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## Margaret Cavendish and Joseph Glanvill: Science, Religion, and Witchcraft

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### **Abstract**

Many scholars point to the close association between early modern science and the rise of rational arguments in favour of the existence of witches. For some commentators, it is a poor reflection on science that its methods so easily lent themselves to the unjust persecution of innocent men and women. In this paper, I examine a debate about witches between a woman philosopher, Margaret Cavendish (1623-73), and a fellow of the Royal Society, Joseph Glanvill (1636-80). I argue that Cavendish is the voice of reason in this exchange—not because she supports the modern-day view that witches do not exist, but because she shows that Glanvill's arguments about witches betray his own scientific principles. Cavendish's responses to Glanvill suggest that, when applied consistently, the principles of early modern science could in fact promote a healthy scepticism toward the existence of witches.

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## Abstract

Many scholars point to the close association between early modern science and the rise of rational arguments in favour of the existence of witches. For some commentators, it is a poor reflection on science that its methods so easily lent themselves to the unjust persecution of innocent men and women. In this paper, I examine a debate about witches between a woman philosopher, Margaret Cavendish (1623-73), and a fellow of the Royal Society, Joseph Glanvill (1636-80). I argue that Cavendish is the voice of reason in this exchange, not because she supports the modern-day view that witches do not exist, but because she shows that Glanvill's arguments about witches betray his own scientific principles. Cavendish's responses to Glanvill suggest that, when applied consistently, the principles of early modern science could in fact promote a healthy scepticism toward the existence of witches.

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## 1. Introduction

In 1667, Margaret Cavendish, the Duchess of Newcastle (1623-73), was engaged in a correspondence with the English philosopher-theologian and fellow of the Royal Society, Joseph Glanvill (1636-80). From this exchange, there are only seven surviving letters, and all of them are from Glanvill to Cavendish.<sup>1</sup> On first reading, and in the absence of

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<sup>1</sup> These letters are in Cavendish (1678). In this collection, Glanvill's letters are arranged in the following order: (1) 22 December [no year], p. 85; (2) [undated], pp. 98-100; (3) 13 October [no year], pp. 102-3; (3) 25 August [no year], pp. 104-5; (4) 13 October 1667, pp. 123-7; (5) 22 April [no year], pp. 135-6; and 8 July [no year], pp. 137-42. But based on internal evidence, the most likely chronology is: (1) 22 April [1667], pp. 135-6; (2) 8 July [1667], pp. 137-42; (3) 25 August [1667], pp. 104-5; (4) 13 October [possibly 1667], pp. 102-3; (5) 13 October 1667, pp. 123-7; (6) 22 December [1667], p. 85; (7) [undated, probably early 1668], pp. 98-100. For a brief overview of the correspondence, see Whitaker (2002), pp. 316-19. Glanvill includes *verbatim* passages from his 8 July letter to Cavendish in Glanvill (1668a), pp. 95-7, obliquely alluding to Cavendish as 'a person of the highest honour' (p. 95). These passages also appear in subsequent editions of the work, Glanvill (1668b) and Glanvill (1681). Though both the *Philosophical Endeavour* and *Blow at Modern Sadducism* have 1668 on their title-pages, they seem to have been

Cavendish's responses, we might think that this correspondence was a happy meeting of minds. In his opening letter, dated 22 April 1667, Glanvill tells Cavendish that she has 'convinced the World, by a great instance, that Women may be Philosophers, and, to a Degree fit for the ambitious emulation of the most improved Masculine Spirits'.<sup>2</sup> He praises her published writings as 'ingenious', and describes them as 'singular Composures to all which the World is obliged'.<sup>3</sup> Later in the correspondence, he repeats these compliments, requesting copies of 'those Ingenious Works, by which your Grace doth so much outshine your Sex, and many, that would be thought the greatest Wits in ours'.<sup>4</sup> Other comments suggest that they carried out a friendly exchange of views on topics such as the nature of God, the creation of souls, the existence of witches, and the Platonist doctrine of the World Soul. Cavendish politely excuses Glanvill for taking 'the liberty of Arguings', and Glanvill himself encourages 'the largest freedom of Discourse and Inquiry' in their letters. In the spirit of his first work, *The Vanity of Dogmatizing* (1661), Glanvill assures Cavendish that the 'free and ingenious exchange of the Reasons of our particular sentiments' is the best method of discovering truth and improving knowledge.<sup>5</sup> In short, all of this is what one would expect from the lowly rector of the Abbey Church at Bath in correspondence with a woman of the social standing of Margaret Cavendish, second wife of William, Duke of Newcastle.<sup>6</sup> Glanvill's unctuous flattery, and the numerous gift copies that he sent to her, suggest that he may even have been soliciting her patronage.

But there is reason to think that, beneath the surface, their exchange was not so friendly. Although Glanvill and Cavendish did not know each other personally,<sup>7</sup> they

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available earlier. In his diary entry for 25 December 1667, Samuel Pepys records that his wife read to him 'the history of the Drummer, of Mr. Monpesson', a story that first appears in the *Blow*, an enlarged edition of the *Philosophical Endeavour*. See Pepys (1974), p. 589. The 8 July letter must therefore be dated earlier than 1668 for Glanvill to have included it in these works. I have calculated the rest of the chronology on the basis of the content of the letters.

<sup>2</sup> Glanvill to Cavendish, 22 April [1667]; in Cavendish (1678), p. 136.

<sup>3</sup> Glanvill to Cavendish, 22 April [1667]; in Cavendish (1678), p. 135.

<sup>4</sup> Glanvill to Cavendish, 13 October [1667]; in Cavendish (1678), p. 103. Glanvill requests copies for a library at Bath 'erected, chiefly for the diversion of Gentlemen that come hither upon the occasion of the Bath' (p. 103).

<sup>5</sup> Glanvill to Cavendish, 25 August [1667]; in Cavendish (1678), p. 105.

<sup>6</sup> For biographical details on Glanvill, see Greenslet (1900), Popkin (1954), Cope (1956), Willey (1986), Rogers (1998), and Burns (2002).

<sup>7</sup> In his first letter, Glanvill speaks of the '*Indecorum*' that there may be 'in the boldness of such unknown Addresses' (Cavendish 1678, p. 136). A few weeks later, on 30 May 1667, Cavendish made her famous

were certainly familiar with each other's writings. In his first letter, Glanvill says that he has been intending to respond to Cavendish's works for 'more than three years since',<sup>8</sup> a period that spans the publication of her *Philosophical Letters* (1664) and her *Observations upon Experimental Philosophy* (first published in 1666). In both these works, Cavendish is casually dismissive of Glanvill's Platonist-inspired views on the immaterial or supernatural world.<sup>9</sup> Though she does not mention Glanvill by name, she comments directly on passages in his *Lux Orientalis* (1662) and *Scepsis Scientifica* (1665), a later edition of the *Vanity of Dogmatizing*. The comments are unfavourable. If Glanvill had read Cavendish carefully, he would have known that she rejects his doctrine of the pre-existence of the soul, that she denies the existence of witches and demons, and that she thinks immaterial substances are just 'so many Hobgoblins to fright Children withal'.<sup>10</sup> She also challenges the usefulness of Glanvill's beloved Royal Society and the new experimental philosophy. In turn, Cavendish would have known that, in Glanvill's eyes, she was one of those Hobbesian 'Sadducees' who dare not deny the existence of God, but content themselves with denying the existence of spirits and witches instead. According to Cavendish's philosophy, the entire created world is composed of infinite, self-moving matter, and the idea of an immaterial being is simply unintelligible—views that Glanvill would describe as likely the products of wickedness and debauchery.<sup>11</sup> In short, like his contemporary Ralph Cudworth, Glanvill would have regarded Cavendish as little better than 'a bungling *Well-wisher*' to atheism.<sup>12</sup>

In this paper, I propose to reconstruct the debate about witchcraft that took place in their correspondence, using Glanvill's letters, his published works, and Cavendish's philosophical writings as a guide. In his first letter, Glanvill presents to Cavendish 'a

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visit to the Royal Society at Arundel House, where she witnessed experiments by the great natural philosopher, Robert Boyle. But there is no reason to think that Glanvill was present on this occasion. For details, see Mintz (1952).

<sup>8</sup> Glanvill to Cavendish, 22 April [1667]; in Cavendish (1678), p. 135.

<sup>9</sup> See Cavendish (1664), pp. 230-1; and Cavendish (2001), pp. 215, 219-20. In the *Philosophical Letters*, a series of reflections addressed to an imaginary female correspondent, Cavendish comments on the philosophical views of great thinkers of her age, including Thomas Hobbes, Rene Descartes, Henry More, Jan Baptiste van Helmont, William Harvey, Galileo, Walter Charleton, Robert Boyle, the authors of the *Discourse of the Virtuosi in France*, and Glanvill himself. In *Observations upon Experimental Philosophy*, Cavendish narrows her focus to the experimental philosophers of the Royal Society, including Glanvill, Boyle, Robert Hooke, and Henry Power.

<sup>10</sup> Cavendish (1664), p. 187.

<sup>11</sup> Glanvill (1665), sig. a4<sup>v</sup>-b<sup>r</sup>.

Trifle of mine', which seems to have been a copy of his *Some Philosophical Considerations Touching the Being of Witches and Witchcraft* (1667). In this work, Glanvill challenges the view, popularised by Reginald Scot and Thomas Hobbes, that 'there is no such thing as a *Witch* or *Apparition*, but that these are the *creatures* of *Melancholy* and *Superstition*, foster'd by *ignorance* and *design*'.<sup>13</sup> By sending this work to Cavendish, Glanvill ignites a debate that was carried out at intervals throughout 1667 till early 1668, with Glanvill arguing in favour of the existence of witches and Cavendish against.

Nowadays, it is a popular view that the early modern witch-hunters, and those who defended the existence of witches, must have been caught up in irrational or absurd beliefs about the supernatural. Although Glanvill and his Cambridge colleague Henry More did not participate in the hysteria of the witch-hunts or the witch-trials, we might be tempted to dismiss their opinions as the products of superstition and religious ideology. But recent scholars challenge the popular perception of the early modern 'witchcraze'. Far from being hysterical or deluded, they argue, many witch-hunters and witch-believers presented scholarly arguments for their beliefs in accordance with the highest standards of scientific inquiry at the time.<sup>14</sup> On this view of history, it is not the case that the scientific revolution heralded the immediate demise of witchcraft belief and the rise of rational scepticism. On the contrary, many leading proponents of the Royal Society gave scientific credibility to belief in witches by presenting experiment-based arguments for their existence. Stuart Clark says that 'Glanvill and his Royal Society colleagues were interested in witchcraft because they were enthusiasts for the new philosophy, not despite this'.<sup>15</sup> For some scholars, this association between early modern science and witch-belief is unfortunate because it implicates scientists in the persecution and execution of innocent people; yet we like to think that being more 'scientific' or more 'rational'

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<sup>12</sup> Cudworth (1964), p. 137.

<sup>13</sup> Glanvill (1667), p. 2. On Glanvill's defence of belief in witches, see Prior (1932), Notestein (1965), Jobe (1981), and Coudert (1989).

<sup>14</sup> On the connections between demonology and science in this period, see Clark (1997), pp. 151-311.

<sup>15</sup> Clark (1997), p. 298.

implies being somehow ‘less ignorant, destructive, brutal, and oppressive’ toward others.<sup>16</sup>

In what follows, however, I maintain that Margaret Cavendish’s responses to Glanvill suggest a way in which we might rehabilitate the reputation of early modern science. I intend to show that it was the supposedly whimsical and muddle-headed duchess,<sup>17</sup> and not the cautious and sceptical Glanvill, who was the voice of scientific reason in their exchange. This is not just because Cavendish supports the conclusion that most scientists support today—the view that witches do not exist—but because her arguments point to the fact that Glanvill was practising bad science *by the light of his own principles*. While Glanvill strives to uphold the Royal Society’s inductivist approach in his arguments about witches, Cavendish’s writings highlight the way in which Glanvill betrays his own probabilist and anti-dogmatic programme; in her denial of witches and the supernatural, Cavendish exercises the very scientific prudence that Glanvill so passionately endorses in his works.

## 2. Background to the Glanvill-Cavendish exchange

The Glanvill-Cavendish debate on witchcraft begins when Glanvill answers some ‘particulars’ in Cavendish’s response to his gift copy of the *Philosophical Considerations*. First, Glanvill takes issue with Cavendish’s remark that his arguments in favour of witches are merely ‘*probable Arguments*’.<sup>18</sup> In itself, this suggestion should not have perturbed Glanvill—the ostensible project of his book on witches, after all, is to establish the mere probability of their existence. In this work, Glanvill affirms that in the search for the hidden causes of natural effects we must settle for hypotheses with a reasonable degree of probability rather than absolute certainty. As fallible human beings, our faculties of sense and reason are hopelessly weak and limited, and our hypotheses about nature can only ever have a provisional status: in future, the discovery of new empirical data could always render those hypotheses false or untenable. For this same reason, Glanvill adopts a strongly anti-dogmatic attitude in all his works. In his ‘Address

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<sup>16</sup> Green & Bigelow (1998). Green and Bigelow argue that the witch-hunters practice bad science because in their methods they fail ‘to embody the cognitive virtues that ... are constitutive of good science’ (p. 201).

<sup>17</sup> On Cavendish’s reputation for ‘madness’ and eccentricity, see Broad (2002), pp. 38-40.

to the Royal Society' at the start of *Scepsis Scientifica*, Glanvill challenges those dogmatists who boast 'Infallibility of Knowledge'.<sup>19</sup> Scepticism, or a cautious withholding of assent to propositions, is 'the only way to *Science*'.<sup>20</sup> In Glanvill's view, the only acceptable hypotheses are those that are based upon a thorough and painstaking investigation of empirical data. In one letter to Cavendish, Glanvill says that the purpose of 'natural researches' is 'to tie down the mind in Physical things, to consider Nature as it is, to lay a Foundation in sensible collections, and from thence to proceed to general Propositions, and Discourses'.<sup>21</sup> The scientific enterprise is thus an ongoing, collective project: 'the more experiments our reasons have to work on, by so much they are the more likely to be certain in their conclusions, and consequently more perfect in their actings'.<sup>22</sup> In another letter to Cavendish, Glanvill advocates an even greater circumspection, asserting 'that we have yet no certain Theory of Nature: And in good earnest, Madam, all that we can hope for, as yet, is but the History of things as they are, but to say how they are, to raise general *Axioms*, and to make *Hypotheses*, must, I think, be the happy priviledge of succeeding Ages'.<sup>23</sup>

In her own works, Cavendish shares Glanvill's anti-dogmatic and probabilistic approach to natural philosophy.<sup>24</sup> In the *Philosophical Letters*, she says that 'no particular Creature in Nature can have any exact or perfect knowledg of Natural things, and therefore opinions cannot be infallible truths, although they may seem probable; for how is it possible that a single finite Creature should know the numberless varieties and hidden actions of Nature'?<sup>25</sup> Like Glanvill, Cavendish advocates a lack of pride or conceit in one's opinions, and shows a commitment to finding the most probable theory

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<sup>18</sup> Glanvill to Cavendish, 8 July 1667; in Cavendish (1678), p. 137.

<sup>19</sup> Glanvill (1665), sig. [A4]<sup>r</sup>.

<sup>20</sup> Glanvill (1665), p. 56. On Glanvill's scepticism, see Popkin (1953), van Leeuwen (1970), and Talmor (1981).

<sup>21</sup> Glanvill to Cavendish, [undated, probably early 1668]; in Cavendish (1678), p. 99.

<sup>22</sup> Glanvill to Cavendish, [undated, probably early 1668]; in Cavendish (1678), p. 100. Here Glanvill echoes the views of Thomas Sprat, another apologist for the Royal Society, who argues that 'the True Philosophy must be first of all begun, on a scrupulous, and severe examination of particulars: from them, there may be some general Rules, with great caution drawn: But it must not rest there, nor is that the most difficult part of its course: It must advance those Principles, to the finding out of new effects, through all the varieties of Matter: and so both the courses must proceed orderly together; from experimenting to Demonstrating, and from demonstrating, to Experimenting again'; see Sprat (1667), p. 31.

<sup>23</sup> Glanvill to Cavendish, 13 October 1667; in Cavendish (1678), pp. 124-5.

<sup>24</sup> On Cavendish and probabilism, see Clucas (2003).

<sup>25</sup> Cavendish (1664), p. 246.

rather than holding dogmatically to one viewpoint. She opposes other philosophers ‘not out of a contradicting or wrangling nature’, but in order to find ‘truth, or at least the probability of truth, according to that proportion of sense and reason nature has bestowed upon me’.<sup>26</sup> She declares that ‘I love Reason so well, that whosoever can bring most rational and probable arguments, shall have my vote, although against my own opinion’.<sup>27</sup> Both Cavendish and Glanvill allow that some explanatory hypotheses have greater merit than others. In Glanvill’s writings, the new natural philosophers are favourably compared to the ‘peripateticks’ or Aristotelians, whose hypotheses about nature in terms of ‘substantial forms’ and ‘occult qualities’ are rejected as sterile and useless. By contrast, the Royal Society is praised for ‘improving the minds of Men in *solid and useful notices* of things, helping them to such *Theories* as may be serviceable to *common life*’.<sup>28</sup> Though Cavendish questions the usefulness of the new experimentalism in her *Observations*—especially the utility of microscopy—she generally endorses the Baconian ideal of science as useful and beneficial to human beings. In her *Philosophical Letters*, Cavendish asks that, if even our most probable hypotheses may be as far from truth as the least probable, then why should anyone trouble themselves with natural philosophy? Her answer is that

The undoubted truth in Natural Philosophy, is ... like the Philopher’s [*sic*] Stone in Chymistry, which has been sought for by many learned and ingenious Persons, and will be sought as long as the Art of Chymistry doth last; but although they cannot find the Philosophers Stone, yet by the help of this Art they have found out many rare things both for use and knowledg. The like in Natural Philosophy, although Natural Philosophers cannot find out the absolute truth of Nature, or Natures ground-works, or the hidden causes of natural effects; nevertheless they have found out many necessary and profitable Arts and Sciences, to benefit the life of man .... Probability is next to truth, and the search of a hidden cause finds out visible effects.<sup>29</sup>

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<sup>26</sup> Cavendish (2001), p. 9.

<sup>27</sup> Cavendish (1664), sigs. B1<sup>r-v</sup>.

<sup>28</sup> Glanvill (1665), sig. a2<sup>r</sup>.

<sup>29</sup> Cavendish (1664), p. 508.



For both Glanvill and Cavendish, a probabilistic hypothesis is acceptable in so far as it has plausible arguments to support it, and it is somehow useful or beneficial to everyday life.

Given these shared assumptions, it is curious that Glanvill takes issue with Cavendish's remarks about witches. In his *Philosophical Considerations*, Glanvill points out that 'in resolving *natural Phaenomena*, we can only assign the *probable causes*, shewing how things *may be*, not presuming how they *are*'.<sup>30</sup> Glanvill's numerous anecdotes about witch behaviour, and his explanations for that behaviour, have the modest aim of establishing the mere conceivability of witches. 'Many great *truths* are *strange* and *improbable*,' he says, 'till *custom* and *acquaintance* have reconciled them to our *fancies*'.<sup>31</sup> By explaining how the existence of witches is at least conceivable, and not altogether logically impossible, Glanvill intends to establish the conclusion that their existence is 'not improbable'. Yet, in his response to Cavendish, he says that 'whereas your Grace calls the Inducements to the belief of Witches, *probable Arguments*, I am apt, with submission, to think some of them to be as great demonstrations as matter of Fact can bear'.<sup>32</sup> Presumably, Glanvill interprets Cavendish as ascribing only a *low degree* of probability to the existence of witches. In the *Philosophical Letters*, Cavendish's position on immaterial spirits is much stronger. She says that 'relations of Dæmons, of the Genii, and of the Souls after the departure from humane Bodies' are more 'Poetical Fictions, then Rational Probabilities; containing more Fancy, then Truth and Reason'.<sup>33</sup> For Cavendish, on an epistemological continuum from improbable, to probable, to morally certain, the proposition that there are witches occupies the lowest position.<sup>34</sup> For Glanvill, however, 'tis the greater probability' that witches exist.<sup>35</sup>

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<sup>30</sup> Glanvill (1667), p. 13.

<sup>31</sup> Glanvill (1667), p. 19.

<sup>32</sup> Glanvill to Cavendish, 8 July 1667; in Cavendish (1678), p. 137.

<sup>33</sup> Cavendish (1664), pp. 216-7.

<sup>34</sup> Barbara Shapiro observes that in the seventeenth century knowledge came to be seen as a continuum: 'The lower reaches of this continuum were characterised as 'fiction', 'mere opinion', and 'conjecture'; its middle and high ranges as 'probable', 'highly probable'; and its apex as 'morally certain'; see Shapiro (1983), p. 4.

<sup>35</sup> Glanvill (1667), p. 10.

### 3. Arguments to the best explanation

At this point, though it is tempting to dismiss Glanvill's position off-hand as absurd or irrational, we should keep in mind that both Cavendish and Glanvill offer plausible arguments in favour of their conclusions. More specifically, both writers adopt the inductive style of argument typical of natural philosophy in seventeenth-century England. Glanvill and Cavendish construct (what are now known as) *inferences to the best explanation* for the phenomena commonly known as 'witchcraft'. The premises in their arguments are empirical descriptions of strange and bizarre occurrences that need to be explained, and their conclusions are put forward as the best explanations of those occurrences. As probabilists, each author allows that further evidence might be discovered that weakens their explanation or makes another hypothesis seem more likely.

Needless to say, Cavendish offers an alternative explanation for those occurrences allegedly caused by witches: she suggests that these events are brought about by extraordinary natural phenomena or by 'art' and deception. In her first letter (according to Glanvill), Cavendish says 'that Superstition and Ignorance of Causes make Men many times to impute *the Effects of Art, and Nature*, to Witchcraft and Diabolick Contract. And the Common People think God, or the Devil to be in every thing extraordinary'.<sup>36</sup> Cavendish expresses a similar opinion in her published works. In the *Philosophical Letters*, she says that it would be foolish 'to ascribe all the unusual effects in Nature to Immaterial Spirits; for Nature is so full of variety, that she can and doth present sometimes such figures to our exterior senses, as are not familiar to us'.<sup>37</sup> In a critique of the philosophy of the chemist Jan Baptiste van Helmont, she questions the veracity of a story about a witch who could 'make a Drum beat of it self'.<sup>38</sup> In the mid-1660s, Glanvill was partly responsible for spreading this story, popularly known as 'the Drummer of Tedworth', and he includes a detailed account in a later edition of his *Philosophical Considerations*, entitled *A Blow at Modern Sadducism* (1668).<sup>39</sup> In this case, a poltergeist haunts the house of the Mompesson family in the English town of Tidworth. The haunting begins in 1662 after John Mompesson, a local militia man, arrests a drummer-

<sup>36</sup> Glanvill to Cavendish, 8 July [1667]; in Cavendish (1678), pp. 139-40; my italics.

<sup>37</sup> Cavendish (1664), p. 228.

<sup>38</sup> Cavendish (1664), p. 299.

<sup>39</sup> For a full account of this story, see Hunter (2005).

vagrant, William Drury, who had been unlawfully requesting money from the locals. When Drury is imprisoned and his drum confiscated, the Mompesson family home is subsequently terrorised by repeated drumming, scratching, thumping, and other strange occurrences, for several months.

In 1663, Glanvill himself visited the Mompesson house in order to investigate reports of the phantom drummer. For half an hour, Glanvill was a first-hand witness to scratching noises in the family beds, strange dog-like panting noises, and the shaking of windows.<sup>40</sup> In his first response to Cavendish, Glanvill refers her to ‘a particular Story which is sufficiently famous, and of part of which I my self was a Witness’.<sup>41</sup> In this case, Glanvill assures her, he was not mistaken or the victim of some deceit. Many such stories, he says, are ‘no less than the evidence of the Senses, and Oaths of sober Attestors, and the critical inquiries of Sagacious, and suspitious Persons’.<sup>42</sup> Similarly, in his *Philosophical Considerations*, he says ‘We have the *attestations* of thousands of eye and ear-witnesses, and those not of the easily deceivable vulgar onely, but of wise and grave discerners, and that when no interest could oblige them to agree together in a common *Lie*’.<sup>43</sup> Though we might discover a few liars and impostors, it would be beyond the bounds of reason to think that *every* incident is the result of fraud or deceit, especially when they are witnessed by suspicious and unbiased persons. The best explanation is that these occurrences are not just the result of fraud and deception—they are extraordinary events brought about by supernatural agents.

But for Cavendish, the testimony of sober witnesses is not enough to establish rational belief in witches. Later in the correspondence, Cavendish complains that in his discourse on witchcraft, Glanvill ‘sets the perfection of the sense higher than that of Ratiocination’ or reason.<sup>44</sup> He insists that the empirical evidence establishes the behaviour of witches as a ‘matter of fact’.<sup>45</sup> But for Cavendish, the senses can be untrustworthy and deceptive. In her *Observations*, she affirms that ‘sense deludes more

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<sup>40</sup> Glanvill (1668b), pp. 132-4.

<sup>41</sup> Glanvill to Cavendish, 8 July [1667]; in Cavendish (1678), pp. 137-8.

<sup>42</sup> Glanvill to Cavendish, 8 July [1667]; in Cavendish (1678), pp. 137-8.

<sup>43</sup> Glanvill (1667), p. 5.

<sup>44</sup> Glanvill to Cavendish, [undated, probably early 1668]; in Cavendish (1678), p. 99.

<sup>45</sup> Glanvill (1667), p. 4.

than it gives true information'.<sup>46</sup> Not even wise men can always trust their senses, she says, because objects are not always 'truly presented according to their natural figure or shape', and the senses themselves become defective 'through age, sickness, or other accidents'.<sup>47</sup> In her *Philosophical Letters*, Cavendish points out that of course stories such as the drummer of Tedworth 'will amaze many grave and wise men, when they do not know the manner or way how they are done'.<sup>48</sup> But if we look closely, what appear to be the effects of supernatural beings will be explicable in terms of natural causes—just like the extraordinary acts of an ordinary magician or juggler. Cavendish says that

by reason we cannot assign any Natural cause for them, [we] are apt to ascribe their effects to the Devil; but that there should be any such devilish Witchcraft, which is made by Covenant and Agreement with the Devil, by whose power Men do enchaunt or bewitch other Creatures, I cannot readily believe. Certainly, I dare say, that many a good, old honest woman hath been condemned innocently, and suffered death wrongfully, by the sentence of some foolish and cruel Judges, merely upon this suspicion of Witchcraft, when as really there hath been no such thing; for many things are done by slights or juggling Arts, wherein neither the Devil nor Witches are Actors.<sup>49</sup>

If we cannot assign a natural cause for these occurrences, that is simply because we have not yet discovered one—and not because there is no natural explanation.

On this topic, Cavendish's opinion resembles that of the philosopher Thomas Hobbes, an occasional visitor to the Cavendish household in Paris in the late 1640s.<sup>50</sup> In her *Life of William, Duke of Newcastle* (1667), Cavendish tells us that she was privy to a discussion about witches between Hobbes and her husband.<sup>51</sup> In this conversation,

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<sup>46</sup> Cavendish (2001), p. 9.

<sup>47</sup> Cavendish (2001), p. 49.

<sup>48</sup> Cavendish (1664), p. 299.

<sup>49</sup> Cavendish (1664), p. 298.

<sup>50</sup> On the connections between Cavendish and Hobbes, see Rogers (1996), Hutton (1997), Battigelli (1998), James (1999), Broad (2002), Ankers (2003), and Sarasohn (2003).

<sup>51</sup> Cavendish (1667), pp. 144-5. Cavendish sends a copy of this work to Glanvill. In a letter to Cavendish, dated 25 August [1667], Glanvill thanks her for 'the excellent History you were pleased to order for me', and says that she has 'erected a lasting Monument to his [William Cavendish's] Virtue' (Cavendish 1678, p. 104).

Hobbes says that he would not have believed in the existence of witches except for the fact that many women offer up confessions. William responds with the opinion that these confessions are the result of ‘Erroneous Belief’, sometimes arising from dreams that are mistaken for reality.<sup>52</sup> In *Leviathan* (1651), Hobbes makes similar remarks, and attributes widespread belief in witches to ‘ignorance, stupidity, and superstition’.<sup>53</sup> On closer inspection, he says, we will find that what appear to be wondrous occurrences are often ‘wrought by ordinary means’.<sup>54</sup> Many seemingly miraculous acts are ‘easie tricks’ like that of a ‘Juggler by the handling of his goblets’.<sup>55</sup> In her correspondence with Glanvill, it is likely that Cavendish would have also pointed out that such occurrences are often ‘nothing but slights and jugling tricks’.<sup>56</sup>

Accordingly, in his response, Glanvill aims to dismiss the view that *all* the strange and bizarre phenomena known as witchcraft can be explained away by natural causes. He says

But yet, *Madam*, your Grace may please to consider, That there are things done by mean and despicable persons, transcending all the Arts of the most knowing and improv’d *Virtuosi*, and above all the Essays of known and ordinary Nature. So that we either must suppose that a sottish silly old Woman hath more knowledge of the intrigues of Art, and Nature, than the most exercised Artists, and Philosophers, or confess that those strange things they performe, are done by confaederacy with evil Spirits, who, no doubt, act those things by the ways and applications of Nature, though such as are to us unknown.<sup>57</sup>

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<sup>52</sup> Cavendish (1667), pp. 144-5.

<sup>53</sup> In *Leviathan*, Hobbes says that ‘From this ignorance of how to distinguish Dreams, and other strong Fancies, from Vision and Sense, did arise the greatest part of the Religion of the Gentiles in time past, that worshipped Satyres, Fawnes, Nymphs, and the like; and now adayes the opinion that rude people have of Fayries, Ghosts, and Goblins; and of the power of Witches. For as for Witches, I think not that their witchcraft is any reall power; but yet that they are justly punished, for the false beliefe they have, that they can do such mischief, joyned with their purpose to do it if they can’; see Hobbes (1996), p. 18.

<sup>54</sup> Hobbes (1996), p. 304.

<sup>55</sup> Hobbes (1996), p. 304.

<sup>56</sup> Cavendish (1664), p. 299.

<sup>57</sup> Glanvill to Cavendish, 8 July [1667]; in Cavendish (1678), pp. 139-40.

It is unrealistic, in other words, to suppose that an uneducated and dull-witted woman could have the art or intelligence to deceive so many people through ordinary means. The best explanation for their astonishing acts is that these women are the instruments of supernatural agents, such as demons or ‘evil Spirits’.

But although this explanation might have convinced Glanvill’s male colleagues,<sup>58</sup> it was hardly likely to appeal to Cavendish. Women, in her view, are not as silly as they look. In an early work, the *Philosophical and Physical Opinions* (1655), she challenges those who think it impossible that women ‘should have either learning or understanding, wit or judgement, as if we had not rational souls as well as men’.<sup>59</sup> Though a woman might not be highly educated, she can have a natural wit and intelligence. Along similar lines, in her *Philosophical Letters*, Cavendish takes issue with van Helmont’s opinion that women are more likely to be bewitched or enchanted than men: ‘I cannot but take exception,’ she says ‘in the behalf of our Sex.’ She drily observes that van Helmont has obviously never been in love, ‘or else he would have found, that Men have as well bewitching *Ideas*, as to Women’.<sup>60</sup> Again she attributes the phenomenon of ‘bewitching’ to natural causes—in this case, inordinate love, infatuation, or even madness.

At this point, then, the debate seems to amount to Glanvill’s willingness, on the one hand, and Cavendish’s reluctance, on the other, to assign supernatural causes to natural effects. On this basis alone, we might be tempted to conclude that Cavendish occupies the most reasonable position. But I think that that would be hasty. Cavendish and Glanvill’s opposing views about the existence of witches stem from certain background philosophical assumptions—assumptions that are equally tenuous and unproven, both then and now. In his second letter to Cavendish, Glanvill expresses his belief in a ‘Soul of the World, which possibly is the great *Archeus* that formes Plants, Animals, and other more curious *Phaenomena*’.<sup>61</sup> On this topic, Glanvill echoes the views of his Cambridge contemporary and fellow defender of belief in witches, Henry

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<sup>58</sup> Robert Boyle, Henry More, and Ralph Cudworth all defend belief in the existence of witches. But I should add that one woman philosopher, Anne Conway, was also a believer in witchcraft and a contributor to a later edition of Glanvill’s *Saducismus Triumphatus* (1726). For details, see Nicolson (1992).

<sup>59</sup> Cavendish (1655), sig. B2<sup>r</sup>.

<sup>60</sup> Cavendish (1664), pp. 243-4.

<sup>61</sup> Glanvill to Cavendish, 8 July [1667]; in Cavendish (1678), p. 140.

More.<sup>62</sup> In his *Immortality of the Soul* (1659), More argues in favour of the Platonic idea that there is a ‘spirit of nature’, or an immaterial principle of growth, organisation, and nutrition, infused throughout the material world. Glanvill gives his cautious support to this theory both in his published works and in his letters to Cavendish. In his *Lux Orientalis*, Glanvill affirms the existence of the ‘plastick faculties’ in human beings, ‘those faculties of the soul, whereby it moves and forms the body ... without sense and animadversion’.<sup>63</sup> Later in the correspondence with Cavendish, he says that although we cannot conceive exactly how such an immaterial substance could manage and order corporeal motions, we should not therefore deny its existence.<sup>64</sup> Glanvill’s arguments in favour of witches are closely connected to this theory that immaterial substances can be causally efficacious in the natural world. By contrast, in her *Philosophical Letters*, Cavendish asserts that ‘Matter stands in no need to have some Immaterial or Incorporeal substance to move, rule, guide and govern her, but she is able enough to do it all her self, by the free gift of the Omnipotent God.’<sup>65</sup> There is simply no need to posit the existence of immaterial substances, or the interference of God’s spiritual intermediaries, in order to account for the life, motion, and organisation of natural things. According to Cavendish’s natural philosophy, every particular creature is composed of a thorough blend of animate and inanimate matter. Every human being, animal, vegetable, mineral, and element has ‘Life and Soul, Sense and Reason’, and is thus capable of self-motion without the assistance of an immaterial substance. For Cavendish, in other words, even the most basic constitutive parts of nature have active mental properties, a theory known as panpsychism.

The debate between Glanvill and Cavendish, then, cannot be decided merely on the grounds that Glanvill permits recourse to supernatural explanations, whereas Cavendish permits natural explanations alone—on the grounds, that is, that Cavendish offers a ‘sensible’ materialist account of the phenomena, while Glanvill does not. In the early modern period, the primacy of purely materialist or physicalist approaches to the natural world had by no means been established. And similarly, from our modern viewpoint, it is not obvious that Cavendish’s panpsychist materialism is a *better*

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<sup>62</sup> On More and witchcraft, see Coudert (1989).

<sup>63</sup> Glanvill (1662), p. 131.

<sup>64</sup> Glanvill to Cavendish, 13 October 1667; in Cavendish (1678), pp. 123-4.

hypothesis than Glanvill's Platonist-inspired spiritualism. We might give Cavendish some credit for espousing a type of theory that has recently been revived in philosophy of mind.<sup>66</sup> But we should consider the fact that Cavendish's theory still permits the existence of *fairies*: 'As for Faires,' she says, 'I will not say, but there may be such Creatures in Nature, and have airy bodies, and be of a humane shape, and have humane actions'.<sup>67</sup> Generally speaking, neither theorist offers an unproblematic or uncontested account of 'the way the world is'. In my view, Cavendish is the voice of reason in this debate *not* because she constructs the more reasonable philosophy of nature—but rather because Glanvill's arguments about witches betray his own scientific principles, whereas Cavendish's do not. This point can best be demonstrated, not by comparing their philosophies of nature, but by comparing their different views about the relationship between philosophy and religion.

#### 4. Philosophy and religion

In all her writings, Cavendish supports Hobbes' view that philosophy and religion should be kept apart. In his *Elements of Philosophy*, Hobbes declares that the subject matter of philosophy excludes theology, because it is principally concerned with the generation of material bodies, and not the doctrine of an ingenerable and immaterial God.<sup>68</sup> In her *Philosophical Letters*, Cavendish says that 'some Philosophers striving to express their wit, obstruct reason; and drawing Divinity to prove Sense and Reason, weaken Faith so, as their mixed Divine Philosophy becomes mere Poetical Fictions, and Romancical expressions, making material Bodies, immaterial Spirits'.<sup>69</sup> She accepts the orthodox view that there is a God and immaterial spirits, but she does so through a leap of faith, and not on the basis of sense and reason. For her, the philosophical study of God's nature and purpose is pointless because God is incomprehensible to our limited minds. For this reason, Cavendish explicitly rejects Glanvill's arguments about immaterial souls. In letter no. 33 of the *Philosophical Letters*, following a detailed critique of Henry More's

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<sup>65</sup> Cavendish (1664), pp. 194-5.

<sup>66</sup> See, for example, Griffin (1998). Griffin argues in favour of a 'panexperientialist physicalism' against the arguments that panpsychism is absurd. Some philosophers also think that the later chapters of David Chalmers' *The Conscious Mind* have panpsychist overtones. See Chalmers (1996).

<sup>67</sup> Cavendish (1664), p. 227.

<sup>68</sup> Hobbes (1962), p. 10.

<sup>69</sup> Cavendish (1664), p. 12.



philosophy of witches, Cavendish gives her opinion on ‘the Book that treats of *the Pre-existence of Souls*, and the *Key that unlocks the Divine Providence*’.<sup>70</sup> She refers to Glanvill’s 1662 treatise on the creation of the soul, the full title of which is *Lux Orientalis, An Enquiry into the Opinion of the Eastern Sages, Concerning the Praeexistence of Souls. Being a Key to Unlock the Grand Mysteries of Providence, In Relation to Mans Sin and Misery*.<sup>71</sup> On Glanvill’s attempt to ‘unlock divine providence’, she says that ‘I am in a maze when I hear of such men, which pretend to know so much, as if they had plundered the Celestial Cabinet of the Omnipotent God’.<sup>72</sup>

Concerning *the Key of Divine Providence*, I believe God did never give or lend it to any man; for surely, God, who is infinitely Wise, would never trust so frail and foolish a Creature as Man, with it, to let him know his secret Counsels, Acts, and Decrees.<sup>73</sup>

We cannot know the essence of God either, because we have only a finite knowledge, whereas God’s attributes are infinite; and ‘how can there be a finite idea of an Infinite God’?<sup>74</sup> For similar reasons, Cavendish maintains that the question about the origins of the immaterial soul ‘belongs to Faith, and not to Reason’.<sup>75</sup> Commenting on Glanvill’s theory of pre-existence, she says that ‘The truth is, what is Immaterial, belongs not to a Natural knowledg or understanding, but is Supernatural, and goes beyond a natural reach or capacity’.<sup>76</sup> By definition, our natural faculties simply cannot conceive of something that goes above or beyond nature. To speak of the ‘progress of immaterial souls’ is therefore an improper or ‘Metaphorical expression’.<sup>77</sup>

By contrast, in a direct challenge to Hobbes, Glanvill maintains that philosophy can provide a firm foundation for theology. In his *Scepsis Scientifica*, Glanvill argues that

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<sup>70</sup> Cavendish (1664), p. 231.

<sup>71</sup> In this work, Glanvill embraces the philosophy of the Alexandrian theologian, Origen, in defence of the doctrine of the pre-existence of the soul. On Glanvill and pre-existence, see Lewis (forthcoming). I am very grateful to Dr Lewis for sending me an earlier draft of this paper.

<sup>72</sup> Cavendish (1664), p. 231.

<sup>73</sup> Cavendish (1664), p. 231.

<sup>74</sup> Cavendish (1664), p. 139.

<sup>75</sup> Cavendish (1664), p. 230.

<sup>76</sup> Cavendish (1664), pp. 230-1.

<sup>77</sup> Cavendish (1664), p. 230.

there is no incompatibility between the new mechanical philosophy and orthodox religion. Although Glanvill is a ‘seeker’ in natural philosophy, he ‘cannot believe that a sceptick in Philosophy must be one in Divinity’.<sup>78</sup> He distinguishes between Hobbesian mechanism, on the one hand, and the mechanical philosophy of the Royal Society, on the other.<sup>79</sup> While Hobbesian mechanism inevitably leads to atheism and irreligion, the Royal Society’s inquiries into matter and motion enable us to secure the foundations of religion against atheism.<sup>80</sup> This is because ‘the more we understand the *Laws of Matter and Motion*, the more we shall discern the *necessity* of a *wise* mind to *order* the blind and *insensible* Matter’.<sup>81</sup> Once we recognise that mere matter in motion could not be responsible for the ‘elegant and orderly fabrick’ of the universe, we must acknowledge the existence of God and his immaterial or plastic spirits in nature. Those Hobbesian thinkers who deny the existence of immaterial substances and bestow ‘unbounded prerogatives’ on matter are both impious and foolish.<sup>82</sup> They relegate God to the role of an aloof spectator in his creation, whilst all the while failing to see the clearest evidence of God’s guiding influence in the natural world.

In sum, Glanvill’s arguments in favour of witches form a vital part of a religiously-motivated programme: the witch anecdotes provide essential evidence of the existence of spiritual beings in nature. As he himself says in the *Philosophical Considerations*, when men deny the existence of witches

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<sup>78</sup> Glanvill (1661), p. 186.

<sup>79</sup> Glanvill (1665), sig. b<sup>v</sup>.

<sup>80</sup> Glanvill (1665), sig. a2<sup>r</sup>.

<sup>81</sup> Glanvill (1671), p. 24.

<sup>82</sup> Glanvill (1665), sig. b<sup>r</sup>. In the *Observations*, Cavendish responds directly to Glanvill’s accusations of atheism against materialists. She says

I perceive their supposition is built upon a false ground; for they are of opinion, that ‘the exploding of immaterial substances and the unbounded prerogative of matter, must needs infer atheism’: which whether it do not show a weaker head than those have that believe no immaterial substances in nature, rational men may judge: for by this it is evident, that they make immaterial substances to be gods, by reason they conclude, that he who believes no immaterial substance in nature, is an atheist: And thus by proving others atheists, they commit blasphemy themselves; for he that makes a God of a creature, sins as much, if not more than he who believes no God at all. And as for the unbounded prerogative of matter, I see no reason why men should exclaim against it; for why should immaterial substances have more prerogative than material? (Cavendish 2001, pp. 219-20)

Cavendish quotes from Glanvill (1665), sig. a3<sup>v</sup>-a4<sup>r</sup>. In her *Philosophical Letters*, Cavendish also challenges Glanvill’s view that sadducism and atheism go hand in hand. On the contrary, she says, Christians should be cautious in embracing belief in witches, ‘for if we should, we might at last, by avoiding to be Atheists, become Pagans, and so leap out of the Frying-pan into the Fire, as turning from Divine Faith to Poetical Fancy’ (Cavendish 1664, pp. 218-9).

We are beholden to them if they believe either *Angel* or *Spirit*, *Resurrection* of the *Body*, or *Immortality* of the *Souls*. These things hang together in a *Chain* of *connexion* ... So that the vitals of religion being so much interested [sic] in this subject, it will not be impertinent particularly to discourse it.<sup>83</sup>

By conquering sadducism, or the denial of immaterial spirits, witches, and demons, Glanvill saw himself as conquering atheism; in his view, one was simply a slippery slope to the other.

### 5. Assessing the arguments

These presuppositions about the relationship between philosophy and religion have a notable influence on Cavendish and Glanvill's arguments about witches. On the subject of witches, Cavendish clearly distinguishes between her religious and her philosophical views. In the *Philosophical Letters*, she says that on the basis of faith she believes in the 'witch of Endor', who is mentioned in the Bible, but she avers that 'If you desire my opinion concerning Witches ... I will tell you really, that in my sense and reason, I do not believe any'.<sup>84</sup> Like Hobbes, she maintains that the idea of immaterial or supernatural substances is simply inconceivable. She asks how we are supposed to 'conceive that which is not in nature to be found'?<sup>85</sup> Cavendish comments on van Helmont's view that witches might direct 'spiritual rays' at men and animals, in order to kill or maim them. She dismisses this theory, 'for men may talk as well of impossibilities, as of such things which are not composed of Natural Matter',<sup>86</sup> and she 'will never be able to conceive a substance abstracted from all Matter'.<sup>87</sup> Instead these strange events must be explained by natural means. Cavendish says that 'My Sense and Reason doth inform me, that there is Natural Witchcraft, as I may call it, which is Sympathy, Antipathy, Magnetisme, and the

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<sup>83</sup> Glanvill (1667), p. 4.

<sup>84</sup> Though Cavendish does not question the Scriptures, she says that it would be absurd to think that God would suffer the devil 'to have such a familiar conjunction, and make such contracts with Man, as to empower him to do mischief and hurt to others, or to foretell things to come, and the like' (Cavendish 1664, p. 227). In the correspondence with Glanvill, Cavendish also supports her stance against witches by citing the fact that '*they are not mentioned by Christ, and his Apostles*' (Glanvill to Cavendish, 8 July [1667]; in Cavendish 1678, pp. 138-9).

<sup>85</sup> Cavendish (1664), p. 446.

<sup>86</sup> Cavendish (1664), p. 300.

like, which are made by the sensitive and rational motions between several Creatures, as by Imagination, Fancy, Love, Aversion, and many the like'.<sup>88</sup> In her view, 'sympathy' and 'antipathy' are not immaterial principles, but rather by-products of the material or bodily passions. Some stories about 'witches' causing and curing diseases may be true, she suggests, but the 'cure, and the disease, are made by the rational and sensitive corporeal motions within the body, and not by Supernatural Magick, as Satanical Witchcraft, entering from without into the body by spiritual rays'.<sup>89</sup>

In his book, Glanvill challenges the Hobbesian view that immaterial spirits, such as witches and their familiars, are impossible to conceive. He points out that our 'narrow and contracted minds' can provide us with apprehensions of the way in which such creatures might act. But to show this conceivability, Glanvill describes the actions of witches and evil spirits in *natural* or *material* terms. First, he says, it is not unreasonable to think that the souls of witches travel through the air by leaving their earthly bodies behind and using airy 'vehicles' to meet with their confederate spirits.<sup>90</sup> These airy vehicles are made of a subtle kind of matter, and they 'cloathe' the witches' souls so that they might be physically transported to their rendezvous. Second, Glanvill says that it is not unreasonable to think that when a witch is being sucked by her familiar, 'the action infuseth some *poisonous ferment* into her, which gives her *imagination* and *spirits* a *magical tincture*, whereby they become *mischievously influential*'.<sup>91</sup> And finally, evil spirits might also influence witches by breathing 'vile vapours' into their bodies, tainting their '*bloud* and *spirits* with a *noxious quality*' and thus infecting their imaginations.<sup>92</sup> Evil spirits, in other words, might influence witches simply by poisoning them. In this way, according to Glanvill, 'we see it is not so desperate to form an apprehension of the manner of these odde performances; and though they are not done the way I have described, yet what I have said may help us to a conceit of the possibility'.<sup>93</sup>

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<sup>87</sup> Cavendish (1664), p. 300.

<sup>88</sup> Cavendish (1664), p. 298.

<sup>89</sup> Cavendish (1664), p. 302.

<sup>90</sup> Glanvill (1667), pp. 14-5.

<sup>91</sup> Glanvill (1667), p. 18.

<sup>92</sup> Glanvill (1667), p. 18.

<sup>93</sup> Glanvill (1667), pp. 18-19.

We are now in a position to see how and why Glanvill's views about witches fail to conform to his own rigorous standards of scientific inquiry. In *Scepsis Scientifica*, Glanvill says that 'our senses being scant and limited, and Natural operations subtil and various', those operations 'must needs transcend and out-run our faculties'.<sup>94</sup> Glanvill himself agrees that the observations that ground our inductive arguments are often inadequate and incomplete. On this basis, he advises the natural philosopher to avoid confidence in opinions, to be wary of assenting to positive hypotheses, and to refrain from making dogmatical statements. Glanvill vows to 'seek Truth in the Great Book of Nature; and in that search to proceed with wariness and circumspection without too much forwardness in establishing Maxims, and positive Doctrines'.<sup>95</sup> In his correspondence with Cavendish, he suggests that the best we can do is to collect facts based upon unbiased empirical observations and experiments, with the intention of building hypotheses at a later date upon secure foundations. But even then, our hypotheses will only ever be probably true—they could always turn out to be false.

Glanvill's arguments about witches fail to live up to these principles. In each subsequent edition of the *Philosophical Considerations*, he adds further anecdotes to support his arguments to the best explanation in favour of witches. Like a good inductivist, he recognises that the best hypotheses are those that are founded upon a large number of observations and experiments. By asserting that the existence of witches is merely probable, Glanvill also avoids being arrogant and dogmatic. Nevertheless, as we have seen, Glanvill's uncritical religious ideology is the driving force behind his scientific programme—and it is this dogma that inevitably compromises his conclusions. Though Glanvill professes to be wary and circumspect about making positive statements, when it comes to witches, he is quick to affirm the probability of their existence. In his *Philosophical Considerations*, he demonstrates that much witch behaviour can be explained in purely natural or material terms: they take flight simply by using material vehicles, and evil spirits infect their imaginations by applying poisonous vapours and ferments. In his attempts to show that supernatural beings are conceivable, Glanvill thus ends up proving the very thing he denies: that we can conceive of the actions of witches

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<sup>94</sup> Glanvill (1665), p. 51.

<sup>95</sup> Glanvill (1676), p. 44.

in natural or material terms alone. By the light of his own principles, he ought therefore to have stopped short of affirming the probable existence of immaterial or supernatural beings. What reason could there be to affirm the existence of witches and evil spirits, when we can adequately explain their actions in purely material terms? I think it is fair to say that religious motivations lead Glanvill to conclude that the existence of supernatural beings is likely, when there is simply no need to posit their existence at all. In the case of the drummer of Tedworth, this bias prevents him from carrying out a further search for causes—one that would inevitably have precluded any appeal to supernatural beings, since the case was purportedly a hoax. Glanvill rests content with an explanation that best fits his prior assumptions about the existence of supernatural beings in the natural world—assumptions that are borne of religious dogma, and not inductive argument.

By contrast, Cavendish does exercise a wariness and circumspection when it comes to affirming the existence of supernatural beings. Cavendish rejects supernatural explanations on the grounds of inconceivability, but also because of their lack of utility: we simply do not *need* to posit the existence of supernatural beings in order to explain the phenomena. On Henry More's theory of witches and spirits, she says that it would be a great folly

to ascribe all the unusual effects in Nature to Immaterial Spirits; for Nature is so full of variety, that she can and doth present sometimes such figures to our exterior senses, as are not familiar to us, so as *we need not to take our refuge to Immaterial Spirits*: ... if spirits cannot appear without bodies, the neerest way is to ascribe such unusual effects or apparitions, as happen sometimes, rather to matter that is already corporeal, and not to go so far as to draw Immaterial Spirits to Natural actions, and to make those Spirits take vehicles fit for their purposes.<sup>96</sup>

In this respect, Cavendish explanation for the strange and bizarre phenomena known as witchcraft is much simpler than Glanvill's hypothesis.<sup>97</sup> Her explanation in terms of

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<sup>96</sup> Cavendish (1664), p. 228.

<sup>97</sup> It might be objected that Cavendish offers a variety of explanations for witch behaviour (juggling, madness, fraud, and so on), whereas Glanvill offers a single unified explanation for all the strange and bizarre occurrences attributed to witches (the existence of certain individuals who are able to perform

natural causes does not multiply ontological entities beyond necessity. She says ‘why should we puzzle ourselves with a multiplicity of terms and distinctions, when there’s no need of them? ... If nature be material, as it cannot be proved otherwise, sense and reason are material also; and therefore we need not introduce an incorporeal mind or intellect’.<sup>98</sup> By refraining from affirming the probable existence of supernatural beings, Cavendish exercises a scientific caution that is lacking in Glanvill’s own discourse.

## 6. Concluding remarks

In his last letter to Cavendish, Glanvill says that

Since my receipt of yours grace’s ingenious Works, I have ... cast my Eyes again into them, and I am sorry they cannot dwell there, where I find so pleasing, and so instructive an entertainment. And though I must crave your Pardon for dissenting from your Grace’s Opinion in some things, I admire the quickness, and vigor of your Conceptions, in all: In which your Grace hath this peculiar among Authors that they are, in the strictest sense, your own, your Grace being indebted to nothing for them, but your own happy Wit, and Genius, a thing so uncommon even among the most celebrated Writers of our Sex, that it ought to be acknowledged with wonder in yours. And really, Madam, your Grace hath set us a pattern, that we ought to admire, but cannot imitate.<sup>99</sup>

Despite the hyperbole, and the ambiguity of praise, Glanvill was probably being sincere. It is easy to forget that Cavendish and Glanvill have much in common. Both oppose dogmatic opinions in natural philosophy, both present their own theories as probabilistic hypotheses rather than certainties, and both attack purely mechanistic accounts of natural

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supernatural acts through their confederacy with evil spirits). Scientists often regard one unified explanation as a boost for the probability of a theory. Here, however, I suggest that it is Cavendish who offers the single explanatory hypothesis—ordinary natural causes—rather than a mixture of supposedly supernatural and natural entities.

<sup>98</sup> Cavendish (2001), p. 272. In this work, Cavendish also touches on Glanvill’s notion of sense and reason remarking that ‘Those authors which confess, “that vulgar reason is no better than a more refined imagination; and both reason, fancy, and the senses, are influenced by the body’s temperament, and like the index of a clock, are moved by the inward springs and wheels of the corporeal machine”; seem in my opinion, to confirm, that natural sense and reason is corporeal’ (Cavendish 2001, p. 215). Cavendish quotes from Glanvill (1665), pp. 91-2.

phenomena. No doubt Glanvill did find Cavendish's works singular and 'entertaining'. But although Glanvill might have admired the originality of Cavendish's philosophy, he was not prepared to imitate it. On the essential points—the relationship between philosophy and religion, and the existence of witches and immaterial spirits—Glanvill radically dissents from Cavendish's opinions. This is because Cavendish is committed to the Hobbesian separation between religion and philosophy, while Glanvill is principally motivated by his religious beliefs, and his desire to reconcile the new mechanical philosophy with orthodox religion. For this reason, though Glanvill offers plausible inductive arguments in support of witches, he ultimately fails to live up to his own ideal of scientific prudence. In particular, as Cavendish's arguments show, Glanvill is quick to affirm the probable existence of supernatural beings, when there is simply no need to go beyond a natural explanation for 'witch' behaviour. In short, despite his pretensions to free philosophy and scientific caution, Glanvill's views were largely the result of uncritical prejudice. A comparison of Cavendish and Glanvill's arguments about witches thus helps us to defend early modern science against the imputation that its methods inevitably lent themselves to the unjust persecution of innocent men and women. Cavendish's responses to Glanvill show that, when applied consistently, the principles of early modern science could in fact promote a healthy scepticism toward the existence of witches.

## References

- Ankers, N. (2003). Paradigm and Politics: Hobbes and Cavendish Compared. In S. Clucas (Ed.), *A Princely Brave Woman: Essays on Margaret Cavendish, Duchess of Newcastle* (pp. 242-54). Aldershot: Ashgate.
- Battigelli, A. (1998). Political Thought/Political Action: Margaret Cavendish's Hobbesian Dilemma. In H. L. Smith (Ed.), *Women Writers and the Early Modern British Political Tradition* (pp. 40-55). Cambridge: Cambridge University Press.
- Broad, J. (2002). *Women Philosophers of the Seventeenth Century*. Cambridge: Cambridge University Press.

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<sup>99</sup> Glanvill to Cavendish, [undated, probably early 1668]; in Cavendish (1678), pp. 98-9.



- Burns, W. E. (2002). Joseph Glanvill. In P. B. Dematteis, & P. S. Fosl (Eds.), *British Philosophers, 1500-1799*. In *Dictionary of Literary Biography*, 252, 157-63.
- Cavendish, M. (1655). *The Philosophical and Physical Opinions, Written by her Excellency, the Lady Marchionesse of Newcastle*. London: J. Martin and J. Allestrye.
- Cavendish, M. (1664). *Philosophical Letters: Or, Modest Reflections Upon some Opinions in Natural Philosophy, Maintained By several Famous and Learned Authors of this Age, Expressed by way of Letters: By the Thrice Noble, Illustrious, and Excellent Princess, The Lady Marchioness of Newcastle*. London: privately published.
- Cavendish, M. (1667). *The Life of the Thrice Noble, High and Puissant Prince William Cavendishe*. London: A. Maxwell.
- Cavendish, M. (1678). *A Collection of Letters And Poems: Written by several Persons of Honour and Learning, Upon divers Important subjects, to the Late Duke and Dutchess of Newcastle*. London: Langly Curtis.
- Cavendish, M. (2001). *Observations upon Experimental Philosophy* (E. O'Neill, Ed.). Cambridge: Cambridge University Press. (First published 1666).
- Chalmers, D. J. (1996). *The Conscious Mind: In Search of a Fundamental Theory*. New York: Oxford University Press.
- Clark, S. (1997). *Thinking with Demons: The Idea of Witchcraft in Early Modern Europe*. Oxford: Clarendon Press.
- Clucas, S. (2003). Variation, Irregularity and Probabilism: Margaret Cavendish and Natural Philosophy as Rhetoric. In S. Clucas (Ed.), *A Princely Brave Woman: Essays on Margaret Cavendish, Duchess of Newcastle* (pp. 199-209). Aldershot: Ashgate.
- Cope, J. I. (1956). *Joseph Glanvill: Anglican Apologist*. St Louis: Washington University Studies.
- Coudert, A. (1989). Henry More and Witchcraft. In S. Hutton (Ed.), *Henry More (1614-1687) Tercentenary Studies* (pp. 115-36). Dordrecht: Kluwer.
- Cudworth, R. (1964). *The True Intellectual System of the Universe: The First Part; Wherein, All the Reason and Philosophy Of Atheism is Confuted; And Its*

- Impossibility Demonstrated*. Stuttgart-Bad Cannstatt: Friedrich Frommann Verlag. (First published 1678).
- Glanvill, J. (1661). *The Vanity of Dogmatizing: or Confidence in Opinions. Manifested in a Discourse of the Shortness and Uncertainty of our Knowledge, and Its Causes: with Some Reflexions on Peripateticism; and an Apology for Philosophy*. London: E.C. for Henry Eversden.
- Glanvill, J. (1662). *Lux Orientalis, or An Enquiry into the Opinion of the Eastern Sages, Concerning the Praeexistence of Souls. Being a Key to Unlock to Grand Mysteries of Providence, In Relation to Mans Sin and Misery*. London.
- Glanvill, J. (1665). *Scepisis Scientifica: or Confest Ignorance, the way to Science; In an Essay of the Vanity of Dogmatizing, and Confident Opinion. With a Reply to the Exceptions of the Learned Thomas Albius*. London: E. Cotes for Henry Eversden.
- Glanvill, J. (1667). *Some Philosophical Considerations Touching the Being of Witches and Witchcraft written in a letter to the much honour'd Robert Hunt, Esq. by J.G., a member of the Royal Society*. London: E. C. for James Collins.
- Glanvill, J. (1668a). *A Philosophical Endeavour In the Defence of the Being of Witches and Apparitions*. London: E. Cotes for James Collins.
- Glanvill, J. (1668b). *A Blow at Modern Sadducism in some Philosophical Considerations about Witchcraft*. London: E. Cotes for James Collins.
- Glanvill, J. (1671). *Philosophia Pia, or, A Discourse of the Religious Temper and Tendencies of the Experimental Philosophy which is profest by the Royal Society to which is annexed a recommendation and defence of reason in the affairs of religion*. London: J. Macock for James Collins.
- Glanvill, J. (1676). *Essays on Several Important Subjects in Philosophy and Religion by Joseph Glanvill*. London: J.D. for John Baker and Henry Mortlock.
- Glanvill, J. (1681). *Saducismus Triumphatus: or, Full and Plain Evidence Concerning Witches and Apparitions. In two Parts, the First treating of their Possibility, the Second of their Real Existence* (H. More, Ed.). London: J. Collins and S. Lownds.
- Green, K., & Bigelow, J. (1998). Does Science Persecute Women? The Case of the 16<sup>th</sup> and 17<sup>th</sup> Century Witch-hunts. *Philosophy*, 73, 195-217.

- Greenslet, F. (1900). *Joseph Glanvill: A Study in English Thought and Letters of the Seventeenth Century*. New York: Columbia University Press.
- Griffin, D. (1998). *Unsnarling the World-Knot: Consciousness, Freedom, and the Mind-Body Problem*. Berkeley: University of California Press.
- Hobbes, T. (1962). *Elements of Philosophy. The First Section, Concerning Body*, in *The English Works of Thomas Hobbes of Malmesbury* (W. Molesworth, Ed.). London: Scientia Aalen.
- Hobbes, T. (1996). *Leviathan* (R. Tuck, Ed.). Cambridge: Cambridge University Press.
- Hunter, M. (2005). New Light on the “Drummer of Tedworth”: Conflicting Narratives of Witchcraft in Restoration England. *Historical Research*, 78, 311-53.
- Hutton, S. (1997). In Dialogue with Thomas Hobbes: Margaret Cavendish’s Natural Philosophy. *Women’s Writing*, 4, 421-32.
- James, S. (1999). The Philosophical Innovations of Margaret Cavendish. *British Journal for the History of Philosophy*, 7, 219-244.
- Jobe, T. H. (1981). The Devil in Restoration Science: The Glanvill-Webster Witchcraft Debate. *Isis*, 72, 342-356.
- Lewis, R. (Forthcoming). Of Origenian Platonism: Joseph Glanvill on the Pre-Existence of Souls. *Huntington Library Quarterly*.
- Mintz, S. I. (1952). The Duchess of Newcastle’s Visit to the Royal Society. *The Journal of English and Germanic Philology*, 51, 168-76.
- Nicolson, M. H. (1992). *The Conway Letters: The Correspondence of Anne, Viscountess Conway, Henry More and Their Friends, 1642-1684* (S. Hutton, Ed.). Oxford: Clarendon Press.
- Notestein, W. (1965). *A History of Witchcraft in England from 1558 to 1718*. New York: Russell & Russell.
- Pepys, S. (1974). *The Diary of Samuel Pepys* (R. Latham, & W. Matthews, Eds.). London: Bell.
- Popkin, R. H. (1953). Joseph Glanvill: A Precursor to David Hume. *Journal of the History of Ideas*, 14, 292-303.
- Popkin, R. H. (1954). The Development of the Philosophical Reputation of Joseph Glanvill. *Journal of the History of Ideas*, 15, 305-311.

- Prior, M. E. (1932). Joseph Glanvill, Witchcraft, and Seventeenth-Century Science. *Modern Philology*, 30, 167-193.
- Rogers, J. (1996). *The Matter of Revolution: Science, Poetry and Politics in the Age of Milton*. Ithaca and London: Cornell University Press.
- Rogers, G. A. J. (1998). Glanvill, Joseph. In E. Craig (Ed.), *Routledge Encyclopedia of Philosophy* (Vol. IV, pp. 80-83). London and New York: Routledge.
- Sarasohn, L. T. (2003). *Leviathan and the Lady: Cavendish's Critique of Hobbes in the Philosophical Letters*. In L. Cottagnies, & N. Weitz (Eds.), *Authorial Conquests: Essays on Genre in the Writings of Margaret Cavendish* (pp. 40-58). London: Associated University Presses.
- Shapiro, B. (1983). *Probability and Certainty in Seventeenth-Century England: A Study of the Relationships between Natural Science, Religion, History, Law and Literature*. Princeton: Princeton University Press.
- Sprat, T. (1667). *The History of the Royal-Society of London, For the Improving of Natural Knowledge*. London: J. Martyn.
- Talmor, S. (1981). *Glanvill: The Uses and Abuses of Scepticism*. Oxford and New York: Pergamon Press.
- van Leeuwen, H. G. (1970). *The Problem of Certainty in English Thought 1630-1690*. The Hague: Martin Nijhoff.
- Whitaker, K. (2002). *Mad Madge: The Extraordinary Life of Margaret Cavendish, Duchess of Newcastle, the First Women to Live by Her Pen*. New York: Basic Books.
- Willey, B. (1986). *The Seventeenth-Century Background: Studies in the Thought of the Age in Relation to Poetry and Religion*. London: Ark Paperbacks.

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