

S. Hagel, *Greek Ancient Music. A New Technical History*. Cambridge: Cambridge University Press, 2010. Pp. xiv, 484, ISBN 0521517648. £ 65.00/\$ 115.00

A new study in Ancient Greek Music should be welcome to every scholar concerned not only with specific questions such as the origins of musical notation, tuning, ancient scales, keys, instruments, but also with metrical and rhythmical features related to what ancient Greeks called *Mousike*, that is to say performances where verbal text, melody and dance were often associated. Hagel's research, it must be admitted, is highly complex. It is neither intended as a "revisionist" version of West's well-known study about *Greek Ancient Music*¹ nor properly as an implementation of A. Barker's precious collection of *Greek Musical Writings*.² Its deliberate goal is rather to reconstruct more in detail aspects of history of ancient Greek music at an extremely technical level. This means for sure that not everybody, though interested in such an important topic, will be able to cope with it, unless they have a strong familiarity with musical theory, both ancient and modern.

The first chapter is focussed on origins, development and evolution of ancient Greek musical notation (1–51). One of the most interesting issues dealt with is the explanation of the "marginalisation" of the Dorian *tonos*, which was apparently one of the most widely used in the fifth century BC, and possibly even earlier, after the classical period. Such "marginalisation" is seen by Hagel as the necessary consequence of a meaningful mapping of the inherited *tonos* system onto the scales provided by the notation. In fact, the scholar states, it would have been difficult to devise another type of notation where the Dorian could have gained a central position, and in which the crucial relations of tetrachords and *pykna* were nevertheless reflected (15). Another important issue concerns the very origin of musical notation. "Notation [Hagel explains] could be conceived as a theoretical means of defining a tonal grid, into which individual scales could be fitted. ... its origins are ... to be sought in the reality of music-making, in the wish to write down not tonal systems, but melodies. Absolute pitch probably did not matter at this rather early period. Therefore there was no need to cover a lot of interrelated keys ... Some natural scale plus the traditional types of modulation would have sufficed". In order to confirm this picture, Hagel quotes two pieces of evidence. The first is Aristides Quintilianus, speaking of "the *Harmoniai*" used by "the very ancients" (p. 18, 20 W.-I.), which he describes by means of intervals and vocal and instrumental notation. They were probably transmitted as interval lists or verbal descriptions and transcribed only later, possibly even by Aristides Quintilianus himself. What is remarkable is that whoever notated them chose Lydian notation. The other important piece of evidence is the famous *Orestes* papyrus' fragment, from about 200 BC, bearing music to Euripides' play (Hagel is here inclined to think that the melodies go back to the poet himself). Insofar as the vocal scale can be gathered from the relatively few notes,

¹ M.L. West, *Ancient Greek Music*, Oxford 1992, ital. transl. *La musica greca antica*, a cura di Mariacarla De Giorgi, Milella 2007.

² A. Barker, *Greek Musical Writings*, I-II, Cambridge 1984–1989.

it is identical to the ‘ancient’ Dorian or Phrygian as given by Aristides, and it is written with the same signs of the ‘Lydian’ key (19). These scales seem to reflect a state in the evolution of the notation when music was generally notated in the ‘basic’ key, regardless of its modal connotations. At the beginning there was probably no more than the “central octave”, comprising the notes from *hypate meson* to *nete diezeugmenon*: the note names, stemming from the archaic lyre tunings, betray the original character of this range. Since the conception of the *pyknon* is at the heart of the system, it can be assumed that the enharmonic genus was the first to be considered (but on this point cf. also 366 f.); Aristoxenus still accuses earlier writers of music of having neglected the other two genera. The primary key is, as still found in the *Orestes* fragment, that later called the ‘Lydian’. (20) From these data Hagel starts with his hypothetical reconstruction of the development of the Greek musical notation (20–51).

Chapter 2 deals with the main ancient sources (Bellermann’s Second Anonymus, Ptolemy, Porphyry) pertaining to notation, musical instruments (especially string instruments), voice and vocal range both in musical practice and in historical and technical thought. Hagel argues here for the historical and structural primacy of the Lydian key (53–93).

Chapter 3 gives information, gained from ancient sources (Gaudentius, Alypius, Bacchius; Bellermann’s Anonymi, Boethius), about notation in handbooks. Hagel’s assumption is that the fixed order in which the *tonoi* were presented, since it was based on the triads, cannot be older than the latest version of the notation with its fifteen keys (ch. 1). Here the Lydian triad comes first, the Dorian last, and the tables start from the plain Lydian *tonos* (97–102).

Chapter 4 is focused on the note names as codified in “thetic” and “dynamic” and also on the correlated question of *mese*, to be understood as “starting point” and “leader/guide” for the tuning practice. It also treats the *Koine hormasia*, which seems to preserve the explicit connection between the citharodic ‘thetic’ nomenclature and notational signs, for which Ptolemy’s *Harmonics* gave only indirect evidence, and thus supplies the ultimate proof for the relation between Ptolemy’s *tonoi* and those of Aristoxenian tradition. Moreover, it confirms that octave harmonics belonged to the art of lyre playing, and suggests an intimate connection between this instrumental practice and the octave strokes or the notation. Finally, the *hormasia* also provides direct evidence for the presence of a *hyperypate* string on the cithara, and the restriction of the ambitus of this instrument to a ninth. A brief paragraph is also devoted to the question “how to tune a lyre”, especially a post-archaic one (103–134).

Chapter 5 studies the so-called “fine tuning”, by a thorough reading of ancient sources: Philolaus, Aristoxenus, Pythagoras, Thrasyllus, Nicomachus, Boethius and other minor sources: Archytas, Eratosthenes, Didymus, Ptolemy. To what extent musical reality lies behind Ptolemy’s speculation is a matter of study in Chapter 6 (216–250), and Hagel seems to incline for a (cautiously) optimistic approach (243).

Chapter 7 (251–255) briefly treats the “resonators described by Vitruvius”, which were sets of tuned resonating jars distributed in semicircles around the auditorium in many Greek stone theatres. Their role was to reinforce certain pitches (which was less urgent in wooden theatres, thanks to the elasticity of the material). Vitruvius’ description, besides, perfectly suits the general requirements of Roman Imperial Music.

Chapter 8 (256–326) is a very attractive survey of the main extant musical documents, already published in the standard collection *Greek Documents of Ancient Music* edited by E. Pöhlmann and M.L. West (Oxford 2000). For each of them Hagel gives a short commentary on aspects of their scalar and modal structure, in a way which sometimes diverges from the standard edition. In addition, he tries to conjecture in detail the structure of the instruments playing the melodies. Particularly remarkable is the reconstruction of the *aulos* possibly used to play the melody documented in *Pap. Michigan* 1205, with interesting considerations about the ancient *aulos* playing techniques (cf. 319–323 and 338ff.). In presence of vocal (not exclusively instrumental) pieces, no metrical considerations of any kind are usually made, which would have been surely of some interest for our better knowledge of the interrelation between verbal text and musical design in ancient scores. Regarding *Pap. Leiden* Inv. P. 510 (3rd cent. BC), which contains Euripides’ *Iphigenia in Aulis*, Hagel seems to believe that it is “a little more likely to preserve the original music”, though of its music nothing could be restored with certainty. Hagel disagrees with the “hyperaolic” interpretation of the musical recognizable signs (257), with the strong arguments that the hyperaolian scale as such is not even included in Aristoxenian system and that, even if the music of the fragment was not the original, it should be assumed that the fifteen-key system postdated the papyrus by generations. His estimation is that the present readings seem not so certain to serve as the basis for conclusions of any kind. The Ashmolean papyri (3rd–2nd cent. BC), clarifies Hagel, convey a faint idea of “New Music” at work, selecting and alternating between several possibilities that are inherent in a grid of semitones. When Comedy entertains the images of ant paths and vegetables full of caterpillars for the compositions of avant-garde poets such as Timotheus and Agathon, there is little doubt that a similar style is meant (269). The elaborate melodic figures within a small tonal space are opportunely compared with the bewildering movements of crawling or squirming insects. A very interesting document is *Pap. Berlin* 6870, 16-19; 23: in nr. 17 (known as the ‘Ajax fragment’) music from the classical or early Hellenistic tragedy is expected to recur, though are present there clues pointing to a later date (pp. 277; 279). In the elusiveness of signals at our disposal, Hagel’s conclusions are again cautious and open to doubt. Pieces belonging to Roman Imperial music are often analyzed in the light of Ptolemy’s cithara tunings (286 ff.). The anthology is improved by two papyri recently published (*Pap. Louvre* E10534; *Pap. Oxy.* 4710) and not yet included in the Pöhlmann–West collection.

In Chapter 9 Hagel studies *aulos* types and pitches (327–365). In the absence of written sources, information on such topics come basically from pictorial evidence

and excavated instruments. Musical documents, already analyzed in previous chapters, are re-examined, and inferences are made about the possibility of aulodic character (rather than citharodic) for some of them.

Notation of music before Aristoxenus is the main topic of Chapter 10. Here Hagel puts forward the hypothesis that in the very beginning the notes were arranged to meaningful scales. A requirement was the institution of some common scheme, onto which the scales could be projected. The inventors of the notation, however, practice-oriented as they were, implemented a functional analysis of scales into tetrachords, thus preparing the way for the comprehension and advance of modulating structures (370). This idea is very fascinating, inasmuch as it recalls the ancient doctrine of *prototypa*, according to which versification was organized in *metra*, modulating into one another. A reconstruction of the notation in its original state is eventually proposed (diagram 89, p. 370). In the following pages Hagel argues for the possibility of dating Aristides' scales back to the earlier fifth century (390 ff.).

The last chapter (Chapter 11) offers both a useful synthesis of all the topics dealt with in the foregoing chapters and a historical overview up to the end of the sixth century. In Hagel's opinion this is the period in which the first clues of musicians deliberating the nature of pitch structures emerge. The evidence allows us to outline a variety of tunings within the range of an octave or perhaps also a seventh, probably already including the basic division by fifths and fourths, which remained unchanged until at least the second century AD. The first invention of a melodic notation, Hagel suggests, might take place not long after 500 BC. Its form requires the analysis of scales not necessarily fitted into tetrachords, but into functional values of notes that possibly participated in a *pyknon*, and others that did not (443). The first stage of the notation would suffice for notating melodies in different modes, regardless of the actual pitch, though it is uncertain whether it was only used for instrumental airs or also for vocal music, as a memory aid for personal use or in professional education as well, and for transmitting and preserving newly composed melodies (444). Within the fifth century both music theory and musical practice developed, and the evolution saw an acceleration in the second half of that century. The 'New Music' was characterized by the enrichment of the tonal material by modulation, the multiplication of cithara strings up to eleven and the invention of mechanical *auloi*. The invention of the vocal signs also falls within this period: our oldest scores already use it (445). Another important change was that the introduction of the new chromatic instruments irrevocably separated private and professional music-making. In the past, lyres and *auloi* with capabilities not very dissimilar from those of the *virtuoso* were commonly accessible, and people were able to perform the songs of famous lyric poets at the symposium. But as soon as the professional auletes possessed more expensive and sophisticated instruments, and as the many-stringed citharas required a technical excellence which was difficult for the ordinary people to reproduce, it became impossible to play the music of public performances at private occasions. As a consequence, much of the newly created music necessarily was played by professionals at public performances. A new development in music theory

might take place in the first centuries AD (450), reaching a high degree of consistence with practice, although only within the limited scope of citharody. The very last paragraph concerns the transcription of ancient notation: it should be the Lydian *tonos*, states Hagel, and not the Hypolydian, traditionally adopted since Bellermand and Fortlage, that is to be equated with our natural scale: the place of the pivotal 'a' should become occupied by the Lydian *mese* | < which is also the note most frequently attested in the musical documents.

Hagel's research seems to be remarkably significant, also to scholars not very familiar with this highly selective topic. It would now be highly interesting to let this revisited *corpus* interact with other related disciplines like metrics, rhythmic, and history of dance, in order to clarify better the respective weight and effectiveness in performance. Indeed, to get a fruitful interface, an interdisciplinary approach would be needed. In this respect the comprehensiveness of West's *Ancient Greek Music* has not yet been outclassed.

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