

FLORA R. LEVIN: *Greek Reflections on the Nature of Music*. Cambridge University Press, New York 2009. ISBN 978-0-521-51890-1. XXIII, 340 pp. GBP 45, USD 85, EUR 51.90.

The author of this book, Flora R. Levin, died in 2009 and *Greek Reflections on the Nature of Music* is thus her last book. Levin has also written two monographs on Nicomachus of Gerasa: *The Harmonics of Nicomachus and the Pythagorean Tradition* (1975) and *The Manual of Harmonics of Nicomachus the Pythagorean* (1994) as well as several contributions to ancient Greek music.

The presentation of *Greek Reflections on the Nature of Music* states that "in this book, Flora R. Levin explores how and why music was so important to the ancient Greeks". Generally, the main themes treated are the Pythagorean mathematical analysis of sound, the Aristoxenian empirical approach to music and the clash between these two schools. Under closer examination are subjects such as numerical ratios corresponding to musical intervals, the division of melodic space, the intervallic and continuous movement of sound, and the relationship between harmonic theory and astronomy. Music's role as a mirror-image of the cosmos and, vice versa, the role of cosmic elements – time, motion and the continuum – in music are also a constituent part of Levin's thematic field. The author seems to have a special agenda to give more attention to Ptolemaï of Cyrene, the only known female scholar of musical science in antiquity. Her writings are known only from the paragraphs quoted by Porphyry. Levin discusses these passages thoroughly and speculates about the background of this cryptic character among the ancient Greek musical theorists.

Levin examines her topics with genuine enthusiasm, though she often seems to forget the original argument. One could describe her writing style as a stream of consciousness inspired by musical and philosophical writings from antiquity to modern times. The themes of ancient Greek musical science are often compared with excerpts from modern writers on philosophy (e.g. Wittgenstein, Russell), astronomy (Kepler), acoustics (Helmholz) and music (e.g. Maconie, Cooke, Hindemith, Stravinsky, Mendelsohn, Sloboda, Zuckerkandl). Levin also generates artificial dialogues between ancient and modern authors by quoting passages that she feels have similar mindsets or concepts. As to the interpretation of ancient Greek musical texts, she often quotes directly from other modern authors (e.g. Anderson, Barker, Mathiesen, Comotti, Winnington-Ingram and West) instead of stating her own conclusions. On the other hand, Levin sometimes expresses her own opinions as universal facts. Among the rather controversial claims are the following: "acoustic theory is universally accepted to have begun with Pythagoras of Samos..." (p. XIV) and "the view accepted here is that ... Homer is the single author of the Iliad and the Odyssey" (p. 24, n. 47). Levin even refers to evidence that speaks against these views (p. 10, n. 18; p. 24, n. 47), but still trusts her own instincts and does not furnish any counter-evidence to support her claims. However, these are minor details. What is more problematic is that there are an exceptionally large number of errors and some hasty assumptions in this book.

Levin is convinced that the Greeks in general – and not only musicians – had absolute pitch, and to support this claim she mentions, for example, their ability to discriminate microtonal intervallic relations (p. XVIV–XV). This can be easily questioned, for example, by referring to Aristides Quintilianus' report that enharmonic genus (which contains $\frac{1}{4}$ -tones) was accepted only by the most remarkable musicians, whereas it was impossible for most people (Arist. Quint. *De Mus.* 1,9). This, of course, does not rule out the possibility that the Greeks

could have been generally musical people, but still it is evident that an extremely accurate perception of microtonal structures was a special skill possessed only by the most talented professionals.

There are many deceptive typos in the diagram displaying the names of ratios (p. 67, fig. 2): the ratio of ἐπίπεμπος is written erroneously $1+1/3$ instead of $1+1/5$, the ratio of ἐπιτετρόπεμπος $1+4/3$ instead of $1+4/5$ and τρισεπίπεμπος $1+2/3$ instead of $1+3/5$. There is also a minor spelling mistake in the chart (*supertriquitus* instead of *supertriquintus*). More idiosyncratic than truly incorrect is Levin's choice of expressing superparticular and superpartient ratios as fractions instead of using number to number ratios, which is the prevailing manner of presenting musical intervals mathematically. Levin does use number to number ratios elsewhere in the book, when she deals with mathematical approaches to intervals, and hence the present chart would have been more useful if the ratios were expressed in the usual way, for example, the hemiolic as 3:2, the epitritic as 4:3, the sesquiquartan as 5:4, etc.

Proslambanomenos is omitted from both the lesser perfect system (p. 142, n. 24) and the perfect immutable system (p. 150, n. 36).

Levin's chromatic tetrachord (p. 152) is erroneous, because the ratios 256:243, 256:243, and 64:54 do not form 4:3. Naturally, this kind of tetrachord, which includes two equal Pythagorean *leimmata*, does not exist in the texts of ancient Greek authors.

The interpretation of the passage from Aristoxenus (Aristox. *El. Harm.* 56–57; p. 195–6, n. 97) is erroneous. The notes should be E – F – A – B instead of E – F – A – C. In this interpretation the interval of a fifth exists between the notes E and B.

The claim that the interval of a fifth would contain only six semitones (p. 199) is erroneous, as the number of semitones is seven.

The passage attributed to Helmholtz (pp. 200–1) is actually a quote from the translator of Helmholtz's book, Alexander J. Ellis, who was also the developer of the cents system, in which the octave is divided into 1,200 equal units.

The hemiolic chromatic tetrachord is presented erroneously as $3/4$, $3/4$, $13/4$ (p. 202). In reality, it is: $3/8$ -tone, $3/8$ -tone, $13/4$ -tone.

Levin confuses the information when she reports that the intervals of Eratosthenes' diatonic tetrachord were 9:8, 10:9, 16:15, and Didymus' 9:8, 9:8, 256:243 (p. 222). In reality, the figures of Eratosthenes belong to Didymus, and vice versa (see Ptol. *Harm.* 72–74 [Düring]).

The musical interval equal to ratio 28:27 is not a $1/4$ -tone, as Levin claims (p. 284), but a (septimal) $1/3$ -tone. On the same page she also reports that 15:14 equals a $1/3$ -tone, though in reality it corresponds to a semitone (in modern nomenclature known as a septimal or a major diatonic semitone).

The diagram of the Harmonic Series (pp. 286–7, n. 86, fig. 10) should have shown that the 7th, the 11th, the 13th and the 14th tone differ from the Equal Temperament, because this fact also has an effect on the intervals of the scale in question (e.g., the interval between the 13th and 14th tone is not a semitone but a $2/3$ -tone, etc.).

P. 299, line 25: should be the number 12 instead of the fraction $1/2$.

These defects are not the only ones that can be found in this book, but only a sample of incorrect details that can easily mislead a reader with no previous knowledge of ancient Greek harmonic science or contemporary music theory. Who, then, is the potential reader to whom this work could be recommended? As Levin's book does not offer any new information on ancient Greek music, it cannot be recommended for experts in the field. However, since previous

knowledge of music theory is highly recommended, *Greek Reflections on the Nature of Music* is probably best suited for musicians with only a little or no experience of Greek music. The book introduces the central features of Greek musical literature and gives a general overview of the relevant writings. Unfortunately, because there is a lot of misinformation in this book, the reader must be cautious with the concepts and details presented. Some of the errors seem due to lack of editorial accuracy, and thus a new revised edition would be a welcome idea.

Kimmo Kovanen

Philosophie und Dichtung im antiken Griechenland. Akten der 7. Tagung der Karl und Gertrud Abel-Stiftung am 10. und 11. Oktober 2002 in Bernkastel-Kues. Herausgegeben von JOCHEN ALTHOFF. Philosophie der Antike 23. Franz Steiner Verlag, Stuttgart 2007. ISBN 978-3-515-08824-4. 156 S. EUR 30.

The eight papers in this slender volume assess the multifaceted connections between Greek philosophy and poetry. In the brief "Foreword", Jochen Althoff reminds the readers of the fact that the ancient concept of philosophy was substantially broader than the modern one (p. 7). Although the range of the papers extends from Homer to Porphyry, a quick skim through the *index locorum* ascertains that Aristotle, not surprisingly, is the protagonist of the book. In terms of subject, the book is rather diverse: many of the papers discuss the influence that philosophical ideas had on literature, but the notion of friendship in Aristotle, for instance, is also dealt with.

The overall quality of the papers is extremely high. I particularly enjoyed the papers of Oliver Hellmann, Sabine Föllinger and Jochen Althoff. Hellmann's paper examines in depth the controversial character of Achilles by comparing the divergent perspectives of Plato and Aristotle. Föllinger's article on the other hand investigates the notion of *Nicht-Wissen* in early Greek literature. Althoff's thoughtful paper discusses the character of Socrates as a natural philosopher in Aristophanes' *Clouds*, for instance, by detecting points of resemblance with the ideas of Protagoras and Aristotle.

All in all, *Philosophie und Dichtung im antiken Griechenland*, even though being only 156 pages long, presents a reasoned and well-balanced collection of perspectives to our understanding of the absorbing interaction between poetry and philosophy. The book ends with an *index locorum* and a *Sachindex*, a minor complaint being the lack of a general bibliography.

Iiro Laukola

The Cambridge Companion to Socrates. Edited by DONALD R. MORRISON. Cambridge University Press, New York 2011. ISBN 978-0-521-83342-4 (hb), 978-0-521-54103-9 (pb). XVIII, 413 pp. GBP 60, USD 95 (hb), GBP 19.99, USD 29.99 (pb).

This book is a valuable collection of essays. As is appropriate for the *Cambridge Companion* series, all the authors are well-known scholars from a variety of fields. Each of the fifteen essays is both accessible and of high quality. The collection offers a learned introduction to dif-