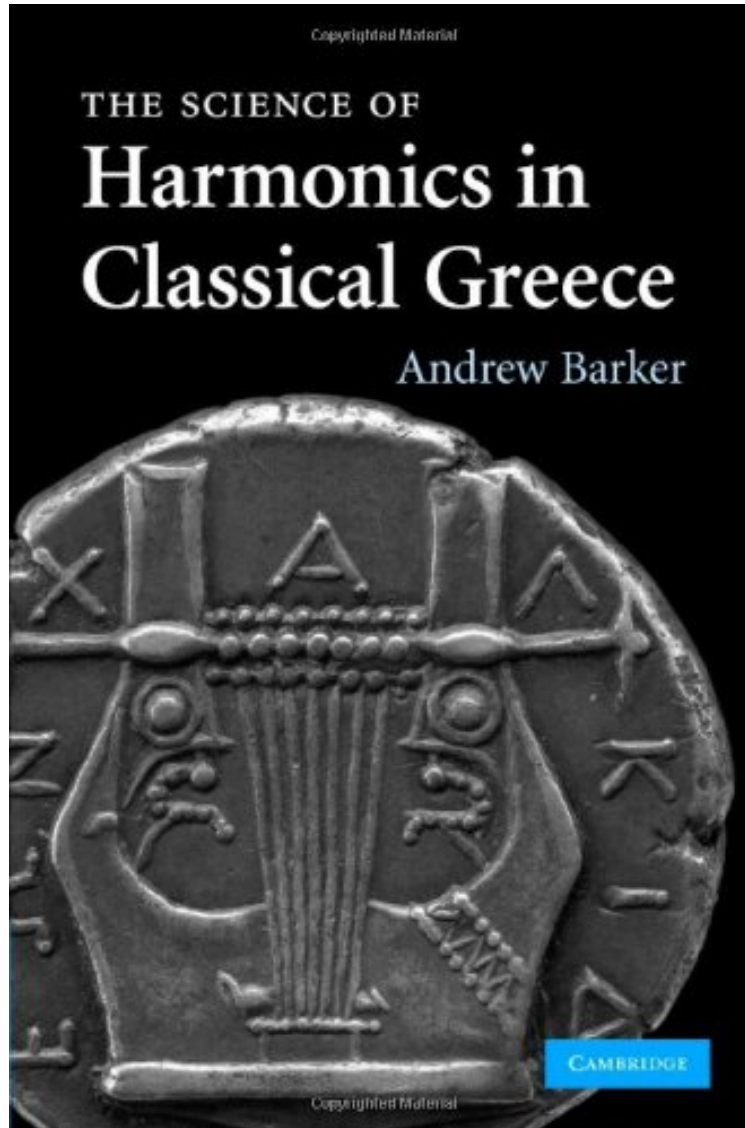


(Library ebook) The Science of Harmonics in Classical Greece

The Science of Harmonics in Classical Greece

Andrew Barker

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Andrew Barker : The Science of Harmonics in Classical Greece before purchasing it in order to gauge whether or not it would be worth my time, and all praised The Science of Harmonics in Classical Greece:

2 of 2 people found the following review helpful. Precious material for historians of mathematics, natural philosophy, and ontology
By Jordan Bell
There are four disciplines that have substantial connections with ancient mathematics: harmonics, astronomy, optics, statics. Not enough has been said about harmonics in the history of science literature. It is not immediate what things are measured in harmonics and what it means to say that one note is higher than another note or what it means to assign ratios to intervals (diastemata), e.g. to say that the fourth is 4:3. The work of

Aristoxenus was new to me, and he writes about finding a minimum interval against which other intervals can be measured (cf. Plato's Republic 531a); this impinges on the question of minima naturalia in natural philosophy. We speak of one note being higher or lower than another note. It is not obvious from the phenomenon of hearing music why we should speak this way (namely if we do not have the connection between frequency and a note). "Just occasionally, a Greek writer speaks of notes as 'above' and 'below', *ano* and *kato*; but the usage is very rare. Where we would call a note 'high', a Greek would most commonly describe it as *oxys*; where we would call it 'low' it is *barys*. But *oxys* and *barys* do not mean 'high' and 'low'; they mean 'sharp' and 'heavy'. I have argued elsewhere that these designations are not conceptually neutral, amounting to nothing more than another way of labelling the same distinctions of pitch that we make, but that they radically condition the way in which the Greeks experienced and envisaged the phenomena." (page 21) Another subject that appears in music theory is approximations to square roots. To divide an interval into two equal parts amounts to finding a square root, and the approximation 7:5 is used for the square root of 2. If a tone is 9:8, then a semitone is the square root of 9:8, and the approximation 17:16 is used. It would be helpful for scholars outside of music if the objects used in music theory were introduced formally. Without having long experience using musical instruments, the following terms may not say as much to the reader as the author wants them to: harmony, melody, attunement, note, scale, tone, semitone, interval, pitch, octave, fourth, fifth, enharmonic, diatonic, chromatic, concord, discord, modulation. If I am explaining different cuisines to an alien who is nourished by electricity, I will not casually mention the different pizza chains in North America before I defined precisely what food is, what pizza is, explain that pizza is sold, that stores can be part of chains, etc. Instead of saying that this book is bad because it doesn't give definitions adequate for an outsider, I say that there is room in the literature for a book presenting Greek music theory as part of the history of science that builds up all the musical ideas from scratch.

3 of 4 people found the following review helpful. The Science of Harmonics in Classical Greece By Hugues Dufourt
Une reacute;organisation du savoir Grec antique en matiegrave;re de theacute;orie de la musique. Une approche originale et syntheacute;tique agrave; la charniegrave;re des matheacute;matiques, de la musique et de la philosophie. Une nouvelle "topique" ougrave; toutes les difficultheacute;s fondamentales sont abordeacute;es et clairement cerneacute;es. Un nouveau regard sur la penseacute;e antique et une nouvelle cristallisation du savoir. Ouvrage appeleacute; agrave; devenir un classique.
 Hugues Dufourt///A reorganization of ancient Greek knowledge in the field of music theory. An original and synthetic approach at the crossroads of mathematics, music and philosophy. A new "topic" where all the fundamental problems are addressed and clearly identified. A new look at ancient thought and a new crystallization of knowledge. Work destined to become a classic. Hugues Dufourt

The ancient science of harmonics investigates the arrangements of pitched sounds which form the basis of musical melody, and the principles which govern them. It was the most important branch of Greek musical theory, studied by philosophers, mathematicians and astronomers as well as by musical specialists. This 2007 book examines its development during the period when its central ideas and rival schools of thought were established, laying the foundations for the speculations of later antiquity, the Middle Ages and the Renaissance. It concentrates particularly on the theorists' methods and purposes and the controversies that their various approaches to the subject provoked. It also seeks to locate the discipline within the broader cultural environment of the period; and it investigates, sometimes with surprising results, the ways in which the theorists' work draws on and in some cases influences that of philosophers and other intellectuals.

"Barker has written an important book for anyone interested in ancient Greek music theory and its relationship with other intellectual activities of the time, such as philosophy and the empirical or mathematical sciences... This is a densely argued work with many detailed discussions of technical sources. It is unlikely that any scholar will agree with all of Barker's readings, but we should be grateful to him for laying out his own readings with such care, and in the process, shedding light on many difficult passages. " --BCMR"...this is a very significant book, a highly original contribution to a very problematic field, and an essential starting point for further research into classical Greek writings on music theory." NECJ, James Grier, University of Western Ontario
 About the Author Andrew Barker is Professor of Classics in the Institute of Archaeology and Antiquity at the University of Birmingham.