

Report ESF Exploratory Workshop

Sextus Empiricus and Ancient Physics

Delphi, Greece, 6 - 12 August 2007



The C. J. de Vogel Foundation

The Evert Willem Beth Foundation

The ZENO Research Institute for Philosophy (Utrecht-Leiden)

The University of Athens

1. Preliminary note.

On Saturday 11 August, on the last day of this workshop, one of the participants, Prof. Michael Frede, suddenly died. It goes without saying that this tragic and completely unexpected event came as a terrible shock to all those present, and to numerous other colleagues in the world. It is only appropriate to signal, right at the beginning of this report, that the participants' recollection of this workshop is overshadowed by this sad ending. There were practical consequences involved as well. The afternoon session of 11 August, in which James Warren's paper was to be discussed was canceled, as was the final session on general conclusions, proceedings and further prospects. Discussion of these issues had to be postponed and was carried out afterwards through e-mail, to the extent that this was possible.

2. Executive summary.

Sextus Empiricus is the most influential representative of ancient (Pyrrhonian) scepticism. His eleven books *Against the Mathematicians* (*M*) contain a sustained sceptical critique of the knowledge claims of the liberal arts (including the mathematical sciences, books I-VI) and philosophy (logic, books VII and VIII; physics, books IX and X; ethics, book XI). In the early modern period these books were mined for philosophical arguments against various forms of dogmatism. Later, from the nineteenth century onward, they were mined once again, this time for the information they provide on philosophers, especially from the Hellenistic period (c. 300-0) whose works have otherwise been lost.

This workshop, which focused on the two books *Against the Physicists* (= *M* IX and X) aimed to approach Sextus from a different perspective, and to focus in particular on the overall argumentative structure of this text and on the various ways in which its formal features relate to its contents. To this purpose we brought together the combined expertise of specialists in Sextus and ancient scepticism on the one hand and specialists in ancient physics on the other, to illuminate Sextus' often difficult text which has hardly been studied in its own right. The format of the conferences allowed for in-depth discussions: papers were circulated in advance and discussed in sessions of three hours each. The structure of the workshop followed Sextus' own division by nine topics (god, cause, wholes & parts, body, place, motion, time, number, change). Accordingly nine sessions were planned.

The preliminary results of workshop strongly suggest that the approach chosen was the right one: studying the formal and material aspects of this text in close interconnection has allowed us to gain precious new insights in many details of Sextus' text, in Sextus' value as a source, and in the aims and strategies of his scepticism in practice. These results will be presented in a collective volume which, by treating all sections of Sextus' text in succession will serve as a kind of philosophical commentary to the text as a whole

The following steps have been planned for the upcoming months:

[a] on the basis of the discussions during the workshops and the written comments circulated afterwards, the papers will be revised for a collective volume (deadline: summer 2008) which will be published by Cambridge University Press;

[b] in the course of the process of revision each of the contributors will be coached by one of the other participants, allotted by the organizing committee;

[c] Katerina Ierodiakonou and Keimpe Algra will be responsible for the final edition; they will coordinate the work, will see to it that the eventual result will be a useful and coherent whole, and will also be responsible for the general introduction;

[d] an additional introductory chapter, focusing in particular on Sextus aims and methods in general, and thus synthesizing many of the results of this workshop will be written by prof. Charles Brittain (Cornell).

3. Scientific Content.

Richard Bett's paper '*Against the Physicists on Gods*', discussing *M IX*, 13-194, served as a sort of general introduction to the topic of the workshop. As such it examined such general questions as the place of *Against the Physicists* within the *skeptika hupomnēmata* of Sextus, the question of the relation between *Against the Physicists* and the *Outlines of Pyrrhonism (PH)*, the structural oddities of the work and the occasional inconsistencies in Sextus' argumentative procedure (e.g. in his various uses of the Greek term *anairein*, 'to do away with'). In addition, Bett also offered a careful study of the main features of the attack of philosophical theology (i.e. the discussion of god as an active principle of the world) which constitutes the first section of the *Against the Physicists*. Finally, Bett's paper also discussed the way in which Sextus' scepticism can leave the religious tradition intact, while at the same time refusing to except (not only theoretical but also) ordinary beliefs from sceptical doubts.

Stephen White ('Sextus on Causation', discussing *M IX*, 195-330) analyzed Sextus' sceptical discussion of the active and the passive and of cause and effect, in part by contrasting it with the empiricist analysis of such later philosophers as Locke or Hume. He also called attention to the more 'rhetorical' aspects of Sextus' procedure, underlining the quantitative or 'additive' nature of Sextus' strategy in obtaining suspension of judgment and the resulting *ataraxia*.

Katerina Ierodiakonou discussed the next section of Sextus' account (*M IX*, 331-358) in her paper 'Sextus Empiricus on Wholes and Parts'. Partly basing herself on Jonathan Barnes' 1986 article 'Bits and Pieces', she examined Sextus' comparatively brief account of how dogmatists conceive of the structure of substances and of the physical and conceptual relation between wholes and parts. Special attention was paid to the meaning of the epistemological term *summnēmoneusis* ('co-memory') and the activity it denotes (which Sextus ascribes to his opponents).

Gabor Betegh took care of the complicated section on 'body' in *M IX* 359-440 ('Sextus on Body in *Against the Physicists*'), examining the way it relates to the parallel account in *PH III*, and to the discussion of *Against the Geometers (M 1-6)*. Betegh argued that the discussion in *Against the Physicists* is probably best regarded as an elaboration of the framework first set out in *PH III*, and that the addition of the material on mathematical conceptions of body created the very imbalance which is such an obvious characteristic of this part of Sextus' text. Betegh's paper provided a careful analysis of the structure of the whole chapter, of the way in which it intertwines the discussions of physical and mathematical conceptions of body (and of surface and line), and of the way in which Sextus is in part dependent on the doxographical tradition (an extensive comparison of

part of the doxography of ps.-Galen and its parallels in Sextus was added as an appendix).

Keimpe Algra ('Sextus Empiricus on Greek Theories of Place') took care of the section on place (*M X*, 1-37). He tried to elucidate its contents by relating them to a general typology of ancient theories of place, to the parallel account in *PH III*, to the text of Aristotle's *Physics IV* and to Sextus' general sceptical position, dealing in particular with the question whether and to what extent Sextus can be seen to have allowed non-technical usage of spatial terms in ordinary thinking and speaking. He argued, among other things that the way in which Sextus refers to Aristotle's theory of place can only be explained if we assume that he did not have the text of the *Physics* before him, but was using an epitome.

Also Jim Hankinson ('Sextus on Motion' *M X* 37-16) dealt with the question what kind of affirmations (this time about motion) a Sextan sceptic would be prepared to allow, arguing that the acceptability or unacceptability of such affirmations would seem to depend not so much on subject-matter, but on the relevant subject's epistemic attitude. For the rest he provided an extensive analysis of the structure of the text, of the way in which it embedded the difficult Diodorean arguments against motion, and of the various types of *diaphônai* (sets of opposing arguments) of which Sextus avails himself in this particular chapter.

In 'Sextus Empiricus *Against the Physicists II*, 169-247 does Time exist?' Susanne Bobzien examined the general strategy (existing definitions of time are pitted, first, against more general sceptical arguments, and subsequently against more specific dialectical *ad hominem* arguments) and the contents of the section in time. This involved dealing with various aspects of the theories referred to by Sextus (Platonists, Aristotle, Strato, Stoics, Democritus and Epicurus). Special attention was given to the question whether Sextus provides reliable information on the Stoic theory of time.

Tad Brennan ('Sextus on Number, *M X*, 248-309') showed that the discussion of number in this text has a restricted scope, in so far as it leaves out all considerations about the ontological aspects of mathematical entities as such, and focuses instead on number's role *in physics*. Accordingly, the chapter is mainly concerned with what Sextus calls 'the Italian physicists', i.e. the Pythagoreans and their followers. Brennan's analysis of the chapter and the arguments used led him to conclude that the parallel account in *PH III* is certainly superior and that this might indicate chronological priority of at least this section of *Against the Physicists* in comparison with the version of *PH III*.

Finally, James Warren's paper 'Sextus Empiricus on Coming-to-Be and Passing-Away' dealt with the concluding section of the text, *M X*, 310-51. It showed how Sextus here (in contrast with his treatment of the same subject in *PH III*) deliberately puts the discussion of coming-to-be and passing-away – and in a more general sense: change – at the end of his examination of the main concepts and arguments of the physicists (i.e. at the end of *M IX* and *X*). He also showed how much of the material in this final section explicitly or implicitly refers back to ground covered earlier in these two books. According to Warren, Sextus' reader is encouraged and indeed expected to supplement the rather succinct arguments of this final section with the resources supplied by the earlier discussions. The reader should recognize, in other words, how Sextus' attacks on the most fundamental assumption of the natural philosophers (i.e. the possibility of change) were related to the considerations launched earlier against their more specific concepts and arguments.

5. Assessment of results and decisions for future developments.

The participants agreed that these five days of collective close reading of the successive entries of *Against the Physicists*, guided by expert papers, have allowed them:

- (1) to clarify many difficult passages and stretches of argument, in a way which enables us to present the proceedings of this workshop as a kind of running philosophical commentary on this important text;
- (2) to conclude that Sextus' approach, and the philosophical cogency of his arguments, differs considerably over the various entries: some of them are neatly structured and full of pertinent arguments, others rather seem to apply a quasi-rhetorical strategy of amassing evidence without much concern for its force or cogency;
- (3) to gain further insight in Sextus' use of his sources, which seem to have included not only original texts, but also intermediary summaries or doxographies;
- (4) to conclude that the question of the chronological priority of either *Against the Physicists* or the partly parallel third book of Sextus' *Outlines of Pyrrhonism* can hardly be answered with any degree of certainty and is perhaps misguided: we may be dealing with texts written over a larger period of time and written for different occasions or readerships (however, the subject is far from decided and many questions remain);
- (5) to gain further insight in the way Sextus deals with the philosophical question of the relation between knowledge and opinion, and with the question whether and to what extent a sceptic can have opinions.

During the consultations through email, which followed the workshop (see above, preliminary note) it was decided that the follow-up to this workshop should take two different forms.

First of all, it was agreed that the workshop's *format* – an in-depth and section-by-section discussion of a complete philosophical text, which combines formal and material features (i.e. argumentative strategy and philosophical content) – could be usefully applied to similar texts. It was decided to organize another workshop using this format in Budapest in 2010. This workshop will focus on Cicero's *De finibus*, a text which deploys Academic sceptical strategies in discussing the fundamentals of Hellenistic ethical systems and which, like Sextus, is also an important *Fundgrube* for materials on earlier schools and thinkers.

Secondly, the two convenors, in close collaboration with prof. Istvan Bodnar (Budapest), intend to organize a series of follow-up workshops dealing with the same *subject*: the philosophical and epistemological foundations of cosmology and the sciences in antiquity,

focusing in particular on the relation between philosophical physics and the mathematical sciences, including the role of scepticism in this debate. Collaboration will be sought with Prof. Alan Bowen (Dept. of the History and Philosophy of Science, Princeton), who has earlier showed interest in an initiative of this sort. Such a platform, where students of ancient philosophy and historians of ancient science can meet on a more or less regular basis appears to be a *desideratum* in the eyes of many scholars. Among the texts which will be further explored, on the basis of the data furnished by the present conference, will be the earlier books of *Against the Mathematicians* (I-VI, on which see above).

6. Final Programme.

Final programme

Monday 6 August 2007

Afternoon	<i>Arrival at Athens</i>
16:30	<i>Meeting at the Athens offices of the European Cultural Centre (Frynichou 9, Plaka, Athens 10558); Travel by bus to Delphi</i>
20:00	<i>Dinner</i>

Tuesday 7 August 2007

09:15	Opening: Katerina Ierodiakonou Presentation of the European Science Foundation (ESF)
09:30	chair: Julia Annas Richard Bett: <i>Sextus on god (I, 13-194)</i>
10:30	<i>Coffee break</i>
11:00	Discussion
13:00	<i>Lunch</i>
16:00	chair: David Sedley Michael White: <i>Sextus on the active (or cause) and the passive (I, 195-330)</i>
17:00	<i>Coffee break</i>
17:30	Discussion
20:00	<i>Dinner</i>

Wednesday 8 August 2007

09:30	chair: Malcolm Schofield Katerina Ierodiakonou: <i>Sextus on wholes & parts (I, 331-358)</i>
10:30	<i>Coffee break</i>

11:00 **Discussion**
13:00 *Lunch*
16:00 **chair: Myrto Dragona-Monachou**
 Gabor Betegh: *Sextus on body (I, 359-440)*
17:00 *Coffee break*
17:30 **Discussion**
20:00 *Dinner*

Thursday 9 August 2007

09:30 **chair: Dorothea Frede**
 Keimpe Algra: *Sextus on place (II, 6-37)*
10:30 *Coffee break*
11:00 **Discussion**
13:00 *Lunch*
 Excursion to Hosios Loukas
 Dinner at Galaxeidi

Friday 10 August 2007

09:30 **chair: Charles Brittain**
 Jim Hankinson: *Sextus on motion (II, 37-168)*
10:30 *Coffee break*
11:00 **Discussion**
13:00 *Lunch*
16:00 **chair: Myles Burnyeat**
 Susanne Bobzien: *Sextus on time (II, 169-248)*
17:00 *Coffee break*
17:30 **Discussion**
20:00 *Dinner*

Saturday 11 August 2007

09:30 **chair: Anna Maria Ioppolo**
 Tad Brennan: *Sextus on number (II, 248-310)*
10:30 *Coffee break*

11:00	Discussion
13:00	<i>Lunch</i>
16:00	chair: Brad Inwood
351)	James Warren: <i>Sextus on coming to be and perishing (II, 310-</i>
17:00	<i>Coffee break</i>
17:30	Discussion
19:00	chair: Keimpe Algra
	Discussion of proceedings, plans for follow-up etc.
20:00	<i>Dinner</i>

Sunday 12 August 2007

Morning *Breakfast and departure from Delphi*

7. Full list of participants.

1. Keimpe Algra, University of Utrecht, convenor.
2. Katerina Ierodiakonou, Department of Philosophy and History of Science, University of Athens, co-convenor
3. Julia Annas, Department of Philosophy, University of Arizona
4. Thomas Benatouil, Département de philosophie, Université Nancy
5. Gabor Betegh, Department of Philosophy, Central European University, Budapest
6. Richard Bett, Department of Philosophy, Johns Hopkins University
7. Susanne Bobzien, Department of Philosophy, Yale University
8. Ted Brennan, Sage School of Philosophy, Cornell University
9. Charles Brittain, Department of Classics, Cornell University
10. Myles Burnyeat, All Souls College, Oxford
11. Myrto Dragana-Monachou, Department of Philosophy and History of Science, University of Athens
12. Michael Frede, emeritus Keble College Oxford
13. Dorothea Frede, Philosophisches Seminar, Universität Hamburg
14. Jim Hankinson, Department of Philosophy, University of Texas at Austin
15. Brad Inwood, Department of Classics, University of Toronto
16. Anna Maria Ioppolo, Facoltà di Filosofia, Università di Roma
17. Paul Kalligas, Department of Philosophy and History of Science, University of Athens
18. Vassilis Karasmanis, National Technical University of Athens
19. Maria Protopappas, research Centre for Greek Philosophy, Academy of Athens
20. Malcolm Schofield, St. John's College, Cambridge
21. David Sedley, Christ's College, Cambridge

22. Emidio Spinelli, Facoltà di Filosofia, Università di Roma
23. Teun Tieleman, Department of Philosophy, University of Utrecht
24. James Warren, Corpus Christi College, Cambridge
25. Michael White, Sandra Day O' Connor College of Law, Arizona State University.

8. Statistics on Participants.

- Nationality

Canada	1
Germany	1
France	1
Greece	5
Hungary	1
Italy	2
Netherlands	2
UK	5
USA	7

- Gender

male	18
female	7

- Age range

30-40	7
40-50	4
50-60	7
60-70	6