

Marco Beretta, Francesco Citti and Lucia Pasetti (eds.)

Seneca e le scienze naturali (Florence: Leo S. Olschki 2013), pp. vi + 273, €29.00 (paperback), ISBN 978 88 222 6189 2.

Because of its complexity, scholars have for a very long time neglected Senecas' *Naturales quaestiones*, as its comprehension requires a variety of interdisciplinary skills. The revival of interest that this work has enjoyed in recent years has now culminated in a publication that is the result of a fruitful collaboration between scholars of different disciplines and settings.

This book arises from an interdisciplinary seminar on Seneca, which was hosted by the Department of History and Methods for the Conservation of Cultural Heritage of the University of Bologna, and held at Ravenna in November 2008. Further essays have been added to the papers that were presented on that occasion. Thanks to the collaboration between historians of science and scholars in classical Latin literature, this book now ably places the *Naturales quaestiones* in an enriching and stimulating perspective.

The volume contains eleven essays, which cover reasonable thematic criteria. The first three contributions retrace the origins of the *Naturales quaestiones*, and investigate its specific debt to Lucretius and more generally earlier classical works of literary-scientific production.

The first essay, by Marco Beretta, *Il concetto di legge naturale in Lucrezio e Seneca* (pp. 1–17), offers a useful introduction to the concept of natural law in ancient thought. An extensive diachronic review traces the evolution of the concept of natural law from Stoic providentialism to its refutation by Lucretius. Seneca likewise ascribes to the natural law the task of explaining the regularity and characteristics of natural phenomena. Beretta, who takes us all the way up to the present, shows how the opposition between the descriptive and prescriptive interpretations of natural law, which was widespread in the seventeenth century, was overcome in the subsequent century, when the idea of 'law' was replaced by that of 'principle'. The liberation from prescriptive dogmatism, which this replacement implied, was accompanied by an increasing awareness of the conventional nature of the sciences. The second essay, by Piergiorgio Parroni, *Il linguaggio «drammatico» di Seneca Scienziato* (pp. 19–29), looks at the background of the *Naturales quaestiones* from a linguistic and stylistic point of view. The author examines passages in which the Seneca's style gets dramatic and 'tormented', which testifies to the strong emotional involvement with which this author experienced the conquest of scientific 'truth'. Parroni's analysis of particular quotes (explicit or implicit) from Lucretius and Ovid highlights the complexity of Seneca's literary reminiscences and offers new and striking arguments in the text-critical examination of passages

in Seneca and in the sources he quotes (cfr. *NQ* I praef. 4 ~ *Lucr.* V, 37s.: pp. 21–25). The dialectic between Seneca and his scientific sources is the subject of the essay by Harry M. Hine, *Originality and Independence in Seneca's Natural Questions Book 2* (pp. 31–47). Focusing on book two, the author selects five topics, which testify to specifically Roman characteristics of Seneca's philosophy: his treatment of Etruscan divination in a scientific context, his reflection on the Latin terminology, the laws of physics as exposed in his introduction to the book, the wording used to present Seneca's own opinions, and a possibly original theory of the phenomenon of lightning solidifying wine. This review leads to the impression that in *Naturales quaestiones* II, Seneca is providing a demonstration of how a Roman should carry out physical science: the transposition to Latin of ideas taken from Greek writers invites also "the inclusion of discussion of related systems of thought from the Roman world." By re-examining basic assumptions that had until then been taken for granted, by refusing to take the view of others for granted and by working out what he could believe himself, Seneca also offers his readers – according to Hine's convincing argument – a model of how to read his own work.

The subsequent essays are devoted to a discussion of violent natural phenomena. The paper by Francesca Romana Berno, *Non solo acqua. Elementi per un diluvio universale nel terzo libro delle Naturales Quaestiones* (pp. 49–68) deals with the end of the third book, with its representation of the flood. The author traces the exposition of the doctrine of the elements and their mutual transformations, illustrating the concept of a cosmic balance that, if disturbed, leads the *chaos*. Seneca's whole discussion is a preparation for the final description of the flood, for which the reader had to be scientifically prepared. Berno supplies also an analysis of literary models and strategy in this elaborate section of Seneca's book. Water is also the predominant element in the following paper, by Pasquale Rossi, *Le piene del Nilo nelle Naturales Quaestiones di Seneca* (pp. 69–80). A fully informed description of the current disposition of the Nile and the phenomenon of its flooding preludes Rossi's comparison with Seneca's presentation, which allows us to appreciate the latter's extraordinary accuracy. Indeed, the author seems to trace, together with Seneca, the ancient theories on the origin of this phenomenon, which stunned people all over the Mediterranean, as the Nile swelled in the summer instead of decreasing, as rivers did elsewhere. This is followed by a survey on the same subject by Daniel Pellacani (pp. 81–92). Another natural phenomenon of impressive violence is the subject chosen by Arturo De Vivo for the following essay, *Seneca e i terremoti* (*Questioni naturali, libro VI*) (pp. 93–106). On this subject, Seneca had already composed a juvenile work, which is now lost. De Vivo first reviews the autobiographical evidence regarding Seneca's long interest in this topic; he

then turns to the interesting literary and ideological strategy employed in the *Naturales quaestiones*, which depicts science as a liberator from anxiety due to ignorance; and finally turns to historical-political and biographical issues such as the philosophical justification of Seneca's renunciation to politics and his rejection of the irrational brutality of Nero's regime.

Seneca's justification for his withdrawal from political life is also the subject of a relevant passage examined by Francesco Citti in the subsequent study, *L'opzione della scienza. A proposito di Seneca, De otio 4,2* (pp. 107–117). Citti focuses on a specific expression (*inserta mari ac terris*), which appears in the context of the opposition between the general theory of the single cosmos and the Epicurean idea of infinite worlds. The meaning of the ambiguous word *inserta* is unclear, which might indicate some interruption in the continuity between the terrestrial and the marine surface. Citti embraces this interpretation on the basis of an acute comparison with the *Naturales quaestiones*, demonstrating that Seneca describes the earth when looking at a map, in accordance with the theory of Posidonius of Apamea on the nature of the oecumene as an island.

The last section of the book is a rich account of the impact of the *Naturales quaestiones* in the modern age. Hiro Hirai, *Seneca's Naturales Quaestiones in Justus Lipsius' Physiologia Stoicorum: The World-soul, Providence and Eschatology* (pp. 119–141) deals with the massive presence of Seneca in the work of this Flemish humanist. Bardo Maria Gauly, *Aliquid veritati et posteris conferant: Seneca und die Kometentheorie der frühen Neuzeit* (pp. 143–158) is concerned with early modern astronomy, and specifically with Seneca's presence in the thought of Tycho Brahe, Galileo and Kepler. A survey by Nanni and Pellacani (pp. 161–252) concludes this interesting volume with a comprehensive look at the reception of the *Naturales quaestiones* from Antiquity to today.

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