

Hagel, S. 2009. *Ancient Greek Music. A New Technical History*. Cambridge, Cambridge University Press. xx, 484 pp. Pr. £65.00 (hb). ISBN 9780521517645.

Several important studies on ancient Greek music have come out lately, but a systematic one covering the interplay between musical theory and practice was missing among them. Hagel's (H. henceforth) work, full of original, innovative proposals, fills that lacuna and clarifies a number of until now open questions, offering a new approach to the matter.

H.'s book is a great achievement, but if I had to highlight just one aspect of it, I would stress its varying approach, where every existing method is at work, thus compensating for the scarcity of the extant musical material: a rigorous philological examination of the sources; an extensive up-to-date bibliography both of ancient and modern authors; a thorough examination of the extant musical documents (frequency of individual notes, kinds of interval in melodies, suitability of different instruments in their performance); a semiotic study of musical signs; a careful iconographic study of instruments (*cithara* and *aulos*); statistic corrections of the data stemming from different sources; a physical and organological study of strings and other material as instrumental components; a study of acoustic resonance of intervals and instruments. And, what is more, all these strands interact so as to draw a clear, lively picture of ancient Greek music.

Reading H.'s book requires familiarity with its subject, and proves to be somewhat difficult, as its organization is not linear and demands much coming and going (a detailed thematic index would have been welcome), but it is also enthralling, since each chapter, and the new light it casts, adds to the picture of this period's music, so it more than makes up for the effort. In Chapter 1 ("The Evolution of Ancient Greek Notation") the evolution of Greek musical notation is considered as interplaying with the process of regularizing and integrating the primitive musical systems into a regular scheme. Chapter 2 ("Notation, Instruments and the Voice") deals with vocal and instrumental range, with particular emphasis on that of the *cithara*, and absolute pitch. Chapter 3 ("Notation in Handbooks") considers notation as it appears in handbooks and in Boethius, and the latter's discussion of Greek *tónoi*. Chapter 4 ("String and Notes") studies the characteristics of the *cithara* in the light of Philol. fr.6a, Ptolemy's 'thetic' note names, this author's *cithara* tunings, and the *koiné hormasia*. Chapter 5 ("Fine Tuning") is entirely devoted to studying Greek fine tuning, mainly transmitted by Ptolemy. Chapter 6 ("Going beyond Ptolemy?") constitutes fine research on modality in Greek music after Ptolemy in the light of the previous chapters, which is not confined, as it usually is, to the mere scales. Chapter 7 ("Assisted Resonance") considers the resonators in the theatres as reported by Vitruvius and their relationship with instrumental range. Chapter 8 ("The Extant Musical Documents") thoroughly analyzes the

extant musical documents, with emphasis on their modality, and the possible instruments they were composed for. Chapter 9 (“*Aulos* Types and Pitches”) studies the *aulos*, its range and the remains of this instrument, and proposes tentative restorations of it for the different periods of ancient Greek music. Chapter 10 (“Before Aristoxenus”) deals with the origins of notation, pre-Aristoxenian harmonic theory and musical schools (with a tentative dating of Aristides Quintilianus’ archaic scales), early *auloi* and the origin of the enharmonic. Chapter 11 (“Synthesis”) constitutes a succinct overview on ancient Greek music summarizing the contents of the book.

Many questions in the book are noteworthy, but I only can comment on a few of them. H. is cogent in stating (p. 20) the triplets from instrumental notation as devised to notate the auletic enharmonic *pykná*, and their basic signs, $\text{C}\cup\text{C}$, $\langle\text{V}\rangle$, $\square\cup\square$, are interestingly related to modern brackets, (), $\langle \rangle$, [], with similar meaning of opening and closing (the *pyknón*); thus, the origin of Greek musical notation must be seen not in a series of letters from some alphabet hitherto unidentified, as has been supposed, but in a set of letter-like signs with maybe the addition of some (initial) letter. H. is right in rejecting the centrality of Hypolydian, if the notational system originated in Lydian; the modern note *a* should then be assigned to the Lydian *mésē* $\text{I}\triangleleft$; besides, Dorian’s secondary incorporation to the notational system perfectly accounts for its purported marginal status, and also for its corresponding *mésē* being notated by means of an ‘accidental’ (C). The identity of the top notes from Aristides’ archaic scales for Dorian, Phrygian and (Syntono-) Lydian, when notated in their own *tónoi* (p. 34 ff.), surely cannot be coincidental, and the fact of two of them being *nétai* (Dorian *néte diezeugménōn* = Phrygian *néte synēmménōn*) strongly suggests their being notated by the initial letter (N), its rotation and inversion (NH) being applied to Phrygian and Lydian *néte diezeugménōn* only when these notes appeared, all this before notation was fixed, as H. upholds.

H.’s elucidation of Ptolemy’s Dorian as common Lydian (pp. 57-68), according to the primacy of this key, perfectly accounts for many puzzles in this author’s *cithara* tunings. Following suggestions from Winnington-Ingram and West (p. 103),¹⁾ H. rightly identifies Ptolemy’s positional note names with *cithara* string names as in all likelihood they were used among citharists, and the same interpretation must be adopted in ancient sources when the ‘primacy of *mésē*’ is referred to. In this context, H.’s explanation (pp. 110, 116) of the terms $\chi\rho\omega\mu\alpha\tau\iota\kappa\acute{\eta}$ ²⁾ and $\delta\acute{\iota}\alpha\tau\omicron\nu\omicron\varsigma$ (Ptol. *Harm.* 43.10 and 20 Düring, respectively) also as *cithara* string names is entirely logical and clarifies Ptolemy’s text, so far inadequately explained; it is confirmed by

¹⁾ Cf. also Chailley, J. 1960. *L’imbroglio des modes* (Paris), 20.

²⁾ Düring reads $\chi\rho\omega\mu\alpha\tau\iota\kappa\acute{\omicron}\varsigma$, against the testimony of m and g stems.