



HAL
open science

The 'physical prophet' and the powers of the imagination.

Part II

Koen Vermeir

► **To cite this version:**

Koen Vermeir. The 'physical prophet' and the powers of the imagination. Part II. *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences*, 2005, 36 (1), pp.1-24. <10.1016/j.shpsc.2004.12.008>. <halshs-00641622>

HAL Id: halshs-00641622

<https://shs.hal.science/halshs-00641622v1>

Submitted on 16 Nov 2011

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



HAL Authorization

Vermeir, Koen. 2005. "The 'physical prophet' and the powers of the imagination. Part II: a case-study on dowsing and the naturalisation of the moral, 1685-1710." *Studies in history and philosophy of biological and biomedical sciences* 36 (1): 1-24.

The 'Physical Prophet' and the Powers of the Imagination
Part II
A case-study on dowsing and the naturalisation of the moral
(1685-1710)

Abstract

Relying on the results of the first paper of this pair (Vermeir, 2004), which argued the importance of theories of the imagination in debates on divination, I unearth the role of the imagination in a discussion on dowsing. References to the imagination often stayed implicit because of its negative associations, but I show in detail how the imagination was used to negotiate between the material and the spiritual, and between the natural, the supernatural and the moral. Natural philosophers, theologians as well as moralists struggled for authority over divinatory phenomena. The debate evolved around the questions whether moral states could be naturalised and whether subtle material vapours could have moral qualities.

Keywords: Dowsing; Divination; Imagination; Spirit; Body; Physiology; Contagion; Magic; Occult; Vapours; Preternatural; Natural philosophy; Moral philosophy.

Lysette: Je ne demande aussi qu'une baguette, mais
une baguette qu'il faut faire passer pour avoir
des proprietes extraordinaires, comme de
connoître les as-

Crispin: Les assassins & les meurtriers

Lysette: C'est justement cela. De faire trouver les tr...

Crispin: Les tresoirs.

Lysette: Les sour...

Crispin: Les sources d'eau.

Lysette: Tu l'as dit.

Bordelon, La Baguette

(1694)

Introduction

One day in 1688, Jaques Aymar, a Dauphiné peasant, went out to search for water with his divining-rod, and when he felt his rod turn strongly, he was sure that he was standing over an underground spring. When he dug at the appointed spot, instead of water he found the remains of a woman. Indeed, a woman from the village had been missing for four months, and Aymar went to the house where she had once lived. He directed his rod in turn upon each person there, and it moved when he directed it to the widower. The man immediately fled, so proving his guilt, and as a consequence people bestowed Aymar with the capacity to trace murderers. It was not, however, until 1692, when he was called upon to solve a difficult case, that he acquired national fame. Thieves had broken into a wine shop in Lyon, stolen the money and killed the owners. When called for by the police, Aymar led them out of town and followed the trail of the murderers even on rivers. He pointed out all the places where the criminals had been and the things they had touched. After a long trip through many provinces, he found one of the murderers, who confessed his crime. Aymar set out again to follow the trail of the others, but this led him to the sea where they had boarded a ship, and so crossed the limits of the jurisdiction.

This remarkable feat sparked a huge controversy, which resembled other debates on divination in many respects, such as the debate on prophecy I described earlier (see Part I). It

kindled even a short hype or ‘enthusiasm’ in which suddenly diverse people claimed the ‘gift’ of dowsing. I will show that four causes (God, demons, hidden natural principles and human deceit) were invoked to explain the events, as in other cases of divination. I have argued that the imagination had a pivotal function in the debates on prophecy and divination in general (ibid.), and I will pursue this line of argument further in the present case-study. I will show that the imagination was a crucial element in the understanding of dowsing, notwithstanding the fact that its role was more concealed in the debates (partly due to the oppressive socio-political context in France). The powers of the imagination were a controversial issue and in making reference to this tradition, one would be vulnerable to ridicule and imputations. Yet I will show that it was continuously present at the background and could hardly be avoided.¹

In the debate on dowsing, the issue of morality (which was interconnected with the discussion on the imagination) came more to the fore. Divination was often used to find out moral qualities and natural magicians often claimed that this worked by purely natural means. The density of the human pneuma reflected man’s moral state and theurgy or purification techniques used material means for moral change. In the attempt then to naturalise parts of what most theologians saw as demonic magic (which included most of divination), it was to be expected that moral issues would enter natural philosophy.² I have shown (ibid., epilogue) that mental and moral qualities were sometimes supposed to be transported by purely material means. In the debate on prophecy, it was argued that the ‘true spirit of Christianity’, which is not the Holy Ghost but the true morality of a Christian³ as well as the different spirits of

¹ Setting the cases of prophecy and dowsing next to each other illustrates how the concept of the imagination was ‘repressed’ because of its negative associations. Many French natural philosophers endorsed the practice of dowsing and tried to legitimise it by giving natural explanations and avoiding the negative associations of the imagination. The naturalists in England were opposed to enthusiasts and had fewer qualms about using unorthodox theories of the imagination which calumniated the prophets.

² With ‘moral’ I refer to the distinction between good and evil, normally grounded in reference to God and the notion of sin. Some passions, ideas or deeds are then fundamentally evil, and the question here is how this is expressed in the natural order. An example could be Pinocchio, whose nose grows longer when he lies, which is a physical expression of the moral order. I do not mean to refer to the ideas that the natural order is morally good, that portents are moral signs, or that science has moral presuppositions or consequences.

Moral should be distinguished from spiritual. The moral normally included will and intention, contrary to the spiritual (e.g. in spiritual matter). The question in our case-studies is whether the moral could also be a quality of inanimate corpuscles.

³ ‘An inward habit or firm disposition, and frame of the Mind, Will, and Affections of every true Christian, that is made conform to the (...) Rules and Precepts of holy Living.’ Keith (1707), pp. 1-2.

diverse heresies could physically be transmitted. ‘Each heresie has its differing Spirit’, Keith (1707, p. 5) wrote, and the founder ‘inspires and infuses his spirit into them.’ Shaftesbury believed in a similar process, and society was plagued by the physical contagion of ‘ill as well as (...) good passions’ (Shaftesbury, 1999, p. 10). The body-politic then needed a treatment analogous to the body, yet these remedies could be social and moral instead of physical, which brought the discussion again on a moral plane.

There has been almost no attention in history and philosophy of science to these kinds of questions.⁴ Natural philosophy did not only have to define its boundaries with the divine, demonic or spiritual, but also with the moral, and theories of the imagination played a crucial role in this process. In this case-study, I will show in detail how the imagination was used (or dismissed) to negotiate between the natural and the supernatural as well as the moral. It will become clear that these different realms were inseparably entangled. Participants negotiated to what extent naturalisation was possible. Every party defended its authority to judge these phenomena, and these judgements reflected already their presuppositions on the distinctions between the natural, moral and supernatural. We will be able to identify different degrees of naturalisation, in which the acknowledging of moral issues is deciding.

The dowsing-case

The facts of Aymar’s accomplishments were recorded in legal documents and testified to by magistrates and other honourable men. Discussions and disputes, in which many leading intellectuals took interest,⁵ started in the 1693 and 1694 editions of the primary popular and scientific journals of the time, such as the Mercure Galant, the Journal des Sçavans, the Lettres Historiques and the Mercure Historique et Politique, and in many books and pamphlets. Experiments were performed to test Aymar’s abilities. The magistrates of Lyon had already performed some simple tests; they buried the murder weapon and some other tools, for instance, and asked Aymar to find them and to distinguish the murder weapon from the others. After the execution of the murderer several more trials were made and Aymar succeeded in many, even if they tried to trick him. In the tests performed by the prince de Condé and the Académie Royale des Sciences, however, Aymar failed at the trick questions,

⁴ There is a substantial literature on science and religion (e.g. Brooke (1993)), but this does not deal with the relation between the natural and the moral in the sense I explained above. See also note 2.

⁵ Such as Malebranche, Regis, Leibniz, Bayle and Fontenelle. Previously, Gassendi, Boyle and Locke had written on the rod.

performing far below the strained expectations of the witnesses.⁶ Yet the discussion continued and a consensus in public debate was not achieved.

Dowsing rods were commonly used in early modern Europe, and they had figured in several works on natural magic. The early history of the rod is unclear, because it overlaps with all kinds of magic rods.⁷ It was sometimes called ‘wishing-rod’ (wünschelrute), which refers to more general divining powers. It was also called the ‘mercurial rod’, probably because of its ability to find metals, but this term had also an important meaning in alchemy. Others referred to Mozes’ rod as a biblical example of a dowsing rod. Even at the end of the seventeenth century, one could play with these different meanings. The theologian Renaud, who reviewed the first publications on the Aymar case, jokingly tells us that the rod would not turn at him for this crime of ‘plagiarism’. ‘I say even more’, he wrote, ‘if the rod of Mercury, who is the God of the sciences as well as of the thieves, would turn at all the thefts unjustly committed in the republic of letters, it would be a perpetual movement, something one has not yet been able to find.’⁸

Besides an allusion to a mining-rod in a manuscript of 1430, the first unmistakable references occur in the early sixteenth century (Fig. 1). Luther included the use of the rod in a list of acts that break the first commandment; but it became only widely known when Agricola discussed it extensively in his De Re Metallica (1556). Here the rod was associated with magic and ‘the impure fountains of enchantment’.⁹ After this reference, many referred to it favourably or unfavourably.¹⁰ Some explanations assumed an innate affinity between vegetable and mineral things. Many drew an analogy between the divining rod and the loadstone, the epitome of an occult power, to elucidate this new phenomenon. Dowsing was drawn into the experimental program by Boyle, but he could not bring the matter to a satisfactory conclusion. At the same time, the rod was actually in use at several mines in Cornwall, Devon and Somerset. Dowsing for water became common only at the end of the seventeenth century.

⁶ For the experiments, see the recent article by Lynn (2001).

⁷ See Barrett and Besterman (1926), p. 6.

⁸ Renaud (1695), p. 17.

⁹ Barrett and Besterman (1926), p. 2.

¹⁰ E.g. Valentin, Münster, Mayer, Melanchton, Peucer, Belon, Bodin, Della Porta, etc. Vallemont and Le Brun give both an extensive historiography to legitimise their positions. See Vallemont (1693), Ch. XVII; and Le Brun (1732), book 7; see also Barrett and Besterman (1926), pp. 7-9.

The case of Aymar was special because it was not about searching for metal or water, but about tracking criminals; and this fuelled a huge controversy. It brought the discussion into the social and moral realms, and instead of sympathies between metals and plants, man seemed to possess ‘occult qualities’ too.¹¹ Apparently, a dowsing rod could discriminate between good and evil people; some even argued that it could identify illegitimately replaced boundary stones or stolen objects and detect whether or not a woman was a virgin. For some, these claims were too absurd and this depreciated the use of the rod in general; others tried to separate truth and trickery, or legitimate and illegitimate use, by separating natural philosophy and the social consequences; and some treated it as a purely natural philosophical curiosity. As in the debate on prophecy (Part I, XXX), fraudulent, natural, demonic and sporadically even divine causes were postulated. Again, the discussion evolved as a natural philosophical discourse, but the social and political reverberations were always present in the background.

A lot of the discussion revolved about the use of the divining rod, but its advocates asserted that the rod was not really necessary for dowsing, it only amplified feeble traces.¹² Some people seemed to have very susceptible bodies which interact in a highly specific way with the surrounding environment. Physicians, philosophers as well as theologians, gave a medically inspired explanation of dowsing and, similar to the prophecy case, the focus was primarily on the bodily states. Aymar experienced ‘violent emotions’ during dowsing, and it seemed that some people were bestowed with a special and almost inexplicable capacity for feeling underground water springs, treasures or traces of murderers. When Aymar was on the trail of the murderers, not only the rod reacted, but his body experienced severe affections; his heart rate increased and he became feverish;¹³ he felt faint and sometimes vomited blood; and when he walked close to the murderer, he suffered from severe heart spasms. Aymar felt those ‘violent agitations’ only when tracing criminals, but similar cases were known of, where ‘sensible’ people experienced violent emotions when walking above certain metals.¹⁴ Other

¹¹ Cf. the discussion of Pomponazzi in Part I, XXX.

¹² Vallemont (1693), p. 436: ‘C’est ce subit changement qui se fait si violement en dedans de luy-même, qui l’avertit qu’il est dans l’atmosphère des vapeurs, des exhalaisons & des fumées. Quand ce dérangement intérieur est grand & bien sensible, il dirige suffisamment Jaques Aymar, & alors il n’a pas besoin de la Baguette, qui ne luy sert que quand il n’est émû intérieurement que d’une manière foible & équivoque.’

¹³ Ibid., p. 434: ‘On fait que son pouls s’élève alors comme dans une grosse fièvre...’

¹⁴ Ibid., p. 446: ‘Je connois un homme qui trouve sans Baguette l’argent qu’on a caché dans terre. Les seuls écoulements métalliques l’imprégnent si fort, qu’il sent son pouls s’élever, & son coeur s’affoiblir jusqu’à le faire vomir avec des violences terribles.’ See also the preface and p. 256.

symptoms were headaches, fatigues and muscle spasms. Physicians and natural philosophers explained these emotions by the effect of different exhalations on the body. According to them, every object transpires specific vapours and analogously to contagious prophecy, Aymar could discern these particular exhalations by means of the distinctive emotions he experienced.

Vallemont and the ‘Prophète Physique’

The physician Chauvin associated the passions and convulsions experienced in dowsing with the union of body and soul. The murderer and the victim must both have had an inflamed imagination, together with passions of self-preservation, fear, hate and revenge. This disturbs the animal spirits, which flow together with the blood, and their irregular motions cause the body to perspire little corpuscles of a specific figure,¹⁵ which are picked up by the dowser and which arouse violent affections in the dowser’s body. Chauvin mocks the alleged implicit pact with the devil and rejects astrological explanations.¹⁶ Garnier, a professor in medicine at the University of Montpellier, set out an axiomatic Cartesian system and proceeded to give a mechanical explanation of dowsing. The passions of the soul cause a change in the humoral balance and in the transpired corpuscles. It is comparable, he states, with the example of the viper, which is only poisonous if angry.¹⁷ These Cartesian physicians see this curious feat of divining as the effect of a strong imagination that causes the body to exhale vapours of a particular sort, which can be recognised by others.¹⁸

Pierre Lorrain, abbé de Vallemont, a theologian who worked as a private teacher for the high nobility, wrote La Physique Occulte (1693), the first voluminous book on the Aymar-case (Fig. 2). The book was a display of erudition, and its ambiguity and eclecticism was probably due to its subject. Vallemont wanted to show that dowsing was a purely natural phenomenon that could mechanistically be explained. And although he (perfunctorily) derided

¹⁵ Chauvin (1732a), p. 10: ‘on conçoit aussi que ce mouvement [le mouvement irrégulier des esprits animaux] ne peut se faire sans qu’il ne se sépare au travers des glandes milliaires, quelques petits corpuscules d’une certaine figure déterminé, qui sont poussés & entraînés au dehors par la transpiration.’

¹⁶ I cannot expand here on the ambiguous attitudes towards astrology in the debates.

¹⁷ This was a commonplace in the tradition of fascination or the powers of the imagination. It is also comparable to Keith’s theories of the contagiousness of prophecy. See Part I, XXX.

¹⁸ Here, the explanations of the Aristotelian physicians of Lyon (see e.g. Panthot) were remarkably similar to those of the Cartesian physicians. Aristotelians tended to classify corpuscles into volatile and fixed.

the ‘vague talk about sympathies’ of the magicians, they were the only authorities on the subject and he had to rely on their writings. The typical mechanist rhetoric was not irreconcilable with the use of magical ideas. Theories of vapours, pneuma and the powers of the imagination merged imperceptibly into a Cartesian context (see Fig. 3). A review praised Vallemont’s work, but complained that it was too general, and indeed one can find in it various digressions and associations.¹⁹ It is as if dowsing is only a pretext to show off and to expound his worldview of invisible fluxes of particles causing the most wondrous curiosities.²⁰

Vallemont gives an explanation of dowsing similar to Chauvin’s, but shifts the emphasis from the medical to the philosophical. He is convinced that all previously called ‘occult qualities’ should be explained by the effects of exhalations of vapours,²¹ and he casts this ‘theory of vapours’ in a mechanistic setting.²² The murderer exhales a specific vapour, composed of corpuscles with a certain shape and size; the dowser has specific pores fit to receive them, and this ‘matière étrangère’ enters the body and causes convulsions and heart spasms.²³ Vallemont does not give detailed mechanistic explanations of how these particles work upon the body,²⁴ but tries to elucidate the process with analogies. There is of course the obvious machine-metaphor, but Vallemont goes further and compares the processes in the body of the dowser with a thermometer, hygrometer and barometer, implicitly stating that the human body (or better, certain human bodies) can be seen as a measuring instrument.²⁵ Confounding man and machine, he related the story of a ‘little artificial man’, invented by the famous physicist Guériké, which indicated changes in the weather and even the appearance of comets a few hours in advance. Vallemont called it the ‘anemographic man’ or the ‘physical

¹⁹ See Renaud (1695), p. 115.

²⁰ He wrote a similar book (Description de l’Aimant) one year earlier on the curious phenomenon of the magnetisation of a bell in the Cathedral of Chartres.

²¹ In this he resembles Pomponazzi, but Vallemont refers to Kircher and Schott to support this claim. ‘I explain the sympathy of the divining-rod with metals and other things to which it inclines by the flow of subtle matter, which transpires from all bodies, and disperses in the air, and the Jesuit Schott says that this is the right way to explain effects, which were previously ascribed to occult qualities.’ Vallemont (1693), p. 142.

²² From the references to Kircher and Schott, it is already clear that these vapours can be described in terms of other theories as well.

²³ For this, Vallemont uses Chastelain’s theory of convulsions, see Part I, XXX.

²⁴ Such explanations would consist of a mechanical account of muscle movement, the excretion of particles, etc. See e.g. the models of the Parisian physician Hacket. (Brockliss, 1989).

²⁵ See Vermeir (2003).

prophet', and compared it with a dowser.²⁶ Because of the homeostatic interaction by means of fluxes of invisible particles, the body of the dowser can give objective information of the outer world; and his body can be read as a measurement.²⁷ It is this interpretation of the body as a measuring instrument that is the ultimate defence for the naturalness and reliability of dowsing. Notwithstanding the necessary participation of humans in the process of dowsing (it had been shown by Agricola and Kircher that the rod alone did not turn – and was thus not an 'instrument' in itself – and that the dowser was a necessary part of the process), the subjectivity which this apparently involves could be eliminated by presenting the body of the dowser as a measuring instrument, independent of his intentions, imagination or will.

For this to succeed, Vallemont had to eliminate the role of the imagination, which mediated between soul and body. Because of the associations between the imagination and error, deception and demons, proponents of divination had to be careful and tended to mechanistic explanations. If the imagination was involved in dowsing, people could argue that fraud was involved or that a pact with a demon had been made.²⁸ Vallemont did not employ the concept of the imagination, even when relating phenomena where its role was a common trope, such as in the example where the mother imprints a sign on the foetus, which he explains in purely mechanical terms.²⁹ In one revealing passage, he shows that he was very aware of the dangerous associations if the imagination were to be important in dowsing. In his single explicit reference to the imagination, he locates it in the negative context of illicit magic, demons and error. 'How could there be superstition involved when no words, no ceremonies, no figures, no characters, no vain observances are used, when there is no enthusiasm, and when there is no profanation of saintly things; i.e. it does not demand a feat

²⁶ Vallemont (1693), p. 348: 'L'homme Anémoscope, ou le Prophète Physique, qui annonce les changements de tems'.

²⁷ See Castle (1995), for similar ideas for a later period.

²⁸ For similar reasons, Jurieu tried to eliminate the role of the imagination in his account of the prophecies in the Dauphiné (Part I, XXX).

²⁹ He uses this as an illustration of the force of little particles: 'Ce qui se fait par l'écoulement des esprits animaux de la mere, qui se communiquent au cerveau de l'enfant, & qui agissent même sur son corps (...) & cette matiere subtile coula avec tant de véhémence du cerveau de la mere émuë par ce spectacle tragique, sur les fibres délicates du cerveau de l'enfant, qu'elles en furent dérangées & qu'il fût toute sa vie destitué de raison. (...) Voilà jusqu'ou s'étend la force de ces corpuscules, qui quoy que très-simples, & très-foibles en apparence, produisent pourtant des effets qui demandent une force surprenante.' Vallemont (1993), p. 348. See also Part I, XXX.

of the imagination, no belief, no trust, no intention, no consent, no circumstances, nor anything else which could allude to the involvement of demons.’³⁰

Opposition to these naturalistic interpretations, given by provincial physicians and fashionable courtiers like Vallemont, came from more orthodox theologians such as Le Brun, but also from Cartesians like Malebranche and Fontenelle. Also Menestrier, professor and native of Lyon, blamed physicians and naturalists for their pretensions and stated that only theologians could decide on what was supernatural.³¹ They all claimed that dowzers necessarily had a pact with the devil, but the debate evolved in the terms set by the natural philosophers. Opponents of dowsing identified inconsistencies in the arguments of the naturalists and shrewdly used these as evidence of the involvement of demons³² (Fig. 4). Malebranche, Cartesian philosopher and Oratorian theologian, considered dowsing for water and metals as possibly natural, but the recent developments in which dowzers tracked murderers or identified illicitly replaced boundary stones, made the practice as a whole suspicious. The diviners must be utterly stupid, Malebranche argued, if they believed that their new kind of dowsing was natural. For the working of the divining rod to be a ‘secret of nature’, it was always restated, it has to work in a constant and uniform way in similar

³⁰ ‘Comment voulez-vous qu’il y ait de la superstition dans un usage où l’on n’emploie ni paroles, ni cérémonies, ni figures, ni caractères, ni vaines observations, où l’on ne prend point d’heures affectées, où l’on ne prophane point les choses saintes; enfin où l’on n’exige ni tour d’imagination, ni foy, ni confiance, ni intention, ni consentement, ni circonstances, ni rien autre chose qui puisse marquer qu’on invoque le secours du démon.’ Vallemont (1693), pp. 540-541, my italics.

³¹ Menestrier (1694b). The section on suspicious enigma's generally followed Del Rio, except for an extensive analysis of the dowsing rod.

³² Simultaneously with the controversies on prophecy and dowsing, an important debate divided the intellectuals in the whole of Europe. In 1683, Van Dale, a leading Anabaptist Dutch physician, published Oraculis Ethnicorum, which stated that ancient oracles and all divining was a fraud. (See Israel’s Radical Enlightenment (2002), for a summary of this debate.) Van Dale argued that the Devil lacked any power to affect man and that magic or divination did not exist at all. This work would become fundamental for the ‘radical enlightenment’ and was translated by Fontenelle. This Histoire des Oracles (1687), however, mitigated Van Dale’s claims; it maintained the power of the devil and the existence of ‘genuine magic’. Contemporaries interpreted this as insincere concessions to Louis XIV and the Catholic Church, which proved effective for a while. Yet the unorthodoxy of the book would get Fontenelle, then secretary of the Académie des Sciences, eventually into trouble. He was silenced on the king’s orders, which attests to the oppressive context in France. The case of Aymar came thus at a difficult moment and Fontenelle seems to have been compelled to publish an official ‘Academic’ endorsement of Le Brun’s demonological interpretation of the case.

circumstances.³³ The magnet, for example, fulfils this condition, but the divining rod does not. Why, asks Le Brun with Malebranche, does the divining rod work only in the hands of certain persons? How can the rod differentiate between the different exhalations of water, metals, or even humans?

On the other hand, the divining rod clearly worked, and this was proved in different trials and by the numerous springs, lodes and criminals found by dowzers. The only intelligible explanation was then that the rod could indicate ‘the hidden’ correctly, but only by help of a demon.³⁴ They argued that it was impossible that moral qualities could enter the natural realm. An example was given in which the rod stopped working after the murderer had confessed and repented his crime, and the opponents of dowsing stated that it was impossible to detect this moral conversion by natural means. It was perceived to be unaccountable how the murderers could leave detectable ‘traces’ of their ‘free actions and crimes’.³⁵ In another example, a dowser lost his special gift after some prayers, which was sufficient proof for the divines that it could not be a ‘natural faculty’. Furthermore, if divining were to be natural, the intention of the dowser should not matter; while it was attested by some dowzers that the concentration of their imagination played an important role. According to the theologians opposed to dowsing, it was this concentration that attracted the intelligences, which have power over the corporeal by means of natural or occasional causes. Only evil demons could be ‘the invisible actors behind the prodigies of the baguette’,³⁶ because the good angels would never interrupt the cosmic order³⁷ (Fig. 5 & 6).

In the midst of this discussion, as already related, some savants in Paris performed tests and experiments with Aymar, and according to their interpretation, he failed. The prince even went so far as to publish in the Mercure Galante a warning that dowsing was only ‘illusion and chimera’. In a contemporary theatre play, this reputation of the rod was reinforced. A girl had to marry a rich old man, but she planned to trick her avaricious father. Her lover

³³ Malebranche (1732a).

³⁴ Le Brun (1732, p. 129), remarks cynically that it is not the first time that people enthusiastically start explaining the most superstitious things; even the invisibility of the Rosicrucians had been explained as a natural phenomenon.

³⁵ Menestrier, see JdS, 14/11/1695.

³⁶ Malebranche (1732b).

³⁷ Malebranche (1732b); e.g. ‘Les bons Anges ne sont & ne doivent rien faire parmi nous, que pour nous porter à Dieu, & jamais pour nous occuper des corps, & encore moins des propriétés merveilleuses d’une nature imaginaire.’

pretended to be a dowser, convinced that ‘it would be easy enough to cheat him in this respect.’³⁸ Manipulated by sleight-of-hand, the rod indicated the father’s guilt (he had a guilty conscience about the accidental death of his son) and his hidden treasure, after which the frightened father exchanged his daughter for the baguette of the lover.³⁹

Others refused to believe in the bad intentions of the dowzers, and did not perceive the trials in Paris to be fair and conclusive. Dowzers continued to be in demand, particularly in the South of France. It was partly a clash between popular and learned culture, but also between the capital and the province. Renaud, for example, defended the natural explanation of dowsing in his Critique Sincere (1695), and phrased the dispute as a conflict between the physicians of Lyon and Paris.⁴⁰ Even if the trials in Paris were valid, Renaud argued, that would not prove anything because the conditions were different. It could be explained, for example, because of a change in the pores. The capacity of dowsing was dependent on the temperament and bodily states of the dowser. Some people had the right body, others had not, and it was plausible that a body could undergo changes if the situation or environment changed. Vallemont related this to the texture of the fibres of the body, which are different for everyone. The pores of the body have to correspond exactly with the volume and figures of the atoms of the vapours to let them through.⁴¹ (It is as with dogs: only some breeds have a good nose for hunting, and there are dogs which hunt only foxes or hares.) Some of Aymar’s failings, in the stressful setting of experiments performed for the prince de Condé, could be explained by the psychic and bodily disturbances he underwent, which had a direct influence on his animal spirits and blood. The capacity of dowsing is thus dependent on the present state of the body (conditioned by food, stress, saturation of the blood) and its general complexion, such as its temperature and way of perspiring.

³⁸ Bordelon (1694), p. 216: ‘en tout cas il seroit encore facile de le tromper à cet égard.’ See also the epigraph.

³⁹ The possibility of a sexual interpretation is obvious. The divining-rod was often seen and drawn as a phallus symbol. Sexual imputations were also an easy way to discredit the practitioners and to question their morality.

⁴⁰ In his reply to Le Brun’s collection of letters entitled Lettres qui découvrent l’illusion des philosophes sur la baguette he referred to the ‘illusion of the illusion’. Renaud (1695), supplement, p. 14: ‘particulier l’illusion des Docteurs de Paris touchent l’illusion prétenduë des Docteurs de Lyon.’

⁴¹ Vallemont (1693), p. 423.

The physiology of morality

Renaud did not only criticise the Parisian savants, but he also disapproved of Vallemont because of his assertion that the traces of all kinds of criminals affected Aymar in the same way. To the contrary, Aymar had said that he experienced distinctive emotions and could distinguish trails of thieves from murderers. I have argued that Vallemont tried to eliminate the role of the imagination in dowsing, and therefore he had to assume that the transpiration of the criminals was independent of their passions, intentions and fancies. It was already difficult to assume in Vallemont's system that criminals had a different transpiration than normal people, but if the transpiration differed according to the crime, surely imagination or intention were responsible. Renaud took the consequences of this seriously. Contrary to Vallemont, he asserted that the divining rod was not infallible.⁴² Our bodies pick up diverse particles which can cause the rod to turn slightly in any circumstance. Vallemont and other naturalists had sidestepped important moral issues in their argument, by claiming that the dowsing rod could detect 'murderous' or 'immoral' matter. This seemed to suppose that there were particles of a certain form which represented immorality, and that nature's substructure mirrored moral states. Renaud argued that moral states could be represented in nature (as immoral thoughts our deeds can make us blush), but this was more like a translation of the moral into the physical. The subtle vapours were only a 'sign' of immorality which represented moral states only ambiguously.

Someone innocently accused, Renaud argued, can have the same passions of fear and distress as a real criminal would experience, and this can cause the rod to react. This must make us very cautious in the use of the rod for 'moral' purposes. When an 'instrument' measures something of the 'moral realm', distinctions are not so clear cut as Vallemont would want it, and one has to be very careful when one reads or interprets the measurement. This incited Renaud to dismiss the use of the rod in certain cases. It should not be used to find out whether a girl is still a virgin or to read other's most secret thoughts and intentions. One should be particularly wary to use it in religious or political situations. People with a parliamentary function, for instance, can feel tensed or have certain emotions for different kinds of reasons, and one should not use the rod to identify the vapours they exhale in order to make definite conclusions about their hidden allegiances. The use of the rod must also be

⁴² Renaud (1695), p. 144.

prohibited for the divination of future events, because this involves free will. According to Renaud, only a limited use of the rod is legitimate.

All these moral considerations did not mean that he considered dowsing not to be a natural phenomenon. To the contrary, Renaud also evoked moral reasons for the support of the naturalness of the rod. You should accuse nobody of using illicit magic if you are not completely sure, he argued. It is better to let a thousand people go instead of convicting one innocent.⁴³ The natural interpretation is the best one according to (1) la logique, the explanation by means of vapours is the most intelligible; (2) la justice, it is improper to accuse if one is not completely certain; (3) la charité, we should judge favourably of our brothers.⁴⁴

In his reply to objections against his book, made by people as Le Brun, the imagination is pivotal again. Le Brun and Malebranche had argued that the intention of the dowser moves the divining rod, but this could not be a natural process since something moral or spiritual cannot move something corporeal.⁴⁵ From this they concluded that dowsing necessarily involves demons. Renaud responded that even angels (which he characterised as ‘purely mind’) can move matter directly (by making themselves impenetrable, or in another way⁴⁶). Furthermore, he asked, how do they match this alleged weakness and feebleness of the imagination and intention with the acknowledged powers and inclinations of the imagination of the mother on the foetus? The imagination is not as feeble as the orthodox theologians suggest, and it is proven that the rod turns optimally when the imagination of the dowser is most concentrated and serene towards the examined object. This must be seen as a purely natural phenomenon, however, and the imagination and intention of the dowser can guide the rod to detect specific traces while the inflamed imagination of the murderer causes specific transpirations.

Renaud admits that there are still problems involved which would need some elucidation, and he would probably agree with de la Mothe’s exclamation: ‘Nothing is more difficult in medicine than to explain the strength or the weakness of the imagination’.⁴⁷ If one grants the imagination more power, the explanation by vapours and ‘murderous matter’ seems to become unnecessary, and Renaud writes: ‘Why could the imagination not incite the animal

⁴³ Ibid., p. 150.

⁴⁴ Ibid., supplement, p. 16.

⁴⁵ See note 2. The debate is complicated by the meaning of ‘intention’ in demonology, which often referred to an unconscious pact with the devil.

⁴⁶ See Part I, XXX.

⁴⁷ De la Mothe (1708), p. 89. He was an exiled Huegenot writing on the French Prophets.

spirits of the dowser to produce emotions, perspiration, and other symptoms without the help of strange corpuscles, when one attributes to the same power of the imagination even more astonishing effects of sympathy and antipathy, as one can see in the work of Sir Digby.’⁴⁸ Might it be possible that some antipathy of the dowser’s imagination feels the presence of the murderer, which causes these violent agitations and the inclination of the rod? In the current context, this suggestion seemed too dangerous to pursue.

In any case, Renaud is convinced that the divining rod works in a natural way. He had shown that a morally correct attitude was not to condemn dowsers unless one was absolutely certain that demons were involved. To be sure that the rod was diabolic, however, one would need to know all natural causes, and this was impossible. Nature is a ‘sanctuary’, and it does not show its ‘secrets’ to everybody,⁴⁹ which means that it is perfectly possible that certain people possess special capacities. At the end of the volume, he gives us some general principles for discerning natural from demonic magic. His list is similar to that of Vallemont quoted above; only, and tellingly, with omission of the imagination: ‘In natural magic are neither characters, nor barbarous and unknown words, nor certain ceremonies, nor false circumstances, nor vain observances of a special hour, number, or person involved.’⁵⁰ Renaud understood that the imagination played a crucial role in dowsing, and that this brought moral consequences with it. It could not be seen as an incentive for a diabolical interpretation, however, and it did not totally discredit dowsing. The use of the rod had only to be limited to some morally acceptable goals.

⁴⁸ ‘D’où vient que la force de l’imagination sans le secours des corpuscules étrangers ne pourroit pas déterminer les Esprits animaux de l’homme à Baguette à produire les emotions, les sueurs & les autres symptômes, puis qu’on attribüé à la même force de l’imagination des effets Sympathiques & antipathiques aussi suprenans qu’on peut avoir dans le Chevalier d’Igbi.’ Renaud (1695), supplement, p. 14. This reference to Digby is difficult to interpret. It is almost certainly to his treatise on the weapon-salve, presented at Montpellier and first published in French, which contains a long digression on the powers of the imagination. Although mostly concerned with the case of the mother and the foetus, the fact that ‘the strong imagination of one man doth marvailously act upon another man’ (Digby, 1658, p. 93) is mentioned in the same context of floating animal spirits. Renaud’s remark is curious, however, because Digby treats the imagination in terms of strange corpuscles (although interspersed with references to sympathy), and can only be attributed to a confused memory of the actual contents of the text. The connection between the imagination, the weapon-salve and dowsing, however, seems interesting for further elaboration.

⁴⁹ Renaud (1695), p. 152.

⁵⁰ ‘Principes pour discerner la Magie naturelle d’avec la diabolique. Il n’entre ici ni Caracteres; ni paroles barbares & inconnües; ni certaines Ceremonies; ni circonstances fausses; ni observances vaines d’une telle heure, d’un tel nombre, d’une telle personne.’ Ibid., p. 160.

Renaud pursued a more nuanced position between extreme naturalism and the accusations of fraud or diabolic intervention. He dismissed the experiments of the nobility, which he thought biased by their prejudices against provincials and peasants. He negotiated with theologians and orthodox philosophers about the interaction between the moral and the natural. Such an interaction did not necessarily imply diabolical intervention. He solved these problems, not by denying moral effects in nature, but by asserting that these effects were not unambiguous. The natural was not an exact reflection of the moral state, and he suggested imposing moral and social sanctions on the use of natural techniques. Like Shaftesbury, Renaud realised that there were natural processes involved, but these processes could not determine the moral and social situation. Enthusiasm and dowsing both had natural causes, but focussing solely on these was not enough to understand and react to these complicated phenomena. This ambiguity was due to the imagination, which occupied the realm between the moral and the natural, and whose fancies and susceptibility to suggestion conflated the real and the imaginary. Social sanctions (such as ridicule or restricted use) and moral judgements (such as the judgement of responsibility or guilt) have to assess the natural.

Conclusion

Between 1685 and 1710, two curious events of divination shook up the inhabitants of the South of France and a wider intellectual community. Prophets and dowsers challenged the explanatory tools of the savants who seized on the events to expound their world views. The natural explanations of dowsing and the contagiousness of prophecy bear striking similarities. Material vapours created by an inflamed imagination are emitted through the pores of the body. They are picked up by susceptible individuals and cause affections in their bodies and imagination. It is difficult to see a 'decline of magic' in the debates I have analysed, notwithstanding the increasing unease with the term 'magic'. The debates, indeed, still evolved in terms of the same categories as before, evoking divine, demonic, natural or human causation for uncommon phenomena. The uncommon became a continuous pretext to negotiate the boundaries of, for instance, medicine, natural philosophy, moral philosophy and theology.

In the debate on the contagiousness of prophecy, but particularly in the dowsing-case, the question was raised whether moral qualities could be naturalised. The material vapours exhaled by the imagination seemed to transmit something secret, moral and invisible; and divination was essentially about making these hidden qualities manifest. The case of the

French Prophets was of interest for our analysis of divination, not only because they foretold the future, but especially because the prophets had also a special capacity to recognise each other, to read secret thoughts and to transmit their ‘gift’.⁵¹ From the Aymar-case onwards, dowsing exceeded the search for hidden treasures, and seemed to be about the externalisation of someone else’s most inner secrets and moral states. The dowser really became a ‘physical prophet’ and the debate evolved around the attempts at a natural explanation.

What used to be unproblematic within the conceptual structure of natural magic became a major difficulty for early eighteenth-century natural philosophy. For the participants of our case-studies, it was a pressing question whether the mechanical philosophy could be successfully applied to account for the transmission of moral qualities. Cartesian dualism seemed to preclude an easy transition from the moral to the corporeal. Accordingly, different parts of man were perceived to be involved: while natural philosophers stated that the process was purely mechanical, similar to a measuring instrument, theologians argued that the soul was corrupted by an implicit pact with a demon. More subtle arguments, like Renaud’s, tried to disentangle moral and social concerns and natural causes.

In the debates on prophecy and dowsing, there was a division based on gender, region and education. Children and women had such a bodily disposition (‘moist and passive’) that they were easily deceived by others or demons,⁵² and together with the vulgar,⁵³ their reason was not enough developed to control their strong imaginations. This, however, gave them also an elusive and subversive power. They were more susceptible to almost insensible changes in the environment, such as subtle vapours exhaled by others, and could detect hidden qualities.

⁵¹ It was like a combination of divination and magical bonding.

⁵² Digby (1658), p. 93; see also Del Rio (1599-1600), IV.1.3.3. Pierre Le Loyer even made a distinction between virgins, widows and married women, who were less trustworthy in this order. Sexuality played thus an important role. Jonathan Swift wrote sexual satires on both prophecy and dowsing (‘A Discourse Concerning the Mechanical Operation of the Spirit’ (1704) and ‘Virtues of Sid Hamet the Magician’s Rod’ (1710)). Contagious prophecy resembled love-magic and carnal desires, ‘fascination’ was derived from ‘phallus’, and the divining rod was in itself a phallus-symbol. Sexual accusations were an easy way to malign opponents and to point at their ‘otherness’ and different way of living. The associations with sexual impertinency stayed also present in later cases. Female convulsionaries were indecent because they showed their underwear in public during their fits (cf. the St-Médard case), and the close contact between Mesmer and his female patients provoked sexual imputations. See also note 39 and Part I notes XXX, XXX.

⁵³ ‘Vulgar’ was, like ‘superstition’ an ambiguous term. It was used in the debate on dowsing to denote both those who still believed in the constant intervention of demons and those who were so ‘naive’ to deny the intervention of demons.

Because of their strong emotions and imagination, their moral states were more easily expressed and transmitted, which allowed for the secret communications and conversions. At the dawn of the Enlightenment, and from the standpoint of the learned elite, they stood for ‘the other’; and it was this dark side of the ‘age of reason’ which was pre-eminently represented by the imagination. The imagination was almost ‘bad’ by definition; but it was often unsettlingly strong and was responsible both for social cohesion and disruption.

The powers of the imagination would eventually disappear from scholarly debate. Applied to external bodies, the theory was already problematic (not in the least socially and politically) at the turn of the century, as I have shown. The imagination’s influence on the foetus was questioned in France only at the middle of the eighteenth century,⁵⁴ to be finally dismissed as ‘une erreur vulgaire’, after which only the psychosomatic powers of the imagination (often induced by suggestion) stayed commonplace, as the cases of Mesmerism and the St-Médard convulsionaries show.⁵⁵ The imagination became more and more internalised (a process started earlier and developing while its external powers declined) and its powers over the mind increased, reaching its apogee in idealist philosophy where ‘the whole world’ became internalised in the imagination. We might see a parallel movement in demonology, where the external workings of demons became gradually replaced by delusions in the mind of the tempted and deceived. I argued that the theory of the imagination was antithetical to demonology, but both performed the same functions in explaining uncommon phenomena, and their fate seems related. After this internalisation, however, when all curious phenomena were illusions in one’s own mind, demonological explanations became increasingly redundant.

The case-studies explored in Part I and II, mark a crucial point in this evolution, and I have examined the social and moral issues involved. Renaud’s assertion that the use of the rod must be subject to social and moral considerations (notwithstanding the naturalness of the rod) gains even more weight when considering the further history of Aymar. After his

⁵⁴ It was discussed in the 1727, 1730, 1732 and 1745 editions of the Journal des Sçavants

⁵⁵ Mesmerism can more fruitfully be compared with a later dowsing controversy, i.e. the case of Bléton in 1782 (see Barrett and Besterman, 1926, pp. 31-35; Lynn, 2001, pp. 45-53; Darnton, 1986, p. 31). A crucial difference was that Bléton could only find springs, and Aymar’s capacity to identify murderers was then generally dismissed as a fraud. Demons and the external powers of the imagination were not evoked as explanations anymore. The psychosomatic powers of the imagination induced by suggestion, however, were crucial. See Brockliss and Jones (1997), pp. 783-802; see especially Wilson (1993), p. 110 on the ‘contagiousness’ of gendered irrationality.

humiliation in Paris, he returned to the Dauphiné and his capacities were still much in demand. And although the church had forbidden the use of the rod in the ‘moral world’, for chasing criminals or settling lawsuits for instance, he was often employed for this purpose, even by officials and magistrates. In the turmoil around the prophets, the Catholic side had asked Aymer to trace a group of Camisards who allegedly had killed Catholics in a raid. At his word, twelve Protestants were arrested and executed.

Acknowledgements

I wish to thank Sigrid Leyssen and Simon Schaffer for their comments, and particularly Lauren Kassell for her support and criticism. This research is supported by a grant from the Fund for Scientific Research – Flanders.

Bibliography.

- Albinus, T. (1704). Das entlarvete Idolum der Wünschel-Ruthe. Dresden.
- Barrett, W., & Besterman, T. (1926). The Divining-Rod, an Experimental and psychological investigation. London: Methuen & co.
- Bordelon, L. (1694). La Baguette. In L. Bordelon, Arlequin comédien aux Champs Elisées: nouvelle historique, allegorique & comique (2^{nde} ed.). Paris.
- Brockliss, L. (1989). The medico-religious universe of an early eighteenth-century Parisian doctor: the case of Philippe Hecquet. In R. French, & A. Wear (Eds.), The Medical Revolution of the Seventeenth Century. Cambridge: Cambridge University Press.
- Brockliss, L., & Jones, C. (1997). The Medical World of Early Modern France. Oxford: Clarendon Press.
- Brooke, J. H. (1993). Science and Religion. Some Historical Perspectives. Cambridge: Cambridge University Press.
- Buissière, P. (1694). Lettre à M. l’abbé D.L., sur les véritables effets de la baguette de Jacques Aymar. Paris.
- Burke, P. (1987). Popular culture in early modern Europe. London: Temple Smith.

- Camenietzki, C. Z. (2001). Jesuits and Alchemy in the Early Seventeenth Century: Father Johannes Roberti and the Weapon-salve controversy. *Ambix*, 48 (2), 83-101.
- Camporesi, P. (1988). The incorruptible flesh: bodily mutilation and mortification in religion and folklore. T. Croft-Murray and H. Elsom (Trans.). Cambridge: Cambridge University Press.
- Castle, T. (1995). The Female Thermometer. Eighteenth-Century Culture and the Invention of the Uncanny. Oxford: Oxford University Press.
- Chastelain, J. (1691). Traité des convulsions et des mouvemens convulsifs. Lyon.
- Chauvin, P. (1692). Lettre à Mme la Marquise de Senozan sur les moyens dont on s'est servy pour découvrir les Complices d'un assassinat commis a Lyon, le 5me juillet, 1692. Lyon.
- Chauvin, P. (1732a). Lettre. In P. Le Brun, Histoire critique des pratiques superstitieuses Vol 3 Paris. First published 1693.
- Chauvin, P. (1732b). Réflexions Physiques. In P. Le Brun, Histoire critique des pratiques superstitieuses Vol 3. Paris. First published 1693.
- Clark, S. (1997). Thinking with Demons. The Idea of Witchcraft in Early Modern Europe. Oxford: Oxford University Press.
- Clarke, D. M. (1989). Occult Powers and Hypotheses. Cartesian Natural Philosophy under Louis XIV. Oxford: Clarendon Press.
- Darnton, R. (1986). Mesmerism, and the End of the Enlightenment in France. Cambridge, Mass.: Harvard University Press.
- Daston, L. (1995). The moral Economy of Science. *Osiris*, 10, 2-24.
- Daston, L., & Park, K. (2001). Wonders and the Order of Nature. 1150-1750. New York: Zone Books.
- De la Mothe, G. (1708). Caractère des nouvelles prophécies. London.
- del Rio, M. A. (1599-1600). Disquisitionum magicarum libri sex. Lovain.
- Descartes, R. (1897-1913). Oeuvres de Descartes (12 vols.). C. Adam, & P. Tannery (Eds.) Paris: Cerf.
- Digby, K. (1658). A Late Discourse Made in a Solemne Assembly of Nobles and Learned Men at Montpellier in France; Touching the Cure of Wounds by the Powder of Sympathy. R. White (Trans.). London.

- Fontenelle (1688). History of Oracles. London.
- Frommann, J. C. (1675). Tractatus de fascinatione. Nuremberg.
- Garnier, P. (1692). Dissertation Physique ... dans laquelle il est prouvé que les talents extraordinaires qu'a Jaques Aymar, ... dependant d'une cause très-naturelle et très ordinaire. Lyon.
- Garnier, P. (1693). Histoire de la baguette de Jaques Aymar, pour faire toutes sortes de découvertes. Paris.
- Henry, J. (1986). Occult qualities and the experimental philosophy: active principles in pre-newtonian matter theory. History of Science, 24, 335-381.
- Hunter, M. (1990). Alchemy, Magic and Moralism in the thought of Robert Boyle. British Journal for the History of Science, 23, 387-410.
- Hutchison, K. (1982). What Happened to Occult Qualities in the Scientific Revolution? Isis, 73, 233-253.
- Hutchison, K. (2000). The Natural, the Supernatural, and the Occult in the Scholastic Universe. In G. Freeland, & A. Coronas (Eds.), 1543 and All That (pp. 333-355). Dordrecht: Kluwer.
- Israel, J. I. (2002). Radical Enlightenment. Philosophy and the Making of Modernity 1650-1750. Oxford: Oxford University Press.
- Keith, G. (1707). The Magick of Quakerism or, the Chief Mysteries of Quakerism Laid Open. London.
- Le Brun, P. (1732) Lettres qui découvrent l'illusion des philosophes sur la baguette, et qui détruisent leurs systèmes. Paris. First published 1693. Reprinted in P. Le Brun, Histoire critique des pratiques superstitieuses (2nd ed). Vol 3. Paris.
- Levi, A. S. J. (1964). French Moralists. The Theory of the Passions 1585 to 1649. Oxford: Clarendon Press.
- Lynn, M. R. (2001). Divining the Enlightenment. Public Opinion and Popular Science in Old Regime France. Isis, 92, 34-54.
- Malebranche (1732a). Réponse de l'Auteur de la Recherche de la Vérité. In P. Le Brun, Histoire critique des pratiques superstitieuses Vol 3 (pp. 141-148). Paris. First published 1693.
- Malebranche (1732b). Réponse du même Auteur. In P. Le Brun, Histoire critique des pratiques superstitieuses Vol 3 (pp. 166-176). Paris. First published 1693.

- Malebranche, N. (1997). The search after truth. Cambridge: Cambridge University Press.
- Ménéstrier, C. F. (1694a). Reflexions sur les usages et les Indications de la Baguette... Lyon.
- Ménéstrier, C.-F. (1694b). La philosophie des images énigmatiques: ou il est traité des énigmes, hiéroglyphiques, oracles, prophéties, sorts, divinations, loteries, talismans, songes, Centuries de Nostradamus, de la baguette (2nd ed). Lyon. First published 1682.
- Morman, P. J. (1986). Rationalism and the Occult: The 1692 Case of Jacques Amar, Dowser Par Excellence. Journal of Popular Culture, 19 (4), 119-129.
- Münster, S. (1554). Cosmographia universalis. Basileae.
- Nicolas, J. (1693). La Verge de Jacob, ou L'Art de trouver les trésors. Lyon.
- Panthot, J-B. (1692). Lettre de M. Panthot. Grenoble.
- Panthot, J-B. (1693). Traité de la baguette. Lyon.
- Porta, J. B. (1658). Natural Magick. London. See also:
<http://members.tscnet.com/pages/omard1/jportac1.html>
- Renaud, A. (1695). Critique sincère de plusieurs écrits sur la fameuse Baguette (with Reponse aux objections). Lyon.
- Rohault (1671). Traité de physique. Paris.
- Roper, L. (1994). Oedipus And the Devil, Witchcraft, Sexuality and Religion in Early Modern Europe. London: Routledge.
- Shaftesbury, A. A. Cooper earl of (1999). A Letter Concerning Enthusiasm to my Lord. In A. A. Shaftesbury, Characteristics of Men, Manners, Opinions, Times. L. E. Klein (Ed.). Cambridge: Cambridge University Press.
- Sutton, G.V. (1995). Science for a Polite Society. Gender, Culture, and the Demonstration of Enlightenment. Oxford: Westview Press.
- Swift, J. (1710). Virtues of Sid Hamet the Magician's Rod. London.
- Swift, J. (1958). A Discourse Concerning the Mechanical Operation of the Spirit. In J. Swift, A Tale of a Tub. A. C. Guthkelck, & D. N. Smith (Eds.). Oxford: Clarendon Press. First published 1704.
- Thomas, K. (1973). Religion and the Decline of Magic. Studies in Popular Beliefs in Sixteenth- and Seventeenth-century England. Harmondsworth: Pinguin Books.

- Thorndike, L. (1958). A History of Magic and Experimental Science (8 vols.). New York: Macmillan & Columbia University Press.
- Vallemont, P. L. de (1692). Description de l'aimant. Paris.
- Vallemont, P. L. de (1693). La Physique Occulte, ou Traité de la baguette divinatoire. Paris.
- Vallemont, P. L. de (1747). La Physique Occulte (expanded edition). The Hague.
- Van Dale, A. (1683). De oraculis veterum ethnicorum. Amsterdam.
- Vermeir, K. (2003). The porous body and the “scientific affect”. Conference paper for Sensing Affect: The Physiology and Philosophy of feeling, 1688-1840. 2 May 2003. Faculty of English, Cambridge University.
- Vermeir, K. (2004). The ‘Physical Prophet’ and the Powers of the Imagination. Part I. A case-study on prophecy, vapours and the imagination (1685-1710). Studies in History and Philosophy of Science, 35C, XXX
- Walker, D. P. (1969). Spiritual and Demonic Magic: From Ficino to Campanella. Nendeln, Liechtenstein: Kraus Reprint. First Published 1958.
- Webster, J. (1671). Metallographia, or, A history of metals. London.
- Wilson, L. (1993). Women and Medicine in the French Enlightenment: the debate over Maladies des Femmes. Baltimore: Johns Hopkins University Press.
- Zeidler, G. (1700). Pantomysterium. Hall in Magdeburg.

Captions

Fig.-1: Earliest picture of a dowser, who searches for metals near a mine, in Sebastian Münster, Cosmographia universalis (1554), p. 9. Reproduced by permission of The British Library, Shelfmark 216.d.12.

Fig.-2: A dowser depicted in Vallemont (1693). Note the exhalations that make the rod turn. Reproduced by permission of The Society for Psychical Research.

Fig.-3: The frontispiece of Frommann's De Fascinatione (1674) depicts bewitchment by the evil eye, by malignant breath and with the help of a demon. Note the importance of invisible vapours and exhalations. Frommann denied the naturalness of visual fascination, but besides the fact that he considered most of the traditionally related effects to be diabolical, he attributed some of these effects to the workings of subtle effluvia and breath. He also accepted the naturalness of dowsing, and his work was one of the many curious sources Vallemont drew upon for his account of dowsing. Reproduced by permission of The Society for Psychical Research.

Fig.-4: Frontispice of Le Brun, Histoire critique (1732), a criticism on many superstitious practices, parts of which were first published in 1693. Reason expels superstition and illicit magic. Note the witches' Sabbath in the background, but particularly the dowsing rods in the foreground (this bow-like shape was common in the seventeenth century) together with magical sigils and amulets. Reproduced by permission of The Society for Psychical Research.

Fig.-5: Frontispiece of Johann Gottfried Zeidler, Pantomysterium (1700). In the foreground a dowser shows all the implements of his craft. He tweaks the nose of Halle ('God's city'). In the background, a dowser tweaks the nose of a divine, a demon guides a dowser, and Leviathan belches up plenty of dowsing-rods. God's arm announces retribution. Reproduced by permission of The British Library, Shelfmark 8630.aaa.15(1).

Fig.-6: Frontispiece of Albinus (1704), a book on the natural workings and morality of dowsing. The theologian unmasks the dowser/devil. In the background, demons are

distributing rods. Albinus criticises Vallemont, who claimed that physicists only had the authority to judge the workings of the rod. He recognised the importance of both nature and morality ('Es läufft allhier beides Natur und Moralität zusammen') but he separates them by delimiting the authority of physicists and moralists strictly (p. 394). Reproduced by permission of The Society for Psychological Research.