

## SCEPTICISM AT THE TIME OF DESCARTES

RICHARD H. POPKIN

As Western Europe entered the 17th century many intellectuals were being engulfed by a sceptical crisis that challenged all their basic principles, assumptions and beliefs in science, philosophy and theology. This was the result in part of the wealth of new ideas, new discoveries, and changing life situations that occurred in the Renaissance, the Reformation and the Counter-Reformation during the sixteenth century. It also resulted from the effect of the scepticism presented by Montaigne, by the ancient Greek thinker, Sextus Empiricus, as well as the scepticism presented in Cicero's *Academica*, interest in which had recently been revived at the time.

The texts of the main surviving Greek sceptic, Sextus Empiricus, circa 200. a. d., were mostly unknown in Europe during the Middle Ages. There are a couple of manuscripts of a Latin translation of Sextus in French and Spanish medieval collections. Sextus's work was rediscovered in the mid 15th century from manuscripts which had just been brought from Byzantium. It was read by leading Italian humanists of the period, including Pico della Mirandola and Marsilio Ficino. The first indication that Sextus's sceptical arguments were being used by Renaissance thinkers appears in discussions of disciples of Savonarola, the prophetic religious leader of the Florentine reform movement at the end of the 15th century. A few months before his fall from power, Savonarola, who was himself a philosophy professor, asked two of his monks from the Convent of San Marco to prepare a Latin translation of Sextus for use in combating pagan philosophies. There is no evidence this translation was ever completed. However, a work by one of Savonarola's disciples, Gainfrancesco Pico della Mirandola, a nephew of the great humanist, entitled *Examination of the Vanity of Gentile Philosophy*, published in 1520, makes great use of Sextus' arguments in order to criticize all forms of

philosophy, and as a way of leading people to accept religion on faith. Gianfrancesco Pico employed Sextus's Pyrrhonian scepticism to challenge both Aristotelianism and Platonism. This work was little known at the time.

Later, in 1562, the Protestant humanist publisher, Henri Etienne, put out a Latin translation of Sextus's *Outlines of Pyrrhonism*. A little later, in 1569, the Catholic polemicist and scholar, Gentian Hervet, secretary of the Cardinal of Lorraine, published the complete works of Sextus in Latin. In the preface to this edition he explained his purpose in making this text available. He said that the Pyrrhonian sceptical arguments would undermine all philosophical pretensions and would also undermine the claims of the Calvinist religious reformers. If nothing can be known, he declared, then Calvinism cannot be known. This use of classical scepticism in the religious debates of the time then became a way of undermining the claims of each side to having an adequate and certain criterion of religious knowledge. On the Catholic side this was usually accompanied by an appeal to accept Catholicism on faith, tradition and custom.

In 1576 a philosophy professor at Toulouse, Francisco Sanchez, a cousin of Montaigne's, produced the first serious sceptical attack on modern philosophy, especially in its Aristotelian form, *Quod nihil scitur, That Nothing Can be Known*.

The most popular and persuasive statement of scepticism appeared in the *Essais* of Michel de Montaigne, especially in his longest essay, the "Apology for Raimund Sebond", which sceptically criticized the bases of philosophy, science and rational theology. Montaigne introduced the sceptical arguments against sense knowledge and rational knowledge from ancient sources, and modernized them in terms of recent examples. He stressed relativistic arguments stemming from comparisons of what went on in the European world and in the newly discovered worlds in the Americas and Africa. Montaigne's version of scepticism was republished many times, as was the more didactic rendition of his thought by his disciple, Father Pierre Charron, in *De la Sagesse* (1603). Montaigne's and Charron's writings also appeared in popular English translations of the time. In addition, the writings of Sextus Empiricus were re-edited in 1601 and 1621 in Greek and in Latin translation. There are some indications that an English translation appeared around 1592, and that one or more French translations were being prepared in the early 17th century. Avant-garde thinkers used materials in these ancient and modern

sceptical authors to challenge the accepted philosophical, scientific and theological views of the time. The posing of fundamental sceptical problems, especially as presented by Montaigne, provided what is called the modern problem of knowledge. It also provided as well as the very vocabulary in which the problem has been stated and discussed.

Francis Bacon, who had studied Montaigne's *Essais*, offered his *Novum Organum* as a way of avoiding either complete doubt or unjustified dogmatism. If one could find the right method, then complete doubt could be avoided and knowledge of the world could be reached. Bacon's great methodological construction attempted to overcome the difficulties previously encountered by mankind in using their senses, their reason, and their philosophical and theological theories. Bacon insisted, there were basic obstacles that have inhibited the search for true knowledge. These are the Four Idols, natural ways the search for knowledge is distorted: namely, the weaknesses of human nature, personal idiosyncrasies, preconceptions, and problems of communication. Some of this might be overcome by the aid of instruments, such as eyeglasses and hearing aids. But some of the difficulties were endemic to the human condition. By using a careful inductive procedure, one could overcome some of the preconceptions and some of the individual problems. Then, by compiling immense lists of observed instances, and after that, looking for common factors, Bacon hoped, one could find knowledge of nature. He insisted, knowledge is power, and it can be used to solve human problems.

Bacon's crude empiricism presented a way of admitting a partial scepticism about most metaphysical concerns, as well as finding the best answer possible to scepticism through collecting data and employing induction. In France Bacon's efforts were almost immediately condemned both as unsuccessful, and as just aping the Pyrrhonists while pretending to answer them.

The 17th century French essayist, François La Mothe le Vayer, called Sextus the "divine Sextus", who was the author of our new Decalogue, namely the ten sceptical tropes for doubting everything. La Mothe Le Vayer, who was a counselor to the King, saw Sextus's work and Montaigne's as well, as undermining all rational convictions. And this, he said, would lead people to accept beliefs on faith alone, and leave their doubts at the foot of the altar.

Some people saw this kind of universal doubting as encompassing not only past and present rational views, but also faith itself. They saw

people like La Mothe Le Vayer and his friends as really "libertins érudits", who were employing their vast erudition in order to undermine all convictions whatsoever, and thereby covertly spread a kind of unbelief that would ultimately lead to atheism. At the time, the fideism expressed by the "libertins érudits" sufficed to keep them from being declared heretics, or from being persecuted by the Church or State. They prospered in the France of Louis XIV, and they helped to develop a Golden Age there.

By the 1620's the scepticism of Sextus and Montaigne was so pervasive in France that serious attempts to answer it were being launched by theologians and philosophers. Edward, Lord Herbert of Cherbury, who was then the English ambassador in Paris, published *De Veritate, On Truth*, in 1624. It began with the announcement "truth exists". Herbert declared, "I say this in answer to sceptics and imbeciles". Then Herbert offered a most elaborate way of evading the sceptical challenges, which was quickly shown by Gassendi and others to be totally inadequate.

A good friend of Herbert's, Father Marin Mersenne, 1588-1648, a Franciscan monk, who had attended the Jesuit college at La Flèche at which Descartes later studied, published a thousand page book, *The Truth of the Sciences against the Sceptics*, in 1625. Mersenne, who was a friend of Galileo, Descartes, Hobbes, and other new scientists, felt that he had to undermine the impact of scepticism and as well as Renaissance naturalism and Christian kabbalism.

Mersenne's treatise is a dialogue between an alchemist, a Pyrrhonist, and a "Christian philosopher" (who is no doubt Father Mersenne himself). First the Pyrrhonist undermines the knowledge claims made by the alchemist employing sceptical arguments. After that the Christian philosopher examined most of the sceptical arguments that appear in Sextus's texts. Mersenne proceeded by presenting a sceptical argument, then admitting that it could not be refuted, and then observing that that did not prevent people from having adequate intellectual ways of dealing with problems. The sceptical critiques of sensory knowledge claims could not be refuted, he said, but they could be set aside because by using optical devices, and the laws of reflection and refraction, one could gain enough information in order to proceed in life. In our human situation we just do not have the means to know the true essences of things, and thus to possess real knowledge. However, God has given us enough information and as well as ways of dealing with the information so that we have sufficient guidance in order to solve life's problems and in order to act.

After Mersenne had gone through Sextus's text in great detail, and had offered his pragmatic answer, he then devoted the last three quarters of the book (over 700 pages) to listing all that we can know in mathematics and the sciences. This list, which amounts to one of the first textbooks in modern mathematics and physics, made the sceptic speechless. After having silenced the sceptic, Mersenne then spent the rest of his life working for the advancement of science, by publishing works by scientists like Galileo and Hobbes, by informing people of each other's activities, and by discussing people's intellectual work, and encouraging them to proceed in their scientific endeavors.

Mersenne's answer to scepticism, which I have called "constructive" or "mitigated" scepticism, admits the arguments of Pyrrhonian scepticism cannot be answered, but then shows what can be accomplished nonetheless. This view is somewhat like that of Francisco Sanchez's conclusion to *That Nothing Can Be Known*, attempting to defuse the sceptical crisis by showing how intellectuals can try to understand their world in spite of the force of scepticism unleashed by Sextus, Montaigne and Charron. Mersenne also sought to show that modern scientists like himself could be seriously religious, accepting religious truths on faith. There is no indication that Mersenne's long association with avant-garde thinkers led him to have any doubts about his own Catholic faith. Mersenne published the French edition of Hobbes's *De Cive*, circulated the manuscript of Isaac La Peyrere's *Men before Adam*, and encouraged Galileo's heretical disciple, Tomaso Campanella. He also gathered the philosophical and theological objections to Descartes's *Meditations*, that appeared with the original text. He encouraged young Pascal to set forth his scientific findings. Mersenne was tolerant, and worked with Catholics, Protestants and Jews and the so-called free-thinkers. He advocated a science without metaphysics, and without justification, as a way of avoiding the sceptical crisis of the time.

Mersenne's best friend, Father Pierre Gassendi, 1592-1655, also developed a form of mitigated scepticism. He declared that he was seeking a *via media* between scepticism and dogmatism. Gassendi began his career teaching scholastic philosophy at the University of Aix-en-Provence. He was supposed to lecture on the philosophy of Aristotle. Instead, Gassendi's course of 1624 was a sceptical decimation of Aristotle's views, ending with Gassendi's declaration that there can be no knowledge, especially not in Aristotle's sense.

Gassendi was well versed in the arguments of ancient scepticism as well as those of Sanchez and Charron. He employed the sceptical outlook to respond to both Herbert of Cherbury and René Descartes. His book length attack on Descartes's philosophical system was originally intended as just one of the objections that Mersenne wanted to append to Descartes's *Meditations*. Descartes however was so incensed that he only allowed a brief letter detailing a few of Gassendi's points to appear in the text. Descartes said that Gassendi's question about how could Descartes tell that his great system was anything more than a set of ideas in his mind was "the objection of objections". Descartes's response was to say that if we took it seriously we would shut the door on reason and become just monkeys or parrots.

Gassendi sought a way out of complete scepticism in the ancient atomic philosophy of Epicurus. He edited Diogenes Laertius's "Life of Epicurus", the major Greek source of Epicurus's views, and thus revived this major system of ancient thought. He published studies of Epicurean atomism applied to current scientific problems. He himself was an important experimental scientific researcher. He finally put his philosophical and scientific views together in the enormous *Syntagma philosophicum*, only published posthumously. Gassendi offered a kind of pragmatic empiricism as the *via media* between scepticism and dogmatism, showing how one could support knowledge claims about appearances without at the same time, making any claims about the real nature of things. Epicurean atomism was offered as a hypothetical way of organizing the myriad data of experience, allowing for predicting future states of affairs from the present suppositions about atomic movements. This constituted a hypothetical materialism as the basis for modern natural science, that made no claims to metaphysical truth. In Gassendi's presentation, he began with a sceptical-empirical theory of knowledge and then the scientific explanation of nature. There is no chapter on metaphysics. His atomic system is presented as the best hypothesis for explaining our experience.

Mersenne and Gassendi have been considered the first theoreticians of modern mechanistic thought, and the first to show how the mechanistic model of the world could be used to replace the Aristotelian one, thereby allowing for a science without an ontology. Gassendi's materialist Epicureanism was one of the major systems of modern science developed in the 17th century. It was quickly studied all over Europe and in

America. And some of his major works were translated into French and English.

Mersenne and Gassendi were both priests who were friends of Galileo. They were never challenged or condemned by the Catholic Church because of this. But Gassendi was seen by some as one of the "libertins érudits", free-thinkers, who was covertly challenging religion. Later writers in the 18th and 19th centuries saw him as a hero of modern materialism. It was assumed as an Epicurean his own views must have been in conflict with Catholic doctrines. Recent studies of Gassendi's and Mersenne's religious views suggest they clearly and consciously developed their scientific views without at the same time challenging any Catholic views. They were opposed to many strange religious developments of the time such as Kabbalism and Rosicrucianism. Originally both of them accepted Galileo's version of the heliocentric theory, but they stopped publicly advocating it after Galileo was condemned. They tried to present a cosmology acceptable to the Church and that was also consistent with astronomical evidence. More important they both insisted that religion was based on faith, and not on scientific claims. Gassendi refused to apply his atomic materialism to Church doctrines about the soul, the afterlife, the nature of God, etc. He advanced a form of the argument from design in order to justify belief in God, but he opposed attempts to develop an empirical theology. Gassendi's Christianized Epicureanism, the ancient atomic theory shorn of its anti-religious features, could then provide an intellectual framework for modern men. Mersenne and Gassendi were both convinced that modern science, which was then just developing, was compatible with the Church's teachings. A healthy constructive scepticism could help eliminate false or dubious metaphysical theories such as those of Aristotle, Plato and the Renaissance naturalists; theories that could lead people to embrace heretical views about God and Nature.

Mersenne and Gassendi both encouraged interest in modern science, and in accepting its findings along with a non metaphysical Christianity. Gassendi's materialism unfortunately did not lead to any new and important scientific discoveries or theories and was later swept aside by the work of Newton and Leibniz. The solution to the sceptical crisis of Mersenne and Gassendi however encouraged a moderate way of dealing with it, by admitting that fundamental questions about the nature of knowledge and of nature are unanswerable. This however does not preclude a constructive way of dealing with the information we have, and

also of using this information as a guide to life. This outlook also appears among the scientists of the Royal Society of England and reappears in the 20th century in the pragmatic and positivistic philosophies of science.

Another reaction to the sceptical crisis that has been largely ignored is that of some spiritualist or theosophical thinkers like Joseph Mede, Jan Amos Comenius, John Dury and Jacob Boehme. Mede who was the leading 17th century expert on interpreting Biblical prophecies, reported that when he went to Cambridge University in 1603, he happened to see a copy of Sextus Empiricus on the desk of a student. He avidly read the work, and then underwent his own sceptical crisis in which he became unsure of anything. He sought for some basis for certainty in the many courses taught at Cambridge. He studied philosophy, theology, philology, history, etc. with no solution until he found certainty in the method for interpreting Biblical prophecies. Mede's solution to the sceptical crisis influenced Dury and Comenius, the leader of the Moravian Brethren.

Dury, a Scot trained in theology in Leiden, became a preacher, an active promoter of the new science, and a religious diplomat, trying to reunite all European Protestant Churches in preparation for the Second Coming of Jesus, and his thousand year reign on earth. Dury joined with Comenius and Samuel Hartlib in 1641 to create a reformed state in England in preparation for the great events to come. This included creating the institutions that would train new scientists who would be needed in the Millenium. Dury had become a follower of Mede's theory of the method of interpreting Scripture.

Dury encountered René Descartes at a gathering in The Hague while the latter was writing his *Discourse on Method*. Descartes explained to Dury that he had been in complete doubt about everything until he found certainty in mathematical demonstrations. Dury answered that he himself had had such doubts until he found the method of interpreting Scriptural prophecies with certainty. From then on Dury kept writing different versions of his own discourse on method, for religious purposes rather than scientific ones.

Another indication of the difference between what Descartes was trying to do and what Dury and Comenius were doing appears in the account of a "summit meeting" between Comenius and Descartes, that was held in a Dutch castle in 1642. After hours of bitter discussion, Descartes reported that Comenius had no understanding at all of

mathematics. Comenius, on the other hand, complained that Descartes did not understand anything about Scriptural prophecies.

Comenius's theory of knowledge began with an empiricism like that of Francis Bacon. The latter has cast "a most bright-beam in a new age of Philosophies now arising". Bacon had found, according to Comenius, the true key, but he had not actually opened up Nature's secrets. All knowledge starts with sense information. However, the senses are often confounded, as sense illusions and deceptions indicate. Then, we have to use reason in order to correct the defects of the sense and its errors. However, many things are remote both from the senses and from reason. And, here we have to rely on the revealed truths which God has shown us, allowing us to know some of Nature's secrets.

Thus sense, reason and Scripture have to be conjoined. If we relied only on the senses, we would be no wiser than ordinary people, and we would accept various false or dubious views. If we relied only on reason, we would deal only with abstractions which might be mere phantasms, or imaginary worlds. If we only relied on Scripture, we might be carried away, or become involved in matters far beyond our comprehension. So, conjoining sense, reason and Divine Revelation allows for belief, understanding and certainty, thereby allowing us to escape scepticism. The senses provide us with evidence. Reason can correct the senses, and Revelation can correct reason, when the latter arrives at false views about matters that are invisible.

In Comenius's theory sense is the source of knowledge and certainty concerning natural things, and reason the means of reaching knowledge and certainty about revealed matters. The senses and reason can enable us to contemplate the wonderful world that God has created, but they cannot help us concerning eternal matters. These can only be known from the Word of God. Scripture does not tell us about grammar, logic, mathematics or physics, but it does tell us of other kinds of wisdom. Thus, Comenius insisted that "Philosophy is lame without Divine Revelation".

This outlook was used to criticize reliance on the teachings of Aristotle. Comenius declared that Aristotle was very bright, but he lived at the world's infancy and he lacked revelation. Bacon, Campanella and others had shown weaknesses in Aristotle's views. Giving up Aristotelianism leads not to complete doubt and scepticism. "The Guidance of God, the Light of Reason, and Testimonie of Sense" will overcome many

doubts and disputes. Understanding will be increased and many inventions will be created.

Comenius, who was a strong advocate of the new science, was in the forefront of revising and reforming the education system of the time from kindergarten to graduate school, so that people could increase their knowledge and their ability to use it. His goal was pansophia, universal knowledge. This he saw as part of the divine progress that was leading to the Millennium. He appealed to the Biblical verse, *Daniel* 12.4, that knowledge shall increase as we approach the end of human history. There would be a progressive overcoming of the sceptical crisis by the progressive revelation of Divine secrets and the progressive realization of what knowledge we could possess.

The admixture of religion and science in Comenius's thought became more pronounced in theosophical movements of the time, such as the Rosicrucians and the spiritualism of the German mystic, Jacob Boehme. They contended that there is a higher knowledge that only adepts can have, and that this knowledge is not open to sceptical challenge. This has led to an ongoing presentation of theosophies, rather than philosophies, as ways of attaining certitude. Of course, doubters questioned the reliability of this, likening it to "enthusiasm", which Henry More characterized as the firm belief that one is RIGHT even though actually wrong.

The early 17th century sceptical crisis "cast all in doubt", as John Donne said. The sceptical texts of Sextus, Cicero, Montaigne, Sanchez and Charron, raised questions about all previous philosophies, theologies and science. Modern philosophy begins with attempts either to live with sceptical doubts, or overcome them. The new scientific developments convinced some like Mersenne that there was genuine knowledge, even if it could not be justified. New religious views convinced others like Comenius that Scripture could provide a way to avoid complete doubt. René Descartes felt it necessary to find an entirely new foundation for knowledge to overcome the sceptical crisis, a crisis which has continued to haunt philosophy up to the present time. He sought a foundation for knowledge which none of the doubts of the sceptics could possibly shake. His new system, presented as definitive answer to scepticism proved to be the starting grounds of newer and newer scepticisms up to our own times.

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