people is at the 'hubs' that connect them, such as schools, train stations, hospitals, universities and leisure destinations, and the Finding New Solutions projects concentrate on reaching people through the following hubs:

- Leisure destinations – giving people a positive leisure cycling experience, and evaluating to what extent this can be a trigger to increase everyday cycling
- Workplaces – focusing on major employers, including the NHS, universities and teaching hospitals, in order to identify the most effective package of cycling measures to encourage more cycling to and from work
- Train stations – working with Train Operating Companies (TOCs) to identify the most effective mix of measures to encourage more cycle journeys to / from railway stations, including cycle parking facilities, bike hire/loan schemes, events and marketing initiatives.

10. The first year's results are still being collated. However, qualitative evidence and case studies suggest that a high quality leisure cycling experience during which participants are given sufficient confidence to give cycling another go can result in people cycling more regularly for everyday journeys, including to/from workplaces. Similarly, whilst providing an appropriate mix of infrastructure facilities at train stations is vital to incentivise train customers to cycle to/from the station, partnership working between TOCs, their local authority partners and other organisations is also important to ensure the target audience is

⁷³⁶ Unpublished analysis as part of ongoing research; subject to amendment.

given a positive opportunity to ‘try-out’ cycling, either via bike hire/loan or led rides/events/training.

What are the most influential drivers of behaviour affecting an individual’s choice of mode of travel?

11. Cycling England’s approach to programme design is predicated upon the assumption that all of the following factors are likely to influence whether an individual chooses to cycle:

- The prevailing social norm: i.e. whether the individual’s colleagues, family, friends or other members of his/her peer group cycle
- Habit: i.e. the individual’s usual mode of travel
- Practical constraints e.g. not owning a bicycle; not having somewhere to store a bicycle at home; whether convenient cycle parking is available at the destination
- Confidence / ability in riding a bicycle
- Existence of suitable safe routes to the destination
- Knowledge of suitable safe routes and travel times to the destination.

What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?

12. Our view is that high quality cycle infrastructure is important in encouraging more people to cycle, but that it is not on its own sufficient, nor universally necessary. New cycle infrastructure is more likely to result in a quicker and greater increase in the number of people cycling if accompanied by ‘smarter choice’ travel behaviour change measures such as marketing, promotion, events and tailored interventions with schools, workplaces and other important journey destinations. In the first six Cycling Demonstration Towns, on average 79% of cycling investment in the first phase of the programme (2005-2008) was for infrastructure with 21% of investment being in ‘smarter choice’ travel behaviour change measures (Cycling England 2009a)⁷³⁷.

13. In the past, there was a tendency to build new cycle infrastructure in those places where it was easiest or least controversial, rather than providing high quality facilities in the places where they were most needed but possibly more challenging to install. We have termed this speculative approach to cycle infrastructure investment ‘build it and they will come’. Unfortunately this is a rather ineffective way to encourage more people to cycle, as the infrastructure provided will not necessarily cater for the everyday journeys that people wish to make.

14. In our work with the 18 Cycling Cities and Towns, we have strongly encouraged a more strategic approach which starts from an analysis of which people, places and journey purposes are most susceptible to influence. Having once identified these key target audiences (e.g. children travelling to school, or commuters travelling to work at a large employer in the town centre), the next stage is to identify and tackle *all* of the barriers that are likely to discourage these people from cycling. Some of these barriers may require an infrastructure solution (e.g. a cycle crossing of a busy ring road to enable cyclists to reach the town centre, or a cycle path to enable pupils to reach a school located on a busy main road); but other barriers require a non-infrastructure solution (e.g. a bike recycling scheme to provide affordable bikes for adults who do not own one). We explore this further below.

⁷³⁷ These figures relate to Cycling England funding plus local authority matched funding. The proportion of the total investment that was in infrastructure varied between 51% and 86% across the six towns. Note that infrastructure generally requires significant expenditure but less staff time, whereas non-infrastructure interventions require less expenditure but more staff time. Thus these percentages if anything underplay the amount of ‘effort’ dedicated to non-infrastructure interventions.

15. The Cycling Demonstration Town programme enabled us to identify eight infrastructure design principles in order to make cycling an appealing travel choice for people who may be relatively new to cycling (Cycling England 2009a):

- Focus infrastructure improvements on main routes to ‘target’ destinations (e.g. schools, workplaces, local centres)
- Give cyclists an advantage by creating shorter, quicker routes to their destination
- Make navigation easy, by comprehensive cycle route signage, using times not distances, and clear route branding
- Fill in ‘missing links’ so that cycle routes to target destinations are continuous
- Provide routes that feel very safe e.g. along quieter roads and off-road paths where possible, and extend the use of 20mph zones, traffic calming and speed control
- Make routes attractive e.g. via green space and scenic areas
- Build high profile ‘feature routes’ to generate a ‘feel good factor’
- Provide cycle parking at destinations.

What are the latest developments in the evidence-base in relation to changing travel-mode choice and the implications of those developments for policy?

16. We believe that the evidence from the interim evaluation of the Cycling Demonstration Towns (summarised in paragraph 5 above) demonstrates clearly that a concerted programme of behaviour change measures targeted at a closely defined audience can be successful. It is worth emphasising that this is in some ways a surprising conclusion. It is commonly supposed that past failure to increase cycling levels is proof that it is not possible to increase cycling in Britain. However, the CDTs have demonstrated that it is possible to increase cycling, even in towns which almost completely lack a ‘cycling culture’ and where other factors, such as hilliness or high car ownership, might have been expected to make behaviour change less likely.

17. Such programmes also represent good value for money. In the case of the CDT programme, an assessment by the Department for Transport suggested that the benefit-cost ratio of the programme was at least 2.6 - 3.5, and possibly higher (up to 4.7 - 6.1) depending upon the assumptions made as to the longevity of the resulting behaviour change (Department for Transport 2010).

18. The key implication for policy is that carefully-targeted, well-designed and integrated programmes deserve continued investment. Since the value for money of such programmes is generally high compared to other forms of public investment, we believe that there is a clear case for increased levels of investment.

What are the most appropriate type and level of interventions to change travel-mode choice?

19. Our experience suggests that the most appropriate interventions to encourage more people to cycle involve (a) identification of a target audience (defined by the ‘3Ps’ of people, place and purpose); and (b) developing a tailored package that addresses each one of the barriers to cycling in that target audience.

20. The target audiences in the 18 Cycling Cities and Towns have been varied, but have typically included three or four of the following:

- Children travelling to school
- Children cycling for leisure
- Residents travelling to work within the town

- Commuters travelling to the station
- Students travelling to the local college / university
- Residents cycling to the town centre
- Visitors trying cycling for fun as part of their holiday or day trip
- Residents living near a new branded cycle path or signature route
- Residents of a particular neighbourhood with good cycling facilities
- Occupants of a new residential development.

21. To take the example of children travelling to school, an effective package would include:

- Providing secure cycle parking at the school, so that parents know that their children's bikes will not be damaged or stolen
- Offering high quality cycle training, including training on the child's cycle route to school, so that parents can feel confident that their child is equipped with the right skills to cycle safely
- Installing cycle crossings and/or cycle paths where needed on the routes used by pupils to reach the school, so that their journey is safe
- Organising regular events (e.g. 'Bling Your Bike' days or 'Medal Motion' competitions) that give a special reason for children to try cycling to school on a particular day
- Arousing interest in cycling, for example through after-school bike clubs
- Finding ways to involve parents e.g. family bike rides, family cycle training
- In some schools, making bikes available to children who do not have one
- Initiatives specifically designed to attract girls and young women (e.g. 'Beauty and the Bike' programmes).

22. These packages are most effective when their design is based on the needs of the local target audience, taking into account the local context and opportunities, as each locality will have a unique combination of barriers to cycling and a unique set of opportunities they can exploit to help overcome these.

Who are the most effective agents for the delivery of behaviour interventions to change travel-mode choice?

23. Our experience suggests that behaviour change interventions are most effective when they are delivered by a *combination* of several agencies working closely together. This is because it is very rarely the case that any one agency or organisation is able to tackle all of the barriers to change for a particular target audience, or holds all the necessary experience. Role models and champions at the targeted 'hubs' play a particularly crucial role.

24. Taking the case of children cycling to school, the key agents are the local authority (which is the only agency that can install any on-road cycle infrastructure), working with a team of cycle trainers and with an organisation specialising in the design of activities to enthuse children and their parents to try cycling (e.g. Sustrans' Bike It programme, or CTC's Bike Club, or British Cycling's Go Ride), and, of course, the school community itself. Teachers and parents may play a central role as champions and/or role models.

25. In the case of commuters travelling to work, the key agents include, once again, the local authority (both for its role in installation of on-road cycle facilities, and for its role in coordinating workplace travel planning programmes), together with 'champions' within the target organisations (e.g. Bicycle User Groups), and organisations specialising in running intensive workplace-based cycling programmes (e.g. CTC's Challenge for Change).

26. Encouraging people to cycle for leisure can be most successful when a local authority or lead partner teams up with 'champions' within community groups to recruit their own members, or employ cycle trainers, ride leaders or event organisers with detailed local knowledge to provide a quality, enjoyable experience. Partnerships with local businesses, visitor attractions, tourism agencies and transport providers will greatly expand the marketing opportunities.

27. For journeys to/from stations, TOCs working with Network Rail can provide cycle facilities within the immediate station environment and marketing to their customer base. The local authority will provide the linking on/off-road facilities and signage to the station along with additional marketing and cycling support services, whilst cycle operators can provide bike hire/maintenance facilities at the station.

28. A feature of behaviour change interventions involving several agencies is that they require some form of overall co-ordination. In our view the local authority is the best-placed organisation to provide this co-ordination at local level. However, it is also our experience that local authorities commonly lack key skills in programme design, delivery and evaluation, and that some form of information-sharing and collaborative learning is therefore important. In the case of the Cycling Cities and Towns, this has been provided through a structured series of 'cluster meetings' and 'skill-shares' which have been organised by Cycling England.

How do current behaviour change interventions seek to change travel-mode choice and what use is made of available scientific evidence?

29. See our comments in paragraphs 19-22 above.

30. It may also be worth noting that our experience from the Finding New Solutions projects is that it is worthwhile to try a variety of ways to engage people. For example, Bournemouth and Plymouth Hospitals have both decided to provide fun leisure cycling events for their staff and families as this may provide an appealing 'way in' to cycling for people for whom cycling to work may seem too daunting or complex.

Are current policy interventions addressing both psychological and environmental barriers to change?

31. The interventions in the CDTs/CCTs, and also those delivered via the Finding New Solutions programme, have sought to address both psychological and environmental barriers to change, as illustrated by the examples in the table below.

Environmental barriers	Interventions used
Poor / unsafe cycling environment	Well-designed, continuous cycle paths and routes to target destinations
Lack of availability of a bicycle (at baseline in the CCTs, 78% of adult non-cyclists who indicated they might start cycling did not own a bike)	Bike recycling schemes; bike loan schemes; bike hire schemes; 'try before you buy' schemes
Lack of secure place to store bike at destination	Extensive provision of cycle parking at workplaces, schools, stations, town centres etc
Lack of storage space for cycling equipment at workplaces	Lockers at workplaces
Lack of storage for bike at home (e.g. in flat / student hall of residence / terraced housing)	Secure cycle parking (retro-fitted and as part of new developments)

Psychological barriers	Interventions used
Perception that cycling is not a 'normal' activity	Mass-participation events that redefine what is 'normal', at least temporarily e.g. Bristol Bike Carnival, workplace 'Challenge for Change' programmes
Perception that 'girls don't cycle'	'Beauty and the Bike' project developed as part of the Bike It programme in Exeter and now widely used elsewhere; Darlovelo project in Darlington
Lack of confidence riding a bike (affecting both the individual and other family members)	Cycle training (individual and 'mums & kids'); family bike rides; other social bike rides
Lack of knowledge of suitable routes / opportunities to ride a bike	High-profile signing and branding of cycle route network e.g. Aylesbury Gemstone Cycleways; on-line cycle journey planner
Lack of basic knowledge of cycling / accessories	Bike repair / maintenance classes; 'everything you need to know about a bike' sessions; seasonal training / activities / promotions to overcome concerns about dark / cold / wet weather

32. In general an effective package of measures to encourage cycling within a target audience (as the example of school children above illustrates), would include measures which:

- Provide safe, high quality **infrastructure** to cycle on
- Provide high quality **information** about cycle routes and cycling
- **Enable** access to the equipment, skills and confidence to cycle safely
- Ensure that relevant **policies** and procedures support cycling
- **Promote** cycling and reward regular cyclists.

33. This combination of infrastructure, information, enabling, policy and promotional measures ensures that whether an individual's barriers to cycling are psychological and/or environmental they will all be addressed.

Are policy interventions appropriately designed and evaluated?

34. Outside the Cycling Cities and Towns and a few other areas (most notably London), our sense is that cycling behaviour change initiatives currently tend to be developed on a small scale due to lack of staff resource, funding and local level political support. This limits their impact, compared to the more comprehensive programmes that have been developed in the Cycling Cities and Towns.

35. Evaluation of the early Cycling England programmes was carried out on a small budget, reflecting the fact that the programmes themselves were relatively inexpensive and that large-scale evaluation would have been inappropriate. Nevertheless, the monitoring and evaluation of the Cycling Demonstration Towns in particular yielded very valuable insights regarding programme design, and these have been applied to subsequent phases of our programmes.

36. The second phase Cycling Cities and Towns programme has been the subject of a more detailed and costly evaluation, which is ongoing (Aecom et al. 2011). We feel that questions remain as to the appropriateness of this level of evaluation, both because the

budgets required are substantial and because the demands made of programme participants have the potential to distract from their day-to-day responsibilities for programme delivery. At best, we believe that evaluation should contribute to a deeper understanding of behaviour change, which in turn leads to the design of more effective programmes. However, at present we feel that it would be fair to say that the right balance may not have been struck.

What lessons have been learnt and applied as a result of the evaluation of policy?

37. The key lessons from the evaluation of Cycling England's programmes over the last five years are set out below.

Nationally

- A highly focussed approach is needed: the best results are achieved by working intensively with a few key target audiences, and concentrating on those locations where there is high potential for change
- Behaviour change programmes require a combination of capital investment in changing the physical environment and revenue expenditure on awareness-raising, information, publicity, events and training
- Large-scale behaviour change is a long-term task, requiring a consistent approach over several decades. European towns and cities which have successfully increased cycling have repeatedly told us that their achievement is the result of consistent investment over periods of 20-30 years
- It takes time to put the right teams in place and to develop an effective strategy – so it makes sense to continue with an effective programme rather than changing direction every few years
- Collaborative learning between delivery agencies results in more effective overall programmes. This will not ‘just happen’ – it requires an external body to provide leadership and to act as a catalyst, at the national or regional level
- Even the best interventions to encourage cycling are at present being delivered in a negative policy context. If this were to change, the degree of effort required to stimulate behaviour change would be far less.

At local level

- Partnerships involving local authorities, voluntary organisations and the private sector can be extremely effective in delivering behaviour change, as each agency brings different capabilities and skills
- Senior level political and executive commitment is necessary to generate buy-in from all relevant stakeholders and to get effective delivery. Behaviour change programmes require political will and committed champions at the top
- Success breeds support: as councillors, senior local authority officers and other players see the success (and popularity) of a behaviour change programme, their willingness to back it grows
- Behaviour change programmes are intensive of staff time, and require highly motivated, committed teams
- Infrastructure must be designed to a high standard
- Tailored intervention packages are required for each target audience – a ‘one size fits all’ approach may be attractive to nobody
- It is impossible to know which specific element of an intervention is needed to persuade any given individual to make a change, and so it is necessary to tackle *all* of the barriers to behaviour change.

20 January 2011

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20 January 2011

Written evidence from Stagecoach Group plc (BC 116)

1.0 Introduction

1.1 Stagecoach Group plc welcomes this opportunity to contribute to the inquiry into Behavioural Change and Travel Mode Choice and to present evidence to the Science and Technology Committee.

1.2 Stagecoach has a particular interest in this topic since the long term future of its business necessitates an understanding of the drivers of consumers' travel behaviour.

1.3 Our views concerning the market for bus travel in town and cities are given below in response to the questions the Committee has posed.

2.0 Stagecoach Group

2.1 Stagecoach Group has extensive public transport operations in the UK, United States and Canada. The Group employs around 35,000 people and operates bus, coach, rail, and tram services.

2.2 In the UK, our fleet of around 8,400 buses connects communities in more than 100 towns and cities across the country. We have been consistently highly placed in national UK Bus Awards in each of the last four years.

2.3 Two million passengers travel on Stagecoach bus services outside the capital every day, using a network stretching from south-west England to the Highlands of Scotland. We serve major cities, including Manchester, Liverpool, Newcastle, Sheffield, Hull, Oxford, Cambridge and Exeter, as well as key shire towns and rural areas. We have also recently re-entered the London bus market with the acquisition of the East London and Selkent bus companies, which run 15% of the capital's bus services.

2.4 We operate a range of local scheduled services, express coach networks and school bus operations. Most of our services are operated on a commercial basis in a deregulated environment. We also operate contracts on behalf of local authorities and other organisations.

2.5 Since 2006 Stagecoach has invested £398 million in new state-of-the-art buses. This is part of a long-term commitment to improve our environmental performance and ensure all our vehicles are fully accessible to the elderly, disabled and families with young children. As part of our strong commitment to the safety and security of our passengers and our people, all our new vehicles are fitted with digital CCTV systems.

2.6 We also operate express coach services linking major towns within our regional operating company areas including the Oxford Tube connecting London and Oxford at high frequencies 24 hours per day, 365 days per annum. The Group runs the market-leading budget inter-city coach service, megabus.com, which carries over two million passengers a year on a network covering more than 50 locations and the bus/rail integration product, megabusplus.com. Scottish Citylink, our joint venture with ComfortDelGro, is the leading provider of inter-city express coach travel in Scotland.

2.7 Putting customers first is our priority. We continue to focus closely on the recruitment and training of our people, and we have one of the best records of any major operator for vocational training among our frontline drivers and engineers. Our UK Bus division is also a major employer, providing jobs for around 23,000 people at over 110 locations in our 19 regional companies.

2.8 Stagecoach Group is a major rail operator and has an involvement in running almost a quarter of the UK passenger rail network. The Group operates the East Midlands and South Western rail franchises, the latter incorporating the South West Trains and Island Line networks. South West Trains, the UK's biggest commuter franchise, runs nearly 1,700 trains a day in south-west England out of London Waterloo railway station. In addition, Stagecoach Group has a 49% shareholding in Virgin Rail Group, which operates the West Coast inter-city rail franchise.

2.9 We also operate Supertram, a 28km light rail network incorporating three routes in the city of Sheffield, and have a 10-year contract to operate and maintain the Manchester Metrolink tram network.

2.10 We are committed to investing over £200m in our rail franchises to improve the quality and range of our services. This has included station and car park enhancements, making ticket purchase simpler using smart media and ticket vending machines, depot extensions and rolling stock refurbishment.

3.0 What are the most influential drivers of behaviour affecting an individual's choice of mode of travel?

3.1 Stagecoach employs a dedicated Customer Insight Team (CIT) whose role is to monitor customer perception of Stagecoach bus services and to generate new custom through direct marketing and complementary initiatives.

3.2 Primary Research undertaken by the CIT, consistently shows that the most influential drivers of behaviour that may affect an individual's choice of mode of travel are 'Purpose of Travel' including:- 'Visit Doctor/Hospital, Meeting Friends and Relatives, Leisure, Socialising, Shopping, Travel to School College and Travel to Work'. In addition, Frequency of Travel when linked to 'Purpose of Travel' may also affect an individual's choice of mode of travel.

3.3 Further primary research undertaken by the CIT indicates that convenience is the key reason why non users of buses favour the car over public transport.

3.4 In addition the three predominant service variables, which drive existing passenger satisfaction, are Frequency, Reliability and Punctuality. The delivery of these service attributes, at the appropriate performance levels, is all instrumental in facilitating changes in travel mode choice. Satisfactory levels of performance in these areas are critical to ensure the retention of existing passengers and ongoing customer loyalty. Infrastructure underpins these three key performance variables.

4.0 What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?

4.1 Infrastructure influences travel-mode choice in two important ways.

4.2. As indicated in 3.4 above, reliable and punctual services are a pre-requisite of an attractive bus service. Highway Authorities which do not introduce and enforce effective bus priority measures in congested areas make it very difficult and expensive to deliver these key service attributes. Less efficient bus services result in higher fares, fewer passengers and lower service frequencies, which in turn reduce the relative convenience of bus services for those with a travel-mode choice.

4.3 The role of land use development strategy has also been a key determinant of the demand for bus services. Planning policies encouraging land use dispersal, particularly for retail and office developments have a major impact on travel -mode choice. Indeed, many developers have demanded easy and convenient car access supported by generous free parking provision as a pre-requisite for a viable project. This process, which gathered pace in the 1970's, shows little sign of abating. Research shows that while 30% of retail trips to central areas are made by public transport, the public transport mode share of trips to edge of centre and out of centre retail outlets fall to 8% and 7% respectively.

4.4 Unless these two infrastructure issues are effectively addressed it is very difficult to influence travel -mode choice in a sustainable manner.

5.0 What are the latest developments in the evidence-base in relation to changing travel-mode choice and the implications of those developments for policy?

5.1 The Stagecoach CIT has developed an ongoing customer acquisition program, which facilitates modal shift, predominantly amongst car users using a free travel offer. The program is targeted at non bus users and all marketing channels tailored according to the target market. Channels are subsequently integrated where appropriate. The award winning program, which was launched in 2002, has been used effectively to generate modal shift in both New Zealand and throughout the UK. The program has been rigorously measured and upgraded throughout.

5.2 The success of the program, which includes the micro management of the target bus services and careful local level target marketing, has significant implications for policy development. To date we have contacted circa 900K prospective customers by telephone and direct mail. Overall 100K prospective customers have subsequently used our free travel voucher. Our experience is that modal shift is achievable but that other local factors also contribute to the success or otherwise of attempts to deliver modal shift. These factors include local demographics, quality of the local network and bus fleet and local perceptions of the overall public transport offer.

6.0 What are the most appropriate type and level of interventions to change travel-mode choice?

6.1 There are various levels and types of intervention, which are instrumental in stimulating changes in travel –mode choice.

6.2 At a national policy level it is for Parliament to establish its overall objectives and develop a comprehensive, coherent strategy framework to deliver its desired reduction in greenhouse gas emissions. In common with other world legislatures it has yet to do so.

6.3 Delivery of government policy invariably falls to local government. As indicated above, attractive public transport requires bus operators to deliver consistently good quality services with the support of Highway Authorities providing effective bus infrastructure, i.e. Bus Shelter Provision, Route Priority etc. Stagecoach has been able to do this in partnership with a number of local authorities. Where it has done so, growth in bus ridership has been achieved. It does however require strong leadership on the part of the authority and commitment to invest and effective service management on the part of the bus operator.

6.4 Together these interventions can facilitate the frequency, reliability and punctuality of service which will lead to customer acquisition and retention. Coupled with comfort and safety within the waiting environment and the provision of an effective information service, both offline and online, the bus service can become an attractive local travel-mode choice for many more customers.

6.5 Local parking policies also have a major role to play in influencing travel – mode choice. The supply and price of parking spaces is a key determinant of this choice, yet many authorities regard the availability of inexpensive/free parking spaces to be an essential competitive tool in their battle to attract customers to their town centres. It would seem that without some sub - regional policies designed to moderate this competition, this important tool will remain a little used intervention.

6.6 Importantly, land use policies and consequent planning decisions, which have the effect of promoting the use of the private car, must be also changed if the interventions described above are to have any positive overall impact.

7.0 Who are the most effective agents for the delivery of behaviour interventions to change travel-mode choice?

7.1 The key agencies needed to deliver the necessary behavioural interventions are the local authorities and the bus operators. They are not the only agencies involved, however. There is still a need to achieve buy-in amongst the community at large to the benefits of reducing greenhouse gas emissions and the personal responsibility to make an appropriate contribution.

7.2 To deliver such a shift in attitudes requires engagement with the community at large, including local businesses, developers, schools, hospitals and major employers. Without their buy-in it is unlikely that a locally elected Authority will have the mandate to take the actions necessary to deliver an attractive public transport choice.

8.0 How do current behaviour change interventions seek to change travel-mode choice and what use is made of available scientific evidence; are current policy interventions addressing both psychological and environmental barriers to change; are policy interventions appropriately designed and evaluated; what lessons have been learnt and applied as a result of the evaluation of policy; and what lessons can be learnt from interventions employed in other countries?

8.1 Stagecoach does not have the expertise to answer these questions in a way which will assist the Committee.

12 January 2011

Oral Evidence, 8 February 2011, Q676-701

Evidence Session No.20. Heard in Public.

Members present:

Lord Alderdice
Lord Crickhowell
Lord Krebs
Lord May of Oxford
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Baroness Perry of Southwark
Earl of Selborne

Examination of Witnesses

Witnesses: **Dr Rob Wall**, [TravelSmart Manager, Sustrans], **Mr Stephen Glaister**, [Director, RAC Foundation], **Mr Phillip Darnton**, [Chair of Cycling England], and **Mr Peter Nash**, [Policy Adviser, Stagecoach UK Bus], gave evidence.

Q676 The Chairman: Well, I think some of you were here before, and we are so grateful to you for coming and very sorry for keeping you waiting. It might happen again, but we did rather well with the timing of the last vote. What we would like you to do is, if you would, introduce yourselves, and, if you wish to, make an opening statement. I will then ask the first question, and then hand over to the rest of the Committee, and I think some of you saw that. We are being webcast, so you are, as it were, on air, and you will get a chance to see the transcript later. So if there is something else you wish you had said, you will be able to add it at that stage. So, without more ado, can I ask you to introduce yourselves for the record please?

Dr Rob Wall: My name is Rob Wall, I work for the sustainable transport charity Sustrans. We deliver a range of behaviour change interventions, some of which were alluded to in the previous session; we did some work in the sustainable travel towns. I am also involved, to some extent, in the evaluation of those programmes.

Stephen Glaister: Good afternoon, my name is Stephen Glaister. I am Professor Emeritus of Transport and Infrastructure at Imperial College London, formerly at the LSE. I am Director of the RAC Foundation, which is an endowed independent charitable research organisation and I was, like Lynn Sloman, on the board of Transport for London for a number of years.

Phillip Darnton: Good afternoon. My name is Phillip Darnton. I am the Chairman of Cycling England, a non-departmental body set up by the Department for Transport in 2005, and with a termination date of 31 March this year. My background is not in transport at all—I spent almost all of my career in multinational businesses, notably Unilever and Reckitt & Colman, where I was the director of Global Marketing. My particular interest in cycling started because I do see cycling very much in the same way as any other brand, and the opportunity to change people's behaviour in a branding sense is a fascinating one.

Peter Nash: Good afternoon. I am Peter Nash. I am Policy Advisor to Stagecoach Groups UK bus division. I have spent my entire working life in the bus industry, and I have been with Stagecoach for the last 16 years. I am sure you are aware, but Stagecoach is one of the largest bus operators in the UK. We have 8,400 buses, we serve about 100 towns and cities from Devon to Orkney, and we run about 15% of the buses in London. I am also Chairman of the Confederation of Passenger Transport's Bus Commission; that is our trade association, and I support it in its dealings with Government.

Q677 The Chairman: Thank you very much indeed. I should also have said that although quite a lot of you were at our seminar, we may need you to say the same thing again for the record, because we actually need it for the Inquiry itself. So I am going to start, and ask you to draw on the experience of your own organisations where you can. What do you think is the most effective way of reducing car use across the population and what do you think Government can learn from the evidence you have gathered within your organisations, and from the interventions that you have actually implemented? Go for it.

Stephen Glaister: I would like to answer your question, but if I may, before I do, I would like to reinterpret the question, because throughout this Inquiry I have heard you talk about reducing car use. Certainly for me, the primary objective is to reduce congestion and to reduce pollution—reduce carbon emissions. That may or may not actually involve reducing car use. If you are wanting to reduce CO₂ emissions there are other things you can do, like making vehicles much more efficient; there is a great deal to be done on that, I think. The reason I make the point is that I do not think we should ever lose track of the fact that car use is an enormous benefit to people, and what I do not think we want to do is to remove that benefit unnecessarily. We need to think about what we are trying to achieve, and then do appropriate policies. There is one other point. If you are dealing with congestion and air pollution it's traffic, not cars, you are dealing with. A significant proportion of the traffic is vans and commercial traffic, so you need to worry about that as well. The arithmetic here is ruthless; the simple fact is, almost everywhere, up and down the country, the vast majority of personal trips are by car. So if you really want to make a difference to congestion and pollution, in my view you have to attack car use directly, mould it, and adjust it. There is nothing wrong with policies to encourage cycling, and other things—I am not suggesting that—but I am saying that in the big picture they will be largely ineffective, simply because, if cycling is 3% of the market and you double it, you have only got 6% of the market. It has made very little difference to the things you are trying to affect, which is the congestion and pollution. So to your question, in my view, the most effective thing you can do is to use price as a way of adjusting people's behaviour: it is effective, it is instantaneous, and, by the way, it can be done in such a way as to raise more revenue, whereas many of the things that we have been talking about this afternoon cost the taxpayer money, and there isn't any. So I think in practical terms, if you want to adjust congestion, want to adjust emissions quickly and effectively, you have to adjust the national tax system and the way we pay for our roads. We can talk, if you wish, about the effectiveness of the congestion charging scheme in London; you mentioned it earlier.

Q678 The Chairman: I just want to say that what you have just said, certainly the first part particularly, would have been music to Lord Crickhowell's ears. Go on.

Lord Crickhowell: Well, once again, you will not know that before we started the session I asked the Lord Chairman whether in fact we were really addressing the right question, and whether it should not have been equally concerned with the way we drive the cars, and the design of cars, and all those issues, some of which, in fact, I raised at our last session. But

picking this up then, you address it very vigorously in the very first page of your admirable paper, which I have in front of me, where you say that “reducing car use is not the only means of controlling congestion and emissions in urban Britain. The potential of other measures should not be overlooked”. What I would just like to have a view about is what you think the relative significance, in terms of emissions and therefore global warming and all that—the impact of the two different factors—is. On the one hand is controlling or reducing the volume of traffic on the roads, vans and cars and so on, by pricing and other means, and the alternative method is to improve the design of cars, the way we drive the cars, keeping the speed down at which we drive them, and all the others. How do you compare the two contributions?

Stephen Glaister: I can answer that but only by falling back on my professional training as an economist, and other people will not like the way I do this. If you use the standard method of appraisal, which is adopted by our Government and has been for years, I believe that is a very useful way to proceed. So, in other words, you use the standard value for a unit of carbon emitted, and the cost the damage done per unit of carbon, and the cost of a lost hour in congestion through the value of time. In almost every situation you analyse it is congestion which completely dominates the emissions issue. That is not to say that emissions are unimportant, but the simple arithmetic is that in this country over the years we have so underinvested in road capacity—rightly or wrongly—whilst traffic has been growing, that it is congestion that is doing the damage, overwhelming the CO₂. Fortunately, there are many things you can do that help both. I think better, more intelligent pricing can encourage the adoption of more efficient vehicles, and encourage them to be used at different times of day and in different places, so you can actually hit those targets to a degree. But there is so much we could do at really rather low cost on the carbon side. You will know Julia King’s figure that if everybody bought today the most efficient vehicle in the class of vehicle they buy, we would reduce CO₂ emissions by 25% overnight. Then there is another 12% to be got by eco driving and pumping your tyres up. We do not bother; we could do it rather easily. Congestion is really much harder to deal with.

Dr Rob Wall: May I come in? I do not disagree with any of that analysis at all, but I think that it is too narrowly focused. I would like to raise the public health issues and also accessibility issues, as I think those are two important aspects to this discussion. There is a need to address sedentary lifestyles and get people out of their cars and travelling by more active modes, so that their physical activity becomes part of their daily routine, and they are not having to think “I must go to the gym, I must make a special effort to do exercise”, and it is just part of what they do on a day-to-day basis. I think that is a very important social good, and good for the individuals. The second thing is accessibility; we live in a car-dependent culture, and I think much needs to be done to cater for people who do not have access to a car. We’re then looking at very broad issues of land use planning, and so on, but over recent years, with out-of-town developments, it has become more and more difficult for people to access services in their local areas. I think this is all of a larger picture, and it is not only, important though emissions are, about emissions.

Q679 The Chairman: Your evidence says that the work that you have done has reduced car use by about 10%. So can you tell us which of those interventions that you have come up with have been the most effective?

Dr Rob Wall: Sure. That evidence relates specifically to something called individualised travel marketing, or personalised travel planning—the terms are used more or less interchangeably—and projects of that type were delivered in both Darlington and Worcester and, indeed, Peterborough: all three sustainable travel towns. What we typically

find is a 10% reduction in car trips across the target population for those interventions. In the sustainable travel towns those were very large interventions: 30,000 households in Peterborough, which is about one in two households across the city; 23,000 in Worcester.

Actually, a reduction of 10% in the number of trips made on average across that target population is not a huge change at an individual level; that is one car trip per person, per week, or thereabouts. We're not asking people to reinvent their lives and adopt a completely alien lifestyle. They are small, convenient changes that they can make as part of their daily routines. It is fairly labour intensive. This involves kind of direct conversation with people in their homes, provision of tailored information, lots of advice, lots of motivation, but, in my view, that money is well spent, because it does bring results. And coming back to the question about the longevity of that behaviour change, it is worth noting that in Worcester, we have just conducted a follow up survey of exactly the same type that was used to evaluate their Sustainable Travel Town Programme, the results of which will be published this spring. That will be two years after the end of their Sustainable Travel Town Programme, so it will be worth having a look at that.

Q680 The Chairman: Will you be able to let us have that?

Dr Rob Wall: I certainly will, yes—when it is published.

Stephen Glaister: May I just?

The Chairman: Yes, come back on that, and then we will move to Mr Darnton.

Stephen Glaister: I just want to sound a note of caution about that. I do not dispute any of the facts. It is great stuff, but at the national level traffic is growing at 1% compound per annum. So if you have received a 10% reduction you have saved 10 years' worth of growth on a one-off thing, which you have to keep on repeating—you cannot get another 10%, and then another 10%. And in some parts of the country the population is set to grow by 20% in the next two decades. There is nothing wrong with what you have said, but it will not solve the problem. You have to have an alternative, and much more powerful, means of dealing with the problem that I think you are setting yourselves.

Dr Rob Wall: And I would absolutely agree that pricing of some description should be part of the mix. I think, yes, that is another very important tool.

Q681 The Chairman: Well, you are both saying it is a package, are you not? Okay, Mr Darnton?

Phillip Darnton: I do think that Stephen, when talking about there being other things, is quite right. One of those other things happens to be cycling, and it is quite small; he is also quite right about that. Nevertheless, 23% of all car trips that we make are under two miles, and two-thirds of all car trips that we make are under five miles. The opportunity therefore to encourage people to think again about what they use their car for—not for one moment suggesting that it is not an absolutely invaluable and very often absolutely necessary item of our life—seems to me worthwhile. And if we were in a position to create an environment in which people were prepared to review two-thirds of all the trips that they make and adopt an alternative, we would be making a significant start on the problem. I think the other interesting thing was about how fast everything is growing and how everybody will need a car. This is exactly why Cycling England eventually selected Cambridge in its group of 18 cycling towns. Cambridge already has the highest level of cycling trips, and it was not because we were trying to see how high we could push the leader. Rather, Cambridge said, "Over the next 10 years the rate of expansion in the towns and villages around Cambridge is

going to be so vast that unless about two-thirds of all the people who live in those villages adopt the behaviour of Cambridge, in coming to Cambridge they will completely swamp all of the work that we have done to get a quarter of our trips by bicycle. Therefore, as we plan for the next 10 years”—and this is the planning point—“we must plan to ensure that walking and cycling are carefully planned in, and it is made extremely easy and attractive, and very convenient, and rather more difficult to use a motorcar, exactly in an environment where we can stand no more”.

Peter Nash: Yes. I do not disagree with a lot of what has been said. I guess we come at this from perhaps a slightly different angle, because we are obviously desperate to get people to use our buses, and to use them more and more. So, what we seek to do is to offer motorists a choice for particular journeys, which is as convenient as using their car. Now, that is a very general statement, and there are clearly some journeys, at some times, in some places, for which we will never be able to offer them a choice, and we do not set out to try and persuade them. What we seek to do is to target those particular journeys where we can provide an attractive bus service that is comparable to the sort of journey times that they are getting when they are using their cars for those particular journeys, and then we market directly to them. Now, we cannot do this usually unless we have got the support of Local Authorities, and there are some Local Authorities that we have found to be exceptionally good. Somebody mentioned Cambridge just now. In Cambridge, by working together we have managed to double the number of passengers on the City bus services in 10 years; now, that is actually a better performance than has been achieved in London. That has been done by working together, identifying where bus priorities are needed, arranging marketing campaigns, directly targeting motorists, etc. That has gone alongside the park and ride; there are now 5,000 park and ride spaces around Cambridge, and we run those services commercially as well. So it shows what can be done. Of course Cambridge is a very unusual place, because it has an historic core that it wants to protect. It is anxious to encourage visitors, and it has quite a green approach to life and in the community generally. So it has a lot of things going for it, but nevertheless that is the sort of place where we can do things that really deliver for us, and deliver for them as well.

Q682 The Chairman: In your written evidence, you actually mention an initiative to promote the shift from cars to the buses by providing free bus tickets. Is that one of the methods you used?

Peter Nash: We did not actually use it, surprisingly enough, in Cambridge, because we did not have to, but there might be some places where we do. I noticed witnesses earlier were talking about the habit of using the car, and, indeed, we all have it. Quite a lot of effort needs to go into targeting people and persuading them that the bus for a particular journey is a viable alternative for them; and, yes, we give them an incentive—we give them a free week's travel. And what we have found is that where they have taken that up, three months later, usually round about a quarter of them are still using it.

Dr Rob Wall: And just to pick up on the free tickets point, that is a very important element of what is delivered to people in personalised travel planning. Those people who have not used a bus in many years, and there are a great many of them, have enormous misconceptions about the quality of bus services and what it's like. So getting them to make a few journeys and break that habit, not all of them will maintain it, but some will.

Q683 The Chairman: So it is a good incentive?

Dr Rob Wall: Absolutely.

Q684 The Chairman: Mr Darnton, in your evidence you said that sometimes the detailed and costly evaluation might not be as appropriate as in other places, particularly as it might distract people participating in the programme from their responsibilities for day-to-day delivery. So what do you think is the most appropriate method of evaluation for these interventions to change travel behaviour?

Phillip Darnton: I think that the work that the Department for Transport has put in motion for the evaluation of the first six demonstration towns has been what I would call proportionate. We have tried to look both at qualitative measures—what people think and what they say—and very clear quantitative measures as well. My concern about evaluation is that it seems to me, as somebody who sits well outside Government, that there is an enormous desire to know the answer and to know it now. As soon as we start something, a new project, somebody wants to pick it up by the roots just to check that it is growing, and they then ask a very large number of very detailed questions that distract the gardener from his job, and then say, “Well actually we haven’t got anything conclusive. I think we’ll start again”. And much of the work of the Department for Transport, it seems to me, in the areas of walking and cycling, can be characterised in this way, and the real benefit comes from consistency. There is a body of evidence, and it is really striking in the submissions that have been made by various organisations with regard to cycling, that there is little disagreement about what needs to be done. The list is quite obvious and not terribly long. The issue is about whether or not there is the political will, the leadership, and the consistency over a long period of time to stick at it. The reason why we see such a difference in Continental Europe is that, as somebody said to me in Continental Europe, “We started a long time ago and we have kept going”, and that is absolutely the key. So while evaluation is very important, I think there are distractions from it. I think there are some quite good models of how it can be done, but I also think that it can be very distracting to that sense of determination and consistency to keep going.

The Chairman: Thank you very much indeed. I think I am going to move on if you can bear it; otherwise we will run out of time.

Q685 Baroness Perry of Southwark: My question follows very well on from what Mr Darnton just said. Will it be better when much more of the policymaking is devolved to Local Authorities and to local solutions? The Government’s argument, as I understand it, is that it is only locally that people understand the particular circumstances and the particular road systems, and so on. Is it going to be better? I think I asked all four of you. Is the devolving of responsibility going to make matters better?

Phillip Darnton: May I start? I think that the point about collaboration is extremely important, and the point about policymaking is important too. I do think that the Department have a very clear role in signalling what they believe the key directions for the future are. In 2005, with regard to cycling, a tiny topic, they took a decision that they wanted to see change in cycling, and they wanted things done. That was a very clear statement. The creation of Cycling England was simply a mechanism to ensure that local people actually did get funding quite specifically for cycling, and quite specifically for those schemes that they themselves thought would make the most difference. The role of Cycling England, a four-man body, was simply to say, “Are you sure? Have you thought of this? Did you look in Exeter? I wonder about that—that school seems to be an easy place to cycle to, why are there no facilities?”. But the interrogation was purely of a local plan, and I do identify that sense of policymaking nationally—that cycling is going to have a role to play in our integrated transport policy—on the one hand; and, on the other, a local programme

which is designed for the particular problem. Start with “What is the problem? Who are the people we are going to influence? Where do they live? How will we influence them?” And then you have actually got a marketing package designed to change behaviour, but I do not think, if you simply hand money out to local people and say, “Would you please get on with some sustainable transport?”, that the omens are terribly good.

Dr Rob Wall: I think I would second all of what has just been said. A key principle of behaviour change is that the more tailored you can make your intervention the better. That applies if you are looking at us as a group of people, if you are looking at a whole town or you are looking at a whole country. Having the decisions about what will be delivered made locally is a good thing, certainly. Having the Department setting the direction of travel, if you like, with the Local Sustainable Transport Fund saying “These are the things we want to focus on”, issuing guidance about what sort of bids will be looked upon favourably, is a good structure. We can argue about whether the amount of money is sufficient, and whether the time period is sufficient, but in principle, I think this structure should hopefully be effective.

Stephen Glaister: I do think that both those responses are a bit half-hearted, if I may say so. By international standards this country, as you know, is incredibly centralised. Central Government holds the two crucial things in this matter: one is the funding, and the other is the taxation regime. Conditions vary enormously round the country; demographics and geographical conditions are just very different. You hear about Cambridge, but compare it with Exeter. Tastes vary enormously. For me, if we are going to tackle this problem successfully it is about doing two things: allowing local communities to raise taxes on their own tax base, their own money, and not rely on the Treasury to say whether or not you can have a grant for a cycling scheme as you were suggesting—that is why I said it was a bit half-hearted—and allow local communities to make their own decisions about how they’re going to deal with, and to what extent they’re going to deal with, congestion and air pollution, and the other matters that you might want to deal with. The way to achieve that is to reduce the national tax rates, namely fuel duty, and allow those to be replaced by charges for the local road network. Of course, you can do that in such a way that you will achieve your local objectives, which may include funding what you want to do from that set of charges. If you cannot raise the money you cannot do what you want, and if you rely on the Treasury you are not likely to get the money in the current circumstances.

Q686 The Chairman: I think I follow the argument perfectly happily. Do you think there is evidence to demonstrate that you would change behaviour more easily by using that method?

Stephen Glaister: London. You heard the evidence—on day 1, in February 2003, the traffic in central London fell by 20%, the congestion fell by somewhat more than that. That was the result of a congestion charge, which was a crude form of charging for the use of the road network and was part of a funding package. The money went to the Mayor of London and had to be used for transport purposes. It is one of the few examples of a hypothecated charge in this country, and that is why, at the end of the day, it was politically attainable. I think, myself, the failure to have that ring-fencing was why Manchester was rejected. People did not trust the proposition that the money raised through charging for the road network there would be used in the way the local politicians said it would, because there was no way of holding them to account. At the end of the day, they were relying on grants from the Treasury, and it just did not work. So that is genuine localism, and it was very, very effective, and remains so to this day.

Q687 Baroness Perry of Southwark: But some of the other things that you suggested, Professor Glaister, such as more efficient cars, efficient ways of driving, are not really in local control. The cost of cars, the way in which they are designed, and so on, cannot be controlled by a Local Authority.

Stephen Glaister: No. I think that is fair. It is an international market for vehicles.

Q688 Baroness Perry of Southwark: And isn't there always going to be a demand, in certain kinds of situations and in certain stages of one's life, for car use?

Stephen Glaister: Yes, yes.

Q689 Baroness Perry of Southwark: You are all four men; I do not suppose you have ever had to cope with small children and five bags of groceries and dropping older children off.

Lord Crickhowell: I bet they have—this one has.

Baroness Perry of Southwark: Good, good. And you cannot do it by bus. I mean, it is just absurd. So your choice is not to drive a great big four wheeler, which is what happens all too often in families like that, but to drive a small and more carbon efficient car, which also reduces congestion. Those great big hulking four wheelers do not help congestion.

Stephen Glaister: That was the thrust of my opening comments. Absolutely, one should recognise the enormous benefits that people get from the choice of using a car to do whatever it is they want to do, so long as they properly recognise the damage they do to others. On carbon emissions, I think it is partly a question of making sure that people pay the right price for their carbon, whether home heating or whatever it is, and partly education and advertising encouragement, the kind of thing that we have been hearing about, to make people become more aware of the opportunities open to them if they buy more efficient vehicles. I think the general public simply do not understand the physics of vehicles, so they do not realise.

Q690 Baroness Perry of Southwark: That has happened with the London congestion charge as well, hasn't it? With the London congestion charge that has happened: if you drive a fuel efficient car you do not pay the congestion charge.

Stephen Glaister: Yes, indeed. And you see many more low-carbon cars in central London than you will see in the rest of the country for that reason.

Dr Rob Wall: Could I pick up on that very briefly?

Q691 Lord May of Oxford: Can I just make a point about this particular thing?

The Chairman: If you want to make a point about that.

Lord May of Oxford: It is more of the nature of an intervention than a question. I have lived more than 20 years of my life in the United States, where a great deal of expenditure is devolved very locally to the township, this way or the other way, and I am afraid my experience is such that, attractive though your theory is, I do not think it works in practice, unless there is some gross difference between the United States and here. I think it is a great theory, but I do not think it works in practice.

Stephen Glaister: Does not work in what sense?

Lord May of Oxford: It does sometimes, but—anyhow—enough.

Peter Nash: Could I perhaps just comment on this question of local versus central, because from our point of view, we are obviously anxious to work with Local Authorities to deliver in their own particular circumstances, and our own particular capabilities with delivering bus services, and they vary everywhere, as has been said. The dilemma for us is where we have an authority who does not want to engage, because they have other agendas. And so the dilemma then, of course, is nationally what does the Government choose to do about that? Does it choose to ignore it and say to them, “Well, that is what you wish to do, you do it”. Or does it in some way dictate what it wants to see in terms of emission targets, etc? We have been talking about congestion and emissions as though they are two different things. Now, of course, the reality is, the slower the traffic moves, the more that every single vehicle, whatever it is, generates emissions, uses fuel, generates carbon, etc. You can get double the amount of emissions along the same piece of road, depending on how much traffic there is there.

Stephen Glaister: Just briefly, if I may come back.

Q692 The Chairman: You can, come back on that quickly.

Stephen Glaister: A lot of people admire what happens in Europe. I think I am right in saying, everywhere in Europe, there is a much higher proportion of expenditure on the local tax base; there is always a mixture of federal and local funds, but Local Authorities are much more powerful in their ability to choose these things across the whole of Europe.

The Chairman: Apart from Ireland that is true.

Stephen Glaister: Thank you.

Dr Rob Wall: The moment has passed somewhat now, but perhaps I may just pick up on a point you were making about environmental motivation, and people feeling that they ought to drive a smaller car for environmental reasons. I think in our project delivery we discover that environmental motivations, actually, for the vast majority of people, are not important at all. Where environmental issues do have a part to play is, as Professor Glaister points out, if you have some rewards; for example, paying a lesser charge because you were driving a lower emission car. That is a good way to kind of encourage people to think about the environmental issues and to act upon them. But simply having a pro environmental attitude on its own is very rarely a motivator for behaviour.

Q693 Lord May of Oxford: Going beyond central and/or local government working in partnership, how important do you think it is for government of one kind or another to work in partnership with other sectors and other organisations when developing interventions to change travel behaviour? Can you think of some examples where this has worked well, and why it did and some examples of when this did not work well, and why it did not?⁷³⁸

⁷³⁸ When invited to comment on the transcript, Dr Rob Well added: There is a really crucial role for third sector organisations such as Sustrans to work in partnership with local government to deliver travel behaviour change. Relatively few local authorities have the expertise in-house to deliver successful behaviour change interventions. So, as we saw in the Sustainable Travel Towns, it can be very effective to have organisations like Sustrans delivering this type of activity on local authorities' behalf. There is a complementary relationship between the travel planning expertise typically held by local government officers and the expertise in delivery held by third sector organisations which have many years of successful project experience.

Phillip Darnton: I do think that the opportunities that real partnerships provide are very powerful, and they immediately move the topic away from diktat, whether that is central diktat or local diktat, and you see the success of those cycling towns that made it very clear that their website was not called by the name of their town, but was called, as you heard earlier, "Local Motion", in Darlington. That was not by accident; it was a very clear design to try and encourage the sense in which this website belongs to us all and is not imposed by them on us. I think that we have seen in somewhere like Blackpool, for example, an extraordinary collaboration between the Local Authority and a primary care trust. That, almost inevitably, came out of two people, one who knew the other, and the upshot was £500,000 from the primary care trust into a very large cycle hire scheme, taking all the benefits of the London hire scheme, and having as its target two discrete audiences. The tourists, in the summer, can see almost all of the Blackpool illuminations, should you so wish, almost in one day on a bicycle moving from point to point, hiring it and leaving it and picking it up again. And a very, very large number of people—it's an area of great deprivation—both in the council and beyond—have special passes for reduced prices on those cycles to use them to and from work each day. So they had a very nice servomechanism in the summertime, and a use-up factor in the winter. There are heaps of examples, some of which you heard earlier, of groups of people—whether they be Sustrans, whether they be the CTC, whether they be the London Cycle Campaign doing a programme called Age Well on Wheels, trying to get people who perhaps haven't been on a bicycle for 30 years to get back on a bike again—which are all very small but work very, very cost-efficiently, because they are usually run by people who are passionate about the subject and prepared to do quite a lot for rather a little. It does seem to me that those partnerships really are quite invaluable to the whole structure of getting something embedded. One last point if I may: most of those work best when there is somebody, a champion, who says, "I want it, and I want it quite a lot". It might be a workplace where the chief executive says it—it's very funny, when the chief executive says something, how quickly a large number of the employees find it in their interests to pursue it. It is true in a school. Take Bradley Stoke school, where the head teacher said, "I'm going to have a truly sustainable school in everything, from what we eat to how we behave, and how we get to school". It became extremely difficult to get to school—

Q694 Lord May of Oxford: If I could turn to Professor Glaister. As I understand it, you have said, and I have some sympathy with it, that whether it is a government organisation, or another kind of organisation, things are only going to work, and they will only do it, if the desired behaviour change is in the direct interest or pursuit of their duties. And I wonder if you could give us, just quite briefly, an example where a couple of organisations got together because it was in their interest, and they maybe would not have otherwise, and an example where something that ought to have got done did not get done, because one of the necessary partners just did not see it as in their interest.

Stephen Glaister: I will give you one of each, both of them big in my book.

Lord May of Oxford: Great.

Stephen Glaister: Park and Ride, up and down the country, is a partnership between town communities, who recognise you cannot cater for the car for everybody to come into the centre, so they arrange for regulations to stop that happening; then there is a relationship with the bus operator to provide the service from the Park and Ride scene to the centre of town. They are common up and down the country. I think generally speaking they work well, but my colleague will comment.

Q695 Lord May of Oxford: They work very well in Oxford.

Stephen Glaister: Yes. Exactly—and almost every other market town. The one that classically has worked dreadfully badly up and down the country is the relationship between health authorities and the transport authorities. Because it's superficially cheap to have a big, single hospital out of town, that is what they have done, without any regard to the costs they are imposing on their patients, their staff or the local community in terms of serving that new site, closing the cottage hospital, or whatever, and having a conglomeration of one big hospital, and forcing enormous increases. Now, if the health authority had said, "Let's look at the total costs of this decision, taking into account the transport costs and the damage done through extra congestion and pollution", they might well have done it differently.

Q696 Lord May of Oxford: Can I ask you a run-on question to that, which is, given the point you have just made, to what extent is it important for the various agencies involved in doing this, to recognise their need to talk together, and given that it is not done always the way it should be, can you think of ways in which you could actually act to make it happen more often, apart from your one of devolving the money?

Stephen Glaister: Yes, I think fundamentally it would help a great deal if we did have proper prices for the use of the roads which reflected the damage. The reason out of town shopping centres have been developed so fast is they're very cheap and efficient ways of delivering goods and services, but, again, the planning may not reflect the cost of all the extra traffic. That's because the traffic is underpriced. If people were paying the real cost of using the road network to serve the out of town shopping centre, then that worry would, as we say, be internalised, and the cost would be properly reflected. It would be only commercially worthwhile having an out of town shopping centre, if they could bear the full cost of serving the road network.

Q697 Baroness O'Neill of Bengarve: What lessons can we learn from other countries about interventions to change travel behaviour? We have had a certain amount of disagreement on that already. And what assessment have you made of the extent to which either central or local government pay enough attention to this evidence when they are designing interventions?

Dr Rob Wall: I think lessons have been learned, and some of the interventions that we have talked about today have originated in Continental Europe and elsewhere. The particular work that I do with individualised travel marketing has been in the UK for about 10 years, but 20 years prior to that in Continental Europe. So it does happen. We do take on board the lessons. I think something else has been said previously, which I would just like to second. The key lesson is sustained investment in a single direction of travel. Everybody knows what it is that we are aiming for, and the same messages are delivered over a long period of time with the investment to support them. We are close to the start of that journey in the UK, I think, with programmes like the Sustainable Travel Towns. It is sometimes known as Sustainable Travel Demonstration Towns, but it seems that the term "demonstration" has been dropped from these programmes now, which is a good thing; we are starting to mainstream them, but we have a long way to go.

Q698 Baroness O'Neill of Bengarve: Could I just push you a little bit on that? You used this rather impersonal vocabulary of sustainable investment. Who pays? Are you

thinking of a road pricing solution, or tax-based solution, or some partnership solution, or what?

Dr Rob Wall: I think a combination of road pricing or some form of internalising the costs of motoring, some tax-based; and I think that should come out of health budgets, as well as transport budgets.

Q699 Baroness O'Neill of Bengarve: So could I just push a little bit more? Are you and Professor Glaister agreeing that the point is to internalise the externalities of the system you have but beyond that there might be different solutions on the proportion that is carried by the taxpayer and the proportion that is carried by the motorist, and so on? Or are you actually disagreeing?

Dr Rob Wall: No, I think we are probably agreeing on that—what else we might differ on—as an element of what we would like to see.

Stephen Glaister: Yes. And I think to answer your question about international experience, it is a two-way process. I think the London congestion charging scheme has been looked at with great interest around the world. It was very, very nearly adopted in New York. There was some little local difficulty that stopped it. What it demonstrated was that the sky did not fall in, and actually people would vote to keep it. But in terms of learning in the other direction, we are about to publish a study of a large number of these schemes around the world, which have been very successful. We now know from Stockholm, Singapore, several schemes in Australia, some schemes in America and Norway, that these schemes can be made to work and fulfil their objectives. Once they are in, people see the benefit and would vote to keep them; often in a referendum they'll oppose them. But there is this repeated experience from overseas that it is technically possible, and it is politically possible after the event, as it were. The difficulty is to get the thing in place in the first place. And I believe we are a long way behind the game now, in this country, with the exception of London.

Phillip Darnton: Perhaps I may come specifically to the lessons learned in cycling, because I think people do constantly point to cities in Europe. Really the major factor there is that, at the time of the first oil crisis in 1973, both the Netherlands and Denmark in particular made a very clear policy decision that they were going to have to have more of their short urban trips by bike. That was a very conscious decision. It was helped enormously in the case of the Netherlands by a huge programme by mothers around the country looking at the increasing incidence of children being killed on bicycles, saying “We want our roads back”.

These two things came together, but nobody since 1973 has ever questioned it, and the consistency of spending, and the consistency of policy, have really led that forward all the way. It may be that notions of strict liability, which the Minister was asked about recently, had some part to play in that, in the sense that there is that sense of onus on the more powerful to explain their behaviour in the face of the more vulnerable. So that does alter enormously the mindset by which we get in a car and watch out for pedestrians or cyclists or disabled people. So I think there are a number of very big general lessons that have been learned, and I think, most of all, consistency, consistency of investment, and clear leadership are the biggest.

Peter Nash: Could I add one final point? It is our own experience as well. Operating in so many different towns and cities, we have so many different experiences, but the supply and price of parking space is probably the single biggest influencer of whether or not somebody uses their car for a particular journey. Earlier on mention was made of out of town shopping centres. The bigger ones have 10,000 free parking spaces. Now, that immediately has a competitive effect on surrounding town centres; and so, when we start talking to the

Local Authorities in the town centres concerned, and we talk about car constraint, their first reaction is, "But we're competing with the out of town shopping centre down the road, so we want all our spaces to be free". Now, fine, if that is what they wish to do, but it immediately has an impact on their bus service, and getting them to understand that is sometimes quite difficult.

Lord May of Oxford: Then charge for the out of towns—

The Chairman: You won't manage that.

Peter Nash: I'm a bus operator—I cannot decide that—I wish I could.

Q700 The Chairman: But could you just follow up and tell us about your experience operating in other countries in that respect? Does that apply equally in, say, the United States or Canada?

Peter Nash: Well, we do not run many line bus services in the United States and Canada; we run either intercity operations or we run airport transfers and private charter operations.

Q701 The Chairman: So it's completely different?

Peter Nash: We do not run much of that sort of operation, but we certainly did in New Zealand when we ran there.

The Chairman: I think we are going to have to stop, partly because everybody is going to have to go, but I thank you very, very much indeed for coming to give evidence. It has been really interesting. You will get a transcript within a week to 10 days; if there are things you wish you had said please add them in. If there is any additional written material that you can let us have, and particularly references for things that you have said, or things that are going to be published—have not been published yet, but will be within the next week or two—it would be enormously helpful to have them. Thank you very much indeed; it was great. Thank you Committee.

Supplementary written evidence from Cycling England (BC 163)

Case Study of a Travel Behaviour Change Programme: the Cycling Demonstration Towns

Submitted by Phillip Darnton, Chair of Cycling England and Lynn Sloman, Cycling England Board member

Background and rationale for the programme

Cycling England was set up in 2005 by the Department for Transport as a delivery body, charged with the task of getting ‘more people cycling, more safely, more often’. It was a unique collaborative endeavour between the main national cycling organisations and the government, funded by DfT and DH, and involving organisations and individuals drawn from the voluntary, public and private sectors working in coordination to achieve behaviour change.

The CE Board made the decision to focus more than half of its first year budget (£2.8 million out of £5 million) on a concentrated programme of measures to encourage cycling in six Cycling Demonstration Towns, rather than to spread it more thinly across many local authority areas. Our rationale for this was that we had observed that levels of expenditure on cycling in successful European towns and cities (i.e. those with high cycling levels) were at least £10 per head of population per year. By contrast, analysis of Local Transport Plan outturn expenditure data for English local authorities, carried out at our request by the Department for Transport, demonstrated that the average level of spend by English local authorities was less than £1 per head of population per year. We had also been told by local practitioners in towns such as Utrecht, Winterthur and Freiburg that their high levels of cycling were a consequence of sustained investment over several decades. Notwithstanding the constraints of three year government funding cycles, which made it difficult to commit to a long-term programme, our intention from the outset was to continue to work with the targeted towns for longer than the initial commitment of three years if possible. Our hypothesis was that investment in cycling at higher ('European') levels would result in increased cycling in the targeted towns.

The six Cycling Demonstration Towns were chosen from 34 bidders following a selection process which included visits to all shortlisted towns to discuss their proposed plans and assess the extent of senior level (political and official) support for a cycling investment programme. The selected towns were Aylesbury, Brighton, Darlington, Derby, Exeter and Lancaster. Approximately speaking, the CE/DfT contribution was £5 per head of population per year. All towns were required to at least match the funding contributed by CE / DfT, bringing the total spend per head up to levels comparable to those seen in successful European towns.

Programme design

Over the course of the programme, Cycling England and the six towns together developed a highly targeted approach to programme design, which we described as ‘people, place and purpose’⁷³⁹:

⁷³⁹ Cycling England (2009) ‘Lift Off’ for Cycling: Cycling Demonstration Towns Report

Identify each ‘audience’ to be targeted: who are they (people); where are they going (place) and why (purpose)? Examples of target audiences in the six towns included children travelling to school, commuters travelling to work, shoppers travelling to the town centre, and students travelling to university.

- Find out as much as possible about the target audience, and consider the barriers that prevent them cycling (for example, these may include not owning a bike; not having a safe and convenient route to the destination in question; not knowing about a safe and convenient route that already exists; lack of confidence cycling; having nowhere secure to park a bicycle at the start or end of the journey; not knowing other people who cycle; not being in the habit of cycling).
- Systematically tackle *all* of the barriers for the specific target audience.

Programme inputs and outputs

All the towns invested in both new cycle infrastructure and non-infrastructure measures in order to tackle the barriers that they had identified. While the actual measures implemented varied between the towns, they may be broadly divided into the following categories⁷⁴⁰:

- **Infrastructure:** construction of network of cycle routes; cycle crossings of busy roads; signing; advanced stop lines; associated cycle parking
- **‘Enabling’** measures such as adult cycle training; cycle loan schemes and cycle maintenance surgeries
- Work with **schools** and young people, including provision of cycle shelters; child cycle training; intensive support of a Bike It officer; after school / holiday cycle clubs
- Projects with **employers and universities** including grants for cycle shelters; business cycle challenges; pool bike loan schemes; workplace events
- **Travel awareness:** advertising; events; marketing; promotions; competitions
- **Travel information:** cycle maps; website; household-based personal travel planning

Between 2005 and 2009, expenditure and staff time dedicated to the programmes in the six towns was as follows:

	Expenditure (£m)	Capital expenditure	Revenue expenditure	Staff time (full-time equivalent posts)
Aylesbury	2.5	70%	30%	3.6
Brighton	2.9	57%	43%	6.3
Darlington ⁷⁴¹	2.6	88%	22%	9.6

⁷⁴⁰ Department for Transport / Cycling England (2009) *Making a Cycling Town: a compilation of practitioners' experiences from the Cycling Demonstration Towns programme Qualitative Survey 2005-2009*

⁷⁴¹ Darlington also received a grant from the Department for Transport to be a Sustainable Travel Demonstration Town. This grant was invested in a revenue expenditure programme.

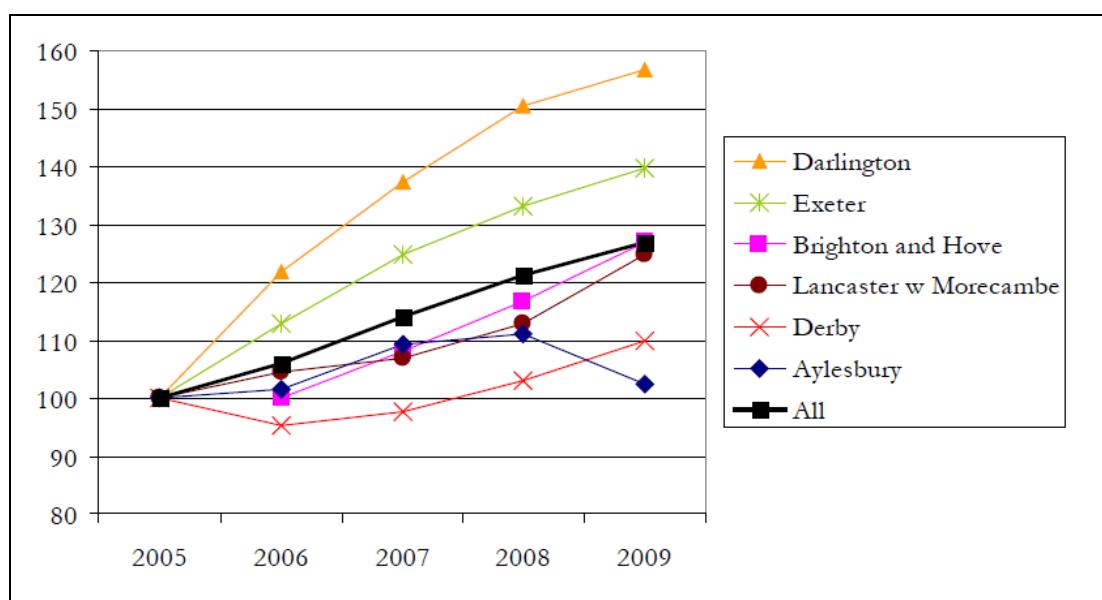
Derby	3.6	75%	25%	7.2
Exeter	3.6	86%	14%	7.3
Lancaster	3.5	80%	20%	3.0
TOTAL	18.8	76%	24%	6.2

Programme outcomes

Monitoring and evaluation of the outcomes of the investment programmes in the six towns is ongoing, but interim results were published in 2010⁷⁴². These indicated that:

- All the towns had increased levels of cycling, with an average increase in cycling activity across the whole programme of 27% between 2005 and 2009, as measured by automatic cycle counters (see Figure 1).
- The proportion of adults doing any cycling increased by 14% (from 24% to 28%) between 2006 and 2009, according to a survey of adults' cycling activity and physical activity.
- In schools that benefited from Bikeability training, more cycle parking facilities, and a Bike It officer, the proportion of pupils who cycled to school on a regular basis (either 'every day' or 'once or twice a week') increased from 12% to 26%, according to 'hands up' surveys carried out at the beginning and end of the one-year Bike It programme in targeted schools.

Figure 1: Change in cycling levels over time in each town, relative to 2005 baseline (automatic cycle count data)



The increase in the proportion of adults cycling in the six towns was accompanied by a reduction in the proportion of adults who were 'inactive' using a validated measure of physical activity, EPIC. Using this measure, the proportion of adult survey respondents who were classed as inactive fell by 10% (from 26.2% to 23.6%).

⁷⁴² Sloman L, Cavill N, Cope A, Muller L and Kennedy A (2009) *Analysis and synthesis of evidence on the effects of investment in six Cycling Demonstration Towns Report* for Department for Transport and Cycling England

The increase in cycling activity in the CDTs was not observed in comparable medium-sized towns elsewhere in England. The rate of growth in cycling in the CDTs matched the growth rate in London, and also other international cities which had demonstrated sustained long-term increases in cycling.

Assessment carried out by the Department for Transport suggested that the benefit-cost ratio of the CDT programme was 2.6-3.5 when assessed over a 10 year period, and increased to 4.7-6.1 if it was assumed that the benefits could be sustained over 30 years⁷⁴³. The largest benefits were in relation to health improvements (from reduced mortality), which were worth around £2.50 for every £1 spent (assessed over 10 years). There were additional benefits from decongestion and improved journey ambience.

What was learnt from the programme

The lessons from the Cycling Demonstration Town programme are set out in Cycling England's written evidence to the Committee. Perhaps the most important of these lessons were that:

- A highly focussed approach is needed: the best results are achieved by working intensively with a few key target audiences rather than spreading the effort thinly.
- Large-scale behaviour change is a long-term task, and it therefore requires a consistent approach over several decades. It is *not* possible to turn a British town with low levels of cycling into a 'Utrecht' in just a few years.
- It is impossible to know which specific element of an intervention is needed to persuade any given individual to make a change, and so it is necessary to tackle *all* of the barriers to behaviour change.
- Where this is done, behaviour change *will* occur. All six towns achieved increases in cycling levels, even though several of them might have been considered challenging places to encourage cycling because they were hilly, or had very high levels of car ownership.

How these lessons were applied

The original six CDTs received further support and funding from Cycling England until March 2011. Levels of cycling have continued to be monitored over this period, and a third survey of adults' cycling activity and physical activity took place in March 2011. Analysis and reporting of the results of this monitoring activity will take place during 2011.

Early evidence from the original six towns was sufficiently encouraging that DfT agreed to support an expansion of the programme to a further 12 Cycling Cities and Towns, between October 2008 and March 2011. Programme design in the 12 new towns and cities was based upon the approach developed in the original six towns. The work in the 12 new towns and cities is also being monitored and evaluated, with the evaluation building on the approach developed in the original six towns.

⁷⁴³ Department for Transport (2010) *Cycling Demonstration Towns: Development of Benefit-Cost Ratios*

The CDT / CCT programme came to an end in March 2011, due to the government's abolition of Cycling England. While there is a hope that some of the 18 towns and cities will continue to invest in cycling, because of the clear evidence of its benefits in terms of health and decongestion, the process of sharing experience and collaborative learning amongst the towns and cities – a key feature of the CDT and CCT programmes – will no longer occur, and much of the experience and momentum in the towns concerned has been lost. It is our view that a crucial lesson from the CDTs/ CCTs and from elsewhere in Europe – the need for long-term consistency of approach – has not been heeded in this case, and we have instead succumbed to stop-start-stop policy implementation.

Nevertheless, we are hopeful that at least some of the 18 CDTs / CCTs will continue to invest in cycling programmes. The government's Local Sustainable Transport Fund offers a source of funding which will enable this, both in the 18 towns and cities and elsewhere. We also believe that the lessons from the CDTs and CCTs, especially in relation to programme design, targeting, and tackling all the barriers to behaviour change, are relevant to other travel behaviour change programmes.

23 March 2011

Mr Oliver Letwin MP, Ms Anne Milton MP and Mr Norman Baker MP
Oral Evidence, 15 February 2011, Q702-740

Evidence Session No.21. Heard in Public.

Members present:

Baroness Hilton of Eggardon
Lord Krebs
Baroness Neuberger (Chairman)
Baroness O'Neill of Bengarve
Lord Patel
Baroness Perry of Southwark
Earl of Selborne
Lord Warner

Examination of Witnesses

Witnesses: **Mr Oliver Letwin MP**, [Minister for Government Policy, Cabinet Office], **Ms Anne Milton MP**, [Parliamentary Under Secretary of State for Public Health], and **Mr Norman Baker MP**, [Parliamentary Under Secretary of State for Transport].

Q702 The Chairman: Welcome. Thank you very much to all three of you for coming. We are really delighted to see you. Welcome to members of the public—many of you are civil servants. We are very glad to see you too. The proceedings are being webcast and there is an information note available for members of the public with some background on the inquiry. We would like the three of you to introduce yourselves for the record and then, I think, Mr Letwin, you are going to start by making a statement on behalf of all three of you. I will then start with the first question and we will go around the Committee. We do know that you are tight on time, so we will try to finish by five on the dot, which I gather is what you really need. Would you like to start?

Oliver Letwin: Oliver Letwin, Minister for Government Policy.

Anne Milton: Anne Milton. I am Parliamentary Under-Secretary for Public Health.

Norman Baker: Norman Baker, Parliamentary Under-Secretary of State for the Department for Transport.

Q703 The Chairman: Can I also warn you that the acoustics in here are dire? I am afraid that you will need to project your voices, particularly for people behind you, but even for us. It is really terrible. Mr Letwin, would you like to start with your general statement?

Oliver Letwin: Thank you very much. Do please let me know if my post-viral condition makes it impossible to hear me. I shall try to speak louder. The reason that I am making this statement on behalf of the three of us is, I suppose, that I am the guiltiest party present. I was responsible for setting up the Behavioural Insights Team in the Cabinet Office, and have taken an interest in the subject for some time now. It might be helpful if I were to set

it a little in context, and then describe briefly the work of the team. Like every other Government, I suppose, there are very large numbers of things that the Coalition Government wants to achieve. Our feeling is that over very many years, Governments of different persuasions have assumed that the way in which you achieve change that you see as desirable is to legislate and then administer. I should say at the start that we certainly recognise that that form of achieving change has its place. Indeed, as your Lordships will have noticed, we are doing a certain amount of legislating, and will be doing a certain amount—indeed, are already doing a certain amount—of administering as well. However, we have observed that there are many instances in the history both of this country and others where Governments—of all persuasions and with the best of intentions—have set about the business of trying to achieve a particular change in the way people behave through legislating and administering. They have discovered, to their horror, that the effect that they sought to achieve has not been achieved, and that instead some other effect has occurred—perhaps benign, perhaps counterproductive. In addition, we have observed that very frequently the mere act of legislating and regulating causes unintended consequences, which have nothing to do with the intended effects, but are by-products. Examples might include causing a considerable additional cost on business, or imposing rigidities on people's behaviour that were not intended, or indeed building vast bureaucracies designed to enforce the regulations. We have run out of money as a country, and we are disinclined to see what money we do have being absorbed by vast enforcement bureaucracies. We very much do not want to impose costs on our hard-pressed businesses, which we are trying to liberate so that they can grow and provide the jobs that the country needs. Therefore, we have three further reasons, beyond the desire to achieve effective behaviour change, for hoping that we can find tools that are non-regulatory in character, to achieve at least part of what we seek to achieve. It was with that set of intentions that we came to the question of behavioural science⁷⁴⁴. The next point that I should make is that we see behavioural science⁷⁴⁵ in the round. There has been a great deal of discussion of "nudge" or "prompted choice". I am sure that the Committee will wish to interrogate us about this, and we are very happy to talk about it. It is a very important part of the tools we are seeking to use to achieve behaviour change that is non-regulatory in character. It is not by any means the whole part, however. The way that things are designed, whether they are housing estates or urban environments or school dining facilities, or anything else, systems and physical locations alike, can clearly have a profound impact on behaviour. It is very important to investigate how one can design things best to minimise crime, to advance well-being, to make people feel more at home, to encourage the development of social capital, and other desirable objectives. Prompted choice, or nudging, is therefore just one part of a much wider scene as we understand it. The next, and last, set of points I want to make relates to the Behavioural Insights Team itself. There is no known perfect method of making something happen that is counter-cultural in Whitehall. If there were, I suppose that government would be in a much happier position than it ever has been in the course of the last few hundred years. We did, however, give some thought to the question of how, without building a vast apparatus and engaging in great cost, we can begin to insinuate into a very large machine. This machine is extremely attuned to regulating, and has not, by and large, over the years paid particular attention to evaluating the effects of the regulation on behaviour. Nor has it paid attention to thinking of non-regulatory means of achieving behaviour change, or indeed of thinking of non-regulatory activities that would go alongside regulation to achieve behaviour change. We gave thought to how we could achieve a change in the culture of such an organisation, in order to prompt it, collectively, to think about these things. We came to the conclusion that it would be helpful to have a small body of

⁷⁴⁴ And behavioural economics

⁷⁴⁵ And behavioural economics

people with particular skills in this area. These people would be devoted full-time to this task, and would be able to liaise with relevant people in relevant Departments around Whitehall. Anne's and Norman's Departments are amongst them. They would be able to try to inculcate this kind of thinking, and to help Departments when they did begin to think this way, by providing them with a research base and an ideas-generating capacity. David Halpern, who is in charge of that unit, is somebody who clearly has a very considerable understanding of these matters. The unit is very small, half-a-dozen people, but is staffed with people who have come from various disciplines and angles. They have access to a considerable range of academic expertise on an ad hoc consultancy basis, and they have focused essentially so far on health, money and the environment. They had to focus on something in order to make an impact. They have so far promoted four or five particular things that have emerged from a pea soup of inquiries and suggestions as things that seem to be sensible to pursue. One is organ donation, which I am obviously happy to talk about. Another is efforts to prompt smoking cessation. A third is efforts to improve car labelling to make the energy efficiency of cars more conspicuous. A fourth is efforts to improve food hygiene by prompting people to be more concerned with it. A fifth is an effort to persuade people to give more money to charity by rounding up to the pound. As I say, I am delighted to dwell on these cases in more detail if the Committee wants to. In each of these cases there are some common features. First, they do not involve regulating. Second, they do involve prompted choice of one kind or another. Third, they are being done cooperatively with the private sector, rather than being imposed. Fourth, they are being quite strictly evaluated after the fact, to find out whether they work or do not work in practice. I suppose the very last thing that I want to say in that connection, and indeed the last thing that I want to say altogether, is that it is of course open to question whether any of this will have any effect whatsoever. I do not want to pretend that behavioural science⁷⁴⁶ is a sufficiently developed science to give us complete confidence, or even 95% confidence, that any given technique will produce given results. It is not that way. As a matter of fact, the science of investigating regulation is not sufficiently developed to give you that either. It is extremely clear, however, that it is pretty cost-free to do these things, and pretty straightforward to do them. If they produce no result, therefore, we will not have lost much, and as we will be evaluating them, we will by the end discover really quite a lot about what does work. I shall now shut up, as you are signalling me wildly.

The Chairman: Just because we are so short of time.

Oliver Letwin: Indeed.

Q704 The Chairman: Thank you very much for that. I suppose the one thing I would ask you, in the wake of what you have just said there, rather than going into any particular thing, is this: one of the things that have been talked about is the difference between "nudging" and "nannying". Could one or other of you, perhaps, tell us what the difference is between nudging and nannying, in your view?

Oliver Letwin: I can answer that, because we have spent a lot of time trying to distinguish between the two of them. If, when somebody seeks a driving licence, they are prompted to choose whether they do or do not wish to donate organs, nobody is telling them to do anything. Nobody is nannying them. They are being offered a choice, but it is there in front of them, rather than being something that they would have to otherwise go off and get some complicated piece of paper from some complicated source. They might never get around to doing that.

⁷⁴⁶ And behavioural economics

Q705 The Chairman: I think that is fair enough. Perhaps it is difficult to know which of you should take this one, but on the question of a nudge, could you use regulation to actually make a nudge happen? I refer, for example, to regulating the food industry to change the environment, for instance by controlling advertisement or product placement, which would in a sense nudge the population in what it then might want to buy. I do not know who would like to answer. Perhaps, Ms Milton, you would like to take that one.

Anne Milton: Yes, happily. Smoke-free legislation, in a way, was a nudge to get people to give up smoking, by restricting where you could smoke. I would say that in some ways you can use regulation to nudge people. We are getting into the realms of semantics, but it can be used, yes. Maybe the difference between nudge and nannyng is also a matter of perception. In many ways, the only reality is perception, so it depends how it is perceived by the person who perceives it, to some extent. The trouble with nannyng is that it can be hectoring, and produce the opposite effect. We will all identify with the fact that there are some people who enjoy breaking rules. If you make rules, and make them very hard and fast, people get a certain perverse pleasure from breaking them. You want to be careful how you use it, but yes, legislation can be used to nudge people into certain forms of behaviour. I do believe that is the case.

The Chairman: We are, I think, very interested in how nudging fits in a wider context.

Anne Milton: Yes.

Q706 Lord Krebs: I want to pick up on that last point if I may, Chairman. Your comment, Anne, seemed to go slightly against what Oliver had said, that the Government wishes to avoid bureaucracy, regulation and control, and adverse effects on business. The anti-smoking legislation clearly did have an adverse effect on the tobacco industry. It does require enforcement, it implies bureaucracy and control, and many pub owners complained at the time it might put them out of business. It seemed to me that you were taking slightly different positions, or did I misinterpret that?

Anne Milton: No, not at all. I said that regulation could be used to nudge people. I did not say that that was what I wanted to do. There is a difference.

Oliver Letwin: What we are saying is totally consistent.

Anne Milton: Yes, it is.

Oliver Letwin: We do not see these as exclusive alternatives. As I mentioned at the beginning of my remarks, we think there is a considerable place for legislation and regulation. However, where we can achieve an effect that otherwise you would achieve by legislation, either directly or through nudge, without having to regulate, we prefer that route if it is available.

Q707 Lord Krebs: That leads me then neatly to my main point. I suppose I am a bit puzzled. I liked your introduction, Oliver, in which you openly admitted that you hoped this might work, that it was desirable to investigate it, but that it is open to question whether or not it will have any effect. You are certainly taking an academic and questioning approach to it. The thing that puzzles me is this. We have taken a lot of evidence over the last six months from experts, particularly in the area of obesity and transport, which have been our two focal areas. I think it is fair to summarise the expert view that we have heard: that nudging in the sense of not having regulation or taxation or restriction, on its own, simply

does not work. That is the broad, headline message. That would be my assessment of the expert witness evidence that we have taken. I wonder: is it that you have different experts giving you different advice? Or is it that you think that, in spite of the expert advice that it will not work on its own, it is nevertheless worth a try, because there is a paucity of evidence, or what? What is your assessment of the evidence, and why is it so different from ours?

Oliver Letwin: I would say three things, and maybe my colleagues want to add to them. The first is that, yes, we clearly do have different experts, some of whom do indeed believe it will work. Experts, however, are pretty rich on the ground. My second point is that none of us thoroughly knows, as I keep on pointing out. None of us thoroughly knows at the moment whether regulation works, either. I do not know how many experts you have asked, but I have read a great deal of the literature, and my impression is that it is extremely poverty-stricken in terms of its analysis of the actual behavioural impacts of regulation. This is a fairly undeveloped field altogether. The third thing that I would say is that I assume that, like me, if it turns out that, having instituted prompted choice on organ donation, organ donations triple or quadruple, you, like I, will conclude that it did work. As we are trying a series of very low-cost, almost zero-risk experiments, I do not see that much is lost by finding out, as a matter of fact, whose set of experts are right.

Q708 Lord Krebs: I would challenge whether it is, in fact, low-cost. If you take the case of obesity, let us suppose that for the next three to five years you adopt a nudging rather than regulatory approach, if I can draw that distinction, and it does not work. There is an implicit cost, because there are more people in the population who have become obese or failed to reduce their weight. That is a cost to them as individuals and to society. It is not fair to say that it is cost-free to try something that, according to expert view, is likely to fail.

Oliver Letwin: As I am sure Anne will explain to you in a second, if I give way to her, we are not, in the case of obesity, trying nudging instead of regulation. We are taking active steps in Responsibility Deals, to twist the arms behind the backs of producers to get measures taken that reduce obesity, in addition to thinking about whether there are nudge things we can do. This is not either/or, this is both/and. Anne, do you want to add more detail?

Anne Milton: If there was one silver bullet, previous Governments to ours would have found it. It is important for us as a new Government to have the humility to recognise the fact that if the answers were easy, Governments before us would have found them. The point is that regulation alone will not change what people put into their mouths. There is no one thing that will make a difference, and in the Public Health White Paper, we talk about a ladder of interventions. At the bottom of the ladder is doing nothing, and at the top is eliminating choice. At the end of the day, people have choices about what they eat and what they drink.

Q709 Lord Krebs: That is not right. Regulation could change what people put in their mouths. If you ban trans fats, then people will not put trans fats in.

Anne Milton: They will not put in trans fats, but you cannot regulate the number of calories they eat, in terms of obesity, which is to some extent dependent on how much they eat. You could try it. You cannot regulate against the number of calories they take a day. It cannot be that one single thing is going to attack this. There are a number of different things that you need to do, at a number of different levels, and we are quite clear in the Public

Health White Paper that, as far as the intervention that we will make as a Government, we will go up that ladder. If we have to, we will regulate.

Norman Baker: Can I make a transport observation at this point?

Anne Milton: Yes.

Norman Baker: One of the beauties of encouraging the correct behaviour—a nudge, if you want to use that phrase—is that first of all it is usually quite cheap to do so. Secondly, I do believe it can be effective, and I will give you one or two examples in a moment. Thirdly, I think psychologically the beauty of it is that people themselves decide that they want to change behaviour, rather than feeling that the Government is forcing them to do something. They make the choice themselves, based on information that you are making available. Take motorways, for example, where sometimes they are putting down these chevrons to indicate to drivers the distance between where they are, and where the car is in front. That is simply an information point, but there is evidence from the Department that it is leading to drivers leaving more space between cars. That seems to me to be a very cheap option. Drivers do not feel the Government has forced them to do anything. They are simply accepting information. The availability of information at bus stops or railway stations, to tell you when the next train is, seems innocuous, but what it does is to drive behaviour by giving people more confidence about public transport. This then leads, in some degree, to modal shift. If you look at road markings, which are often quite cheap, it is perfectly possible to design a road and to put down road markings that give the impression of a road being narrower than it is, thereby causing a reduction in speed and reducing accidents. There is quite a lot that you can do that influences people's behaviour so that they themselves have taken a decision, rather than it being taken for them. That is the beauty, and why, if you can get them to take a decision themselves, they own it far more than if it is imposed upon them.

Q710 Lord Krebs: Chairman, may I just ask one teeny question, and then I will stop? Just coming back to Anne and the point about climbing up the intervention ladder. Since I chaired the Nuffield Council on Bioethics Report that produced the intervention ladder, I am delighted that it has made its way into Government policy papers. My question is this: do you have a plan as to when you will move up the intervention ladder? You start at the bottom, via these softer approaches. If after a certain period of time something has not happened, you will go up the ladder. What is the time, and what is the something that will not have happened?

Anne Milton: Yes, and I am very pleased your ladder of intervention found its way into the Public Health White Paper. We are consulting on an outcome framework at the moment. That consultation closes at the end of March. I think when we publish our response to that and set the outcomes down fairly clearly, we will need to give an indication as to when we would step in. That is quite important, setting clear outcomes, and some timeframes that we can be judged on as a Government. Also, it is an indication to industry as to where we will step in, if they do not help us get along to that point.

Norman Baker: Can I just say that I agree with that, and unashamedly say that I stole Anne's intervention table from the Public Health White Paper?

Anne Milton: We shared it.

Norman Baker: No, no, I stole it from the front of the White Paper. It is replicated in there, if you have a look. This is joined-up Government in the real sense.

Anne Milton: Yes.

Norman Baker: What we have tried to do in the Department for Transport is to identify the outcomes we want to see, whether it is a road safety outcome or modal shift outcome, or whatever it happens to be. We have worked out how we can sensibly achieve that on a value-for-money basis, and assuming that it is preferable to use an intervention on the lowest possible level in this table. In other words, behavioural change is encouraged first and prohibition is at the far end of that. We have to have an ongoing assessment process to see whether that has worked or not. If it turns out to be the case that we have assumed that a nudge will produce a road safety benefit and it does not, 12 months on, or 24 months on, we clearly have to revisit that. There is one other thing that I would say at this point, and that I think would be helpful to the Committee. Generally speaking, in terms of value for money, the use of nudge and encouragement, apart from being sometimes as effective as regulation, can also be far more cost-effective for the public purse. Therefore the cost/benefit ratio, the return on the money invested, is often significantly more, and therefore justifies more of those interventions than the traditional style intervention.

Oliver Letwin: Can I just add one thing that is germane to the points you have been raising with Anne? Let me go back to this organ donation case. The story started in 2008 in Illinois, and in Illinois they found that the number of donors, when they applied exactly this technique, rose from 38% to 60%. We are starting this in 2011. After six months we are going to measure the results. After 12 months we are going to measure the results again, and when we get to summer 2012 we will publish those results. That will be the results of the set of trials, and if those trials have been shown to work in the same way as Illinois, then we will roll them out generally. I do not think that there is any proposal on the table for a regulatory solution to this. I have not heard of one from anywhere. Nor did previous Governments try a regulatory solution to this. Therefore I do not think anything is lost in the interim, and it is at virtually zero cost. I am not saying that that can be achieved in every domain, but it seems to me that it is an experiment that is either neutral or positive.

Q711 The Chairman: I would just like to pick up one point with you, Anne, if I may. When I asked you earlier about whether you could use regulation, say, with the food industry, it seems to me that you are talking about going up the ladder. However, that suggests relatively simple audiences. You are dealing with different audiences, are you not, when it comes to food?

Anne Milton: Correct.

Q712 The Chairman: You are dealing with both the producers and then the people who actually sell it, the supermarkets or whoever, and the consumers. In order to nudge one lot, may you not have to regulate the other? That is where I do not quite understand how you would use the evidence.

Anne Milton: One of the problems is that, as Oliver has pointed out, the evidence is thin generally. You are right that we are aiming at a number of different audiences. I would repeat what I said, which is that we have a number of initiatives going on with the industry to see what progress can be made. The reduction of salt, and the reformulation of food to reduce the amount of salt, has been a success. We have further to go, but it shows what has been achieved. The ladder of intervention works with individuals and with producers and manufacturers, and everybody else involved. We will go up that ladder, and indicate, when we have an outcomes framework, at what point we will seek to take other action.

Q713 The Chairman: Do you have a sense, any of you, what proportion of a desired change nudges can achieve? What point do you think it can get you to, and then you might then have to do more?

Oliver Letwin: I think inevitably we are going to discover, as we experiment, that even amongst the successful cases there are widely differing scopes of success. I would be amazed if it was uniform. One of the things that is going to happen over the next five years, as we try these things, is that we will begin to develop a pretty rich texture of evidence base. I hope that five years from now we could come back to you and say: “We still do not know the truth about life in every dimension, but we can tell you that broadly, in these sorts of domains, we seem to be able to achieve very significant effects quite quickly. In other domains there is not much ever. In others we achieve effects, but they are slow burn,” and so on. We may, as a result, begin to have quite an elaborate science of explanation—of why it is working in some cases rather than others. The important thing to understand here—I think it is really the foundation of all of this—is that we are not operating against the background of a supremely effective system of regulation, which without imposing costs has achieved miracles. That is not the situation we face. There is very, very little information about what is really achieved, by even things like the law against murder, which has been going on for quite a number of years. How effective is the law against murder? Nobody is going to try the experiment, the counterfactual, of removing the law against murder. It is extremely difficult to determine how effective the law against murder is. That is the most fundamental law, I suppose, that a society has. Amongst many, many others, we have no knowledge whatsoever of their effects in any serious scientific sense. What we are doing is beginning a journey to finding things out that will make us better able, and subsequent Governments better able, to legislate rationally.

Q714 Lord Krebs: Just to come back on Oliver’s point, in the evidence we have heard in relation to transport modal shift, we do know what works. We can look at other European countries, where huge changes have been made to get people out of cars, into public transport, bikes, and on foot. We know what works: it is investing in infrastructure. We were told that in Copenhagen they invest £40 per person per year. The new initiative from DfT is reaching the astronomical heights of £10 per person per year. Copenhagen has been doing this for 35 or 40 years. We are just starting. We do know what works—it is just that we are not prepared to do it.

Oliver Letwin: Can I come back to you before Norman deals with the particular transport issue? I put it to you that you do not even believe that, let alone me believing it. Suppose that what I had said to you is true: in Illinois, by doing exactly what we are proposing to do here, organ donation went up from 38% to 60%, and suppose I therefore said we knew that the same thing was going to happen. You would have rightly said to me, “No, you do not. You do not know whether the cultural and other circumstances in Britain militate against the same system working the same way here.” We do not know whether what has gone on in another country, regulatorily, or in terms of public expenditure, or in terms of nudge, will transpose itself perfectly, or even approximately, in a UK context. Cultures change and societies change from one place to another. All we can do is to guess on the basis of what is done elsewhere. It is much better where we can, without causing trouble—or doing any harm—find ways of experimenting, to know eventually what did work here and now, not in some other place at some other time.

Norman Baker: It is true that investment in transport can be useful in securing a modal shift. Indeed, part of the reason for High Speed Two—not the only reason, but part of the reason—is to provide an alternative to short-haul flights. This can then encourage people to

move from aviation to railways, thereby reducing carbon emissions. However, people are not going to move because they believe they ought to reduce carbon emissions. Very few will do that, but they will move because it is more convenient to go from city centre to city centre, or because the train is more convenient, or because it is more pleasurable to do so. They can move around the train, buy a cup of coffee at the buffet bar, or whatever else you do on the train that you cannot do on the plane. I think the assumption that simply a matter of investment will generate the modal shift is, if I may say so, an oversimplification. We have to understand why people use particular forms of transport. The reasons are related to feelings of safety, convenience, price, or the wish to be alone or congenial with other people. There is a whole range of factors in play. For example, the evidence seems to suggest that people will transfer, in a city centre, from a car to a light-rail system more easily than they will from a car to a bus. The bus can be invested in with the same amount of money as the light-rail system, but there is a different paradigm at play there in how people respond. It is quite complicated to work out why people choose particular modes. It is not simply money.

Q715 The Chairman: I want to try two things on you. We have two clear examples where regulation seems to have caused a bigger change than voluntary agreement. One was the charging for plastic bags, and the other is salt reduction. There is roughly an 80% reduction in plastic bag use after an enforced charge, about 40-50% with voluntary agreements. Salt consumption daily in the UK was reduced by 0.9 of a gram per person with the voluntary agreement, and five grams per person in Finland and Japan with legislation. I completely accept that culturally we may be different from these other countries. I spend a lot of time in Ireland, where they now charge for plastic bags, and you do see people wandering around carrying things in their arms and dropping everything. Nevertheless, there is a clear behaviour change. Are you convinced that the cultural difference is sufficiently great between us and those other countries to say that you would definitely want to go with this kind of nudge-type approach, rather than take the evidence of a very considerable difference in success?

Oliver Letwin: What I am arguing is not that we can substitute behavioural science and behavioural insights for the entire panoply of regulation. It may well be that there are all sorts of domains in which regulatory action is required to make major shifts—either only regulatory action, or regulatory action allied to other things. I am arguing, however, that understanding these things properly has to depend on much more than simply comparisons of one place with another. It certainly involves understanding quite long-term cultural shifts.

Let me just give you an example that we think is very salient. For a really long time, Governments thought that drinking and driving together were very dangerous. The breathalyser was famously introduced, and for quite a long time after the breathalyser was introduced, people went on drinking very heavily. Indeed, if you had gone to the King and Keys and watched the cream of British journalism emerging and getting into their cars, long after the breathalyser was invented, you would have thought the breathalyser had no effect. My sense—I imagine the Committee would agree—is that today, in our generation, and even more in our children's generation, it is pretty much verboten to drink and drive. People think that it is morally wrong, not just against the law.

The Chairman: Yes.

Oliver Letwin: Was it the breathalyser that eventually created that shift of culture? Or did something else go on? Who knows? It is very, very difficult to disentangle. Am I suggesting therefore that the breathalyser is a good idea? Yes, it seems to have been a good idea. Was it enough? I do not know. What we are feeling out all the time is how to put things together to achieve desirable results.

Anne Milton: Can I just come in on one thing? Causality is so difficult to demonstrate here. If you take smoking legislation, if you take the plastic bags issue—at the time charging for plastic bags got a lot of publicity. Smoke-related legislation got a lot of talk. Was it the legislation itself, or was it the fact that it was talked about for quite a considerable period of time? What is quite challenging for us in health is the cultural groups that we have to address. We might, by nudging people, get certain social groups to change their behaviour. Those same nudges will have a different impact, if they have any, on another group of people. What we have to do is to not only use every tool in the box, but we have to use every tool in the box for every group. In health the inequalities is the thing that is driving us. Reaching hard-to-reach groups—it is very obvious to say it—is very hard to do. What works for one group in society will not necessarily work for another.

Q716 Baroness O'Neill of Bengarve: You have already covered regulatory approaches and their deficiencies to some extent. I am therefore going to collapse this question a little and address the question of nudge versus both personal responsibility views and fiscal incentives. Those, I think, we have not covered. I would say that the evidence that the Committee has received has often been, in a certain way—probably in a way that you will recognise—a bit unsatisfactory, in that people have said, “We know this package of measures works, but we could not do the evaluation that disaggregates, to tell us which component was responsible for which effect.” Is that also the view that you have reached, or is it not? Do you have different views on fiscal measures, which of course preserve choice under classic economic assumptions, and appeal to personal responsibility?

Oliver Letwin: Yes. If I can move to a domain that we have not yet discussed, energy efficiency, I entirely recognise what you are putting to us. One of the Government’s overriding aims is to reduce dependence on imported hydrocarbons, and therefore also to reduce energy consumption. One of our prime techniques for doing that is the Green Deal, which is designed to make our existing housing stock, 19 million homes or whatever, vastly more energy-efficient. We could have straightforwardly regulated that everybody had to put in certain kinds of cladding and equipment. We could have created the Energy Efficiency Homes Police, and they could have gone around and enforced this regulation. That is clearly an option open to Government. At the opposite extreme, we could simply have gone for advertising, or for prompted choice, or whatever. We have actually chosen to go for a system of, in public accounting terms, fiscal incentives, although they do not come through the tax system. Individual householders will be able to benefit from the reduction, immediately and persistently, of their electricity bills, and indeed their gas bills, if they invest in machinery and equipment. They will not pay for the equipment up front, but rather somebody will come and install it for them, and simply take the saving from the gas bill, leaving them only with a fraction of it until the amount has been paid off. That happens to count as a system that involves the public accounts. Is this prompted choice? Is this fiscal incentive? Is this legislation? It is a bit of all of these things in various different modes. Will it work? I do not know. I profoundly hope it will. Our future, in part, depends on it. Once we have done it, and if it is a magnificent success—as I hope it will be—and our energy efficiency rockets, will it be because we very carefully judged it and people did it at the moment when they shifted house, or will it be because B&Q entered the market? We will never know. We will be exactly in the position of your witnesses. We will not be able to disentangle. It is such an uphill task for Government to achieve a big aim like making Britain’s homes more efficient. Doing it in a way that at least does not involve the police storming your house, or being told what you have to do, and is not authoritarian and illiberal, is already such an advance that I do not much care which part of the package works, if the package works.

Baroness O'Neill of Bengarve: I think you paint a rather gaudy picture of how regulation generally works, if I may say so.

Oliver Letwin: Fair enough.

Q717 Baroness O'Neill of Bengarve: Let me go back to the question of these packages of measures. One of the things that has been striking in the evidence we have received is that it makes it much harder, not easier, to know whether you have the best mix. It makes it harder to know how long you should stick with present policies, when you should, on the contrary, think, “There is some element in there that is counterproductive,” and change them. Likewise, it is harder to know when you should think, “The whole package does not work. We should stop it.” How do you tell this, if you are going for packages, as it were? Choice is, of course, an aspect, but there are many other elements.

Oliver Letwin: In the case of the Green Deal, we will, after a couple of years, know whether anything is happening. Of course it could go slowly to begin with and then accelerate, but if nothing is happening after a couple of years, it will be rather a bad sign. If, on the contrary, there has been a huge explosion of interest in insulating one's home then we will know that it has been a magnificent success. We will be able to judge the package. In the end, that matters most, does it not—for Government to be able, quite quickly, to judge whether what it has done is working? It is less important, immediately and practically, to know which bit of it is working. Of course, by trying a large range of things, some of which are purely regulatory,—are mixtures, or are purely behavioural insight mechanisms, we may over time be able to get a better feel for which bits of the spectrum are working best in different kinds of cases.

Q718 Baroness O'Neill of Bengarve: As you know, there is quite a lot of disagreement on this. I would really like to ask Ms Milton whether she thinks that this is right for public health too. We had evidence from Professor Dame Sally Davies, and she said on obesity, if you want to go fast and make it happen—I think she means not obesity, but the reduction of obesity, but I have taken it out of context—you will do it via the regulatory route. Her view was that evidence went to regulation, not of course of individuals, but of the food that they could purchase, or the places in which certain things were available, or the acceptability of certain sorts of promotions. It is effectiveness against coyness about regulation.

Anne Milton: I do not think it is about being coy about regulation. We mentioned briefly a little bit earlier that it is about behaviour change. If I look at an 18-year-old, in terms of their health, what do I want? I do not want them to smoke. I do not want them to drink too much. I do not want them to get overweight. I do not want them to have sex without using a condom, and I do not want them to have an unplanned pregnancy. Actually what I want to do is to build their emotional resilience. I can regulate the food industry, but that still will not make them thin, because they can still fill themselves full with lots of calories per day that will make them very fat. In public health, without a doubt there is the preventative work, and then there is what I would call curative work. We want to prevent poor behaviour, and then we want to change bad behaviour and habits that have already got established. I do not think we are coy. It is about the facts. It is a recognition of the fact that this is really complicated: getting that 18-year-old person, as I say, building their emotional resilience, building in them the skills to make good choices with the difficult decisions that they face, is very important. If I can do that, then I attack all of those things. They do not smoke, they do not drink, they do not have unprotected sex, they do not end up in an unplanned pregnancy, and they do not get too fat.

The Chairman: We are going to have to speed up, or we are going to run out of time.

Q719 Lord Krebs: Very briefly, I just wanted to ask Anne: do you disagree with Dame Sally Davies, then?

Anne Milton: I do not disagree, but I think Dame Sally Davies would also agree that you cannot regulate for a reduction in obesity. It is one of the tools. It is simplistic to believe that regulation alone will cure our problems with obesity, because it will not.

The Chairman: I know that you are going to have to go and vote, so if we adjourn while you go and vote, will you be able to rejoin us?

Oliver Letwin: We will rush back.

The Chairman: Rush back, and possibly give us an extra five minutes at the end, conceivably? Thank you.

Sitting suspended for a Division in the House of Commons.

Q720 Baroness Perry of Southwark: I am pursuing, again, the business of the evidence base. There is certainly quite a good evidence base about how you change the behaviour of individuals. There is good psychological evidence about getting individuals to change. You have expressed frustration at the fact that there is very shaky evidence about getting whole populations, or parts of the population, to change. One or two of our witnesses have suggested to us that there is no incentive in the research assessment techniques that are used to inspire people to do policy-directed research. If we were to ask you whether you thought that it would be a helpful thing to have some research that was directed towards how to change population behaviour, would you respond yes or no? How would you go about encouraging that?

Oliver Letwin: I think the answer I would give is that we see it as our direct responsibility not, of course, to conduct, but to pay for the conduct of research evaluating our own activities in this field. There is no point in conducting these experiments unless we also evaluate in a robust way, and that means independent research and analysis. I do not think we can just hope that some indirect method will lead to that research. I think we have to commission it in an orderly way, and we are doing that. I have to say, it is a subject that you are very much more knowledgeable about than I, but I would have some hesitation about loading another thing into the Research Assessment Framework. I think it is better to leave central Government, where it is instituting a policy, to carry the responsibility for finding out whether that policy has worked.

Q721 Baroness Perry of Southwark: What NICE told us was, if I can quote, “A majority of experimental evidence about behavioural change related to individual approaches, but it is rare that this evidence can be extrapolated or generalised to the wider population without confidence and without caveats.” That is a serious weakness, as you have acknowledged, in your own wish to change behaviour in the population. Is there not a case for encouraging research that looks more fundamentally, rather than just looking at whether something works after the event, the evaluation? I mean research looking more fundamentally at how population change has happened, as we have had examples.

Oliver Letwin: I am sorry. If what you are saying is, “Is there a fertile field for social research to try to disentangle complex webs of causation?”, my answer is yes, I am sure there is. It is a fascinating and undeveloped area of social research. I was thinking rather of

cases where we have taken an action, whether it is a single action or a package, prompted choice of organ donation or the Green Deal. It behoves us to find out how it has worked across the population. How many houses have been converted? How many organs have been donated? That is not terribly complicated. It is just at the moment it is not being done much.

Q722 Baroness Perry of Southwark: That is hardly research. That is more number-crunching. I was thinking more, and I think our witnesses were thinking more, of where there has been successful population change, as with smoking, drunk driving, and so on. Are there lessons that could be learned from that, if there was some more fundamental research looking at how it happened, which would help with obesity or help with traffic?

Norman Baker: By the way, it is nice to see you after some years, Lady Perry. The road safety aspects can be presented as a package. Over many years, this country has been successful in driving down the number of people who have been killed or seriously injured on our roads. It is not one simple measure that has been taken to achieve that. It has been a number of measures. It has been about driver education, it has been about changes to the road surface—maybe on occasion regulation, in terms of speed and so on, has been applied. It is possible, in that sense, in this case, to disaggregate those factors, and to see what works. It is perfectly possible, for example, to put in a speed camera, and see whether or not that is effective in reducing accidents or speed on that particular road. Indeed when Oxfordshire removed the speed cameras, there was a significant increase in the number of accidents on the road. There seemed to be a direct relationship between those speed cameras and their individual roads. It may not always be the case that a speed camera is effective. It may not be effective at all in some circumstances. In that case, there seemed to be a direct causation. Equally you can say that in areas where there has been, for example, a 20 miles per hour zone put in, there has been a decrease in the number of people who are seriously injured. This is not least of all because that does bring the average speed down, and we know that people are less seriously injured if they are hit by a car at 20 than they are at 30. It is possible, even within a complex matrix of interventions, to work out which ones are having particular effects.

Q723 Baroness Perry of Southwark: We are a Science and Technology Committee, and we, I suppose, are searching for a science of behaviour change. It does exist at the individual level, but it does not seem to exist at the population level. My question is, could it? Is there such a thing? If so, how could it be stimulated?

Anne Milton: If I may, we will be setting up a Health Research School for Public Health, and that will undoubtedly be one of the things that we will be looking at. Gathering together the evidence is one of the things that we badly need to do, and there is insufficient research in this area.

Q724 The Chairman: We agree, but we would quite like to know when that is likely to be, and what information you can give us about it.

Anne Milton: These are plans for the creation of Public Health England, and this will be rolled out over the coming years at various speeds, as quickly as possible, if we want to change people's behaviour.

Q725 Lord Patel: I am pleased to hear that, but when we have the evidence, when should we use that evidence in terms of regulation? For example, let us take obesity again: I agree with you that you cannot stop me shovelling calories into me. I have to be responsible for myself. However, there is clear evidence when particular foods that are calorific are advertised, children get hooked very early on. Yesterday's publication of the evidence of the Bristol Children's Study, which looked at 4,000 children, showed that children get hooked on these products so early that to wean them off it afterwards is impossible. Marmot suggested that these children, by the age of 68—if the retirement age was 68—would be too sick to work anyway.

Anne Milton: Absolutely. What Sir Michael Marmot puts forward in his paper is desperately important to inform what we do. As I said earlier, it is not necessarily about hitting one group of the population. It is about reducing the inequalities in health. We are clear, and I do not think there is any dissent, that we will use regulation when we feel that we need to use regulation, and if we are not effecting the right change. It is important, however, because I am not just Minister for Reducing Obesity. I cover all public health, and so understanding the reasons why people adopt certain behaviours is important if we want to change them. It is across the board, however. It is not just about obesity. It is about smoking, drinking and sexual health as well.

Q726 Lord Krebs: Just to be absolutely clear, are you saying that you would or would not think it is justified to regulate promotion and advertising of food of children to a greater degree than it is already? The evidence is clear that it would help to tackle the problem of childhood obesity.

Anne Milton: I would not like to operate above my pay grade, so I will be careful what I commit to. What I am saying is that we need to look at the evidence.

Q727 Lord Krebs: The evidence is clear.

Anne Milton: Okay. We need to see whether we can change behaviour. As I say, I would not want to commit the Secretary of State to action. There are problems with legislation. With children, and advertising to children, there are steps that we need to look at, but we are evaluating all the evidence and we will come forward with proposals when we set out our clear outcomes.

Q728 Lord Krebs: Evaluating the evidence is usually an excuse for punting it into the long grass.

Anne Milton: Not at all, not at all.

Q729 Lord Warner: Still on the subject of evidence, Mr Letwin, throughout these proceedings, has made much on occasion about the absence of evidence. The Sub-Committee, however, has been told that, on occasions, the Government have not based their policies on the available evidence. These seem to take two forms. One piece of evidence was that policymakers simply do not use existing powerful databases, like the Cochrane database, to inform policy. These were respected academics who were making those arguments. The second one is in the area of food labelling, where two people have sat before us, one the Chief Executive of Sainsbury's, and the other a senior member of Asda, simply saying that the traffic-light system was the one they wanted to use. They had

evidence in Sainsbury's that it had actually changed shopping habits. The Government appears to have ignored that evidence. Is the Government picking and choosing which evidence it wants to use, or is the Chief Executive of Sainsbury's wrong, and is Asda's senior executive wrong, when they tell us that the Government has got this decision wrong? We are now being told different stories from the business world that Mr Letwin wants to make sure can flourish, and Government Ministers.

Oliver Letwin: There are fragments of highly contested evidence about the effects of particular kinds of policy. There is nothing like the science that Lady Perry was referring to. In some cases—Norman has mentioned some of them—relatively recently and in Britain, there is a relatively good evidence base. The Department for Transport—this is not a remark about one Government or another, but under successive Governments—has developed quite an elaborate set of measures of what works and how it works. It has tried, roughly, I guess, under various Administrations, to apply them. I do not think it is true as an accusation against our predecessors, and I doubt it will be against us, that no attention whatsoever has been paid to evidence. It is very, very difficult to find one's way through quite a lot of the evidence, which is conflicting, and in many cases, very partial and not directly applying to our own circumstances.

Q730 Lord Krebs: What evidence shows that the traffic-light system does not work? We have the second and third largest food retailers in the country saying that it does work. Which is the counter-evidence?

Oliver Letwin: It is not a question, in that case, of evidence and counter-evidence.

Q731 Lord Krebs: What is it a question of?

Oliver Letwin: It is a question of trying to think through which system is most likely to work best.

Lord Krebs: That is what the evidence is about.

Q732 Lord Warner: This is what the Chief Executive of Sainsbury's has told us, and a senior person who is responsible for policy in Asda in this area has told us. They have said, very clearly, that the traffic-light system works, and the Government has got it wrong. You are saying, in effect, as I understand it, that they have got it wrong? They cannot both be right, in this area.

The Chairman: They can see it by who buys what. It is quite clear, and they were saying it in turns. That is, if you like, a nudge. That is giving people information in a particular way that makes them behave in a particular way. We do not understand why the Government does not agree.

Anne Milton: Can I come in? I was quite interested to read recently that there is very little academic evidence about the impact of in-store marketing and packaging on consumers' food choice. That may conflict with what you have heard, and I have to say that this statement went against my anecdotal belief. I have a list of references, and I am happy to share that with the Committee in writing.

The Chairman: That would be very helpful.

Q733 Lord Krebs: For a start, why do food companies put so much effort into marketing and packaging, if it has no impact?

Anne Milton: All I can tell you is that I have a list of references and I am very happy, as I say, to share this with you. The front and back labelling is a matter for Europe. It is actively being discussed, and I have responsibility for matters in Europe. There is nothing to stop Asda, Sainsbury's or anybody else putting traffic lights on their food. You can run into some problems, and guideline daily amounts are probably more meaningful. What is very important is that we have meaningful information. There is a danger—for instance, the Marmite test. Marmite gets a red, when in fact it is about the portion size. I have had these arguments with a number of people. It is getting meaningful information, and traffic lights are one of them. Guideline daily allowances are another. It is a matter for European legislation, and it is being actively discussed. It is extremely difficult to get consensus on this, when there is an impact on business as well. For other countries, maybe some of their views are guided more by business interests than the consumer's, but they are trying to balance the two. Business is important to this country, and the biggest indicator of health is wealth, and that is derived from business. It is quite a circular argument. It is getting something that is consistent, something that is meaningful, something that is relevant to all the groups that we are trying to target. It is not just one group of people. As I say, at the end of the day this is a matter for Europe, I am afraid.

Norman Baker: Can I just come in on Lord Warner's earlier point? It is not about traffic lights, which is for the Department for Transport, but there are other matters relating to other traffic lights. Picking up the point, or the suggestions there, the question is, "Do we use evidence to inform public policy?" Of course we do. Do we pick and choose—which is a pejorative phrase—yes we do, and let me tell you why. Evidence is there to assist Ministers and councils, or anyone else using evidence, to make decisions, but it should not be the automatic choice, that you put something into the computer and it comes out and that is what you do. You have to make political judgments. For example, if you look at the transport schemes that we are investing in at the moment, the best cost/benefit ratios for transport schemes tend to be in the South-East. That is the way it comes out, because of the population base and so on. It would be quite wrong, however, if we spent all our money in the South-East and none of it in the North-West, or North-East, or anywhere else in the country. We have to make choices based not just on the evidence base that comes out of the sausage machine, but also on the political objectives of the Government at a particular time, and to ensure fairness across the country. Evidence is best used to inform policy, certainly, but not to drive it in an unreconstituted way.

Q734 Lord Warner: That is an interesting take. I will not bang on any more, but I just wanted to say something about this quote from Sainsbury's. The important point from Sainsbury's, I think, in their evidence to us, was that what they said was, "Over 90% of our customers say that they understand it,"—that is, the traffic-light system—"and over one-third of them say that they actively use it to change what they buy." Much more importantly, in another bit of the evidence, they say: "The fact that consumers change what they buy causes the producers to change the nature of their products that they produce for the supermarkets." There is a chain of consequences on that evidence, which has been very powerfully put to us. I do not think that we can ignore that unless there is some counter-evidence that the Departments have to say that that is wrong.

Lord Krebs: If I could just add a further point, the Great Yarmouth Community Trust said that the GDA system, which you are championing, is discriminatory against those who are

less numerate and less literate. Surely it is really unfair on those people to have a system that they find difficult to handle.

Anne Milton: Absolutely, which is why I said that any system you come up with has to be meaningful and has to be consistent. It has got to be—

Q735 Lord Krebs: Why then does the Government favour the GDA system?

Anne Milton: Just let me add to that. I suppose I would be nervous of something that Sainsbury's said was a good idea. I would have to say to myself, "What is it in this? Why are they favouring this direction?" I would put that in a box alongside what I have just read to you—

Lord Warner: What is the sinister motive?

The Chairman: What possible motive could they have?

Anne Milton: Let me finish. All I am saying is that you have to consider all the evidence available to you. This statement, and this list of references, I only received this week. This conflicts, as I say, with my anecdotal beliefs. I feel as surprised as you do, but I have a list of references that I also have to look at and put in the pot. I take your point, that to me, traffic lights in some ways would be more meaningful if you do not understand about guideline daily allowances. However, there is a danger with demonising foods as good foods and bad foods, which I do not think we want to do anyway. As Norman has rightly said, it is not just simply a matter of the evidence available to you today. There is a huge amount of conflicting evidence, and at the end of the day this is a battle that has to be fought out in Europe.

Q736 Baroness O'Neill of Bengarve: Would you be able to let us have that list of references that you have referred to a couple of times?

Anne Milton: I will happily do so, as I said to the Chairman.

Q737 Baroness Hilton of Eggardon: If I could just make a comment about that, it does not necessarily have to depend on Europe. You could nudge supermarkets and producers without European legislation, surely. That was just an observation; if I may, I will go on to my question, which is about evaluation. The other end of allegedly evidence-based policy is surely that you have to be able to evaluate at the end. I wondered on what sort of basis of numbers, number-crunching, you are measuring the current situation, so that you can tell whether what you produce at the end has changed?

Anne Milton: Exactly—the Responsibility Deal, which has got quite a lot of publicity, is part of that. It involves encouraging industry as far as we can, working with them and with the NGOs to see whether we can get the industry to change. As I say, there is nothing to prevent anybody putting information on food. We are seeing a lot of food outlets now putting out the number of calories on takeaway meals, and that sort of thing. I think that is a very positive step. There is a National Child Measurement Programme, which the previous Government brought in, and that is one of the measures. There are a huge number of measures that we need to have in place to evaluate, although you have to be careful what you do with the information, whether we are making progress. One of the difficulties in public health is that the lead times are very long. If, say, one of our outcomes would be to see a reduction in liver disease, alcohol-related liver disease, we would probably have to wait quite a long time. To some extent, we could be accused of putting in place measures that maybe will favour our successors in government.

Q738 Lord Warner: I have been trying to digest what Anne Milton said earlier in response to my questions about Sainsbury's. As I understood what you were saying, you were saying to the Committee that we should look with a degree of scepticism at what Sainsbury's are telling us. I am now trying to reconcile that with the Government's position that they want to have projects with industry. If we cannot trust a big supermarket like Sainsbury's to give us responsible answers, does that not actually call into question the Government's strategy of making partners of some of these people whom we cannot trust? I am trying to puzzle that out.

Oliver Letwin: I do not think it does at all. First of all, the Committee will want to look at the references and so on, but this is a classic case. We come across it literally every time we have a policy discussion—several times a day. There is conflicting evidence, and not terribly thick on the ground. This is a very distinguished Committee, and it deals with science and technology. Some members of it are very distinguished in various scientific fields. Clearly you do not take simply at face value the observations of an actor who has a very strong financial and commercial interest. You have to examine a whole set of questions about why they are saying what they are saying, whether what they are saying is seen from a particular point of view, whether the same would apply in similar circumstances with much smaller shops, and so on and so forth. Evidently, you want a serious scientific approach. You do not just take one piece of evidence. That is quite separate from the question of whether we can work with businesses—big, small, voluntary sector organisations and social enterprises and so on—to try to agree with them how they might conduct themselves in ways that we hope would be pro-social. That is possibly in their commercial interest. We try to design these things so that they work with the grain of their commercial interest. We do it with our eyes open. We are certainly not handing over to them the power, any more than I would ask you to hand over to them the examination of all evidence. We may need to regulate them and not merely do deals with them. We may need to do combinations of making deals with them and regulating them, and we maintain a certain distance as we do all these things. It is appropriate, however, that the Government should try, insofar as possible, to get them to work with us rather than against us, because one thing we do know—and this is one of the very few pieces of extremely strong evidence; it is pretty universally observable and very anecdotally verified all around the piece—is that you can easily create regulations that people will observe in the letter but not in the spirit. If your mutual antagonism with the person being regulated is such that they get hugely enthused by the idea of employing very clever people to prove that they have observed the letter, you may achieve almost none of the spirit. There is also the problem of regulatory capture, where if you set up regulators to deal with people rather than trying to work with them, they get expert at buying in the regulator. These are all phenomena that are well attested in the literature, and indeed in all our common experience. It is a combination of being willing to regulate and to argue, being sceptical of their motives at all times, and yet, at the same time, being willing to cooperate with them on a sensible basis, where we can, in the public interest. That is what any Government would responsibly tell you.

The Chairman: We are really running out of time and I know that that is difficult for you. Lord Selborne, do you want to move to your question? Then we will get people to come back very quickly on that one.

Q739 Earl of Selborne: I will ask a very quick one. We have heard about the Behavioural Insight Team and the need for evaluation in a robust way. Could you tell us just how you

would think central Government would provide guidance to design, implementation and evaluation for interventions at a local level?

Oliver Letwin: That is an extremely good and difficult question. We are very determined to try to decentralise power and to leave local communities and local governments as free as possible to make their own decisions about how they do things. At the same time, obviously, we want to spread best practice, and we want to try to ensure that people in one place can benefit from what other people in other places have achieved. We are currently discussing—in fact, as it happens, this morning we were discussing—how we could try to set up some kind of research apparatus at low cost. This apparatus would investigate what had been done by one local government in one place, and enable it to be evaluated and transmitted to other local governments in other places. In principle there is a rich field here, rather than having just one central Government doing things. There are many actors, and patterns ought to be observable. At the moment there is relatively little investigation of innovation and its success or failure.

Q740 Earl of Selborne: Would the private sector have a role, do you think, as well as local government?

Oliver Letwin: It might well, and also maybe the voluntary sector, and indeed academe. We are thinking about it, and if this Committee happened to feel inclined to investigate that and to make recommendations, it would be very helpful.

Norman Baker: We have done some work, I might say, in the Department of Transport on that basis. There is traditionally perhaps a stronger relationship between central and local government in the Department of Transport than in some other Departments. I will refer to the Local Sustainable Transport Fund, which was announced recently in conjunction with the Local Transport White Paper. The Local Sustainable Transport Fund, for example, has a behaviour change information pack published alongside the bidding guidance, giving guidance to the principles of behavioural change and setting out best practice. It says, “These are the potential barriers and how you might overcome them.” It does not interfere with localism, because they can still do what they want to do, but it gives them a guide to what elsewhere has worked and might be useful to them. Similarly, we are producing, very shortly, a carbon-measuring tool to enable them to assess what the carbon impacts of their interventions are at local level. With this, they can see that if they are driven to reduce carbon, as we hope they will be, then this is how they can best do it. We have also, for example, procured information on road maintenance, which we will disseminate again to local authorities: “This is how this particular Council has saved money by acting in this particular way, and this is how you can save money by doing it yourself.” I would say that there is a greater role for the Local Government Association, Oliver, in due course, because that has been traditionally a lobbying body. In a new era of localism, personally, I think they need to step up to the plate and be rather more coordinating in terms of the local government voice, including disseminating best practice, than hitherto they have been.

The Chairman: We have to finish it there. Thank you so much for coming. It has been really interesting. You will get a transcript, the usual thing, a chance to comment and correct it. We would love copies of anything that you have mentioned. We have already referred to some of the evidence, but I add the toolkit that you were mentioning, Norman. That would be enormously helpful. We are very grateful to you and any additional stuff will be published alongside. Thank you.

Oliver Letwin: Thank you.

Mr Oliver Letwin MP, Ms Anne Milton MP and Mr Norman Baker MP

Norman Baker: Thank you.

Anne Milton: Thank you.

**Supplementary written evidence from Oliver Letwin MP, Cabinet Office
(BC 162)**

Responses to the further questions

- 1) Could the Minister provide more information on how the Cabinet Office came to decide on the five specific areas of inquiry for the Behavioural Insights Team, and what plans they have to expand the number of topics being investigated and evaluated. (Q703, pp.4-5)**

The Behavioural Insights Team has a Steering Board, which is chaired by the Cabinet Secretary, Sir Gus O'Donnell, and which sets the priorities for the Team's work, including new areas to investigate and evaluate. The Behavioural Insights Team has the capacity to work on a few projects at a time; therefore, this focus and prioritisation is essential.

- 2) Could the Minister please provide details of those experts who believe that nudging on its own will work. (Q707)**

The experts that support the Behavioural Insights Team include Professor Richard Thaler (co-author of *Nudge*) and Dr. David Halpern. The Team collaborates with a range of other academics in the field on particular projects. The view of the Team is that behavioural insight offers one tool of many that the government has at its disposal, which can be usefully employed alongside other mechanisms. The Behavioural Insights Team was set up to provide this complementary tool.

- 3) Could the Minister please provide details of the literature which demonstrates that the evidence for the behavioural impacts of regulation is limited. (Q707)**

I did not claim, in my evidence to the sub-Committee, that "the literature...demonstrates that the evidence for the behavioural impacts of regulation is limited", but rather that "the literature...is extremely poverty-stricken in terms of its analysis of the actual behavioural impacts of regulation". I have found that the literature that I have read does not contain much analysis of the actual behavioural impacts of regulation.

I would of course be delighted, if the sub-Committee wishes me to do so, to provide a list of the texts on regulatory economics that I have read, so that the sub-Committee can verify the lack of analysis of behavioural impacts in that literature.

- 4) Could the Minister please provide the references for the study conducted in Illinois into changing the default for organ donation and any other evidence which demonstrates the effectiveness of changing the default for organ donation to opt out. (Q710)**

The Behavioural Insights Team suggests in its recent publication – *Applying Behavioural Insight to Health* – that organ donation registrations could be increased by moving from an opt-in to a prompted choice system. A prompted choice system would require a person to make a choice about whether they would like to be an organ donor when completing, for example, a driving licence application form. Prompted choice has already been applied successfully to organ donation registration in several US states. Since 2008, Illinois has required that all driving licence applicants actively decide whether to register as a donor or not. The

percentage of donors signed up to the register has increased from 38 per cent to 60 per cent as a result. At the start of the year, Texas also implemented such a system and donor registration rates have already doubled. Most recently, in October, California announced that it would introduce prompted choice to driving licence applications.

References:

1. Department of Health (2008) *Organs for Transplants: A Report from the Organ Donation Taskforce*. London: Department of Health.
2. Department of Health (2008) *The Potential Impact of an Opt Out System for Organ Donation in the UK: An Independent Report from the Organ Donation Taskforce*. London: Department of Health.
3. Abadie A and Gay S (2006) The impact of presumed consent legislation on cadaveric organ donation: A cross-country study. *Journal of Health Economics* 25(4): 599-620.

February 2011

Supplementary written evidence from the Department of Health (BC 161)

SUPPORTING BEHAVIOUR CHANGE TO TACKLE OBESITY

INTRODUCTION

Obesity is one of the greatest public health challenges we face. The latest data indicates that 23.0% of adults and 14.4% of children (2-10 years) are obese, putting England at the top end of the scale among developed nations. Figures for the last few years show that levels of childhood obesity are stabilising, and adult obesity rates may be levelling out – see Annex A. This provides some encouragement. However, the overall rate remains far too high and represents a huge issue for individual health and well-being, for the NHS and for the wider economy.

ADDRESSING OBESITY – A PRIORITY

The Government recognises the scale and implications of the obesity challenge facing this country. *Healthy Lives, Healthy People: Transparency in Outcomes, Proposals for a Public Health Outcomes Framework*, currently out for consultation, sets out the priorities against which progress will be measured and – in the case of local Government – rewarded. Obesity rates for children and for adults are included in the list of proposed key outcome indicators. The White Paper *Healthy Lives, Healthy People: Our strategy for public health in England* also confirms continued commitment to key central interventions on obesity - for example, Change4Life and the National Child Measurement Programme. The Government will follow this with a document in the spring focusing specifically on its approach to tackling obesity.

OVERALL APPROACH TO ADDRESSING OBESITY

The Public Health White Paper *Health Lives, Healthy People: Our strategy for public health in England* set out the Government's framework for the new public health system and overall approach to dealing with key public health issues.

The overarching principles in the White Paper, which will underpin future efforts to tackle obesity are –

- *Individual responsibility*: achieving and maintaining a healthy weight is ultimately the responsibility of each individual. The Government wants to encourage individuals to take responsibility for their own health. It recognises that if individuals are to change their behaviour they need information and support. The Government also recognises that this calls for changes to the wider environment to make it easier for individuals to adopt a healthier diet and increase their physical activity levels
- *Addressing obesity is “everybody’s business”*: supporting individuals in changing their behaviour, including changing the wider environment, calls for concerted and committed action by a wide range of partners – local communities and local Government, charities and other non-governmental organisations, the NHS at national and local level, business, academia, and central Government
- *Local communities and local Government have a crucial role*: the prevalence of obesity, its characteristics, and the factors behind it vary subtly from community to community. Efforts to address obesity need to be tailored to particular local needs. Local Government has a unique part to play as it has influence over a range of determinants, including the education system and the environment

- A non-coercive role for central Government where possible: our starting point is that Government actions should be at the lower end of the Nuffield Council on Bioethics' "ladder" of intervention, with a focus on informing people and guiding and enabling healthier choices wherever possible. Our approach is therefore not to reduce choice except in special cases (for example, children where additional controls – for example school food standards – apply)
- A recognition that tackling obesity and reducing health inequalities go hand-in-hand: rates of overweight and obesity tend to be highest in the most deprived communities and parts of the population. Effort needs particularly to be focused on these parts of the population. The White Paper describes how the new health premium for local Government will take account of the challenges faced in disadvantaged areas.

The Government has indicated that it does not wish to adopt a top-down approach to tackling obesity. It wants people to know that they can change their lifestyle and in doing so they can make a difference to their health. The role of Government will be to bring together key partners to create an environment that supports and enables people to make informed, balanced choices that will enable them to live healthier lives.

AN EVIDENCE-BASED APPROACH: FOCUSING ON “WHAT WORKS”

The Government is determined to ensure that future action to address obesity – and other public health challenges – is based on the best possible evidence of what works. That means ensuring that Government-led interventions both draw on existing evidence and help to build the evidence base. It also means supporting the NHS, local Government and others in doing so. Evidence is central to the Government's approach and will continue to be -

- Supporting behaviour change through provision of information, underpinned by supportive changes in the environment and the provision of a range of services is based firmly in the analysis in the Foresight report, *Tackling Obesities: Future Choices* (2007).
- Existing interventions are based on evidence of what works and help build the evidence base. For example -
 - The Change4Life convenience stores project – this initiative, aimed at encouraging fruit and vegetable consumption by improving access (via new Change4Life signage and chiller cabinets) in shops in deprived communities, was piloted in the North East. An evaluation of the pilot stores indicated an overall increase of fruit and vegetable sales by 47%. This has led to a wider roll-out of the programme. By November 2010 over 190 stores in five regions were selling fresh fruit and vegetables
 - Walk once a Week (WoW) – this is an incentive-based scheme which rewards primary school age children who walk to school. An evaluation of this scheme showed that 19% of children surveyed reported that they started walking to school because of WoW. Around 23% of children surveyed reported that they walk to school with a family member, which shows that WoW and walking to school doesn't just involve children, but also other members of their family. The Government has provided additional funding to expand WoW. Currently 390 schools are taking part in the scheme.

- The Government is continuing to invest in rigorous evaluation of interventions to build the evidence base. Examples include the Healthy Towns programme which has been designed to try and learn more about what works in creating healthier communities to ensure maximum learning. This programme includes both local and national evaluation. The Government will also be commissioning independent evaluation of the National Child Measurement Programme. This will include evaluating different approaches to sharing results with parents to gather evidence for best practice.
- The Government has put in place a strong foundation of data and analysis to inform local prioritisation and ensure interventions are relevant to the target population through the National Obesity Observatory's (NOO) work. NOO provides a single point of contact for wide-ranging authoritative information on data, evaluation and evidence relating to weight status and their causes in order to support policy. Steps have also been taken to encourage rigorous evaluation of local initiatives – for example through the standard evaluation framework (SEF) developed by the NOO. This is a tool to support high quality, consistent evaluation of weight management interventions in order to increase the evidence base.
- The Government is supporting dissemination of good practice through a “one-stop shop” – the Obesity Learning Centre (OLC) - which is an online resource for professionals who work on tackling obesity. The OLC allows people to share best practice, discuss issues with peers and access resources to keep up to date on developments in healthy weight and obesity.
- Alongside this the Government is investing in research to underpin practice. The Department of Health’s Policy Research Programme (PRP) provides the evidence base for policy development and evaluation of policy implementation in health and adult social care. The PRP spent a total of £34 million in 2009-10. In 2010, the National Institute for Health Research (NIHR) Public Health Research Programme and Health Technology Assessment Programme launched a joint obesity call. Projects are just being announced but anticipated spend is £8million. We recognise the need to develop further the evidence base and we will be establishing a new NIHR School for Public Health Research to increase the evidence base for effective public health practice. We have established a Policy Research Unit on Behaviour and Health. This will focus on behaviours such as diet and physical activity.
- Looking forward, the White Paper sets out the key part that data, evidence, evaluation and dissemination of good practice will play in future. Work is underway to develop these arrangements and to map the transition from current to future arrangements. The Department of Health has been in discussion with the National Institute for Health and Clinical Excellence (NICE) about its public health programme, including the provision of obesity guidance which will support practitioners and local authorities in their new role within the public health system.

THE FUTURE ROLE OF THE CENTRE IN RELATION TO OBESITY

As outlined above central Government is one partner among many but has distinctive, key roles in relation to health improvement in general and obesity in particular. These are –

Setting outcome measures and incentivising progress: we are currently consulting on proposals to include two indicators relating to obesity:

- i) The prevalence of healthy weight in 4-5 and 10-11 year olds (to be measured using the National Child Measurement Programme), and
- ii) the prevalence of healthy weight in adults, a new indicator whose measurement process is being developed.

As part of the ring-fenced grant to local authorities for health improvement there will be a health premium that both recognises deprivation and rewards good performance against outcome measures.

Developing and co-ordinating the “knowledge system”: local areas will in future be responsible for developing policies to tackle obesity. To ensure local initiatives are evidence-based we will strengthen the information and intelligence that is available to support public health. The Government will do this by:

- i) Creating an evidence function within Public Health England that is driven by local requirements, and responsive to local needs.
- ii) Drawing together functions currently distributed across bodies such as Public Health Observatories into Public Health England providing a streamlined approach to information and intelligence.

Working at national level with key partners: The Government will create a system to improve public health, by bringing together key partners – including business, non-government organisations and, other government departments. As part of our new approach the Government will consider what can be achieved through voluntary approaches. Through the Public Health Responsibility Deal the Government is working with the food industry to secure agreement on further reformulation of salt, and better information for consumers about food. Industry's pledges for action will be set out when the Responsibility Deal is launched.

Information / social marketing campaigns: The Government cannot compel people to adopt healthier lifestyles. However, the Government will work with a range of partners to provide individuals with information to help them change their behaviour, and provide incentives to make change easier. For example, in January we launched the Great Swapathon to help encourage people to adopt healthier lifestyles. Families were offered £50 of vouchers which included food vouchers, nutritional advice and discounted activities. The Government secured £250 million of partner funded vouchers to make lifestyle choices easier.

Going forward the Government is considering how the Change4Life programme can support families to sustain change by learning from experience and applying the latest in behavioural science.

A small number of things best done at the centre: The Government will continue several central programmes

- the National Child Measurement Programme so that local areas have information to inform planning and commissioning of local services.

Mr Oliver Letwin MP, Ms Anne Milton MP and Mr Norman Baker MP

- continue to help consumers make healthier choices through the Change4Life programme.
- over the coming months the Department will look at what we can learn from the Healthy Towns programme and how local areas can benefit from the insights, and how this learning forms part of the evidence-base for local action to be disseminated by Public Health England.

CONCLUSION

A key priority for this Government is to tackle the rising level of obesity. The Government has set out a radical new approach to transfer responsibility for public health to local areas. In future local authorities will be responsible for delivering improvements in public health, including tackling obesity.

The Government will maintain a key role in helping to create a system which will enable key partners who have an interest to come together. We will also provide information on existing evidence to support interventions to reduce obesity, and support delivery partners.

In the Public Health White Paper the Government committed to producing a follow-up document on obesity in the spring. Work is currently underway with a range of partners in developing this document which will set out how obesity will be tackled in the new public health and NHS systems, and the role of key partners. We want to ensure that key organisations are involved as we develop policy in this area.

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