

CAMBRIDGE READINGS IN THE LITERATURE OF MUSIC

General Editors: John Stevens and Peter le Huray

Greek Musical Writings II



CAMBRIDGE READINGS IN THE LITERATURE OF MUSIC

Cambridge Readings in the Literature of Music is a series of source materials (original documents in English translation) for students of the history of music. Many of the quotations in the volumes will be substantial, and introductory material will place the passages in context. The period covered will be from antiquity to the present day, with particular emphasis on the nineteenth and twentieth centuries.

Already published:

Andrew Barker, Greek Musical Writings, Volume 1: The Musician and his Art

James McKinnon, Music in Early Christian Literature

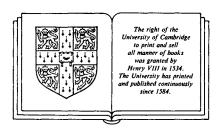
Peter le Huray and James Day, Music and Aesthetics in the Eighteenth and Early-Nineteenth Centuries

Bojan Bujić, Music in European Thought 1851-1912



Greek Musical Writings Volume II Harmonic and Acoustic Theory

Edited by Andrew Barker Senior Lecturer in Philosophy University of Warwick



Cambridge University Press

Cambridge New York Port Chester Melbourne Sydney



PUBLISHED BY THE PRESS SYNDICATE OF THE UNIVERSITY OF CAMBRIDGE The Pitt Building, Trumpington Street, Cambridge, United Kingdom

CAMBRIDGE UNIVERSITY PRESS

The Edinburgh Building, Cambridge CB2 2RU, UK 40 West 20th Street, New York NY 10011–4211, USA 477 Williamstown Road, Port Melbourne, VIC 3207, Australia Ruiz de Alarcón 13, 28014 Madrid, Spain Dock House, The Waterfront, Cape Town 8001, South Africa

http://www.cambridge.org

© Cambridge University Press 1989

This book is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 1989 First paperback edition 2004

A catalogue record for this book is available from the British Library

Library of Congress cataloguing in publication data

Greek musical writings.

(Cambridge readings in the literature of music)

Includes bibliographies and indexes.

Contents: The musician and his art -v. 2. Harmonic and acoustic theory.

1. Music, Greek and Roman - Sources. 2. Music - To

500 - Sources. I. Barker, Andrew, 1943-

II. Series.

HL167.G73 1984 781.738 83-20924

ISBN 0 521 38911 9 volume 1 paperback ISBN 0 521 61697 2 volume 2 paperback



Contents

Acknowledgements Abbreviations, texts and typographic conventions		<i>page</i> vi
		vii
	Introduction	I
1	Pythagoras and early Pythagoreanism	2.8
	Appendix: the scalar division of Archytas	46
2	Plato	53
3	Aristotle	66
4	The Aristotelian Problemata	85
5	The Peripatetic De Audibilibus	98
6	Theophrastus	110
7	Aristoxenus	119
	Elementa Harmonica	126
	Book 1	126
	Book II	148
	Book III	170
	Appendix: Aristoxenus' Elementa Rhythmica Book II	185
8	The Euclidean Sectio Canonis	190
9	Minor authors quoted by Theon and Porphyry	209
	Passages from Theon of Smyrna	209
	Passages from Porphyry	229
10	Nicomachus	245
	Enchiridion	247
II	Ptolemy	270
	Harmonics	275
	Book 1	275
	Book II	314
	Appendix to Book 11	357
	Book III	361
12	Aristides Quintilianus	392
	De Musica	399
	Book 1	399
	Book 11	457
	Book III	494
Bib	liography of works by modern authors	536
Index of words and topics		545
Index of proper names		572

v



Acknowledgements

I should like to record my thanks once again to the University of Warwick for various periods of sabbatical leave, to the many scholars on both sides of the Atlantic who have discussed and encouraged my work, to the students who have insisted that I talk about it, and to the staff of Cambridge University Press, especially Penny Souster and Andrea Smith, for their unfailing help and patience.

In this volume even more than in its predecessor, I owe a particular debt to Professor Winnington-Ingram, especially for his generosity in allowing me to see his manuscript translation of Aristides Quintilianus, *De Musica*, together with detailed notes on some of its early chapters. My work on that difficult treatise would otherwise have been even more imperfect than it is: he is not to be blamed for my errors and confusions.

Writing a book is an absorbing activity, but one that gets inextricably entangled with others. I should like to dedicate this volume compendiously to my wife Jill, my family and my friends, without whom it would all have been very different. It is also a little offering in memory of Derek Macnutt, at whose feet I first learned the rudiments of the translator's art, and whose shade even now, between exertions on the Elysian fairways, still notes our mistakes with an unerring eye, and smiles benignly on our small successes.



Abbreviations, texts and typographic conventions

In citing ancient and modern works I have used only a few esoteric abbreviations:

DK H. Diels and W. Kranz, Die Fragmente der Vorsokratiker, 8th

edition, Berlin, 1956-9

GMW vol. 1 A. Barker, Greek Musical Writings, vol. 1, Cambridge, 1984

MSG C. von Jan, Musici scriptores graeci, Leipzig, 1895

SVF H. von Arnim, Stoicorum veterum fragmenta, 4 vols., Leipzig,

1905-24.

Most other references to modern writings are by author's name and date. Full details of works indicated in this way will be found in the Bibliography.

The translations are based on the following editions (cases where I have preferred a different reading of the texts are mentioned in the notes):

- Chapter 1 The text of the second passage is from vol. 4 of the edition by R. G. Bury, London, 1961 (Loeb Classical Library). Extracts from authors translated more fully elsewhere in the volume are taken from the editions mentioned below. For the remainder I have used the texts printed in DK
- Chapter 2 Plato: texts from editions printed in the Oxford Classical Texts
- Chapter 3 Aristotle: texts from editions printed in the Oxford Classical Texts
- Chapter 4 Texts from Aristotle, Problems 1-XXI, ed. W. S. Hett, London, 1970 (Aristotle, vol. 15, Loeb Classical Library)
- Chapter 5 The Peripatetic De Audibilibus: from Porphyry, Commentary on Ptolemy's Harmonics, ed. I. Düring, Göteborg, 1932
- Chapter 6 Theophrastus, frag. 89: from Düring (1932), as above
- Chapter 7 Aristoxenus, Elementa Harmonica, ed. R. da Rios, Rome, 1954.

 Appendix to ch. 7, Aristoxenus, Elementa Rhythmica Book II, from
 Aristoxenus von Tarent: Melik und Rhythmik des Classischen
 Hellenenthums, ed. R. Westphal, vol. 2, Leipzig, 1893 (reprinted
 Hildesheim, 1965); see also Pighi (1969).
- Chapter 8 The Euclidean Sectio Canonis: text from MSG



viii Abbreviations, texts and typographic conventions

Chapter 9 Passages of Theon Smyrnaeus, Expositio rerum mathematicarum ad legendum Platonem utilium: from the text of E. Hiller, Leipzig, 1878; passages of Porphyry from Düring (1932)

Chapter 10 Nicomachus, Enchiridion: text from MSG

Chapter 11 Ptolemy, Harmonics, ed. I. Düring, Göteborg, 1930

Chapter 12 Aristides Quintilianus, De Musica, ed. R. P. Winnington-Ingram, Leipzig, 1963

Other musicological works frequently mentioned include:

- (a) The three treatises each entitled Eisagoge Harmonike by Bacchius, Cleonides and Gaudentius: texts are in MSG, as are the selections entitled Excerpta ex Nicomacho; Cleonides is translated in Strunk (1952), Bacchius in Steinmayer (1985)
- (b) The group of short works whose familiar title I abbreviate as Anon. Bell., the Anonyma de musica scripta Bellermanniana, ed. D. Najock, Leipzig, 1975; see also Najock (1972)
- (c) Philodemus, De Musica, ed. J. Kemke, Leipzig, 1884; see also Rispoli (1969)
- (d) The Plutarchian De Musica: text and translation in Plutarch's Moralia, vol.14, ed. B. Einarson and P. H. De Lacy, London, 1967 (Loeb Classical Library); other important editions, both with French translation and substantial commentary, are Plutarque: de la musique, ed. H. Weil and T. Reinach, Paris, 1900, and Plutarque de la musique, ed. F. Lasserre, Olten and Lausanne, 1954; English translation also in GMW vol. I

In referring to passages translated in this volume, I have generally used the systems of numbering that stem from canonical printed editions of the texts: these are indicated in the left-hand margin beside the translations. The names of author and work are preceded by bold numerals indicating where they occur in this book. In cases where a chapter contains a single passage or treatise, the numeral is the chapter number; where it contains several passages, the first numeral is the chapter number, and the second identifies the position of the passage in its chapter. Thus a reference to line 8 of Meibom's page 16 of Aristoxenus' Elementa Harmonica, which occupies the whole of chapter 7, will appear as 7 Aristox. El. Harm. 16.8. A reference to Plato, Republic 531a, which occurs in the first passage of chapter 2, will appear as 2.1 Plato Rep. 531a.