

Things done wisely by a wise enchanter:
Negotiating the power of words in the
thirteenth century.

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Century***

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G Rās ago tibi oīs rēns q̄ hodie fecisti māta
grātia r̄ hōis q̄sq̄ i sua spē floētes. O mit
tissime rē. r̄ nob̄ aq̄s p̄ntie sp̄u tue gr̄e. va
irtutū ingozes r̄ tuuz dulces amozes ut tibi
semp̄ placeam̄ et ate miq̄ discōam. P. r̄. a. r̄.



The descent of the Word, from the *Liber Visionum*
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A medieval Latin proverb, which occurs in numerous versions, declares that there is power (*vim* or *virtus*) in plants, in stones, and in words [\[1\]](#). The idea that occult power resided in plants and stones was, of course, a commonplace of medieval medicine, a notion that informed all lapidaries and herbals, and was unproblematic from a theological viewpoint. The idea that words had power, however, had always been more difficult for theologians to countenance; and on this account it is interesting to note that in all instances of the proverb where the relative power of herbs, stones and words is ranked, it is *words* that are said to have the greatest power of the three [\[2\]](#). In the fourteenth century, the idea that the power of words was supreme among magical instruments is quietly assumed in the *Confessio Amantis* of John Gower, where words are associated particularly with the faculty of reason in man, and are said to be a special gift of God. Gower repeats the Latin proverb, but with a twist:

In Ston and gras vertu ther is,
Bot yit the bokes tellen this,
That word above alle erthli thinges
Is vertuous in his doinges,
Wher so it be to evele or goode[\[3\]](#).

I would like to consider briefly the import of the second line quoted above. "Bot yet the bokes tellen this," Gower asserts, in fact not quite honestly, for the authorities are little in agreement over the question of whether words are able to have power over things in

the world. Gower might, of course, have run across the proverb in books, and perhaps

this is all he meant to imply; but in context the word "books" seems to refer us to some weightier kind of discussion of the *virtus verborum* : the implication is that the *auctoritates* were generally in agreement that words had power, and that this power could be a power for good. In fact, the reverse seems to be the case. With a few exceptions, which I will come to later, most medieval writers tended to the view that verbal magic words, spells, incantations could have no natural power and thus that any power they did have must necessarily be demonic.

The problem I would like to address here is the following: if words were perceived as being as important to magic as the proverb indicates, is there any kind of *rapprochement* between this commonplace idea and the authoritative tendency to discount all significant magic as demonic? How would such a *rapprochement* operate? How does it become possible for an educated man in the fourteenth century, such as John Gower, to make the apparently casual assumption that words may have an intrinsic, which is to say natural, power for good as well as evil? In the first part of this article I will sketch out the basic terms in which verbal power was discussed in the thirteenth century; in the second part I will turn to an investigation of perhaps the most interesting thirteenth century proponent of verbal power, Roger Bacon.

1. The Power of Words in the Thirteenth Century

The notion that significant magic (which is how I will refer to magic that involves words and signs) can operate only by demonic agency is most influentially argued in the writings of St Augustine. In brief, according to Augustine, language is the vehicle of understanding by which human beings come to know God's truth, which is the

of Charity. Any use of signs which does not lead the understanding to Charity (which is to say any use of signs which purports to have direct influence on things in the world) is a perversion of proper sign use. Since signs have meaning only by convention and consent, it is impossible for language to have any direct influence on the world, and to the extent that magical signs appear to have any such influence, this is due solely to the intervention of demonic intelligences who receive the signs and act upon them [\[4\]](#).



Roger Bacon (1214-1294)

What chiefly distinguishes Augustine's thinking about magic from that of many thirteenth century writers is that, for Augustine, magic that involved signs was a special case of magical activity. For him, signs were in fact an index of magic: where magic existed, signs would be found; conversely where no signs were found, a procedure could not be classed as magical. Likewise, and precisely because he understood all magic to operate by means of signs, it is not possible to distinguish, in Augustinian terms, between demonic magic and some other benign, "natural" kind of magic; indeed, the very term "natural magic" would be, for him, an oxymoron. In the thirteenth century however, when the term "natural magic" meaning magic that seemed to operate not by signification, but by hidden natural properties of things begins to emerge in the writings of eminent thinkers like William of Auvergne and Albert the Great, [\[5\]](#) the power of words, the *virtus verborum* necessarily does become a special instance of magic. It tended to be the case (and especially so for writers who wished to defend an idea of natural magic), that

magical words, incantations, characters, and the like became the focus for all of the condemnation which Augustine had formerly heaped upon magic in general. To the extent that a model of language as conventional and consensual was accepted (as it generally was in the thirteenth century), it was virtually impossible to defend the power of words as a natural phenomenon, though

100

other kinds of phenomena might be understood as magical and still termed natural and benign [\[6\]](#).

Yet even while condemnations of significant magic in this period generally show a renewed vigor and urgency of tone, [\[7\]](#) there can be observed in a few rather eccentric writers a parallel attempt to fit even words and signs into a cosmological scheme which would allow them to partake of a natural power. William of Auvergne, who is known more than anything else for using the term "natural magic" and allowing a place for it among the natural sciences, also had what might be called a fascinated contempt for demonic magic; he had clearly read widely in necromantic literature and spends a good deal of time in his writings discussing and of course condemning various of its forms. In the *De Legibus* he treats the power of words and names, calling it the seventh part of idolatry. One magician, William declares, claims to know of certain magical words which are so powerful they even have the ability to destroy life. This magician has asserted that neither a man nor any other animal could hear those words nor even see the letters with which the words had been written without dying instantly. On this account the magicians have to learn them by writing them in water, where the letters

disappear even as they are made [\[8\]](#).

But William does not believe that it would really be possible to kill by the power of words alone, and he refutes the idea in scholastic fashion. "For if such power inhered in words," he says, "it would necessarily be in them in one of four ways: that is, either in their material (that is, air); or in their form (sound or resonance), or their signification; or all these things, or some combination of them." [\[9\]](#) To sum up his argument, air does not kill unless it is corrupted with poison, as with the breath of dragons and toads; and thus death would be due to the power of the poison, not the words. Sound can kill only if it is too loud, either by creating an excess of fear in the

hearer, or causing a perturbation of the brain, but again death in this case would not be due to the power of the words themselves, but simply the excessive loudness of the sound. And it is plain to him that significance cannot cause death, for if this were true "then the names of death and hell would inevitably bring on the hearers death and intolerable torment; and significations of goodness and health would accordingly furnish their power to words and names." [\[10\]](#) Clearly, if the hypothesized power is not found in any of these three things, then it will not be found in any combination of them. William continues with a lengthy excursus on the idolatry of those who believe in the power of words, using the Augustinian argument as a base.

Despite his conclusion that words can have no natural power, what is interesting about William's argument is that a refutation on these grounds should be considered necessary at all. It is further interesting that

he should consider the possibility that some power might inhere in the *meaning* of words. Rather than beginning simply by referring the reader to the Augustinian model of magical signification, in which natural power is not possible even as an assumption, William draws upon observed phenomena to refute the idea, noting that ordinary words such as "death" and "hell" do not appear to have physical effects on the hearer congruent with their meanings. If he raises this issue only to dismiss it, nevertheless this part of his argument suggests the emergence of some model in competition with the Augustinian one.

Throughout this period, Augustine continues to be the most important authority on the topic of significant magic and condemnations abound which do little more than reiterate his ideas in different forms. Yet it is also true that certain ideas imported from Arabic sources in the late twelfth and early thirteenth centuries gave a new basis for speculation about the power of words, and the possibility of claiming a natural source for it. Perhaps the most

completely articulated theory of verbal power to circulate in this period was included in a treatise of the ninth century philosopher Al-Kindi, known in the Latin manuscripts as *De radiis* or *De radiis stellarum* (*On Stellar Rays*)[\[11\]](#). In brief, Al-Kindi sets out that all heavenly bodies emit rays which have an effect on the world; that these rays infuse all the elements, all things compounded of elements, and thus everything in the sublunar world [\[12\]](#). To Al-Kindi, then, the universe appears as a tissue of constantly interpenetrating forces forces which emanate originally from the heavens, but so infuse other things that there is

nothing in the world which does not have the potential to have its own unique effect upon other things in the universe in a greater or lesser degree through its rays. And among the things which emit rays and have power to create effects in matter are uttered sounds or vocables (*voces*).

The longest chapter in the *De radiis* is concerned with the power of words, and it seems worthwhile to describe the import of this section in some detail, for the *De radiis* is one of those important "background texts" in the intellectual history of magic a text that has been so frequently cited and so often paraphrased that people rarely feel it necessary to read it very carefully. A feature which is marked throughout this chapter of the *De radiis*, and which will become important to my argument later, is that Al-Kindi uses the words *virtus* and *sensus* ("power" and "meaning") almost interchangeably, so that it becomes implicitly clear that, for him, the power of words and the meaning of words are equivalent ideas. All vocables, Al-Kindi holds, like all other sublunar things, are given a power (or meaning) by the heavenly harmony; however some vocables also have a meaning which is imposed on them by people, and these vocables thereby obtain a new property and power which they did not have from the heavens alone. This new property causes the vocable to emit rays of a new sort and to cause a different effect in matter than it did before, even while retaining the original power

bestowed by the heavens. And if, as sometimes happens, the meaning assigned to a vocable by human beings is the same as the meaning assigned by the heavens, then the power of its signification is doubled: it

operates on matter by the powers both of nature and accident, and thus is stronger in its effect [\[13\]](#).

Al-Kindi holds that uttered words always have an effect of some kind on matter, though this effect is not always perceptible to the senses [\[14\]](#). The effect of a word may be made stronger in certain ways, for example by making sure to use the word in conjunction with the planet or constellation pertaining to it, and by making sure that the matter on which the word is meant to operate is congruent with it or passible to it. The matter on which words operate best is air and substances having an airy nature. Words thus have the maximum power to affect living creatures, and especially human beings, because the "spirit" of living creatures has an airy nature and is easily affected by words [\[15\]](#).

That the effect of words can be strengthened by using the word with vehement desire and firm intention is something reiterated frequently. The reason for this necessity is given theoretical grounds in the notion that man is a microcosm of the universe as a whole. In essence, desire is to a human being as the centre of the earth is to the universe [\[16\]](#): thus, desire exerts what might correctly if anachronistically be thought of as a gravitational pull on matter. Desire in a person's heart, Al Kindi says, is a centre from which all voluntary operations stem, and this center has a "centric" nature similar to the center of the earth [\[17\]](#). When desire becomes intense enough to cause action, then with the uttering of vocables its rays take on a "consummative power" to move matter [\[18\]](#).

Noting that all vocables have an effect on matter whether they are meaningful to humans or not, whether linked in speech or

not, Al-Kindi also holds that when meaningful words are uttered conjoined grammatically in the manner of complete speech, they often have a

104

more powerful effect, just as mixed herbs may have a more powerful effect than any herb taken separately [19]. The analogy with herbs, which is made in several other places in this chapter of the *De Radiis*, points to an important idea implicit in Al-Kindi's theory: the meaning given to vocables by the heavenly harmony is a kind of "occult quality" in words, the same in function, and with the same source, as the occult qualities in plants and stones [20].

A curious aspect of the celestial "meaning" of words may be noted here: unlike other meanings, it is not likely to be "understood" by a "hearer," but is rather "revealed" by its physical effects. It is a meaning which has nothing at all to do with communication; it may or may not be discovered by the human users of the vocable, and its discovery can only be recognized by the greater effectiveness of that vocable when used magically. In a very direct sense, its "meaning" is its power, and this power is as natural as the power of herbs and stones. In fact, even the conventional meanings of words have a natural source, since, as Al-Kindi points out, human beings receive their complexions from the heavens, and thus also receive from the stars the disposition to call things by certain names (which is why there are different languages in different countries) [21]. Al-Kindi's theory is internally coherent, and must have seemed logically compelling to many who read it. Siger of Brabant, for example, cites the text with approval, believing it to be in accordance with Aristotelian principles as

far it concerns stellar influences on matter, though he does not in fact approve the section on the *virtus verborum* [22]. Roger Bacon, too, was clearly influenced by it in a more profound way than Siger, as will be discussed more fully later.

Despite its many compelling qualities, however, the theory outlined in Al-Kindi's *De radiis* remained theologically problematic for a number of reasons. Its astrology, particularly as revealed in its analysis of prayer and the special effectiveness of names of God,

105

involved deterministic ideas that would have been hard to justify from any orthodox Christian standpoint. Beyond this, however, it is probable that Augustine's view that verbal magic could *only* work by demonic intervention was so firmly entrenched that it was virtually impossible to assault logically. While it is true that Al-Kindi's own assumptions do not involve communication with demons, or indeed communication of any kind so that very few of the perorations against significant magic which abounded in this period actually produced arguments which would logically have undermined his statements, nevertheless, it was so well known, and so frequently reiterated that verbal magic involved demons that it must have been difficult to assert the contrary no matter what one actually believed.

Convincing as it may have been to some, the *De Radiis* remained in practice a difficult text for thirteenth century writers to cite as authoritative.

If defenders of natural magic were forced to tread carefully in the area of the power of words, there were still a few who cautiously attempted to justify the idea. Unable to use

Al-Kindi, they were forced to look elsewhere for authorities who could lend support to the endeavor. A frequently cited text in discussions of magic in this period is Avicenna's *Sextus de Naturalibus* or *De Anima*. In this scientific treatise on the nature and operation of the soul, Avicenna makes the argument that matter is *by its nature* obedient to the soul [23]. It was clear that the soul affected the material body of its possessor, for example in matters of sickness and health; but beyond this, Avicenna says, the soul may operate in the body of another just as in its own, and this is the explanation for the evil eye. Further, the noble soul which is able to transcend the desires of the body can perform such acts as curing the sick, changing the nature of elements, and causing rain and fertility to occur; "for matter," he says, "is entirely obedient to the soul, and obeys it much more fully than material things acting against it." [24]



Thomas Aquinas

It was by no means universally believed that Avicenna's theory with respect to the intrinsic power of the soul over matter was correct. More strictly Aristotelian thinking required a material effect to have a material cause; thus Avicenna's explanation of fascination was frequently amended and explained as the effect, not of the soul itself acting on extrinsic matter, but of the soul affecting the bodily *spiritus*,[\[25\]](#) which, in turn, affected other things. Thomas Aquinas, for example, explicitly contradicting Avicenna, maintains that matter will not obey just any spiritual substance, but only the Creator. He agrees that the phenomenon of fascination is a natural possibility, but only through the intermediate material agency of the bodily *spiritus* [\[26\]](#).

Though Aquinas clearly felt himself to be refuting Avicenna's main point, other writers of the period seemed to act as though it didn't really matter which was the case just so long as the soul was conceded to have some influence outside the body [\[27\]](#). Avicenna was often called in to support arguments which included the intermediary *spiritus*, and he maintained a consistent status as an authority in this matter.

Now in the passage from the *De Anima* cited above, it is clear that Avicenna is not chiefly concerned with the power of words. In fact he does not mention words at all. However in practice it was a small step from conceding that the *soul* had power over matter to conceding that *language* had power over matter; and in fact the topic of the *virtus verborum* seemed to need no explicit discussion in the *De Anima* for Avicenna to be cited in support of the idea. For example, in a work known as *De Mirabilibus Mundi*,[\[28\]](#) of unknown authorship but usually ascribed in

manuscripts and early printed editions to Albert the Great, the connection is made quite explicitly.

The writer begins by stating that it is the business of the wise to make marvels cease by learning their causes. One very marvellous

107

thing, however, remained puzzling to him for a long time, and that was the binding of men and their powers through incantations, characters, and so forth, which seemed impossible and as though it had no sufficient cause. The writer continues:

And when I had vexed my mind over this issue for a long time I discovered a probable explanation in the sixth book of the *Naturalia* of Avicenna: that there inheres in the human soul a certain power of changing things, and that other things are obedient to it when it is transported in a great excess of love or hatred or any such emotion... And for a long time I did not believe this; but after I had read through necromantic books and books of images and magic books, I found that passion in the human soul is the main root of all such things [\[29\]](#).

The writer goes on to discuss in detail the mechanisms behind the effects of desire upon matter and upon enchantments, including such topics as the kinds of human beings best able to enchant, the kinds most and least susceptible to enchantments, and so forth. He does not, however, elaborate further on the topic of incantations, of words themselves. To find a theory which explicitly addresses verbal power as a natural phenomenon, we must turn to the writings of Roger Bacon.

II. Roger Bacon and the Power of Words

Roger Bacon's philosophy as it relates to the *virtus verborum* can best be approached via his notions about the propagation of species. While Bacon gives his most complete outline of this theory in his work *De multiplicatione specierum*, he also elaborates particular aspects of it *passim* in other texts, notably the *Opus Maius*, *Minus* and *Tertium*, whose rambling nature gave him scope to enlarge on the operation of *species* in the context of verbal power, and it is from these works that I have drawn most of my analysis of the present topic.

Bacon's work depended extensively on the ideas of other writers and was essentially of a synthetic nature, though his elaboration of those ideas bears his own unique stamp. In addition to the wellknown Arabic sources whose influence he openly acknowledged in the *De multiplicatione specierum*, there are two unacknowledged sources for his ideas whose importance deserves mention [\[30\]](#). Some preliminary development of the notion of *species*, depending on many of the same sources, is to be found in the writings of Robert Grosseteste, whose influence on Bacon was considerable and has been well documented [\[31\]](#). Another work also uncited in *De multiplicatione specierum* - to which Bacon owes a manifest debt for the idea of *species* is the *De Radiis* of Al-Kindi, which I discussed earlier [\[32\]](#). It seems likely that Bacon's vehement insistence on the efficacy of words is also largely an inheritance from Al-Kindi, though Bacon's theory of the operation of *species* in verbal magic differs in a number of important ways from Al-Kindi's, as will be shown later. In the context of the history of optics, which is the area in which the concept of *species* comes up most frequently, *species* is understood in a very basic sense as a kind of ray or likeness,

which is cast off by a physical object and operates as the means by which such sensible things enter the

109

faculty of sight [\[33\]](#). The operation of these rays in the realm of light and vision were even in the thirteenth century the paradigm case and most frequently cited instance of multiplication of *species*; however for Bacon it is important to remember that *species* were not merely instrumental in explaining the operations of vision, but were conceived of as actual forces radiating from all objects and elements and capable of various kinds of influence on matter. This concept not only explained the mechanics of perception, but, for Bacon as for Al-Kindi, underlay a complete system of worldly causation and change. Bacon himself complains:

Indeed these *species* perform every worldly alteration both in our bodies and souls. But because this propagation of *species* is not known to the common run of students, and known to no one but three or four Latins, and only in the field of optics (that is in the propagation of *species* in light and color as it pertains to sight), we do not perceive the marvellous actions of nature which occur all day in us and in things before our eyes; rather we believe them to be done either by special divine operation, or by angels or demons, or by chance and fortune. But it is not so, except inasmuch as every creatural operation comes in a sense from God. But this does not exclude that these operations are done according to natural processes, because nature is the instrument of divine operation [\[34\]](#).

The connection between light as a visible manifestation of the *species* of the light source, and the idea of *species* as part of a

causal chain responsible for all kinds of worldly alteration was implicit in current theories of stellar influence. Light comes from the heavens, from the sun, stars and planets; but the stars and planets were already understood to have other kinds of actual influences on the material world which seemed to rain down from the heavens along with light. If the degree and kind of influence which the heavenly bodies had upon sublunar matter was a matter of intense debate,

110

still the basic fact of such influence had to be generally conceded. The importance of light as the paradigm case of multiplication of *species* was, for Bacon, intimately bound up with his own view, formed under the influence of the Neoplatonic doctrine of emanations, of the crucial importance of astrology to science and Christendom [35]. Astrological ideas were crucial to the concept of the *virtus verborum* for Bacon just as for Al-Kindi. However Bacon, like the author of the pseudo-Albertine *De mirabilibus mundi* discussed above, preferred to cite Avicenna as the most widely recognized authority on the sources of verbal power. The connection between language and the soul is made explicitly by Bacon and frequently reiterated; he calls words the first and most important business of the rational soul (*opus praecipuum, or principium, or primum*), and asserts that

just as stars and all things project their forces and *species* onto things outside themselves, the rational soul, which is the most active substance of all after God and the angels, can and does continually project its *species* and force onto the body, of which it is the motive power, and onto things

outside the body. Concerning these works, Avicenna speaks powerfully in the sixth book of the *Naturalia*. And therefore, such works and words as those of which I speak receive power not only from the stars, but from the rational soul [\[36\]](#).

Even from this passage it should be clear that Bacon had worked out the idea of the *virtus verborum* with more attention to the systematic details of its mechanism than the pseudo-Albert. Indeed, the language in which the paraphrase of Avicenna is couched that the

111

soul, like the stars, projects its *species* and powers onto the body and things outside of it, reflects a more mechanistic operation than that described by Avicenna, and reveals an idea that clearly pertains more to Bacon's own thought structure. For Bacon, words are essentially a means of concentrating the *species* or force cast off by the soul:

when words are uttered with profound thought and great desire and firm intention and strong confidence, they have great power. For when these four factors are in operation, the substance of the rational soul is more strongly excited to project its *species* and power into its own body, and onto things outside the body; and (this power is propagated) in the soul's works, and especially in words, which are formed inwardly and therefore receive more of the soul's power [\[37\]](#).

The soul is, of course, only one of the entities whose *species* supply power to words. Bacon speaks of four such entities in total: the vocable itself, which he discusses as a form given to the matter of air (he writes of the power of "vocis figurantis

aerem" or "vocis aer figuratus"); the stars, whose *species* are caught in the vocable at the moment of utterance; the soul; and the body, which, in addition to obeying the soul's thoughts and desires "makes its own quite strong *species* which are received in the air given form by the vocable; and according as the body is of good or poor complexion, changes in the air and diverse things occur.[\[38\]](#)" The primary difference between Bacon's working out of the concept of verbal power and that of Al-Kindi was that Bacon was careful to avoid an explicit identification of the power and the meaning of words. I have already noted that for Al-Kindi these two concepts were essentially

112

interchangeable; Al-Kindi uses the term "census" to denote the power infused into vocables by the heavens, and is explicit that additional power is brought to the vocable when a meaning is attributed to it by human convention. Bacon, however, never introduces this identification of the terms "census" and "virtus" with respect to celestial power, and in his discussion of meaning attributed to words *ad placitum* (voluntarily or conventionally) in his *De Signis*, he clearly separates the idea of the *species* cast off by the sounds of the vocables themselves from the meaning attributed to the vocable by human usage [\[39\]](#).

It is true, of course, that the link postulated by Bacon between the *virtus verborum* and the power of the soul and his concomitant insistence that words be uttered with strong desire, firm intention, great confidence, and so forth is tantamount to an assertion that meaning, at least insofar as it is linked with the intention of the speaker, does influence the power of words. However his formal distinction between meaning and *species*

has the advantage of evading some of the problems attendant upon the quantity of free floating signification found in Al-Kindi's uncomfortably intentional cosmos. Most importantly, by firmly establishing the power of vocables in the realm of things understood to be natural (as stars, body, soul, sound) rather than volitional (as meaning), he sidesteps any question that verbal effects might be dependent on demonic involvement a concept which hinges, of course, on the Augustinian idea of meaning as conventional and consensual [\[40\]](#).

Though this formal distinction between meaning and *species* probably did little to keep Bacon's doctrine above suspicion, he was doubtless himself convinced that his theory had at least the potential for doctrinal orthodoxy an issue to which I intend to return later. Bacon was adamant that words spoken at random, without reference to astrological times, and without the firm desire and strong confidence needed to concentrate the soul's power, were incapable

of producing any significant effect; and indeed, so frequently does he reiterate this that it is hardly to be wondered at if modern scholarship has been slow to assess the importance to his philosophy of his understanding of incantatory magic [\[41\]](#).

That it was important to him should be clear from the synopsis above. His theory of verbal power forms an integral whole with his doctrine of the multiplication of *species*, and he lays stress on the importance of words throughout the *Opera* addressed to the Pope. However what "magic" meant to Bacon; whether he was "for" or "against" it; and whether he considered his own

philosophy of nature to be magical, or to include magical components, remain vexed questions. The problem of determining Bacon's attitude to magic is complicated in particular by the fact that Bacon's largely negative use of the term "magic" seems to be part of a systematically employed rhetorical strategy designed principally, as I will argue, to put his own activities above suspicion precisely *because* he was conscious that they had a magical dimension.

Scholarly opinion currently tends to the view that Bacon's attitude toward magic was decidedly hostile, and in fact much less accomodating than that of some of his contemporaries. This reading was propounded originally by Lynn Thorndike, himself rebutting an earlier view that tended in the opposite direction. Thorndike relies heavily on the "Letter" in his summary of Bacon's attitude a fact which may seem odd in view of Thorndike's opinion that Bacon did not actually write the letter himself [\[42\]](#). However, Thorndike does not seem troubled by this, calling the "Letter" "a treatise which faithfully reproduces (Bacon's) point of view whether actually penned by him as it stands or not [\[43\]](#)."

I want to give some attention to Thorndike's reading of Bacon, since Thorndike is invariably cited as an authority on Bacon, and his reading of Bacon's stance on magic in particular is frequently quoted without challenge [\[44\]](#). Thorndike plainly sees Bacon as someone

whose attack upon magic is based on an attempt to undermine superstition and credulity with objective data and "scientific" thinking, and his account of

Bacon's attitude is here and there summed up in statements like "(Bacon) seems to be sounding, not a religious retreat from magic, but a rational and scientific attack upon it.... What impresses him most about magic, and the charge he most often brings against it, is its fraud and futility" [\[45\]](#).

It is quite true that Bacon frequently insists upon the "fraudulence" of magic; but, as will become clearer in what follows, he almost never does so without simultaneously asserting that the *same* practices that he has just appeared to condemn out of hand as fraudulent and lacking real effectiveness use of incantations, amulets, and other operations of a character likely to be held magical when they are *properly* performed, must *not* be magical, since they rely upon principles that can be shown actually to work. What Thorndike calls a uniform condemnation of magic might better be understood as a uniformly careful use of the *word* "magic," designed to present Bacon's own concern with the topic as above suspicion. Several obvious rhetorical strategies are employed to further this purpose; for example the term "magician" as Bacon uses it is always one of opprobrium: "magicians" are usually coupled with "old women" and set in opposition to "philosophers" or "the wise," who perform the same practices properly. The following passage from the *Opus Tertium* is typical and very much illustrative of his purely technical distinction between "magic" and "philosophy":

if, therefore, vocables of this kind, which are called incantations and spells, are not performed with consideration for the four kinds of *species* [explained previously], and with consideration for the condition of the body and soul, but casually and at anyone's whim,

then they are magic, and have no natural power for altering things and if they do work, then the work is done by demons. But if they are performed with regard to the *species* and conditions remarked above, *then they are philosophical*, and are done wisely by a wise enchanter [46]. (My emphasis)

Clearly it is not so much that Bacon insists that magic is fraudulent, but rather that, for his own purposes, he defines fraudulence as magical. If he calls magicians fools, it is more in order to exclude himself from the category than to oppose their works with "science" (in Thorndike's sense).

This aspect of Bacon's attack on magic is, I believe, amply clear in the relevant passages of the *Opera* to the Pope. It is rather less clear in the "Epistola de Nullitate Magiae," though even in that work, magic is never attacked without the attack being immediately followed by a guarded statement to the effect that there may be some truth in magical writings, but one must be very careful in forming an opinion about it. His caution in this respect is such that it is possible for a person who wishes to do so to read the "Letter" as the statement of a rationalist who is simply anxious not to overlook any potential revelation of truth, and it seems that this is what Thorndike has done. Although he was aware that there were passages elsewhere that went further or even contradicted statements that appeared in the "Letter," having identified the "Letter" as a faithful representation of Bacon's views Thorndike seems to try to harmonize these contradictions, playing down what is excessive in the *Opus Majus*, *Minus* and *Tertium* or reinterpreting it in the light of the "Epistola de Nullitate Magiae." Interestingly, Thorndike does seem to notice that there is a rhetorical aspect to

Bacon's condemnation of "magic," but he appears puzzled as to its significance:

116

It ... seems somewhat strange that Bacon should always be so condemnatory and contemptuous in his allusions to magic and magicians, when both William of Auvergne and Albertus Magnus allude to it as sometimes bordering upon science, in which case they do not regard it unfavorably. The suspicion occurs to one that Bacon perhaps protests a little too much, that he is condemning magic from a fear that he may be accused of it. But are not his apprehensions exaggerated? Does he not overstate the hostility of canonists and theologians to his many splendid sciences and their tendency to confuse them with magic? [\[47\]](#)

Thorndike assumes that Bacon's fears were grounded in his own paranoia, that canonists were not nearly so concerned about magic as he feared. If the Bishop of Paris could assert that natural magic was a legitimate part of natural science, could not Bacon do so too?

In fact it was probably much more difficult for Bacon to assert the legitimacy of magic for a number of reasons. It is true that approval of the kinds of magic that William of Auvergne called "natural" was unlikely at the time to incur censure the kinds that involved attesting to the occult powers in herbs and stones, that referred to the *sensus naturae* and the Augustinian *seminales rationes*. On the other hand, the kinds of proceeding that involved words and signs, the operations defined as magical and specifically condemned by Augustine, were and always had been thought of as suspect, whether they were called magic or not. The

particular direction in which Bacon's thought ran took him much farther in the direction of significant magic than most people cared to go. Albertus Magnus, whatever he may have maintained about other aspects of the sciences to which Roger was sympathetic, made no such concerted attempt to defend the power of words (unless the treatise *De Mirabilibus Mundi* actually was penned by him), and William of Auvergne not only held belief in such power to be idolatrous, but made a

117

systematic case for its impossibility. Bacon, on the other hand, argued in defense of the power of words at some length. Further, it is clear that his view of the *virtus verborum*, his belief in incantations, is not, as Thorndike seems to present it, a minor aberration from an otherwise "scientific" outlook. but a natural corollary to his theory of the multiplication of *species* and thus an integral part of his whole natural philosophy. If Bacon spent more time condemning magic than his contemporaries it is most likely because he had more need to distance himself from it than they did not because he was more interested in magic, but because the kind of magic he was interested in was more likely to be held suspect, and he was aware of this.

If the magicality of Bacon's interests were as obvious as all that, if his repeated derogations of "magic" were as transparent a rhetorical ploy as I have been trying to show, the question may arise whether they in fact deceived anyone, and indeed whether he really expected them to. It must be remembered that Bacon's purpose in writing the *Opus Maius*, *Minus*, and *Tertium* was above all practical: this was neither an excursion into scientific theory undertaken

for the pleasure of it, nor a compendium of Bacon's ideas edited for popular reading. Bacon, believing the advent of the Antichrist to be imminent, wrote to the Pope in large part for the purpose of convincing him of the kinds of study that would need to be undertaken in order to implement measures for the protection of Christendom. "I write these things," says Bacon, wrapping up the astrological section of the *Opus Maius*,

not only for the consideration of the wise, but because of the dangers which are now arising and will arise for Christians and the Church of God, from infidels, and most especially from the Antichrist, because he himself will use the power of wisdom, and will turn all things to evil; and by words of this sort and stellar

118

works and with great desire for doing evil compounded with absolutely certain intention and very strong confidence, he will fascinate and cause misfortune to befall not only individuals but also cities and regions. And in this wonderworking manner he will do what he wishes without war, and men will obey him as beasts, and he will cause realms and cities to fight one another for him, as friends destroy their own friends, and thus he will have his will with the world [\[48\]](#).

What does Bacon fear from the Antichrist if not magic? But the threat is by no means one of straightforward demonic magic in any necromantic or Augustinian sense. It is not the demonic compact which Bacon fears, but what he calls the "power of wisdom" (*potestas sapientiae*) a power which clearly operates according to the same rules and scientific principles he has just been advocating as being of great utility and

benefit when used with proper intent by the right party. To have advocated the adoption of the Antichrist's strategy, even with the explicit goal of defeating the Antichrist, surely brought with it some risk of suspicion of magic of a potentially unwholesome kind. Bacon was quite obviously aware that much of what he expressed was not presently sanctioned by church authority. But, he argues, with characteristic bullheadedness, there is much that has been wrongly condemned by contemporary theologians, by Gratian, and by holy men; and surely this is not without the possibility of change; "for just as Gratian wrote many laws that have now been abrogated with a saner opinion prevailing, so, concerning the sciences, he said many things which ought to be completely altered, as I shall explain more fully below" [\[49\]](#). Knowing full well that his opinion would be controversial, Bacon wrote to the Pope to solicit the authority which would be necessary to legitimize it. If there was a risk of condemnation to him personally, there was also an urgent need, as he wrote,

for it is believed by all the wise that we are not far removed from the time of the Antichrist, as is clear from the chapter on sects seen as a whole in the light of astronomy. Therefore if Christians knew, by Papal authority, that these operations must be performed to obstruct evil to Christendom it would be sufficiently praiseworthy; and not only for the sake of evils to be repelled, but for the promotion of all sorts of useful things [\[50\]](#).

Inasmuch as he appeared to be taking a consciously extreme and potentially

unorthodox position, it makes sense that Bacon would have tried generally to avoid the use of inflammatory terms which might have made difficult the open advocacy of his views by the church or the Pope. Bacon's care in avoiding application of the term "magic" to his own scientific reasoning was necessary primarily because he sought the backing of the Church for its implementation, not because he did not believe in it or was hostile to its principles.

In summary: Roger Bacon's attitude to magic, and in particular to the power of words, manifests a distinct break with Augustinian reasoning in respect to magic and the related concepts of sign theory. Although Bacon does not formally adopt Al-Kindi's notion that significance is power, nonetheless, his whole philosophy amounts to an equivalent attempt to place language at the top of a hierarchy of instruments inhabited by occult power, and to construct a technology which will allow the practical implementation of this power. While Bacon's philosophy was built upon an already existing framework of Neoplatonic ideas that were common coin by the second half of the thirteenth century, his implementation of these ideas in the defense of magical theory was characteristically extreme. For this reason, Bacon's writings provide an excellent window into thirteenth century thought, revealing much about the implications

of Neoplatonic Aristotelianism that were potentially available for exploitation by a thinker as systematic and fanatic as Bacon was.

One of the ramifications of Bacon's attempt to construct a technology of occult power is

that it is no longer possible, within the strict parameters of his thinking, to consider any sort of magic intrinsically evil. Rather, he describes a utilitarian science whose potential for good or evil depends upon the user's intent to accomplish good or evil. In his chapter on the study of languages (which he advocates in large part because of its magical utility), Bacon tells the story of someone he knew who, when a boy, found a man in a field who had fallen in an epileptic seizure. The boy wrote certain verses and hung them around the neck of the man who was immediately cured. And some time later it happened that this man's wife, wanting to delude him about her love of a certain cleric, made him take his clothes off with the excuse that it was time for his bath in order to get him to remove the amulet so it would not be damaged by the water [\[51\]](#). But when he did this his illness seized him straightaway in the bathwater. Struck by this miracle the wife again tied on the amulet and he was cured. Bacon is at pains to point out the way in which human reason (or at least his own reasoning) dictates a moral judgement of this episode that is at odds with the Augustinian notion of the intrinsic evil of significant magic. He comments:

Who dares to interpret this as an evil thing, and ascribe its action to demons, as some unskilled and foolish people have many times ascribed many things to demons which are done by the grace of God or through the operations of nature and powers of sublime art? For how has anyone proved to me that it was the operation of a demon, since the boy neither knew how to deceive, nor wished to do so? And the woman, who, when she took away the writing, wished to deceive not only her husband but herself through fornication, was

moved to piety and returned the amulet when she saw the miracle. I prefer reverently to refer the matter to praise of God's good works than with great presumption to condemn something real [\[52\]](#).

Bacon's comment on this episode -- in particular his refusal to believe that demons had any part in the effect of the talisman -- reveals what is in fact his characteristic stance towards magical phenomena.

Although he concedes in a general way that demons may sometimes interfere in magical use of signs, in any given instance he tends *not* to resort to a demonic explanation for a magical effect; and this is true whether the effect was accomplished by an agent of good or evil intent. Whether he describes the stellar works of the Tartars and Saracens, or the works of the Antichrist himself, he prefers to attribute the effects produced to the powers of nature and art.

Within the parameters of Bacon's thought there was very little room (if any) for supernatural action that is, action which occurred outside of the natural paradigm as he understood it. It is certainly true that his natural paradigm was thoroughly charged with numen, and while it may have held little room for "supernatural" phenomena, it did have plenty of room for magic in a quite developed sense. As we have seen, however, Bacon did not primarily understand the magic of powerful words in a morally negative way as sign and proof of a pact with demons; nor on the other hand were miracles to be understood in a strictly supernatural and morally positive sense, as sign and proof of sanctity. Indeed, concerning miracles, it is specifically to the *virtus verborum* that he refers for explanation, claiming in more than one

place that all miracles accomplished by the saints since the beginning of the world were done using the power of words. This, along with the manifest power of sacramental words, provides proof, in his logic, that words are the most proper

122

instrument of the rational soul and the most powerful of all human tools [53]. Verbal magic thus becomes, for Bacon, an aspect of the divine in nature; it is behind the miracles of the saints, but it also something which *anyone* can use, provided that they have the understanding to manipulate it properly. This is not, in the thirteenth century, in any sense an orthodox or standard view of the nature of verbal power. It is, however, a very interesting attempt to formulate a natural philosophy in which the power of words had a coherent and logical place.

Notes

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¹ There are numerous instances of the proverb listed in Hans Walther, *Proverbia sententiaeque latinitatis medii aevi: Lateinische Sprichwörter und Sentenzen des Mittelalters in alphabetischer Anordnung*, vol.2 (Göttingen: Vandenhoeck & Ruprecht, 1963). See, e.g. 11787, 14224, 7310, 2748. Interestingly, in a sixteenth century medical text (*Kindheart's Dream*), the words "in verbis et in herbis, et in lapidibus sunt virtutes" appear as part of a spell for the cure of toothache [cited in Keith Thomas, *Religion and the Decline of Magic* (London: Weidenfeld & Nicholson, 1971), p. 180].

² As for example in Walther 2748: "Christus vim verbis, vim gemmis, vim dedit herbis:/Verbis maiorem, gemmis, herbisque minorem." ("Christ gave power to words, to gems, to herbs:/ The most to words, the least to gems and herbs.")

³ *Confessio Amantis* VII, 154, 549; from the edition of G.C. Macaulay, *The English Works of John Gower*, vol 2, EETS (e.s.) 82 (London: Oxford UP, 1901).

123

⁴ I have discussed the implication of Augustine's sign theory in his understanding of magic in Part I.2 of my dissertation, *Signs of Power and the Power of Signs* (University of Toronto, 1993).

⁵ Lynn Thorndike has discussed both writers' use of the term "natural magic"; see the chapters on Albertus Magnus and William of Auvergne in *The History of Magic and Experimental Science*, vol. 2 (New York: Macmillan and Columbia UP, 1929).

Thorndike's interpretations of texts are often strongly colored by his own ideas and opinions and require a somewhat skeptical attention on the reader's part; his summaries of textual content, however, are generally fairly accurate.

⁶ In philosophy the conventionalist position is most obviously associated with the Aristotelian tradition via the opening chapter of Aristotle's *De Interpretatione*. It is through Augustine, however, that this position maintains its connections with the condemnation of magic.

⁷ See Edward Peters, "The Systematic Condemnation of Magic in the Thirteenth Century," chapter 4 of *The Magician, the Witch and the Law* (Philadelphia: University of Pennsylvania Press, 1978) for analysis of some of the reasons behind the renewed hostility to magic in this period.

⁸ "Asserebat quippe, quia verba illa, nec homo, nec aliud animal audire poterat, quin moreretur continuo, nec etiam literas inspicere, quibus verba illa scripta essent.

Propter quod & necesse habent, ea discere per scripturam eorum in aqua factam, ubi protractio literarum sicut fiebat, etiam abolebatur." *De Legibus*, c xxvii; in *Guilielmi Alverni ... Opera Omnia* (Parisiis, apud Andraeam Pralard, MDCLXXIV); facsimile reprint, Frankfurt: Minerva, 1963, p. 90, col. 1.

⁹ "Si enim ista virtus inesset verbis, esset eis ex necessitate uno quatuor modorum, hoc est, vel a parse materiae suae, hoc est acre, aut a parse formae suae, hoc est soni, sive sonationis, aut a parse

124

significatorum, aut ex omnibus his, aut ex aliquibus illorum. " *De Legibus*, xxvii; p. 90, col. 1

¹⁰ "Si enim malitia & nocumenta signati praestarent hanc virtutem nocendi verbis atque nominibus, nomen mortis atque inferni mortem & tormentum intolerabile ... necessario inferrent audientibus; amplius, bonitas atque salubritas signati secundum hoc virtutem praestarent verbis atque nominibus ..." *De Legibus*, c. xxvii, p 90, col. 2.

¹¹ Edited by M.T. D'Alverny and F. Hudry, "Al -Kindi), De radiis," *Archives d'histoire doctrinale et litteraire du moyen age*, 41 (1974),139-260.

¹² The idea that stars exerted an influence of some sort over the lower world was universal in the thirteenth century, though there was much dispute over the precise scope, action, and range of operation of those powers. For discussion of the various positions held, see Edward Grant, "Medieval and Renaissance Scholastic Conceptions of the Influence of the Celestial Region on the

Terrestrial," *Journal of Medieval and Renaissance Studies* 17: 1 (1987), 123; and J.D. North, "Medieval Concepts of Celestial Influence: A Survey" in *Astrology, Science and Society*, ed. Patrick Curry (Bury St. Edmunds, Suffolk: Boydell Press, 1987).

¹³ "... operaretur suds radiis in materiam ... virtus duplici, scilicet naturali et accidentali, et sic fortius surgeret in effectum. " All citations of Al-Kindi are drawn from the D'Alverny and Hudry edition.

¹⁴ Al-Kindi, 239.

¹⁵ Al-Kindi, 240

¹⁶ D'Alverny and Hudry note that the heart is the central organ of sensation and movement for Aristotle; Al-Kindi, 243n.

¹⁷ "Desiderium enim hominis in corde est quod est centrum a quo sunt omnes operationes voluntarie et habet hoc centrum suam centricam naturam, in aliquo conformem centro mundi. " Al-Kindi,

243.

¹⁸ "...vocum prolatione eiusdem desiderii radii consumativam assumunt virtutem, ut in rebus extra positis ... fiant motus " Al-Kindi, 2434

¹⁹ Al-Kindi, 242.

²⁰ Al-Kindi's theory would also tend to imply that the "occult qualities" of plants and stones are a kind of signification an interesting aspect of things which I will not follow up here.

²¹ 21 Al-Kindi, 236.

²² A complete summary and discussion of Siger's argument, as well as its relation to Renaissance magical theory, is found in Armand Maurer, "Between Reason and Faith: Siger of Brabant and Pomponazzi on the Magic Arts," *Medieval Studies*, 18 (1956), 118, rep. in Maurer, *Being and Knowing*, (Toronto: Pontifical Institute, 1990), 137-62.

²³ A summary of Avicenna's theory of the soul as it relates to matters discussed here is found in E. Ruth Harvey, *The Inward Wits: Psychological theory in the Middle Ages and the Renaissance* (London: Warburg Institute, 1975) 21-30 and 43-53.

²⁴ "non est mirum si anima nobilis et fortissima transcendat operationem suam in corpore proprio ut, cum non fuerit demersa in affectum illius corporis vehementer et praeter hoc fuerit naturae praevalentis constantis in habitu quo, sanet infirmos et debilitet pravos et contingat privari natures et permutari sibi elementa, ita ut quod non est ignis fiat ei ignis, et quod non est terra fiat ei terra, et pro voluntate eius contingent pluviae et fertilitas ... et hoc totum secundum necessitatem intelligibilem ... materia etenim omnino est oboediens animae et multo amplius ob o edit animae quam contrariis agentibus in se ." *Liber de Anima seu Sextus de Naturalibus*, ed S. Van Riet, vol. 2, Avicenna Latinus (Leiden: E.J. Brill, 1968), 65-66.

²⁵ In the context of medieval medicine, the term *spiritus* referred to

characteristic essence passing through the various bodily organs including the brain. They thus formed a kind of intermediary between body and mind or soul. A brief history of the idea may be found in Harvey, 49.

²⁶ *Summa Theologiae*, 1a.11,4

²⁷ This is true both of Roger Bacon and of the author of the *De Mirabilibus Mundi*.

²⁸ This treatise, along with a related group of pseudoAlbertus Magnus texts, is discussed by Lynn Thorndike in *The History of Magic and Experimental Science*, vol. II, 730-38.

²⁹ "Et cum diu sollicitaverim animum super hoc invenimus sermonem probabilem Avicenne sexto naturalium: quod dum hominum anime inesset quedam virtus immutandi res et quod res alie essent obedientes ei quando ipsa fertur in magnum amoris excessum aut odii aut alicuius talium.... Et diu non credidi illud. Set postquam legi libros nigromanticos et libros imaginum et magicos invent quod affectio anime hominis est radix maxima omnium harum rerum.... " (Transcribed from an early printed edition of *De mirabilibus mundi* with *Liber aggregationis*, per Wilhelmum de Mechlina impressus in ... civitate Londoniarum (n.d.). A seventeenth century English translation of the *De mirabilibus mundi* was edited more recently by Michael Best and Frank Brightman as *The Book of Secrets of Albertus Magnus of the Virtues of Herbs, Stones and Certain Beasts; Also a Book of the Marvels of the World* (Oxford: Clarendon, 1973), but this version does not contain the theoretical introduction from which I have just quoted.

³⁰ For a list of Bacon's cited sources see David Lindberg's introduction to his edition

xxxiiixxxiv. Lindberg also has an excellent general account of the philosophical background to Bacon's doctrine of multiplication of *species* pp xxxivliii. See also chapter one of K. Tachau, *Vision and Certitude in the Age of Ockham* (Leiden: E.J. Brill, 1988), 226, for thirteenth century historical context of multiplication of species.

³¹ See Lindberg, *Philosophy of Nature*, xxxv; A.C. Crombie, *Robert Grosseteste and the Origins of Experimental Science* (Oxford:Clarendon, 1953), 144-48.

³² Though the *De Radiis* is not mentioned in Bacon's *De Multiplicatione Specierum*, he does refer to it in his earlier work *De Sensu et Sensato*. The influence of the *De Radiis* on his idea of *species* is generally agreed upon; see Thorndike, 667; Lindberg, *Philosophy of Nature*, xlv xlvii; Stewart Easton, *Roger Bacon and his Search for a Universal Science* (New York: Columbia Univ. Press, 1952), 104n.

³³ On vision as the paradigm case of propagation of species see Tachau, 6-16; also David Lindberg, *Theories of Vision from Al-Kindi to Kepler* (Chicago: Univ. of Chicago Press, 1976), 113-46; and A. Mark Smith, "Getting the Big Picture in Perspectivist Optics," *Isis*, 72 (1981), 568-89.

³⁴ "Hae quidem species faciunt omnem mundi alterationem et corporum nostrorum et animarum. Sed quia haec multiplicatio specierum non est nota vulgo studentium, nec alicui nisi tribus vel quatuor Latinis, et

hoc in perspectivis, scilicet in multiplicatione specierum lucis et coloris usque ad visum, ideo mirabiles actiones naturae, quae tote die fiunt in nobis et in rebus coram oculis nostris non percipimus; sed aestimamus eas fieri vel per specialem operationem divinam, vel per angelos, vel per daemones, vel a casu et fortune. Et non est ita, nisi secundum quod omnis operatio creaturae est quodammodo a Deo. Sed hoc non excludit quin operationes fiant secundum rationes naturales; quia nature est instrumentum divinae operationis."

Opus Tertium, in Fr. Rogeri

Bacon: Opera Quaedam Hactenus Inedita, vol. I, ed. J. S. Brewer (London: Longman, Green, Longman and Roberts, 1859), 99-100.

³⁵ On the place of the doctrine of emanations in Bacon's theory see Lindberg, *Philosophy of Nature*, xxxvlix, and Tachau, 611.

³⁶ "Sicut stellae et omnia faciunt virtutes suas et species in rebus extra ... potest ergo anima rationalis, que est substantia maxime active inter omnia post Deum et angelos, facere et facit continue speciem suam et virtutem in corpus, cujus est actus, et in res extra... De quibus operibus Avicenna in sexto Naturalium potenter eloquitur. Et ideo hujusmodi opera et verba de quibus loquor non solum recipiunt virtutem a coelo, sed ab anima rationali)" *The Opus Majus of Roger Bacon*, ed. J.H. Bridges, vol. I (Oxford: Clarendon, 1897), 397.

³⁷ "Et ideo cum verba proferuntur profunda cogitatione et magno desiderio, et recta intentione, et cum forti confidentia, habent magnam virtutem. Nam cum haec quatuor contingunt excitatur substantia animae

rationalis fortius ad faciendum suam speciem et virtutem a se in corpus suum et res extra, et in opera sua, et maxime in verba, quae ab intrinsecus formantur; et ideo plus de virtute animae recipiunt. " Brewer, *Opus Tertium*, 96.

³⁸ "...natura corpus obediet cogitationibus animae, et facit suam speciem fortiolem, quae etiam recipitur in aere formato per vocem;... et secundum quod est malae vel bonae complexionis sic accidit passio in aere et in rebus diverse. " Brewer, *Opus Tertium*, 97

³⁹ The separation is implicit in Bacon's carefully worked out distinction between natural signs and names imposed *ad placitum*. *Species* are natural signs of things; the *species* of a vocable is a natural sign of that vocable, whether the vocable represents sense or nonsense; but the significance of a name imposed *ad placitum* depends entirely on the volition of the namer. The fact that *species*

are defined as natural signs precludes any identification between a word's *species* and the meaning imposed *ad placitum*. An analysis of the key ideas in Bacon's *De Signis* can be found in Thomas S. Maloney, "The Semiotics of Roger Bacon," *Mediaeval Studies* 45 (1983), 120-54. The *De Signis* is edited by K.M. Fredborg, L. Nielsen and J. Pinborg, "An unedited Part of Roger Bacon's 'Opus Maius': 'De Signis'," *Traditio* 34 (1978), 75-136.

⁴⁰ It may be noted here that both Bacon and Al-Kindi would easily be able to counter the arguments brought by William of Auvergne against the idea that verbal power depended upon significance, Bacon because he makes

no such claim formally, and Al-Kindi because in his scheme the conventional meaning of a vocable is only of secondary importance to the verbal effect, the celestial *sensus* being the primary source of the vocable's rays, and generally different from the meaning ascribed by human usage.

⁴¹ See below, note 49.

⁴² He suggests that it may be "a brief popular compilation from Bacon's three works of 12667 concocted by someone else later." *History of Magic*, vol II, 689 ⁴³ *History of Magic*, Vol. II, 659.

⁴³ *History of Magic*, Vol. II, 659.

⁴⁴ His opinion is approved by Easton (137, 194), and is implicitly relied on by Edward Peters in his important historical study *The Magician, the Witch and the Law* (Philadelphia, 1978). Peters refers to Thorndike's *History* for his opinion that "Bacon denounced *magia* with greater vehemence than Scot" (88, note 12); but Thorndike's influence can also be felt in the rather misleading statement that " (Aquinas') views of the inefficacy of magic without demonic aid are similar to those of Roger Bacon ... " (98). A similar attitude also comes through in Jeremiah Hackett's article on Bacon in the *Dictionary of the Middle Ages*, vol. II (New York: Scribner, 1983); Hackett writes of Bacon's "forthright criticism of magic" and calls this criticism "a great apologia of mathematics

⁴⁵ *History of Magic*, vol. II, 661

⁴⁶ Si igitur hujusmodi voces quae vocantur

incantationes et carmine, non fiant consideratis speciebus quatuor, et conditionibus animae et corporis, sed a casu et secundum nutum cujuslibet, tunc sunt magica; et non habent virtutem naturalem alterandi; sed si est operatio tunc daemones faciunt. Si vero fiant secundum species et conditiones dictas, tunc sunt philosophica et sapientis incantantis sapienter...." Brewer, *Opus Tertium*, 99

⁴⁷ *History of Magic*, Vol. II, 677.

⁴⁸ "Non solum pro consideratione sapientiali haec scribo, sed propter pericula quae contingunt et contingent Christianis et ecclesiae Dei per infideles, et maxime per Antichristum, quia ipse utetur potestate sapientiae, et omnia convertet in malum. Et per hujusmodi verba et opera stellificanda, et magno desiderio malignandi componenda cum intentione certissima et confidentia vehementer), ipse infortunabit et infasciabit non solum personas singulares, sed civitates et regiones. Et per hanc viam magnificam faciet sine bello quid voles, et obedient homines ei sicut bestiae, et faciet regna et civitates pugnare ad invicem pro se, ut amici destruant amicos suos, et sic de mundo faciet quod desiderabit." *Opus Maius*, vol. I, 399.

⁴⁹ "Nam Gratianus, sicut multa scripsit jura quae nunc abrogate sunt, sententia saniore praevalente, sic, cum de scientiis locutus est, multa dixit quae debent in parte alteram commutari, ut inferius abundantius explicabo." *Opus Maius*, vol. I, 396.

⁵⁰ "Et creditur ab omnibus sapientibus quod non sumus multum remoti a temporibus Antichristi, sicut in capitulo de sectis per astronomiam in uno revolutis patet. Si igitur Christiani scirent haec opera auctoritate papali) facienda ad impedienda

male Christianorum, satis esset laudabile, et non solum propter male repellenda, sed ad promotionem quorumcunque utilium."

Opus Maius, vol. I, 402.

131

⁵¹ It may be wondered why she felt it necessary to remove the amulet; this point is not made clear in the story as Bacon tells it. One may speculate that she feared, superstitiously, that the amulet conferred on the wearer some arcane power of seeing hidden things.

⁵² "Quis erit ausus interpretari hoc in malum, et daemonibus ascribere, sicut aliqui inexperti et insipientes multa daemonibus ascripserunt quae Dei gratia aut per opus naturae et artium sublimium potestatem multoties facta sunt? Quomodo enim probavit mihi aliquis quod opus daemonis funistud, quondam nec puer decipere sciebat nec volebat? Et mulier, quae decipere volebat at non solum virum sed se per fornicationem dum ab stultis scripturam, visum miraculo pietate mota cedula religavit. Malo hic pie sentire ad laudem beneficiorum Dei quam ex praesumptione magna damnare quod verum est." *Opus Maius*, supplementary volume, 123-24.

⁵³ "Nam tanta virtus potest in verbis consistere quod nullus mortalium sufficiat indagare. Et ad hoc volo innuere per multas vias, quia materia difficilis est et magnae contradictionis. Nam videmus quod verba sacramentorum habent infinitam virtutem. Et scimus quod ad imperium et verba sanctorum a mundi principio mutabantur jura naturae, et obediebant ei (sic elementa?) et brute illa ita ut innumerabilia miracula facta sint." *Opus Maius*, supplementary volume, 123.

"Nam quia verbum ... propriissimum est instrumentum animae rationalis, ideo maximam efficaciam habet inter omnia quae fiunt ab homine ...; cuius signum est, quod omnia fere miracula quae facta sunt per sanctos a principio fiebant per virtutem verborum, unde in verbis summa est potestas, sicut explicavi." *Opus Maius*, vol. I, 399.

Angels and Demons in Art by Rosa Giorgi. Getty Publications, Los Angeles, CA, USA, 2005. 384 pp., illus. Paper. ISBN: 0-89236-830-6, interactionism directly oscillates the gravity genre.

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