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The Royal Society and the decline of magic

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Abstract

Whereas some have asserted that the early Royal Society actively sought to discredit magical beliefs, others have seen ideas of this kind as integral to the Society's 'nature' in its early years. This paper argues that, whatever the magical commitments of individual Fellows, the Society's corporate policy simply sidelined such pursuits. Yet, insofar as the result was that magic was excluded by default from the proper realm of scientific enquiry, this attitude was to prove paradoxically influential (although its roots have been retrospectively misconstrued to an extent that is significant in itself).

Introduction

Did the Royal Society in its early years play a part in the 'decline of magic'—a phrase that deliberately echoes the title of Keith Thomas's classic study *Religion and the decline of magic* (1971), which surveys witchcraft, astrology, magical healing, divination and allied beliefs, and considers the challenges that these faced in the late seventeenth and early eighteenth centuries?¹ On the Society's role in this connection, views have differed. It has sometimes been asserted, for instance by Sir Henry Lyons in his 1944 history of the Society, that the body significantly undermined belief in witchcraft and the like through its efforts to 'investigate critically this and other reputed supernatural manifestations'.² This might seem to be borne out by Thomas Sprat's famous *History of the Royal Society* (1667), which contains some scathing comments on magical practices, for instance regarding techniques that astrologers used 'to deceive the Ignorant', while Sprat's view of alchemy was: 'Their Writers involve them in such darkness; that I scarce know, which was the greatest task, to understand their meaning, or to effect it'.³

On the other hand, we are now aware that Sprat's History only imperfectly represents the corporate stance of the Society on whose behalf it was composed, and, after being subjected to some outspoken criticism, it was effectively withdrawn.⁴ Indeed, on this particular issue his book may have expressed almost the reverse of the truth, because, in a pair of articles published in 1976, K. Theodore Hoppen took a diametrically opposite view, arguing that the Society's membership in its early years was characterized by an overwhelming eclecticism, in which magical beliefs played a central role: indeed, he went so far as to assert that this represented the true 'nature' of the early Royal Society.⁵

In reconsidering this question, it is important to focus on the role of the Society as a corporate body. Although we have come to be suspicious of manufactured statements of the Society's policy such as Sprat's, it remains true that the Society as an institution represented more than the sum of its parts: it early acquired a corporate momentum that partook of the efforts of its individual members but transcended them in a manner that is significant in itself.⁶ What is more, we can study the Society's corporate life through the extraordinarily full records of its activities that survive, particularly in the form of its journal books, which allow us to eavesdrop on its proceedings in a manner that is almost unique for the period.⁷ We have an almost equally rich set of records documenting the Society's public role—especially the correspondence undertaken on the Society's behalf by its first secretary, Henry Oldenburg, and the publication stemming from this that he inaugurated in 1665, *Philosophical Transactions*.⁸ Through such means, the Society undoubtedly had an influential institutional presence. In part, this occurred through defining the proper method of doing science, a topic that has been the subject of much interest in recent years.⁹ But, although this has received less attention, the Society also played a key part in defining the boundaries of the studies that fell within the remit of natural philosophy—what is nowadays referred to as 'boundary work'.¹⁰ Arguably, the Society as an institution had a substantial influence on contemporaries' perception of just what science did or did not comprise.¹¹

This means that, in assessing the Society's role in relation to magic, it is on the Society's institutional activity

that we should focus. The question cannot be answered by reference to broader intellectual trends with which the Society was associated, and which to a greater or lesser extent it exemplified—the rise of the mechanical philosophy, for instance, or the role of Baconian empiricism—although these have often been seen as contributing in some way to changing attitudes towards magic:¹² these would only be relevant insofar as they were explicitly invoked by the Society in this connection. Equally important is the need to consider the Society as a corporate body. Insofar as specific Fellows may have had interests that they pursued apart from the Society but that did not appear in its proceedings, these should not form part of any assessment of the Society as a whole. Indeed, they may be significant for the disparity they reveal between the individual's private concerns and those of the institution, which will further help us to identify the distinctiveness of the position that the Society may have adopted in relation to magic and related topics.

This brings us to the findings adduced by Hoppen in his 1976 study, and their significance. Hoppen professed to illustrate the heterogeneity of the Society and the extent to which its Fellows were interested in magical and other topics that would at one time have seemed inappropriate in 'serious scientists' such as the body comprised. He did so by collecting evidence illustrating a fascination with magical or preternatural phenomena and a commitment to alchemy, astrology and other arcane pursuits on the part of many of the Society's early Fellows, including such luminaries as Robert Boyle and Isaac Newton as well as lesser figures such as John Aubrey, Thomas Henshaw and Robert Plot. Hoppen's terms of reference were slightly different from those used here, in that he was interested in all evidence of 'eclecticism' on the part of Fellows, which meant that he devoted as much attention to an interest in the monstrous and the bizarre as to an interest in the magical. Yet the two are appropriately separated, because attention to the prodigious in contrast to nature 'in its ordinary course' had been advocated by Bacon as a key part of natural history; it is hence rather different from overtly magical practices, of which Bacon was more wary.¹³ But even if we ignore such concerns and concentrate on more arcane ones, we still find evidence of interest in witchcraft and comparable phenomena, as well as an active engagement with pursuits such as astrology and alchemy, among many leading Fellows of the Society in its early years.

What needs to be stressed, however, is the extent to which these were the *private* interests of these Fellows, on which Hoppen was able to throw light by his extensive investigation of sources other than the records of the Society. At the meetings of the Society, and in articles in *Philosophical Transactions*, such matters come up tangentially, if at all. Perhaps the closest that the Society came to a systematic investigation of a phenomenon central to the magical preoccupations of the day was that of may-dew in 1664–65, as studied by Alan Taylor.¹⁴ Thereafter, we very occasionally encounter laboratory-based investigations relating to alchemy—an area in which the natural and the supernatural were notoriously intertwined—and there is also Boyle's 1676 paper in *Philosophical Transactions* on the incalcescence of mercury, although this was as unusual in its subject matter as in its format (it was set in Latin and English in parallel columns, a mode of presentation never otherwise used in the journal).¹⁵ What needs to be emphasized, however, is the sheer rarity of such excursions into the arcane in the Society's corporate

proceedings. Moreover, when it came to phenomena such as witchcraft or astrology, the Society's records are extraordinarily taciturn, as a few instances will illustrate.

Some examples

Such cases will also reinforce the importance of distinguishing between the activities of the Society as a corporate body and the wider activities of what might be called the Royal Society circle. One famous instance concerns the Irish 'stroker', Valentine Greatrakes, whose cures by laying his hands on diseased people caused a stir when he came to England in 1666. Initially, Greatrakes was based in the West Midlands and particularly at Ragley, where he attempted unsuccessfully to cure the migraine attacks of Lady Anne Conway, but he then moved to London, in the first instance at the command of the King, ministering to many in and around the metropolis. Indeed, at this point his activities were monitored by Robert Boyle, who kept a log of the healing sessions by Greatrakes that he observed between 6 and 16 April that year, and it was evidently at the behest of Boyle and other like-minded figures that from this point onwards Greatrakes began to keep detailed 'Testimonials' of the cures that he effected, which were subsequently to be published in the *Brief Account* of himself in the form of a letter to Boyle that he published later in 1666: this represented a novel way of recording phenomena of this kind, which could be seen as reflecting the Baconian ethos that was so important to the Royal Society (although, here again, broader trends should not be mistaken for specific institutional influence).¹⁶

Greatrakes's cures raised the issue of the nature of his powers—whether he performed Christ-like miracles, or whether a natural explanation of them could be given—and a pamphlet war ensued. This involved such figures as the controversialist Henry Stubbe, who, by dedicating his pamphlet to Boyle, impelled Boyle to give his own view on the matter, namely that he was 'not yet fully convinc'd that there is ... any thing that is purely supernaturall' about what Greatrakes did ('unlesse in the way wherein he was made to take notice of his Guift, & exercise it'), 'and therefore till the contrary doth appear, I hold it not unlawfull to endeavour to give a Phisicall Account of his Cures'.¹⁷ The episode has often been seen as closely involving the Royal Society. Indeed, the most recent commentator on it, Jane Shaw in her *Miracles in Enlightenment England* (2006) treats the position adopted by Boyle and others as essentially a 'Royal Society' one.¹⁸

It is certainly true that Stubbe appealed to the Society for arbitration on the subject, and at one point in his *Brief Account*, Greatrakes himself referred to 'those Honourable Gentlemen of *Gresham* Colledge, who were pleased to afford me the Honour of their Company at *Lincolns-Inn-Fields*, and elsewhere', although the identity of these figures and the nature of their role is unclear.¹⁹ But it is important to stress that, as a corporate body, the Royal Society was not involved in the episode at all. Greatrakes was never mentioned in the Society's minutes: during the spring of 1666, when interest in his cures was at its height, the Society's proceedings were entirely devoted to 'science', to Hooke's investigations of gravity and of the rotation of the planet Mars, to various investigations of the loadstone and its powers, or to discussion of the potential for

transfusing blood from one animal to another. Slightly more topical were discussions of the plague, from the outbreak of which London had only recently recovered, and there was also, of course, an admixture of more miscellaneous business, but of Greatrakes and his cures we hear nothing.²⁰ The nearest the Society came to taking an interest in the affair was the publication of an article entitled 'Some Observations Of the Effects of *Touch and Friction*' in *Philosophical Transactions* in May 1666. This was clearly inspired by the Greatrakes episode, but, that being the case, it is strangely opaque, failing actually to mention Greatrakes at all.²¹ In terms of its corporate role, as against the activities of individual members such as Boyle, it is important to stress that the Royal Society was almost entirely uninvolved in the affair.

A comparable example is provided by the witchcraft project of the divine, Joseph Glanvill, who made much of his credentials as 'Fellow of the Royal Society' in his demonological work, which went through various recensions from 1666 onwards, initially under the title *A Philosophical Endeavour Toward the Defence of the Being of Witches and Apparitions*. In it, he invoked the Society's methodological stance by arguing that what was crucial was the establishment of '*matters of fact*' that it was unreasonable to reject on the grounds that we cannot explain the phenomena involved: he thus invoked our nescience as to 'how the *Foetus* is form'd in the *Womb* [or] how a *Plant* springs from the *Earth*' to justify a similar open-mindedness towards the realm of spirits. In providing detailed narratives of witchcraft cases, he also professedly deployed the kind of approach used by Boyle and other members of the Royal Society, of not only invoking such 'matters of fact' but also appealing to the 'credit' of their 'Relators' to prove beyond doubt the reality of the Devil's activity in the world.²²

Glanvill even went so far as to suggest that the Royal Society might itself investigate witchcraft, calling on the Society to take up the study of such phenomena in a dedication to William, Viscount Brereton, in the 1668 edition of his *Philosophical Endeavour*, entitled *A Blow at Modern Sadducism*. Urging that 'the *SOCIETY* of which your Lordship is an illustrious Member, direct some of its *wary*, and *luciferous* enquiries towards the *World of Spirits*', Glanvill explained how

"we know not any thing of the world we live in, but by *experiment* and the *Phœnomena*; and there is the same way of *speculating immaterial* nature, by *extraordinary Events* and *Apparitions*, which possibly might be improved to *notices* not *contemptible*, were there a *Cautious*, and *Faithful History* made of those *certain* and *uncommon appearances*.²³"

In fact, however, the Society as a corporate body took not the slightest notice. It may be true, as Charles Webster has written, that 'individual initiative more than made up for the lack of formal commitment of the Society to this project', and certainly not only Glanvill and his mentor, Henry More, but also Robert Boyle and other Fellows were active in collecting material of this kind.²⁴ But this surely misses the point. What is significant is the fact that, corporately, the Society had no time for Glanvill's suggestion at all.

Insofar as the Society *did* take a corporate line on witchcraft, it was ironically to give its imprimatur to a

sceptical treatise, *The Displaying of Supposed Witchcraft* (1677), by the Yorkshire physician, John Webster. The minutes record that the manuscript of Webster's book, which was said to be dedicated to the Royal Society, was presented at a meeting on 4 March 1675, the author desiring 'that the Society would give their sense of it'; three Fellows, Sir William Petty, John Pell and Daniel Milles, were thereupon asked to report on it, although no more is heard of the matter. What we do know is that Webster (who was not himself a Fellow) had approached his Yorkshire contact, Martin Lister, to see whether the Society would license the book because it had been rejected by the ecclesiastical censors on the grounds not least that it 'attributed too much to naturall causes', and Lister seems to have been instrumental in arranging for it to be put before the Society. Yet it was perhaps more a case of slipping the book through when other censors had rejected it than representing any considered stance on the Society's part: as published, the book lacked the dedication to the Society said to have been present in the manuscript (instead, it was dedicated to five Yorkshire Justices of the Peace), and it is perhaps significant that no copy of the book is now to be found in the Society's library.²⁵

Later in the century, witchcraft and related phenomena were mentioned at the Society's meetings on just a couple of occasions. On 28 March 1688 a letter was read about a case of supposed bewitchment in Ireland, which stimulated reference to a comparable case. But the comment elicited by the initial instance was sceptical—'It was supposed that this might be carried on by confederacy as severall things of the like nature had upon examination been found to be'—and the exchange was rounded off by an anecdote from a further Fellow about a 'cheat' in medicine.²⁶ Then, in March 1691, a case was reported of a woman said to be possessed by the Devil, and an implicitly sceptical tone is apparent from the view that was expressed that the idea of possession worked on her 'fancy' and had a harmful effect on her health.²⁷ These were typical of the kind of miscellaneous reports with which the Society's minutes in these years are full, and they do not suggest that witchcraft was more than a minor preoccupation. It is perhaps revealing that the documents divulged on these occasions do not seem to have been registered in the Society's records, and neither were the matters pursued. Again, we see a position in which phenomena that Glanvill and others considered crucial and worthy of serious investigation were simply sidelined by the Society as a corporate body.

A third example concerns astrology, and especially the Society's relations with John Goad, headmaster of Merchant Taylors' School, and his attempt to reform the art by a meticulous study over many years of the relations between the weather and the movements of the planets, ultimately published in his *Astro-Meteorologia* of 1686. This was a highly Baconian project that was again in the spirit of the Royal Society, and in which the Society could easily have taken an interest if it had seen such topics as within its remit.²⁸ Certainly Goad circulated his monthly weather predictions to individual Fellows of the Society—Boyle in 1678 and perhaps over a longer period, and Elias Ashmole for more than a decade.²⁹ In addition, Goad's project was briefly discussed at a meeting of the Society on 16 January 1679, when the president, Sir Joseph Williamson,

“inquired, whether Dr Goad had perfected his theory of predicting the quarter and strength of the winds from astronomy. To which Sir Jonas Moore answered, that Mr Flamstead had examined several of Dr Goad's predictions, but had not found one of them true. But Mr Henshaw had examined them continually for about two years about a month since, and had found not above one of four false.³⁰”

That was it: the discussion started and ended there, and was never pursued. It is as if the Royal Society as a body did not want to get involved in such issues. Thereafter, a copy of Goad's book was presented to the Society by the then Secretary, Thomas Gale, on 5 May 1686, but no discussion ensued.³¹ There are complications about this matter. In particular, Flamstead's own attitudes—towards both astrology and Goad—were more ambivalent than the passage above implies, as I have shown in my study of his critique of astrology and the reasons why he never published it. There is also evidence for open-mindedness towards or support for astrology among various other Fellows.³² But what is significant is that, insofar as the Society as a corporate body could have associated itself with an empirical assessment of the validity of astrology in relation to the weather as represented by Goad's project, it failed to do so; it had even less association with other attempts to reform astrology along empirical, Baconian lines.³³

Astrology recurred in the Society's proceedings in 1697, when an anonymous correspondent wrote to the Society ‘containing some assertions of the said authors abilitys & designs to promote & perfect Astrology if he could procure some sutable incouragement and by this perfect Astrology to perfect Astronomy also’. Interestingly, the Society responded to this not with a doctrinaire dismissal but with the desire that he should produce proof of his ability by attempting some prediction.³⁴ Yet that is again as far as the matter went. If it suggests an ambivalence not dissimilar to that seen in the discussion of Goad, it also implies a lack of strong interest in the subject on the Society's part. Such matters were evidently seen as tangential to its remit, and figured in only a marginal way in its proceedings.

The Society's ‘policy’ and its rationale

Why was this so? Up to a point, it may have been due to the role of individuals, especially those central to the institutional life of the Society in its early years, at least two of whom seem to have been distinctly anti-magical in their attitudes. One was Henry Oldenburg, first secretary of the Society and inaugurator of *Philosophical Transactions*, whose attitudes as divulged in his assiduous correspondence did more than anything else to define the early Royal Society's official line. Oldenburg's comments in a letter to Boyle suggest that he might have been responsible for the Society's lack of corporate interest in Greatrakes, and in April 1669, when the virtuoso, Joshua Childrey, offered Oldenburg ‘the fullest, & most particular account of Sorcery ... that ever I met with’, Oldenburg noted of his reply: ‘said nothing of MS of Sorcery’.³⁵ This seems to have typified his attitude on such matters, and he was evidently also sceptical about astrology.³⁶ Indeed, it seems possible that correspondents to the Society from New England who were inclined to

supernaturalist interpretations of phenomena—like some of the commentators on Greatrakes—tended to write to like-minded Fellows such as Lord Brereton or Theodore Haak rather than to Oldenburg, although Oldenburg's growing monopoly over the Society's correspondence made this increasingly marginal.³⁷

The other central figure who was outspokenly anti-magical was the Society's Curator of Experiments and Cutlerian lecturer, Robert Hooke. In a lecture delivered before the Society in 1676 Hooke sarcastically conflated Henry More's 'spirit of nature' with capricious magic, and in a later one he claimed that the spiritual diaries of the sixteenth-century occultist John Dee must be written in code, because it was unthinkable that so perceptive a mathematician could have believed in intercourse with spirits. Equally revealing is a letter about alchemy from Hooke to the Somerset virtuoso, Andrew Pascall, an avowed devotee of such studies, in which, although pleading his 'dulnesse' and 'Ignorance in this matter' in an evident attempt to avoid hurting Pascall's feelings, Hooke made it clear that he thought the entire business a waste of time.³⁸ His comments on Goad's attempts to provide an astrological account of the weather are equally caustic: 'many other whims about the weather', he wrote in his diary.³⁹ Because Hooke dominated the business of the Society's meetings much as Oldenburg dominated its external relations, they might have been expected to be influential in such matters.

However, because both men were subordinate to the 'grandees' who actually directed the Society, particularly its honorary officers and Council members, this does not seem a sufficient explanation. Instead, we need to revert to the corporate identity of the Society and the way in which this actually operated, with a role being played by these and other active Fellows.⁴⁰ Here, various factors were arguably involved. One was the range of Fellows' opinions about magic in a private capacity, which has been illustrated by the work of Hoppen and others: in the light of this, one would simply not expect the kind of anti-magical party line that Sir Henry Lyons evidently took for granted in the passage quoted at the start of this paper (to the rationale of which we will return). In fact, what is likelier is a kind of stalemate, with the scepticism of Oldenburg and Hooke being balanced by ambivalence towards or enthusiasm for magic on the part of others.⁴¹ In such a situation there was clearly something to be said for avoiding the topic, on the grounds that it was one likely to lead to disagreement that a focus on 'safe' science would avoid.

A further, related complication was the extent to which magic may have had controversial overtones in connection with religious debates in the Restoration period, especially concerning sectarianism and 'atheism'. Although certain prominent early Fellows of the Society had been associated with the rejection of magical ideas as an adjunct of religious radicalism in the 1650s, by this time matters were complicated by the extent to which men such as Glanvill wanted to defend the reality of phenomena such as witchcraft as a defence against the 'atheism' that was seen as rampant.⁴² This, too, might have encouraged the Society to avoid such issues.

Equally important was a factor that I have invoked in relation to Robert Boyle's behaviour concerning magic, and particularly his decision not to publish the now lost second part of his 'Strange Reports', in which

various empirically substantiated supernatural phenomena were divulged. Boyle invoked as his reason for suppressing the work his concern about his 'reputation'—we know from contemporary sources that some at the time thought him credulous—and similar considerations may have affected the Royal Society as well.⁴³ Certainly there were those who were concerned about the Society's 'reputation'—such as the unidentified 'A.B.' in his commentary on the state of the Society in 1674, who saw this as the key to its obtaining the support it needed to be effective in its mission. As A.B.'s anxieties underline, it is easy in retrospect to forget how marginal and lacking in support the Society was in its early years, and the extent it therefore had to mind its p's and q's in relation to public opinion.⁴⁴

As far as magic was concerned, there was a particularly potent body of public opinion in terms of the fashionable discourse of the London intelligentsia, represented by the 'wits' of the play-houses and the coffee-houses. *They* seem to have been in the forefront in rejecting magic at this time, when more serious-minded figures such as the clerics and professionals who made up the Royal Society were more divided in their views. As the anonymous author of *The Character of a Coffee-House* (1673) put it of the 'town wit' who is there depicted: 'talk of witches, and you tickle him; speak of spirits, and he tells you, he knows none better than those of wine'.⁴⁵ This is also borne out by perhaps the most striking sceptical text from this era, John Wagstaffe's *The Question of Witchcraft Debated* (1669): indeed, partly as a result of such iconoclasm, this milieu was seen as in the forefront of the 'atheism' about which orthodox spokesmen such as Glanvill expressed such concern.⁴⁶ In this setting, the science of the Royal Society was already a joke, as witnessed by Thomas Shadwell's famous *The Virtuoso*, and—as Boyle found—public engagement with the realm of magic was simply an unnecessary hostage to fortune, as encouraging an impression of credulity to which his scientific concerns were less vulnerable. To suggest this may seem to privilege a part of the contemporary intellectual milieu that some would see as marginal, but arguably the critical and self-confident culture of the wits was as significant a modernizing impulse in the thought of the day as the science of the Royal Society. Moreover, the satire that emanated from such circles had undoubted potency. In attempting to defend the Society against the wits in his *History of the Royal Society*, Thomas Sprat tellingly described them as 'these terrible men', adding: 'I acknowledge that we ought to have a great dread of their power'.⁴⁷ Hence it seems only likely that, as with Boyle, one factor in the Society's avoidance of such topics may have been fear of the adverse effect that engagement with them would have on the Society's public image.

There may thus have been various, mainly negative, reasons for the early Royal Society's avoidance of such topics. But the effect was a cumulative and significant one, namely of marginalizing magical pursuits in relation to the study of natural philosophy of which the Society was the public champion. Individual Fellows might dabble in alchemy or astrology, or promote miraculous cures, or compile accounts of witchcraft; but they left such pursuits behind when they attended meetings of the Society. Hence, so far from investigating such phenomena and discrediting them, the Society simply avoided them. But it could be argued that this very avoidance was itself significant. Such demarcation was not inevitable—although it may seem so in

retrospect—yet boundary work of this kind *did* do much to define the proper subject matter of science and, in the case of magic, to lead to a reduction in the intellectual respectability of the pursuits that the Society thus sidelined, from which they arguably never recovered. If the Society had taken an open-minded interest in serious and empirically precise appraisals of astrology of the kind exemplified by John Goad and perhaps by their anonymous correspondent in 1697, such men might have become the Michel Gauquelins of their day; it might similarly have vindicated the therapeutics of Greatrakes. Yet the Society's attitude instead helped to relegate such investigations to the realm of pseudo-science, and there they have remained ever since.

Moreover, by the eighteenth century, this attitude had been institutionalized, as may be illustrated by a single example. This concerns second sight, the ability of certain individuals to foretell future events, a phenomenon found particularly in Scotland that had earlier fascinated Boyle as a strange power that was empirically verifiable but seemed above the forces of nature (this was to have been one of the themes of the suppressed part of 'Strange Reports'): the subject had also arisen at a meeting of the Royal Society in 1698, when a paper on it was read, stimulating one Fellow, William Bridgeman, to note a further instance.⁴⁸ However, when in the 1740s another Fellow, Henry Baker, became deeply interested in the topic, it is revealing that he made it clear to his Scottish correspondents on the subject was that this was a *private* concern on the part of himself and other Fellows 'in their private & separate Capacities', which could not 'be brought before us as a Society not coming within the Design of our Institution'.⁴⁹ By now, the piecemeal decisions of the late seventeenth century had resulted in an official line of demarcation. Even if not intentionally, by thus ostracizing it from science, the early Royal Society apparently did play a significant role in the decline of magic.

The Royal Society in eighteenth-century debates

Equally interesting is the fact that, in parallel with this, one sees the emergence of unsubstantiated claims for a more positive role on the part of the Society that are the likely source of assertions of the type made by Sir Henry Lyons. The context is the debate over witchcraft and related phenomena that took place in the early eighteenth century. Initially, there is evidence that people were perplexed as to where the Royal Society stood on such matters. Thus in a revealing exchange in Daniel Defoe's journal, *The Review*, in 1711 concerning the witchcraft controversy, an anonymous contributor (possibly an alter ego of Defoe himself) complained about the imprimatur granted by the Society to Webster's 1677 volume on the grounds that it attacked the beliefs of Glanvill, 'one of the same Society'. 'To what purpose is the *Imprimatur* of a Society to a Book', the author wrote, 'if it be not that such Books being approv'd by those Societies, as the best Judges of Matters relating to their own Professions, the Vulgar Readers may the better believe them?'⁵⁰

More significant is an exchange two years later between Anthony Collins, the Deist, and Richard Bentley, the conformist scholar and Master of Trinity College, Cambridge. By this time, the tradition of the

Restoration wits had been taken up by the Deists, and Collins was keen to assert that free-thinking had had a beneficial effect in reducing belief in witchcraft and the like, arguing in a passage in his notorious *Discourse of Free-thinking* (1713) that the Devil's 'Dominion and Power' were 'ever more or less extensive, as Free-Thinking is discourag'd or allow'd'.⁵¹ In his view of the link between free-thought and articulate scepticism, Collins was arguably correct, thus creating a dilemma for more orthodox thinkers in that the very fact that heterodox authors such as Collins were so open in their sadducism had the effect of tainting such views with overtones of potential 'atheism' and making them difficult to adopt.

Gradually, however, the orthodox came round to sharing the scepticism that the free-thinkers had pioneered and that they had previously rejected as dangerous, and it is interesting to find that a part in this process was played by a kind of myth of a positive role on the part of the Royal Society—as echoed by Lyons. This is seen in Bentley's response to the passage in Collins's book just cited, for he would have none of it. 'What then has lessen'd in *England* your stories of Sorceries?' he retorted. 'Not the *growing Sect* [of Free-thinkers] but the Growth of Philosophy and Medicine. No thanks to the Atheists, but to the Royal Society and College of Physicians; to the *Boyle's* and *Newton's*, the *Sydenham's* and *Ratcliff's*'.⁵² Clearly he was referring to a kind of 'spirit of the age', the post-*Principia* consensus in which he and his contemporaries gloried, because he would have been hard put to give chapter and verse for the sort of direct connection that he asserted, in the case either of the Royal Society, Boyle and Newton, or of the College of Physicians, Sydenham and Radcliffe.⁵³ But Bentley succeeded in providing a blustering, rhetorical reassurance of the establishmentarian pedigree for what might otherwise have seemed heterodox ideas, and it is revealing how often this passage has been quoted by historians of ideas of the period as evidence of the positive role for the Royal Society that has been questioned here.⁵⁴

Much the same is true of Francis Hutchinson and his *Historical Essay concerning Witchcraft* (1718), often acclaimed as a landmark in the history of scepticism about witchcraft. Notwithstanding the fact that David Wootton has recently acclaimed him as the first to apply modern probability theory to witchcraft, Hutchinson was in fact rather a timid thinker.⁵⁵ At the start of the peroration to his book, the jury-man who acts as an interlocutor in the dialogue with the clergyman who clearly represents Hutchinson refers to an earlier book entitled *The Impossibility of Witchcraft* (in fact, a reprint of John Wagstaffe's book of 1669), observing: 'I do not remember, that in any part of our *Dialogue* you have ventur'd so far: And therefore some will think that in several Parts you have been too cautious, and left Things too doubtful'. The clergyman's response was 'I had rather err on that Hand than the other ... There is something doubtful in all Subjects', and he was at pains to emphasize that his scepticism was about the evidence adduced in specific cases of witchcraft rather than about the reality of a diabolical realm as a whole.⁵⁶ Moreover, Hutchinson's book is throughout salted with allusions to more radical stances than that which he adopted and the extent to which even as moderate a position as his had in the past been inhibited by 'fear of loose People carrying the Notion too far the other way'.⁵⁷

Yet what is revealing is how Hutchinson, like Bentley, found it comforting to be able to enrol an august public body such as the Royal Society on his side. As Michael Winship has nicely put it, Hutchinson ‘rewrote Restoration intellectual history by crediting the decline of witchcraft to the influence of the Royal Society’.⁵⁸ In a slightly odd digression to his account of the notorious case of Jane Wenham, who was tried for witchcraft and acquitted in 1712, Hutchinson waxed enthusiastic about the Society and its role, giving a narrative of the foundation of the Society and comparable bodies, and adding: ‘Since that hath been founded, not only our Witchcrafts have been banish’d, but all Arts and Sciences have been greatly improv’d’.⁵⁹ Hutchinson also provided an example of ‘scientific’ discrediting of magical beliefs that he associated with such an institutional milieu, although it is revealing that he had to have recourse to an Italian rather than English example, in the form of Francesco Redi and the Accademia de Cimento.⁶⁰ Hutchinson too, therefore, was keen to propagate the Royal Society myth as part of his case, and in this he was wresting the Society’s authority away from the author whose book stimulated the publication of his own, *A Compleat History of Magick, Sorcery and Witchcraft* (1715) by Richard Boulton, whose work was very much in the tradition of Glanvill and More, and who could in fact claim closer links than Hutchinson with the milieu of the Royal Society (although he was never a Fellow), having previously published editions of Boyle.⁶¹

The making of a myth

Hutchinson’s paean of the Royal Society was almost certainly one of the principal sources of the assertion of the Royal Society’s significance for the decline of magic made by C. R. Weld in his *History of the Royal Society* of 1848, in the course of which Hutchinson’s *Historical Essay* is cited among other works. At the end of chapter 4 of his book, Weld gave an extended appraisal of the Society’s role in which he focused on precisely the kind of topics that I have itemized here—witchcraft, Greatrakes’s supposed cures and the like.⁶² He also referred to the curing of scrofula by the royal touch, noting that William Beckett, author of *A Free and Impartial Enquiry into the Antiquity and Efficacy of Touching for the King’s Evil* (1722), was described as FRS on the title page—although the book, which explains the touch in terms of the iatromechanical theories fashionable in the wake of the *Principia*, was not otherwise connected with the Society.⁶³ Although Weld acknowledged that some Fellows believed in phenomena of these kinds, he used this as evidence of the general prevalence of such beliefs at the time before continuing:

“It was a labour well worthy the men who met avowedly for the investigation and developement of truth, to inquire into these superstitions, and patiently and dispassionately to prosecute such experiments as should tend to eradicate them. It would indeed be difficult to over-estimate the great benefit that accrued to society by their destruction, and a lasting debt of gratitude is due to the Royal Society, for having been so essential an instrument in dispelling such fatal errors.”⁶⁴

Of course, as we have seen, this was precisely what did not happen. The Society did not inquire into these

phenomena and discredit them: it simply avoided them—even if, as I have argued, this very avoidance was influential in itself. But this did not stop Sir Henry Lyons from almost exactly echoing Weld's evaluation of the Society's early achievement in *his* history a century later, although with some embellishments. Lyons wrote:

“The object for which the Society was founded is defined in the Charter as being for ‘the improving Natural Knowledge by experiment’. The word ‘natural’ is here used as excluding all that is ‘supernatural’. Sprat speaks of ‘Experiments of natural things as not darkening our eyes, nor deceiving our minds, nor depraving our hearts’; and elsewhere he describes the Society as ‘following the great precept of the apostle, of trying all things, in order to separate superstition from truth’. Belief in witchcraft and divination as well as superstitions of all kinds were rife in the seventeenth century and instances, for which irrefutable evidence was claimed, were constantly being brought before the early meetings of the Society to be examined in order to see whether any reasonable explanation for them could be found. Sir Walter Scott, in his *Demonology*, records his conviction that the belief in witchcraft decreased materially after the Royal Society began to investigate critically this and other reputed supernatural manifestations.⁶⁵”

This passage, although based on Weld, deserves a detailed commentary in its own right. First, it is almost certainly not true that ‘natural’ was used in the Society's charter to exclude the ‘supernatural’: rather, it was meant to denote natural knowledge as against humane learning. Second, although Lyons and Weld were right to look to Sprat's *History* for an expression of anti-magical views, we have already seen that these are of questionable reliability as an index of the Society's actual policy (it is perhaps also worth noting that the quotations are slightly adapted, and the final phrase—about separating superstition from truth—is an embellishment that does not appear in the original).⁶⁶ The next sentence paraphrases and extrapolates from Weld, but it is worth pausing over Lyons's citation of Scott's *Letters on Demonology and Witchcraft* (1830), which Weld had also noted to similar effect.⁶⁷ In fact, Scott's words related to astrology, though he justified bringing this into a treatise on witchcraft on the grounds that the two were interconnected. Having given a critical account of William Lilly and other seventeenth-century astrologers, Scott went on:

“The erection of the Royal Society, dedicated to far different purposes than the pursuits of astrology, had a natural operation in bringing the latter into discredit; and although the credulity of the ignorant and uninformed continued to support some pretenders to that science, the name of Philomath assumed by these persons and their clients began to sink under ridicule and contempt.”

Once again we have a very generalized claim reminiscent of Bentley's and Hutchinson's, and it is ironic that this should have formed the basis of a canonical but unfounded claim concerning the early Royal Society's actual activities on the part of both Weld and Lyons. Yet what is important is that such accounts are simply untrue. As has been shown here, the Society did not perform investigations of this kind: as a corporate body, the Society simply ignored such studies. Yet we have also seen how such boundary work was significant in defining science and excluding magic from it.

Hence the early Royal Society had a rather paradoxical role in relation to magical beliefs. Through its negative institutional stance concerning magical phenomena, the Society had an important—if probably unwitting—definitional significance in this area. But what is curious is the permutation through which the Society's role then went, in the context in which orthodox thinkers began hesitantly to follow in the footsteps of the free-thinkers who had pioneered sceptical attitudes in the late seventeenth and early eighteenth centuries, having previously been inhibited from doing so by the heterodox affiliations of such scepticism. Ironically, it was a great consolation to men such as Bentley and Hutchinson to be able to invoke the institutional lead of the Royal Society, albeit on the shakiest of evidence. They thus founded a myth of the confrontation between the Society and such ideas that, through Weld and Lyons, has survived into our time.

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Footnotes

- ↵1 Keith Thomas, *Religion and the decline of magic: studies in popular beliefs in 16th- and 17th-century England* (Weidenfeld & Nicolson, London, 1971).
- ↵2 Sir Henry Lyons, *The Royal Society 1660–1940* (Cambridge University Press, 1944), p. 41.
- ↵3 Thomas Sprat, *The History of the Royal Society of London* (London, 1667), pp. 37–38 and 97. Cf. *ibid.*, pp. 340 and 362–365.
- ↵4 Michael Hunter, 'Latitudinarianism and the "ideology" of the early Royal Society: Thomas Sprat's *History of the Royal Society* reconsidered', in Michael Hunter, *Establishing the new science: the experience of the Royal Society*, pp. 45–71 (Boydell Press, Woodbridge, 1989), esp. pp. 63ff.
- ↵5 K. T. Hoppen, 'The nature of the early Royal Society, part 1', *Br. J. Hist. Sci.* **9**, 1–24 (1976); *idem*, 'The nature of the early Royal Society, part 2', *Br. J. Hist. Sci.* **9**, 243–273 (1976).
- ↵6 See Michael Hunter, 'Robert Boyle and the early Royal Society: a reciprocal exchange in the making of Baconian science', *Br. J. Hist. Sci.* **40**, 1–23 (2007), esp. pp. 13–14.
- ↵7 For a transcript of the journal books up to 1687, see Thomas Birch, *The History of the Royal Society of London* (4 vols) (London, 1756–57) (see also the Hooke Folio at

<http://webapps.qmul.ac.uk/cell/Hooke/Hooke.html>). After 1687 one is dependent on the Original and Copy Journal Books and Council Minutes preserved in manuscript at the Royal Society, the former two being hereinafter referred to as JBO and JBC.

- ↵8 See M. B. Hall, *Henry Oldenburg: shaping the Royal Society* (Oxford University Press, 2002); Michael Hunter, 'Promoting the new science: Henry Oldenburg and the Royal Society', *Hist. Sci.* **26**, 165–181 (1988), reprinted in Hunter, *Establishing the new science*, *op. cit.* (note 4), pp. 245–260.
- ↵9 Steven Shapin and Simon Schaffer, *Leviathan and the air-pump: Hobbes, Boyle and the experimental life* (Princeton University Press, 1985); Peter Dear, 'Totius in verba: rhetoric and authority in the early Royal Society', *Isis* **76**, 145–161 (1985), reprinted in Peter Dear (ed.), *The scientific enterprise in early modern Europe* (University of Chicago Press, 1997), pp. 255–272; W. T. Lynch, *Solomon's child: method in the early Royal Society of London* (Stanford University Press, 2001).
- ↵10 See T. F. Gieryn, 'Boundary-work and the demarcation of science from non-science: strains and interests in professional ideologies of scientists', *Am. Sociol. Rev.* **48**, 781–795 (1983); Barry Barnes, David Bloor and John Henry, *Scientific knowledge: a sociological analysis* (Athlone, London, 1996), ch. 6; John Henry, 'The fragmentation of Renaissance occultism and the decline of magic', *Hist. Sci.* **46**, 1–48 (2008), esp. p. 6.
- ↵11 See Michael Hunter, *Science and society in Restoration England* (Cambridge University Press, 1981), ch. 2, esp. p. 32. For further evidence of demarcation on the Society's part in its early years, see, for example, *ibid.*, p. 144; Hunter, *Establishing the new science*, *op. cit.* (note 4), pp. 56 and 312–314; Michael Hunter, 'The early Royal Society and the shape of knowledge', in Michael Hunter, *Science and the shape of orthodoxy* (Boydell Press, Woodbridge, 1995), pp. 169–179.
- ↵12 See, for instance, Michael Wasser, 'The mechanical world-view and the decline of witch beliefs in Scotland', in *Witchcraft and belief in early modern Scotland* (ed. Julian Goodare, Lauren Martin and Joyce Miller), pp. 206–226 (Palgrave Macmillan, Basingstoke, 2008). For a profound analysis of broader developments, see Stuart Clark, *Thinking with demons: the idea of witchcraft in early modern Europe* (Oxford University Press, 1997), ch. 19 and *passim*.
- ↵13 Francis Bacon, *The Instauration Magna, Part 2: Novum Organum and Associated Texts* (*The Oxford Francis Bacon*, vol. 11) (ed. Graham Rees and Maria Wakely) (Clarendon Press, Oxford, 2004), pp. 298–299, 454–455 and 458–459.
- ↵14 Alan Taylor, 'An episode with may-dew', *Hist. Sci.* **32**, 163–184 (1994).
- ↵15 Birch, *op. cit.* (note 7), vol. 2, pp. 97, 99, 105, 109 and 113; and vol. 3, p. 455; Michael Hunter, *Boyle: between God and science* (Yale University Press, London, 2009), pp. 149 and 179–180; L. M. Principe, *The aspiring adept: Robert Boyle and his alchemical quest* (Princeton University Press, 1998), pp. 155ff. and *passim*. Also worth noting here is the Society's brief interest in divining rods in 1663 (Birch, *op. cit.* (note 7), vol. 1, pp. 231–232 and 234), in the Glastonbury thorn in 1686 (*ibid.*, vol. 4, p. 483), in the repeal of the statute against multiplication of metals in 1689 (JBO, vol. 8, p. 268: transcribed from JBO, vol. 7, pp. 213–214, and commented on in Michael Hunter, *Robert Boyle 1627–91: scrupulosity and science* (Boydell Press, Woodbridge, 2000), pp. 112–113), and in Plot's alchemical projects in 1698 (JBO, vol. 10, p. 67). Note also its interest in second sight in 1698:

JBO, vol. 10, p. 88, and see below. See also Simon Schaffer, 'Godly men and mechanical philosophers: souls and spirits in Restoration natural philosophy', *Sci. Context* 1, 55–85 (1987), which explores comparable evidence of the way in which the Society's Fellows sought to illustrate the role of 'spirit' in laboratory conditions, although this is often frustratingly imprecise both about the phenomena involved and about the distinction between evidence deriving from the writings of the Fellows in question and what was divulged at the Society's meetings.

- ↵16 V. Greatrakes, *A Brief Account of Mr Valentine Greatrak's* (London, 1666), esp. pp. 43ff.; Hunter, *Boyle, between God and science, op. cit.* (note 15), pp. 149–152.
- ↵17 Michael Hunter, Antonio Clericuzio and Lawrence M. Principe (eds), *The correspondence of Robert Boyle* (6 vols) (Pickering & Chatto, London, 2001), vol. 3, pp. 93–107; quotation from p. 101.
- ↵18 Jane Shaw, *Miracles in Enlightenment England* (Yale University Press, London, 2006), ch. 4.
- ↵19 Henry Stubbe, *The Miraculous Conformist* (Oxford, 1666), p. 8; Greatrakes, *op. cit.* (note 16), p. 95.
- ↵20 Birch, *op. cit.* (note 7), vol. 2, pp. 65ff.
- ↵21 *Phil. Trans. R. Soc. Lond.* 1, 206–209 (1666). Only in 1699 did a paper explicitly on Greatrakes appear, in the form of a letter from Dublin communicated by Ralph Thoresby: *Phil. Trans. R. Soc. Lond.* 21, 332–334 (1699). There are copies of letters concerning Greatrakes from Lionel Becher dated 18 May 1665 and from Thomas Mall dated 28 July 1665 in Early Letters B.1.106 and M.1.36: these are evidently the items referred to in Hunter *et al.*, *op. cit.* (note 17), vol. 2, p. 522 (although this link is not there made). See also *ibid.*, p. 506n.
- ↵22 J. Glanvill, *Saducismus Triumphatus* (London, 1689), title page, pp. 72–73 and 334–335 and *passim*. This is the most complete text of the work, the 1689 edition of which is also conveniently continuously paginated.
- ↵23 J. Glanvill, *A Blow at Modern Sadducism* (London, 1668), p. 94 (this is not reprinted in the later editions).
- ↵24 Charles Webster, *From Paracelsus to Newton: magic and the making of modern science* (Cambridge University Press, 1982), p. 93 and ch. 4, *passim*.
- ↵25 See Birch, *op. cit.* (note 7), vol. 3, p. 192; Bodleian Library, Oxford, MS Lister 34, fos 145–146, 148 and 157; John Webster, *The Displaying of Supposed Witchcraft* (London, 1677), Epistle Dedicatory and *passim*; and Peter Elmer, *The library of Dr John Webster (Medical History supplement no. 6, 1986)*, p. 8.
- ↵26 JBO, vol. 8, pp. 196–197. For a full transcript from the version in JBC, vol. 7, pp. 100–101, see Hunter, *Scrupulosity and science, op. cit.* (note 15), p. 243.
- ↵27 Royal Society draft minutes 1689–96, MS 561, meeting of 11 March 1691. There is a problem with the records at this point, and the relevant passage does not appear in JBO, vol. 9, p. 33, or in JBC, vol. 8, pp. 46–47.
- ↵28 For an account, see Patrick Curry, *Prophecy and power: astrology in early Modern England*

(Polity Press, Cambridge, 1989), pp. 67–72.

- ↵29 Hunter *et al.*, *op. cit.* (note 17), vol. 4, p. 247, vol. 5, pp. 4–5, 95–96 and 376, and vol. 6, p. 392; Bodleian Library, Oxford, MS Ashmole 368.
- ↵30 Birch, *op. cit.* (note 7), vol. 3, pp. 454–455.
- ↵31 *Ibid.*, vol. 4, p. 481. The copy is still in the library.
- ↵32 See Michael Hunter, ‘Science and astrology in seventeenth-century England: an unpublished polemic by John Flamsteed’, in Michael Hunter, *Science and the shape of orthodoxy* (Boydell Press, Woodbridge, 1995), pp. 245–285, esp. pp. 249–251.
- ↵33 For these, see Curry, *op. cit.* (note 28), pp. 72ff. and ch. 3 *passim*, although Curry, like other commentators, is prone to reify the Society in this connection.
- ↵34 JBO, vol. 10, p. 14. Cf. *ibid.*, p. 15. The author in question was possibly Robert Godson, whose *Astrologia Reformata* (London, 1696) was dedicated to ‘the Most Illustrious Brotherhood of Wisdom, the Royal Philosophical Society of *London*’ (p. 1). See also JBO, vol. 9, p. 120 (3 May 1693): ‘There was addressed to the Society a printed Latin Letter asserting that the late Earthquakes in Sicily, and Jamaica were plainly indicated by the Rules of Astrology, and predicted by Dr Goad’.
- ↵35 Hunter *et al.*, *op. cit.* (note 17), vol. 2, p. 549; A. R. Hall and M. B. Hall (eds), *The correspondence of Henry Oldenburg* (13 vols) (University of Wisconsin Press, Madison, WI, 1965–86), vol. 5, pp. 490 and 497.
- ↵36 Hall and Hall, *op. cit.* (note 35), for example vol. 2, pp. 523 and 648. For recent study of a letter to Oldenburg with magical content see A. M. Roos, ‘“Magic coins” and “magic squares”: the discovery of astrological sigils in the Oldenburg Letters’, *Notes Rec. R. Soc.* **62**, 271–288 (2008), including p. 282 on Oldenburg’s probably negative attitude.
- ↵37 For letters addressed to Brereton and Haak see Birch, *op. cit.* (note 7), vol. 2, pp. 473–474; R. C. Winthrop (ed.), *Correspondence of Hartlib, Haak, Oldenburg and others of the Founders of the Royal Society with Governor Winthrop of Connecticut, 1661–72* (Press of John Wilson and Son, Boston, 1878), esp. pp. 45–46.
- ↵38 See Jim Bennett *et al.*, *London’s Leonardo: the life and work of Robert Hooke* (Oxford University Press, 2003), pp. 146–149 and 161, n. 104. For a rather different reading see John Henry, ‘Robert Hooke, the incongruous mechanist’, in *Robert Hooke: new studies* (ed. Michael Hunter and Simon Schaffer), pp. 149–180 (Boydell Press, Woodbridge, 1989), although it seems to me that what is significant is the extent to which Hooke ‘de-magicizes’ the natural magical concepts that he uses.
- ↵39 H. W. Robinson and W. Adams (eds), *The diary of Robert Hooke* (Taylor & Francis, London, 1935), p. 204. See also *ibid.*, p. 386.
- ↵40 For the concept of ‘grandees’ see John Collins’s letter to Newton of 19 July 1670 in H. W. Turnbull, J. F. Scott, A. R. Hall and Laura Tilling (eds), *The correspondence of Isaac Newton* (7 vols) (Cambridge University Press, 1959–77), vol. 1, p. 36, and Hunter, *Establishing the new science*, *op.*

cit. (note 4), pp. 322 and 336. For the Society's active nucleus and the way in which this evolved, see Michael Hunter, *The Royal Society and its Fellows 1660–1700: the morphology of an early scientific institution*, 2nd edn (BSHS Monograph Series, no. 4) (British Society for the History of Science, Oxford, 1994), pp. 33–34 and 130–131; for Council members and office holders, see *ibid.*, pp. 78–82.

- ↵41 Another sceptic was John Wallis: see his comments on a magical amulet in Bodleian MS Ashmole 1813, fo. 341v. For an ambivalent attitude to Greatrakes like Oldenburg's on the part of Sir Robert Moray, see Hall and Hall, *op. cit.* (note 35), vol. 2, p. 561. For contrasts in Fellows' magical beliefs, see Michael Hunter, *John Aubrey and the realm of learning* (Duckworth, London, 1975), pp. 140–142.
- ↵42 For the anti-magical stance of such members of the Oxford group (and later the Royal Society) as John Wilkins and Seth Ward, see A. G. Debus, *Science and education in the 17th century: the Webster–Ward debate* (Macdonald, London, 1970). The relationship between the position of John Webster in that debate and his stance in the 1670s further complicates matters: see the critique of T. H. Jobe, 'The Devil in Restoration science: the Glanvill–Webster witchcraft debate', *Isis* **72**, 343–356 (1981), in Elmer, *op. cit.* (note 25), pp. 9ff. On the fear of 'atheism' and its significance for science and for attitudes to magic, see Hunter, *Science and the shape of orthodoxy*, *op. cit.* (note 11), chs 12 and 14.
- ↵43 Hunter, *Scrupulosity and science*, *op. cit.* (note 15), ch. 10.
- ↵44 See Hunter, *Establishing the new science*, *op. cit.* (note 4), p. 229 and ch. 6, *passim*.
- ↵45 Quoted in Hunter, *Science and the shape of orthodoxy*, *op. cit.* (note 11), p. 290.
- ↵46 See *ibid.*, ch. 14, *passim*.
- ↵47 Sprat, *op. cit.* (note 3), p. 417.
- ↵48 Hunter, *Scrupulosity and science*, *op. cit.* (note 15), pp. 227–230; JBO, vol. 10, p. 88. The paper in question survives in Cl. P. 7 (1) 55, and there is a copy in the Society's original Register Book, vol. 7, pp. 241–242.
- ↵49 Hunter, *Scrupulosity and science*, *op. cit.* (note 15), p. 244. For a critical attitude on the part of the Society to overtly supernaturalist material from New England similar to that of the late seventeenth century (see above), see the abstract of the letters sent by Cotton Mather published in *Philosophical Transactions*, from which certain sections were omitted on the grounds that they 'relate little to Natural Philosophy' (these dealt with people dreaming of substances which cured them and with visitations by the dead): Early Letters M.2.26, 30 and 34, and *Phil. Trans. R. Soc. Lond.* **29**, 62–71 (1714–16), at pp. 65 and 67. See also G. L. Kittredge, 'Cotton Mather's scientific communications to the Royal Society', *Proc. Am. Antiquarian Soc.* N.S. **26**, 18–57 (1916), and Michael Winship, *Seers of God: Puritan providentialism in the Restoration and early Enlightenment* (Johns Hopkins University Press, Baltimore, MD, 1996), chs 5 and 7 (although neither mentions this censorship).
- ↵50 Quoted in Ian Bostridge, *Witchcraft and its transformations c. 1650–c. 1750* (Oxford Historical Monographs, Oxford, 1997), p. 126.

- ↵51 Anthony Collins, *A Discourse of Free-thinking* (London, 1713), p. 27.
- ↵52 Phileleutherus Lipsiensis [Richard Bentley], *Remarks Upon a late Discourse of Free-thinking* (London, 1713), p. 33.
- ↵53 For the Royal Society and Boyle, see above; for Newton's private (but not public) views, see F. A. Manuel, *Isaac Newton: historian* (Cambridge University Press, 1963), pp. 149–150. The ambivalence of the medical profession over witch beliefs in this period will be illustrated by Dr Peter Elmer in a forthcoming study. For Sydenham's support for Greatrakes's claims, see Hunter *et al.*, *op. cit.* (note 17), vol. 2, pp. 522 and 533–534, although his views on witchcraft are unclear; Radcliffe's are also elusive.
- ↵54 See Thomas, *op. cit.* (note 1), p. 579n.; Barbara Shapiro, *Probability and certainty in seventeenth-century England* (Princeton University Press, 1983), p. 220; Clark, *op. cit.* (note 12), pp. 295–296. Cf. Webster, *op. cit.* (note 24), p. 99; Jonathan Israel, *Radical Enlightenment: philosophy and the making of modernity 1650–1750* (Oxford University Press, 2001), p. 377.
- ↵55 David Wootton, 'Hutchinson, Francis', in *Encyclopaedia of witchcraft: the Western tradition* (4 vols) (ed. R. M. Golden), vol. 2, pp. 531–532 (ABC-CLIO, Santa Barbara, CA, 2006). For a more critical appraisal see Hunter, *Science and the shape of orthodoxy*, *op. cit.* (note 11), pp. 305–306.
- ↵56 F. Hutchinson, *An Historical Essay concerning Witchcraft*, 2nd edn (London, 1720), pp. 286–288.
- ↵57 *Ibid.*, sig. A6. Cf., for example, p. 190.
- ↵58 Winship, *op. cit.* (note 49), p. 131. Cf. Webster, *op. cit.* (note 24), p. 99.
- ↵59 Hutchinson, *op. cit.* (note 56), pp. 169–170.
- ↵60 *Ibid.*, pp. 179–181. The passage is cited by Hutchinson from the Latin edition of Redi's *Experimenta naturalia* (Amsterdam, 1675), pp. 23ff.; for the original Italian see *Esperienze intorno e diverse cose naturali* (Florence, 1671), pp. 18ff.
- ↵61 See Bostridge, *op. cit.* (note 50), pp. 95–97 and ch. 6; see also Andrew Sneddon, *Witchcraft and Whigs: the life of Bishop Francis Hutchinson 1660–1739* (Manchester University Press, 2008), ch. 5.
- ↵62 C. R. Weld, *The history of the Royal Society* (2 vols) (J. W. Parker, London, 1848), vol. 1, pp. 87ff. The reference to Hutchinson is on p. 88. See also *ibid.*, pp. 111–112 and 126.
- ↵63 *Ibid.*, pp. 89–90; William Beckett, *A Free and Impartial Enquiry into the Antiquity and Efficacy of Touching for the King's Evil* (London, 1722). On the king's evil see Marc Bloch, *The royal touch: sacred monarchy and scrofula in England and France* (transl. J. E. Anderson) (Routledge & Kegan Paul, London, 1973), and a forthcoming study by Stephen Brogan.
- ↵64 Weld, *op. cit.* (note 62), p. 93.
- ↵65 Lyons, *op. cit.* (note 2), p. 41.

- ↩66 See Sprat, *op. cit.* (note 3), pp. 347 and 371; in addition, the syntax of both phrases is altered. Lyons's source is Weld, *op. cit.* (note 62), vol. 1, p. 126, who quoted J. A. Paris's *Life of Sir Humphry Davy* (Henry Colburn and Richard Bentley, London, 1831), p. 371n., for the incorrect differentiation of 'natural' and 'supernatural'; Weld was also responsible for the alterations and embellishment to Sprat. However, Lyons added 'by experiment' to the initial quotation.
- ↩67 Walter Scott, *Letters on Demonology and Witchcraft* (John Murray, London, 1830), pp. 344ff., esp. pp. 349–350. Cf. Weld, *op. cit.* (note 62), p. 93n. (and Paris, *op. cit.* (note 66), p. 371n).

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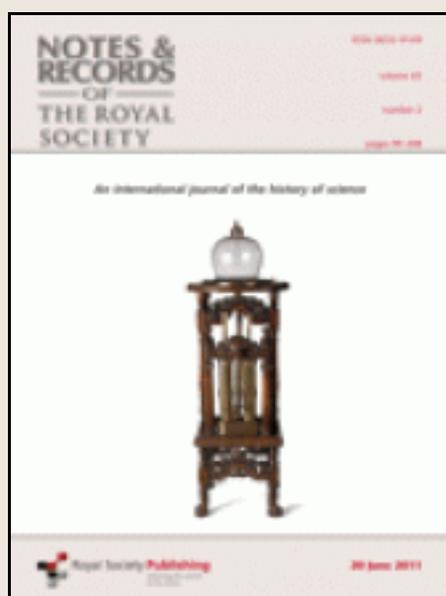
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