

## EPICUREAN NATURAL PHILOSOPHY

BAKKER (F. A.) *Epicurean Meteorology. Sources, Method, Scope and Organization.* (Philosophia Antiqua 142.) Pp. xii + 301, figs. Leiden and Boston: Brill, 2016. Cased, €125, US\$138. ISBN: 978-90-04-32156-4. doi:10.1017/S0009840X17001858

The title of this volume suggests that it is primarily about Epicurean meteorology, the study of the *meteôra* or lofty phenomena. That is undoubtedly an important focus of B.'s work, to which he makes original and significant contributions. In addition, B. probes questions relating to our understanding of Epicurean natural philosophy more generally and argues persuasively against claims about an Epicurean flat-earth theory. He also carefully considers the question of the authorship of the Syriac *Meteorology*, usually attributed to Theophrastus; the issue of the authorship of this text is important to our understanding of its relation to Epicurean meteorology and for Theophrastean studies.

The volume is organised into three main sections, the first dealing with the philosophical method that deliberately entertains multiple explanations for the same phenomenon, the second treating the range and order of subjects covered by ancient meteorology, and the third interrogating whether the Epicureans held the view that the earth is flat. Throughout, B. brings to bear careful and insightful scholarship, enlarging our understanding of Epicurean meteorology, and also challenging well-established views.

The hypothesis of multiple possible causes is a hallmark of Epicurus' approach to explaining the *meteôra* in his *Letter to Pythocles*. Epicurus recognises limits to our ability to know and justifies his advocacy of multiple causation by explaining that some things are liable to be less well understood than others. In his view, meteorology requires a set of methodological procedures different from those applied to questions of more general physics or human life. Meteorological phenomena may have many causes, permitting many accounts. He cautions against becoming too attached to one dogmatic explanation which, he claims, is a superstitious trap. For Epicurus, a single, seemingly conclusive, explanation of a given phenomenon is not necessary for the achievement of *ataraxia*.

B. examines the epistemology underlying the Epicurean method of multiple explanations, arguing that the various explanations offered are regarded as possible, but not necessarily always true, everywhere. He argues that Epicurus and Lucretius adopted a principle of plenitude by which everything that is possible must be true at some time and place. The claim put forward by Diogenes of Oenoanda (a second-century CE admirer of Epicurean philosophy), that some explanations are more plausible than others, is mentioned by B. as a departure from the views of Epicurus, who held that all alternative explanations have the same value. In the 1960s, C. Bailey argued that Lucretius had seemed to indicate a preference for the views of astronomers, as he refers to these at several points. B. contests this, suggesting instead that Lucretius' references to the views of astronomers are part of his polemic, as those views are included as possible, alongside other explanations not subscribed to by mathematical astronomers; in other words, the views of astronomers are devalued by Lucretius, because he puts them on a par with the views of non-astronomers.

Many of the possible explanations mentioned by Epicurus and Lucretius derive from Peripatetic doxographical writings. The extent to which Theophrastus was an advocate for and exemplar of the use of the method of multiple explanations is questioned by B., particularly through his examination of the authorship of the Syriac-language *Meteorology* attributed to him (see the edition and translation by H. Daiber, 'The *Meteorology* of Theophrastus in Syriac and Arabic Translation', in W.W. Fortenbaugh and D. Gutas [edd.], *Theophrastus: his Psychological, Doxographical, and Scientific*

*Writings* [1992], pp. 166–293). B. confronts the question of the authorship of this work, after first presenting a detailed survey and comparison of the range and order of subjects touched upon by ancient writers on meteorology. This comparison provides evidence for B.'s argument that the Syriac *Meteorology* seems to be closer to the *Letter to Pythocles* and *DRN* 6, in terms of the order of subjects covered, than has usually been acknowledged. B. argues that the Syriac *Meteorology* is not Theophrastus' lost *Metarsiology*, but rather a compendium of (mainly) Epicurean meteorology, with some Peripatetic ideas mixed in. In his view, the *Letter to Pythocles*, *DRN* 6 and the Syriac *Meteorology* depend on a fuller explanation of meteorology by Epicurus, presumably contained in his now-lost *On nature*. These works, along with Book 3 of Aëtius' *Placita*, are all likely to have made use of the doxographical material contained in Theophrastus' *Physical Opinions*. In the conclusion (p. 267), B. states that he regards the authorship of the Syriac *Meteorology* as still open to debate.

Whilst the second section of the book may appeal primarily to aficionados of ancient meteorology and/or the place of Theophrastus in that tradition, the final section will be of wider interest, for it systematically tackles a claim that the Epicureans subscribed to a notion that the earth is flat. Others have noted that there is no explicit statement that the earth is flat in surviving Epicurean texts, and B. provides a detailed examination and subsequent refutation of modern claims attributing a flat-earth theory to Epicureans. He addresses a number of questions relating to Epicurean views about natural motion and astronomy, and in the process provides a survey of ancient views about the shape of the earth, including proofs of its sphericity.

Even though those familiar with ancient works on meteorology know that they often include sections on less lofty phenomena, including earthquakes, the question of the shape of the earth itself is not usually included in such writings. While readers of B.'s volume may be surprised by the final section, it is very welcome, for it effectively quashes claims about an Epicurean flat earth. As B. succinctly summarises: 'Despite the strong claims in modern studies about the Epicureans' commitment to a flat earth, this flat earth of theirs turns out to be rather elusive. Epicurus and his followers never said that the earth is flat, and even their most ardent critics never accused them of saying so' (p. 262). In fact, as B. notes, we would not expect the Epicureans to necessarily have a firm view about the shape of the earth.

A theme throughout the volume is the relationship between Epicurean and Peripatetic meteorology, which B. indicates was somewhat complicated. He suggests that Epicurus' rejection of mathematical astronomy may be a rejection not only of such astronomy *per se*, but also of Aristotle's apparent valorisation of mathematical astronomy. Others have noted the possible link between Epicurus' espousal of multiple explanations and work by Theophrastus. B. is persuasive in his argument that Epicurean meteorology may owe more to Peripatetic doxography than has been realised previously.

B.'s volume is not only about Epicureans nor just about meteorology. It will be of value to anyone interested in multiple explanation, Theophrastus, doxography and/or ancient Greek ideas about the shape of the earth. The volume is clearly written and nicely presented from a visual standpoint, with well-designed tables and illustrations, as well as side-by-side Greek–English and Latin–English texts and translations.

*University of Cambridge*

LIBA TAUB  
lct1001@cam.ac.uk