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# GASSENDI THE ATOMIST

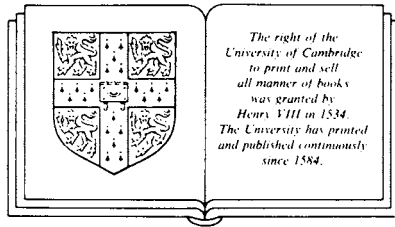
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ADVOCATE OF HISTORY IN AN AGE OF SCIENCE

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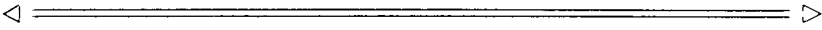
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## Other atomists, other skeptics, and other Epicureans: the problem of determining the context of Gassendi's career

Ever since Bernier's popular French translation of his work in the 1670s, Gassendi has had to be defended against an unusual charge, the charge that he was *only* a historian of philosophy.<sup>1</sup> Scholars have pinned this label to his work not because they did not recognize his skills as a philosopher and scientist but because at a certain point in assessing his philosophical and scientific achievements, they have sought to explain why those achievements do not merit unqualified praise.<sup>2</sup> If Gassendi is significant as a theorizer about atoms, he can be faulted for the apparent naïveté of the experiments he used to test his theories. If he is significant for advancing arguments against Aristotle's metaphysics, he may be counted as just one of a growing number of sixteenth- and seventeenth-century philosophers who were critical of the standard university curriculum. If he is significant as a skeptic during a period of the revival of Pyrrhonian and Academic skepticism in Europe, he suffers from an implicit comparison with his contemporary, Descartes, whose skepticism proved to be more fruitful in the development of modern epistemology than his. However, interpreters of his writings have been reluctant simply to call Gassendi second-rate. The sheer volume, complexity, and scope of his *Opera omnia* do command a respect which goes beyond the limited acknowledgment of his contributions to empiricism in philosophy and to the newly mathematized physics, both of which captivated the attention of intellectuals in the half-century after his death in 1655. Hence the convenience of the label according to which Gassendi was only a historian of philosophy. This label has enabled scholars to recognize the wide scope of his work while at the same time allowing them to caution us not to expect unqualified enlightenment from a philosopher whose categories and priorities were not only very different from our own

but were also markedly different from those of natural philosophers of his period about whose achievements we have fewer reservations.

No one would have been more cognizant of what has happened to his reputation than Gassendi himself. Indeed one of his most conspicuous gifts was an ability to avoid and often to transcend the pejorative labels of his own generation. Who would have predicted that the young professor of philosophy from Aix-en-Provence— who lost his job when the Jesuits took control of the university in 1622 and whose first book against Aristotle occasioned quiet warnings from his friends – would become a great man in his fifties, a renowned and cosseted professor of mathematics in the Collège royal in Paris?<sup>3</sup> But even more surprising than this were the raw materials from which Gassendi built his career. His six-volume *Opera omnia*, published posthumously in 1658, is a massive repository of works on controversial topics. He championed Epicurus above all other philosophers, he defended the writings of Kepler and Galileo, and he fully articulated an atomist metaphysics and physics during a period when these activities were subject to accusations of atheism, libertinism, and the harboring of unorthodox beliefs.<sup>4</sup> Gassendi managed to avoid all but a few such accusations and, as it turned out, his uniquely detailed historical style of philosophizing was what enabled wary seventeenth-century readers to set aside their suspicions and take seriously opinions which they had previously viewed as threats.

What Gassendi never envisioned was that being a historian of philosophy would itself become a reason for being pejoratively labeled.<sup>5</sup> Doing philosophy for him just was a historical activity. And of course neither did he consider investigations in physics and astronomy as investigations separable from philosophy as a whole. Doing physics was a philosophical activity which he often ranked higher than the other two parts of philosophy, logic and ethics.<sup>6</sup> It is now a well-established caveat in studies of seventeenth-century science and philosophy to forewarn the reader that the natural sciences were not yet autonomous enterprises and, similarly, philosophy had not yet been so distinguished from physics that it itself needed to be set on the secure path of a science. To this caveat, I wish to add a second: do not expect that the genres of history of philosophy and history of science will be the same for Gassendi and his contemporaries as they are for us. Research in history during this period was rich in the number of technically sophisticated methods it encompassed. However, to define oneself as a historian was not to denote one's acceptance of a single, coherently demarcated discipline,

because the specialized scholarly disciplines such as philology and chronology, which shaped historical studies at the turn of the seventeenth century, were as much the subjects of speculation and reform as were philosophy and physics.<sup>7</sup> Interestingly, to say that someone was the *historian of* a subject also did not yet connote his second-rateness in the actual practice of the subject whose history he was writing.

In Gassendi, therefore, we have an intriguing example of a historian of philosophy and science whose work must be read with enormous care in order not to impose upon it any unwarranted modern assumptions about the purposes of history, philosophy, and science. Gassendi himself was trying to determine just what these purposes ought to be. Hence if we are to apprehend the results of his determination, we should be ready to witness a very radical alternative to the view that history, philosophy, and science are separable activities. Increasingly many thinkers in the generations *after* Gassendi adopted this view. But the great interest of Gassendi lies in the fact that he did not adopt it, but produced instead an impressive body of writings to demonstrate the detailed workings of an opposing view, one which assumes that history, philosophy, and science are parts of a common enterprise. How will a study seeking to identify the characteristic features of this enterprise affect our previous understanding of his work?

Gassendi has been the subject of several major interpretative studies since the late 1930s which have established his importance as an atomist, a skeptic, and an Epicurean.<sup>8</sup> These studies have described different contexts in which his activities in physics and astronomy, logic and metaphysics, and even ethics can be shown to be related to the new science and philosophy of the seventeenth century. The contexts serving as the bases of these interpretations have been defined in two stages. The interpreters have first selected near contemporaries of Gassendi who wrote on similar topics or held similar opinions on certain key questions. They have then evaluated his work by comparing his skill in articulating particular philosophical arguments or in giving particular scientific explanations with the skills exhibited by the relevant peer group. Not surprisingly, other atomists, other skeptics, and other Epicureans figure prominently in these peer groups. Such comparisons have offered a means of deciding on which of his writings attention should be focused, and they have furnished some scholars with a scale for assessing the strength of his commitments to the new science and philosophy.<sup>9</sup> However, establishing Gassendi's actual relations with the members of various



peer groups has proven exceedingly difficult. Gassendi acknowledged in a few instances his familiarity with a given member's work, as in the case of the French skeptic Pierre Charron (1541–1603).<sup>10</sup> But Gassendi had relatively little in common with the views of the atomists with whom he has been compared. Nor is it clear why thinkers as diverse as Giordano Bruno (1548–1600), Sebastian Basso (*fl.* 1550–1600), Nicholas Hill (*c.* 1570–1610), David van Goorle (d. 1612), Daniel Sennert (1572–1637), Joachim Jungius (1587–1657), Jean Chrysostom Magnen (1590–1679), and Robert Boyle (1627–91) should even be classified as atomists in the same group *with each other*, much less with Gassendi.<sup>11</sup>

The above approach suffers from another obvious drawback. Because of the broad range of Gassendi's interests, no one context satisfactorily explains the significance of all of his writings. Scholars seeking to examine his works as a whole and his over-all career have thus had to resort to more diversified methods. Some have drawn together themes taken from a number of different intellectual contexts in order to formulate summaries of how the disparate sections of his work are related to each other.<sup>12</sup> Others have produced critical editions and translations of his individual texts, which have contributed to our appreciation of the full variety of his writings.<sup>13</sup> In both cases, they have performed exacting tasks, greatly adding to our knowledge of his texts and also raising significant questions about the relationship which Gassendi himself might have assumed to exist among his diverse works.

Now it may be asked whether the interpretative strategy sketched at the outset of this chapter can provide any new insights not already developed by previous scholars concerning the appropriate contexts in which to evaluate his writings. I believe that it can for two reasons. First I think that to begin to understand a philosopher as complex as Gassendi, one must establish how he himself viewed his own career. Did Gassendi really think of himself as a part of intellectual movements called "atomism," "skepticism," "Epicureanism," "nominalism," and even "materialism"? If not, what other influences shaped his loyalties and opinions? This is partly to ask who was his confessor and who were his patrons, for those who influenced his theology and those who paid his bills set certain constraints on his activities. But the most pressing forms of this question are those which ask the following: (a) Where did Gassendi obtain his notion of what constitutes an intellectual career? (b) How did he acquire his understanding of the intellectual genres which he should pursue in his work? (c) Whom did he regard as his audience? That is, what

scholarly practices determined the specific topics of the debates he chose to engage in, and how were the other participants in these exchanges selected? The interpretative strategy which I have sketched is one which will address these critical questions.

My second reason for employing such a strategy is that it treats with proper respect Gassendi's own acute sensitivity to the problems of historical context-building in the exposition of a philosopher's views. Gassendi was a context-builder on the grand scale. This skill was crucial to his practice of the history of philosophy. Indeed his expertise in determining the contexts of other people's ideas will doubtless rival that of any historian who dares to do for Gassendi what he himself did for most of the major (and minor) philosophers who preceded him. Hence a second good reason for adopting the present interpretative approach is a cautionary one. If Gassendi eluded being pejoratively labeled by his contemporaries and if he was a master context-builder for other philosophers, then we should pay close attention to the labels we ourselves have devised for him. Is the charge that he was only a historian of philosophy the result of our misunderstanding of his real strengths as a philosopher? Have the efforts to link his "early" atomism and "early" empiricism to the progressive features of the new science and philosophy actually masked the true character of his work? Perhaps his aims were *not* progressive, or were progressive in ways we do not yet understand.

Modern readers are not the only ones who have had to come to terms with the variety of Gassendi's writings. His seventeenth-century readers outside France included Newton, Locke, and Leibniz. The historian Thomas Stanley, the physician Walter Charleton, and the president of Harvard College, Increase Mather, were also well acquainted with his work. In the eighteenth century, Gibbon, Voltaire, and Adam Smith joined the list of his notable readers, as did the young Karl Marx a century later. Nonetheless François Bernier, his French translator, and Bougerel, his first full-scale biographer, were right to worry about the reception of his writings among audiences not composed of his immediate French contemporaries. Newton read Gassendi's *Animadversiones* in the abridged English version of Walter Charleton.<sup>14</sup> Increase Mather read his *Exercitationes* against the Aristotelians, and expected Harvard undergraduates to do the same.<sup>15</sup> Adam Smith studied his biographies of the astronomers, while Leibniz became familiar with his views through Bernier's *Abrégé de la philosophie de Gassendi*.<sup>16</sup> Charleton considered the most important part of Gassendi's work to be the hypothesis of atoms, which provided atomic explanations of a

mechanistic universe, but Thomas Stanley emphasized Gassendi's standing as a historian of philosophy.<sup>17</sup> Gibbon disagreed with them both and referred to him as "the most eminent philosopher among men of letters, and the best literary man among philosophers."<sup>18</sup> This fragmentation of interests in his work was symptomatic of a tendency among later readers to misconstrue the real purposes of his writings. To make matters worse, many later readers ignored his originality as a thinker and regarded him merely as a transmitter of other people's ideas.<sup>19</sup> In their various characterizations of him, they thus frequently omitted to discuss the over-all aims which he himself had intended his writings to achieve and which, if properly understood, would have given coherence to his views.

Without a doubt Gassendi's best readers were his immediate contemporaries in France and the Netherlands. They at least recognized the full scope of his enterprise and appreciated the fact that the disparate parts of his work bore significant relations to his over-all conception of the history of philosophy. Not everyone understood the finer points of atomism, astronomy, logic, and ethics which he elucidated, but no one questioned the relevance of these diverse topics to his project of reviving Epicurus' philosophy. The range of intellectual backgrounds of these appreciative friends and patrons illustrates the broad appeal of his work during his own lifetime:

Ismael Boulliau (1605–94), the astronomer who was an early defender of the Copernican theory and one of the first foreign associates of the Royal Society of London;<sup>20</sup>

Jean Chapelain (1595–1674), the leading Aristotelian literary critic in France and secretary of the Académie française;<sup>21</sup>

Elie Diodati (1576–1661), the prominent Genevan Protestant who was an important correspondent of Galileo's and who persuaded the Elzevirs of Leiden to publish his friend's *Discorsi*;<sup>22</sup>

Joseph Gaultier (1564–1647), the vicar general of Aix and an astronomer who was an early observer of Jupiter's satellites;<sup>23</sup>

François de la Mothe le Vayer (1588–1672), a writer of philosophical dialogues, tutor of the Duc d'Anjou, and member of the Académie française;<sup>24</sup>

François Luillier (c. 1600–51), a *maître des comptes* better known for his Epicurean revelries and his patronage of scholars, poets, and playwrights;<sup>25</sup>

Marin Mersenne (1588–1648), mathematician and organizer of the most influential circle of scientific and philosophical correspondents in Europe;<sup>26</sup>

Henri-Louis Habert de Montmor (1600–79), a *maître des requêtes* who became a member of the Académie française as well as the patron of his own scientific academy;<sup>27</sup>

- Gabriel Naudé (1600–53), a writer of history, member of the Académie française, and librarian or secretary to the Cardinals De Bagni, Richelieu, and Mazarin and to Queen Christina of Sweden;<sup>28</sup>
- Guy Patin (1599–1672), dean of the medical faculty of the University of Paris and professor of medicine in the Collège royal;<sup>29</sup>
- Nicolas-Claude Fabri de Peiresc (1580–1637), counselor to the King in the Parlement of Provence, the leading bibliophile and collector of manuscripts, inscriptions, and coins of his generation in France;<sup>30</sup>
- Samuel Sorbière (1615–87), French translator of works by Thomas Hobbes and Thomas More, and secretary of Montmor's Academy;<sup>31</sup>
- Louis-Emmanuel de Valois (1596–1653), Comte d'Alais, Master of the Light-horsemen throughout France, and Governor of Provence.<sup>32</sup>

All of these eminent men assisted Gassendi in some aspect of the research, writing, editing, and publishing of his minor as well as his major works.<sup>33</sup> Such assistance was partly to be explained by their deep affection for Gassendi, whom one of them dubbed “the sublime one” and whom even a distant acquaintance like Hobbes called “the sweetest-natured man in the world.”<sup>34</sup> But Gassendi was much more than the object of his friends' affections. Their respect for his work itself was evident not just in the reception they gave to his shorter pieces but also in the eagerness with which they anticipated the publication of his massive summary of Epicurus' philosophy, the *Syntagma philosophicum* (1658). Although some did not live to read it in its final form, they were familiar with earlier redactions of this work, and they viewed as virtues those of its features that tend to bewilder the modern reader: its comprehensive discussion of all the parts of philosophy, its exploration of a new range of experimental and observational problems in physics and astronomy, and its detailed account of the history of philosophy.

Gassendi's relations with his friends are crucial to the interpretation of his work. Not only did these contemporaries know how to appreciate him; they also provided the stimulus and the material resources at each stage of his career which enabled him to pursue his successive interests. His choice of the genres in which he wrote owed much to their guidance during his formative years. Hence it is in the context of these friendships that much of his notion of what constituted an intellectual career must be understood. Insofar as other atomists, other skeptics, and other Epicureans influenced his thought, he learned of their ideas through the mediation of his friends. Yet this circle of patrons and scholars did not define its common concerns in terms of the principles of atomism, skepticism, or Epicureanism. Indeed the shared assumptions which established their identity as a group still remain to be discovered and shall be

examined in subsequent chapters of this book. For the purposes of the present discussion, however, it may be illuminating to consider just two outstanding aspects of philosophy as it was practiced among Gassendi's circle and among the French intellectual elite of the period.

One of the striking features of French science and philosophy in the early seventeenth century was the variety of difficulties that attended a philosopher's attempt to state any one principle or opinion succinctly, in isolation from the rest of his views. A philosopher could never count on making an unambiguous, limited statement of his beliefs because philosophy as a subject of inquiry was itself in a state of transition in which audiences aggressively questioned the *kind* of philosophy which a speaker endorsed at the same time that they questioned the soundness of his particular arguments. When, for example, the Dutch atomist David van Goorle published his defense of an atomist physics in 1620, the philosopher and mathematician Mersenne issued from Paris an impassioned attack on him.<sup>35</sup> Mersenne's attack was notable because it was directed at only a single principle defended by Van Goorle, the principle that everything is made from nothing and returns to nothing. This one principle was used by Mersenne to establish a similarity between Van Goorle's views and that of the French physician and philosopher Jacques Charpentier, who figured in Mersenne's even larger list of philosophical undesirables – his list of known deists, atheists, and free-thinkers of the period.<sup>36</sup> As a result of this identification of just one of Van Goorle's views with the unorthodox systems being advanced by critics as alternatives to Aristotle's philosophy, Mersenne in 1624 discouraged his readers from any further consideration of the Dutch philosopher's writings.

The effect of attacks such as Mersenne's was to make philosophers very wary of presenting their ideas in contexts which they themselves did not control. Since their isolated opinions might be interpreted as having affinities with any number of philosophical traditions, even those quite different from the traditions they actually espoused, they were careful to put forth their ideas en masse. Thus, sometimes systematically and sometimes haphazardly, they presented their arguments in works designed to communicate not only what they believed but also the relations in which their beliefs stood to the rest of philosophy. This tendency among Gassendi's contemporaries greatly enlarges the task of a modern reader of their works. It makes it impossible in many cases to draw a distinction between what an author believed, on the one hand, and

his account of the philosophical traditions which were the sources of his beliefs, on the other hand. It also means that an author's specific theories cannot be examined in isolation from the exposition of the rest of his views.

Still another kind of difficulty encountered by philosophers in the early seventeenth century was the ad hoc composition of many of the forums in which scientific and philosophical exchanges took place. Scholars not employed by a university or scholars, like Gassendi, who held university posts only sporadically during their careers were amateurs in the sense that their public occupations – as lawyers or priests, for instance – did not directly involve their research interests. Their principal means of exchanging opinions and information were the informal networks of influence established among groups of friends. These networks could form around an influential patron such as Gassendi's Epicurean friend, François Luillier, or they could develop from networks of correspondence like Mersenne's.<sup>37</sup> They ultimately received a more structured organization in private academies such as that supported by the *maître des requêtes*, Habert de Montmor. Private academies like Montmor's flourished in a variety of settings prior to the founding of the Académie royale des sciences.<sup>38</sup> During an era when the institution of the academic journal was also yet to be perfected, these networks formed the organizational basis of intellectual life outside the universities.

The effect of the ad hoc composition of forums such as these was again to make the philosopher wary of the contexts in which his opinions were being aired. Gassendi on one occasion warned his friend the astronomer Boulliau not to present his views on the Copernican theory at a conference of Renaudot's Bureau d'adresse.<sup>39</sup> In this popular Paris forum, it was possible for even an experienced astronomer like Boulliau to have the scholarly apparatus supporting his views disregarded by an audience untrained in his field of expertise. Oversimplified or distorted reports of his views might thus find their way into the published minutes of the Bureau's conferences. Such minutes had the potential for causing great offense to the public authorities, who might be persuaded to exercise their powers of censorship. Gassendi's contemporaries recognized quite clearly that the scientific and philosophical debates in their ad hoc forums did not always result in coherent arguments. Usually they were tolerant of shortcomings of this kind, but they did draw some distinctions between acceptable and unacceptable contexts for debate.<sup>40</sup> These distinctions are helpful to the modern reader who wishes to

understand the minimum requirements for rational discourse which were set by early seventeenth-century French intellectuals. Nevertheless, the conditions in which discussions were conducted still make the modern reader's task of interpretation a formidable one. How does one begin to evaluate the relative importance of particular topics discussed in an ad hoc forum? Gassendi's defense of, for example, the concept of atoms is unlikely to be evidence of his participation in a self-conscious atomist movement if it was addressed to an ad hoc group, since his defense of atomism would have been just one among scores of other subjects treated by such a group. He would have been addressing not a constituency of proponents of similar principles but rather a group of scholars, many of whom had no stake in either defending or opposing atomism.

It is perhaps now clearer why the present study takes issue with some of the conclusions reached by previous Gassendi scholars. Since the late 1930s, several important interpretative disputes have dominated Gassendi scholarship. But a resolution of these disputes has not been forthcoming because the proponents of the contending interpretations cannot agree on what are the best contexts in which to judge his work. Moreover, these proponents have tended to shy away from an examination of the genres, especially the historical genres, in which Gassendi thought and wrote. Even those who have remarked on the historical format of many of his writings have afterwards proceeded to minimize its importance when compared with the importance of his interest in the new science and new philosophy of his time.<sup>41</sup> With few exceptions, they have considered it a shortcoming of Gassendi's that he should have expressed his beliefs in a tedious, humanist style of philosophizing. The study of this humanist style has not usually been regarded by them as a likely means of establishing his aims or his originality as a thinker.

Four related problems have been at issue in the interpretative disputes. First there is the problem of Gassendi's importance as a natural scientist. Even allowing for the fact that he contributed a natural philosophy rather than a set of physical laws to the new science, Gassendi's achievements in advancing atomism have been seriously questioned. Koyré (1957) pronounced the harshest judgment on these achievements when he said that the atomism of Epicurus was not a scientific theory and "its revival by Gassendi remained perfectly sterile."<sup>42</sup> Koyré (1955) even criticized Gassendi's astronomical observations and experimental work in the physics of moving bodies because he could see no evidence that Gassendi would have treated these topics mathematically if he had not been testing the theories

of others, in this case, Kepler and Galileo.<sup>43</sup> For Koyré there was no doubt that Gassendi never made the telling move from a qualitative to a quantitative physics which would have signified his mastery of the new science.

A more moderate assessment of his scientific work was given by Rochot (1944). Rochot described the hesitations and lapses which had characterized Gassendi's thinking about atomism as the result of an inability to decide on which of two incompatible projects he should concentrate.<sup>44</sup> Either Gassendi should have committed himself only to the investigation of physical phenomena and should have formulated specific atomist theories to explain just those phenomena, or he should have devoted his total efforts to the production of a first-rate Greek edition of the texts of Epicurus, accompanied by an outstanding Latin translation and commentary. Since Gassendi did neither, Rochot concluded that he had remained someone caught between science and history, and that his achievements, while impressive enough, have thus never merited the highest praise.

Although the fruitfulness of his scientific investigations has been seriously questioned, Gassendi's importance as a transmitter of Epicurean ideas and as an advocate of an early form of empiricism has been upheld by Mayo (1934), Kargon (1966), Norton (1981), and Kroll (1984). These historians differ widely in their accounts of the actual steps by which English audiences, especially, acquired a knowledge of Gassendi's works. Each of them has focused on the distinctive influence on English thinkers of one of the following: (1) Charleton's partial English translation (1654) of Gassendi's *Animadversiones in decimum librum Diogenis Laertii*, (2) Stanley's English translation (1655–60) of Gassendi's *Philosophiae Epicuri syntagma* (an appendix to the *Animadversiones*, not to be confused with Gassendi's major work, the *Syntagma philosophicum*), or (3) Bernier's French translation (1674–8) of the *Syntagma philosophicum*.<sup>45</sup> Kargon also asserts the direct influence of Gassendi on Hobbes when the latter visited Paris.<sup>46</sup> Kroll, in particular, favors the possible influence of Gassendi on Locke via Stanley's *History of Philosophy*, and he has criticized Norton for basing his account of the connection between Gassendi and Locke on a suggestion by Locke's biographer, Richard I. Aaron, that Locke learned about Gassendi's views from François Bernier.<sup>47</sup> However, all of these modern scholars have chosen to emphasize the significance of Gassendi's possible relations with Hobbes, Boyle, Locke, or Newton. In their different ways, they see him as contributing to what was to become, by the eighteenth cen-



ture, the atomist metaphysics and the empiricist epistemology associated with the new science.

Other sympathetic views of Gassendi's importance to the new science have come from scholars who have placed primary emphasis on his epistemology. Popkin (1960, 1979) and Gregory (1961) have independently argued that epistemological considerations, especially Gassendi's skepticism, were what enabled him to reject Aristotle's philosophy and to refashion Epicurus' principles into ones which could be employed as modern scientific hypotheses. Gregory has linked what he views as Gassendi's distinctive brand of skeptical argument to the development of an empirical approach to the study of nature. He has explicitly called Gassendi an "empiricist."<sup>48</sup> Popkin, by contrast, has been more impressed by the similarities between Gassendi and other sixteenth- and seventeenth-century skeptics who borrowed their arguments directly from Sextus Empiricus, the Hellenistic spokesman for the Pyrrhonian school.<sup>49</sup> Popkin has traced several distinctive types of borrowings from Sextus, and his analysis of the varieties of the new French Pyrrhonism has given us a clearer sense of how Gassendi's use of Sextus compared with that of his near contemporaries. Popkin is more cautious than Gregory in attributing to Gassendi later empiricist positions which were not actually stated as part of his mitigated skepticism. Yet he agrees with both Rochot and Gregory that Gassendi's skeptical views presupposed the kind of appeal to experience which these authors associate with the eventual success of Newtonian science.

The second problem which has been a major focus of dispute among modern scholars is whether Gassendi's skeptical arguments should receive the emphasis given them by Popkin and Gregory in defining his epistemology. Closely related to this problem is the additional question of what priority, if any, should be given to the analysis of his epistemology, since Gassendi himself did not employ the word "epistemology" in its modern sense and since his philosophy was instead strongly oriented towards issues of physics and metaphysics. Some recent scholars have been dissatisfied with the view that Gassendi was a skeptic because they think that it has restricted the analysis of his empiricism. Detel (1978) has called for a more rigorous effort by scholars to specify the exact features of this empiricism.<sup>50</sup> His own definition of it rests on a careful identification of those aspects of Gassendi's physics which exhibit a hypothetico-deductive method of theory testing. Although Detel finds that Gassendi made notable departures from this method in certain areas of his work, he concludes that the hypothetico-deductive method