

## PHILOLOGY AND THE OCCULT IN ROGER BACON.

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ROGER BACON is best known to the modern world for his knowledge, method and speculation in natural science. But this is not all in his work to excite interest or demand explanation. He was not, it is true, a quite encyclopedic writer, nor, writing extensively and with enormous haste, was he methodical, even for a medieval. But he had something to say of many subjects which do not fall within the field of physical science or of philosophy (in our sense), and to ignore them would leave an inadequate idea of his grasp and his originality.

Most of these may be reviewed in a word, though on some of them he wrote voluminously. On such subjects as geography, botany, music and medicine he had little to say that was original or significant, though much that was practical and showed his strong interest in the good of humanity, as in what he says of the prolongation of human life. He wrote on comparative religion, naturally not in a well-informed or unprejudiced way;—on Buddhism, Mohammedanism, Judaism, Christianity and other faiths. But two subjects may be singled out for especial mention, in one of which he was most modern, in the other most unmodern. His attitude to philology and the study of language is one of the matters most to his credit; and to understand the reason for his attitude toward astrology and magic is essential to a fair view of him.

Bacon insists with emphatic iteration on the importance of an accurate and full knowledge of the languages in which the wisdom of the past has come down to us. The four languages of which he urges the especial study are Greek, Hebrew, Arabic and Chaldee. He gives us to understand that he knew some Arabic and Chaldee, and he certainly knew the others. An incomplete Greek grammar by him is still in manuscript in Oxford; in several of his other

works he records and explains the Greek and Hebrew alphabets, showing some power of phonetic analysis in doing so, and he knew enough of the grammar and vocabulary of Greek to correct the Latin Vulgate. He knew something of the sound-changes that have occurred in both Greek and Latin. The pronunciation of Greek which he gives is a fairly accurate representation of the contemporary pronunciation, which he had probably learned from some of the Greeks who had been brought to England by Robert Grosseteste, bishop of Lincoln. He uses his knowledge to reprove some of the jaunty etymologizing common in his day, which often reminds one of Voltaire's gibe against etymology as the science in which the vowels count for nothing and the consonants for very little; he especially rebukes the practise of deriving Latin words from Hebrew and Hebrew from Latin, a practise which can be found in old-fashioned dictionaries to the present day. He gives a long and fairly accurate list of Latin words derived from the Greek, consisting of terms for general ideas, and ecclesiastical terms. He exalts very high the importance of an accurate knowledge of language, discoursing on it four or five times. In his *Opus majus*, next after his introduction on philosophy comes his discussion of language,—the basis of knowledge, as ethics and religion are its culmination; of five things essential to knowledge both divine and human, grammar is first. Many persons among the Latins he says can speak Greek, Hebrew and Arabic, but not five know their grammar. These languages are important chiefly because little that is valuable for the theologian or philosopher was written originally in Latin. While learned works ought to be read in the original languages, the western world will be mainly dependent on Latin translations, which no one can make well without close knowledge of the subjects involved and also of the two languages. Yet of those who in the last thousand years or so had made translations from Greek to Latin, only Grosseteste had known science well, and only Boethius had had a due knowledge of the two languages. Bacon complains bitterly of wrong translations in the Vulgate Bible, due partly, he says, to St. Jerome's mistakes and partly to his desire not to make too many changes from the older Latin version in use in his day. Bacon did not share the view of the Council of Trent and of Pope Pius X. as to the ultimate authority of the Vulgate. He also complains of the bad translations of Aristotle current then, which came through the Arabic and also through one or two other languages; made by men ignorant of the subject-matter and not too familiar with the languages. Since so much

of the scientific knowledge and philosophical method of his day was based on Aristotle, he was certainly moderate in demanding accurate versions of him.

Here as elsewhere, in the reasons he gives for his opinions, we cannot forget that he was a medieval. After all, he frequently harks back to mysticism. He sees a glorious tribute to the dignity of philology in the fact that St. Jerome had his teeth filed or moved (*aptari*) that he might the better pronounce certain oriental sibilants. A study of astronomy will help us, he points out, to ascertain the date of Noah's flood and the precise ages of the patriarchs. But if at times he gives reasons which do not appeal to us, if sometimes he gives what we might call the Devil's reasons for doing God's work, this was partly because his intellect usually lagged a little behind his intuition; and partly because with unexpected tact he was adapting himself to his pontifical patron. In regard to his motives, Bacon fluctuated between the medieval and the modern. The fundamental division of things in the middle ages was into the good and the bad; in our day, into the true and the false. The middle ages were an even more utilitarian epoch than the present; they do not look so to us, because they had a different idea from ours as to what is useful. Bacon was medieval enough to hold in the field of consciousness the belief that the true is for the sake of the good. But no one who has read his works can doubt that new truth for its own sake inspired his sub-consciousness and stirred his heart.

In spite of the scientific spirit which Bacon shows in regard to language, there may have been a little mysticism as well,—a little sense of the mystical power of words. This sense is one of the fundamentals in his view as to the reality of magic. For this we shall not condemn unheard as a mere superstitious dreamer an official of a religious system whose most august daily task was to work a stupendous miracle by the five little words "Hoc est enim corpus meum." Yet there is a paradox in seeing the twentieth-century scientific world uniting to honor the memory of a man who was not only a stout defender of magic and astrology, but in whom until rather recently the moderns saw mainly a magician, and at whose feats when he was impersonated on the Elizabethan stage the groundlings craned their necks. Yet, to make the paradox more complete, it must be said that Bacon's attitude to the occult, to magic and astrology, was a consequence of his scientific spirit.

To realize this fully, at least a sketch of background is necessary. Bacon, like almost every one else who ever lived, was a man

of his age; not in regard to certain matters on which he meditated long, but in regard to most of his fundamental view of the world and that part of his mental equipment which he had not time to scrutinize. This is the case with even the most revolutionary thinkers, who may share the most narrow prejudices of their neighbors about social customs or the like. But, more than this, Bacon in his years of discretion had joined the Franciscan order, and ends his greatest work with a long and eloquent tribute to the Sacrament of the Altar. The study to which, next after necromancy, he was most hostile was the Roman law, because it undermined a theocratic system of society. He was a faithful Catholic, and the main reason he urges for the advancement of learning is that it will spread the power of the Christian faith.

Now to the medieval the universe was a closed universe, in which everything had a discoverable use and meaning; it was all-pervaded with spirit, and even with spirits, good and bad. Of man the most important part was spirit, constantly acted on by subtle spiritual influences from outside. His daily life was full of acts and words meant to produce an effect quite incommensurate with their surface meaning. The line between religion and magic has always been found hard to draw; what is religion to the believer often seems magic to the unbeliever. More accurately, religion seeks to gain benefits from the unseen by submission and persuasion, magic by cunning and force. But the two are not incompatible; man might placate the almighty and the benevolent unseen, and outwit or force the subordinate and mischievous or impersonal powers. The impulse which is expressed in magic is almost as deep-seated as that of religion; a late Roman writer makes merry over atheists who would not do the most trifling thing (such as bathe) without ascertaining in what part of the zodiac the moon was. But in the middle ages all good men were believers. There were atheists and scoffers; but they were men whose crimes made them prefer a godless universe and annihilation after death to a good God and his just condemnation. Now the Bible in which good and wise men believed taught the reality of magic; men read of the witch of Endor and the sentence of the Mosaic law, "Thou shalt not suffer a witch to live"; and it taught the reality and power of evil spirits. As to astrology, that was not vouched for by the Bible. But it came to Europe from the east, the source of all wisdom; it came in an imposing system, always so impressive to humble-minded people, as the medievals were; it could point to amazing fulfilments of its prophecies; it seemed *a priori* probable.

For an argument that convinced some of the ablest men of the middle ages was this: on earth there is nothing useless, there is no use in the stars unless they influence the earth, hence the truth of astrology.

A year or two ago the writer had occasion for another purpose to collect the views on astrology and magic of a dozen representative writers of the thirteenth and fourteenth centuries, writers both literary and philosophical. Not one of them denied the influence of the planets, and the only one who showed scepticism was Petrarch. As to judicial astrology, the attempt to learn of the future in detail from the heavens, the general opinion was that this could be done, though not with such definiteness as to set at naught the prerogatives of divine providence and human free-will; but it was generally regarded as more or less impious, not a very logical conclusion. Magic was less often mentioned; partly because of its greater remoteness from ordinary life, partly because it was a more grave matter. It is not true, however, that before the days of the witchcraft manias the ordinary practice of magic involved any very serious danger from the civil or canon law. "White" or "natural" magic, the use of images and charms, seems to have been condemned by nobody, to have been generally recognized as useful, and to have been a more or less regular part of the practice of medicine, especially in the fourteenth century; "black" magic or necromancy, involving the use of blood, sacrifices, incantations, suffumigations, and invocations of demons, was always condemned as impious, but not generally as useless. The word "superstitious," constantly applied to it, had not at all the coloring of intellectual superciliousness which it has now; it meant something not so much despicable as shocking; St. Thomas Aquinas defines *superstitio*, which he applies to magic, as worship directed to a wrong object or in a wrong manner. On the whole, people were not sure just how much there was in these occult arts; any voice which declared there was nothing in them trembled a little, they were regarded with hostility, suspicion, and fear, and men were glad, like children, to hide their faces in Mother Church's vesture. On the whole the medieval attitude was not one of disbelief but of disapproval.

Bacon's position as to all this is quite clear. Good, indifferent, or evil constellations (which means arrangements of the planets) *incline* to good, indifferent, or evil effects on earth; which may be frustrated by man's free-will, divine grace, or the devil. Therefore, he says, all good astrological authorities agree that their forecasts

are not certain, but depend on the divine will, a view not condemned by the early saints. The body, health, and states of mind are strongly affected by the planets; therefore moral acts may be predicted, but not with certainty. Accordingly, the wise man in his actions will heed celestial influences. As to magic, he wrote a work (mentioned by Bale) *Contra necromanticos*. Their art, he says elsewhere, is cursed and unphilosophical, consisting partly of forbidden though effective traffic with demons, and partly of fraud. In reading his account of their fraudulent hocus-pocus, one might imagine himself reading an exposure of a modern charlatan; he inveighs against their use of confederates' help, of darkness, of ingenious hidden instruments, of legerdemain, of meaningless characters, silly songs, and irrational prayers. So far he is at one with St. Thomas Aquinas himself. But while the only magic which the Angelic Doctor approves is useless, Bacon holds that natural magic is righteous and useful, *ad opera miranda*, do good and repress evil. Accordingly, charms and images, which contain, as in storage-batteries, some of the power of what they represent, the human mind and the God-made heavenly bodies, should be used to the utmost. The enemies of Christendom may and do use them to our damage, and he begs the pope that Holy Church may not lack the same power in defense.

Bacon's repute in modern times as a magician is mainly due to the fact that it was his works on the occult which were spread abroad in the sixteenth and seventeenth centuries by astrologers and others, proud, perhaps, to find approval for their arts from one who had earned in the schools the title of Admirable Doctor. His repute in his own day as a dabbler in magic is usually ascribed to his general pushing of inquiry and experiment into little-known fields of science. It may well be questioned, though, if it was not rather due to the clear-cut and the approving attitude he took in regard to astrology and natural magic, in contrast to the usual attitude, which was vague or timid, or both. Now what I affirm is that Bacon's position showed mental courage and a scientific spirit. If he did not throw overboard this whole occult lore as intellectual rubbish—and it is too much to expect a thirteenth-century Franciscan to do that—he did the next best thing. If the planets show how events tend, if charms and images are potent for good, why should man not use their help for his own good ends? St. Thomas Aquinas, of the rival order of Dominicans, another wonderful clear-headed man in an age of muddy-mindedness, here was less clear-headed than the Franciscan. He talks of a tacit

compact with demons in the inscriptions on the images used in natural magic, and maintains that demons sometimes help astrologers in their predictions. But if the worker has no desire and leaves no room for diabolical aid, where is the logic of St. Thomas's position? The real reason for it was that these beliefs seemed to impugn the supremacy of God and the freedom of man. But Dante, one of St. Thomas's most faithful disciples, avoids the difficulty by holding that stellar influence is merely one of the channels through which divine providence acts. In regard to the occult, St. Thomas and his like followed their intuition rather than their reason. The fact that we now know their intuition to have been right will not prevent a scientific mind from justifying Bacon for this time fearlessly following his reason.

So Bacon's attitude toward the occult, though one of his mistakes, is really no reflection on his scientific spirit, but was due to the action of it on his more fundamental beliefs—accepted on authority, it is true. It was this scientific spirit, rather than any of its specific products, which is the significant thing about his career, especially coming when it did. It is hard to show much direct consequence of anything that he wrote, though Columbus's voyage in 1492 was partly inspired by what he had read from Bacon on geography, another of Bacon's mistakes, in reality. The significant thing is that Bacon marks an almost dramatic stage in the relations between the church and the world, between traditional wisdom and scientific knowledge.

Bacon lived in the high tide of the western European medieval system, which, on all sides but the legal, means of the medieval church. His century saw the highest development of medieval art, poetry, philosophy; it saw the high social activity of the church in the work of the friars; it saw Innocent III interdicting England, and the Latins ruling in Constantinople. In Bacon the human intellect brought its highest and finest activity, and laid the rich oblation of gold and frankincense at the church's feet; and she turned away. So far as we know, Clement IV never read, he certainly neglected, the lore which the poor friar, with almost pathetic eagerness at having gained such august encouragement, in earnest haste had written out for him three or four times on different scales, to fit the large or small leisure the pope might have for reading. The church was right, from her point of view; she felt instinctively there was nothing there for her; perhaps she even felt there was danger for her. So here the paths of the human mind divide. The intention of the Catholic church to embrace and

govern all human activity, which in the thirteenth century she seemed in a fair way to attain, she defeated herself. She made here the great refusal. In spite of her continued hold on politics, in spite of such work as that of the Jesuits on astronomy in the nineteenth century, she has cast out science and independent critical learning. In later days, when we think of science and the church, we are reminded of what Bunyan says of the two giants, Pope and Pagan, living in caves in the Valley of the Shadow of Death: "Pagan has been dead many a day; and as for the other, though he be yet alive, he is, by reason of age, and also of the many shrewd brushes that he met with in his younger days, grown so crazy and stiff in his joints, that he can now do little more than sit in his cave's mouth, grinning at pilgrims as they go by, and biting his nails because he cannot come at them." He issues now and then a syllabus of errors, denouncing modern thought and its creations as the works of Satan, to which the modern world replies in such a poem as Carducci's *Hymn to Satan*. But toward subversive thought within her own gate the church takes no longer the attitude of indifference which she took to Bacon, as the modernists can testify, the spiritual descendents of Bacon. They have been trying to do for her what he tried to do, an utterly hopeless and impossible thing. She recognizes clearly now what she recognized obscurely then, that her mission is wholly different, and that if the world will not follow her she must not follow the world. The most thorough man of science cannot but admire the most remarkable institution which ever existed on this planet for sticking to her guns as no other institution ever did.

But we must believe the future to be mainly with what Bacon introduced to the modern world. He was not chiefly a discoverer, but he realized the infinite possibilities of mind working with nature. When he faintly foresaw such modern creations as steamships, it was not due to knowledge but to faith in nature and man. He had faith in the future because he was intellectually humble, and esteemed intellectual conceit a chief fount of error; he did not account himself and his world to have attained. He had a strong sense of the unity and rationality of the universe, such as we are coming to on a larger scale and on a higher plane. When we see that one of the last of the schoolmen was one of the first of the scientists, we see vividly how continuous has been the imposing hierarchy of learning.