

Greek Medical Literature and its Readers

From Hippocrates to Islam and Byzantium

Edited by

Petros Bouras-Vallianatos and Sophia Xenophontos



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This volume focuses on the relationship between Greek medical texts and their audience(s), offering insights into how not only the backgrounds and skills of medical authors but also the contemporary environment affected issues of readership, methodology and mode of exposition. One of the volume's overarching aims is to add to our understanding of the role of the reader in the contextualisation of Greek medical literature in the light of interesting case-studies from various – often radically different – periods and cultures, including the Classical (such as the Hippocratic corpus) and Roman Imperial period (for instance Galen), and the Islamic and Byzantine world. Promoting, as it does, more in-depth research into the intricacies of Greek medical writings and their diverse revival and transformation from the fifth century BC down to the fourteenth century AD, this volume will be of interest to classicists, medical historians and anyone concerned with the reception of the Greek medical tradition.

Petros Bouras-Vallianatos is Wellcome Trust Research Fellow in the Department of History, and Member of the Centre for Hellenic Studies, at King's College London.

Sophia Xenophontos is Lecturer in Classics at the University of Glasgow.

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**Edited by
Petros Bouras-Vallianatos and
Sophia Xenophontos**

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Contents

<i>Figures</i>	vii
<i>Contributors</i>	viii
<i>Preface</i>	xi
<i>Note to the reader</i>	xii
Introduction	1
PETROS BOURAS-VALLIANATOS AND SOPHIA XENOPHONTOS	
PART I	
The Classical world	5
1 Alcmaeon and his addressees: Revisiting the incipit	7
STAVROS KOULOUMENTAS	
2 Gone with the wind: Laughter and the audience of the Hippocratic treatises	30
LAURENCE M. V. TOTELIN	
3 The professional audiences of the Hippocratic <i>Epidemics</i> : Patient cases in Hippocratic scientific communication	48
CHIARA THUMIGER	
PART II	
The Imperial world	65
4 Galen's <i>Exhortation to the Study of Medicine</i> : An educational work for prospective medical students	67
SOPHIA XENOPHONTOS	

vi *Contents*

- 5 An interpretation of the preface to *Medical Puzzles and Natural Problems 1* by Pseudo-Alexander of Aphrodisias in light of medical education 94
MICHIEL MEEUSEN

PART III

The Islamic world 111

- 6 The user-friendly Galen: Ḥunayn ibn Ishāq and the adaptation of Greek medicine for a new audience 113
UWE VAGELPOHL
- 7 Medical knowledge as proof of the Creator's wisdom and the Arabic reception of Galen's *On the Usefulness of the Parts* 131
ELVIRA WAKELNIG

PART IV

The Byzantine world 151

- 8 Physician versus physician: Comparing the audience of *On the Constitution of Man* by Meletios and *Epitome on the Nature of Men* by Leo the Physician 153
ERIKA GIELEN
- 9 Reading Galen in Byzantium: The fate of *Therapeutics to Glaucou*n 180
PETROS BOURAS-VALLIANATOS

- Index* 231

Figures

9.1	Parisinus suppl. gr. 446, f. 11v (Bibliothèque nationale de France, Paris)	203
9.2	Beinecke MS 1121, f. 117v (Beinecke Rare Book and Manuscript Library, Yale University, New Haven, CT)	204
9.3	Beinecke MS 1121, f. 117r (Beinecke Rare Book and Manuscript Library, Yale University, New Haven, CT)	205
9.4	Laurentianus Plut. 75.9, f. 175r (Biblioteca Medicea Laurenziana, Florence)	206
9.5	Parisinus suppl. gr. 634, f. 39v (Bibliothèque nationale de France, BnF, Paris)	207
9.6	Parisinus suppl. gr. 634, f. 48v (Bibliothèque nationale de France, BnF, Paris)	208
9.7	Marcianus gr. App. cl. V/4 (coll. 544), f. 133v (Biblioteca Nazionale Marciana, Venice)	209
9.8	Vindobonensis med. gr. 17, f. 338r (Österreichische Nationalbibliothek, Vienna)	210
9.9	Wellcome MS.MSL.52, f. 146r (Wellcome Library, London)	211

Contributors

Petros Bouras-Vallianatos studied pharmacy, ancient and Byzantine history, before completing his PhD on the late Byzantine medical author John Zacharias Aktouarios; a revised version of his doctoral thesis is to be published soon. He is Wellcome Trust Research Fellow in Medical Humanities in the Department of History at King's College London, where he is working on a three-year project entitled 'Experiment and Exchange: Byzantine Pharmacology between East and West (ca. 1150-ca.1450)'. He has published several articles on Byzantine and early Renaissance medicine and pharmacology, the reception of the classical medical tradition in the Middle Ages, and palaeography, including the first descriptive catalogue of the Greek manuscripts at the Wellcome Library in London. He is also co-editing the *Brill's Companion to the Reception of Galen*.

Erika Gielen is a postdoctoral researcher at the De Wulf-Mansion Centre for Ancient, Medieval and Renaissance Philosophy of the University of Leuven. She is also Managing Director of the interdisciplinary research centre LECTIO. Her research interests include textual history and criticism, Byzantine philosophy and medicine, and their interaction with ancient (pagan) thought. Her first book was published by Brepols in 2016 and presents the first critical edition of the *De virtute et ascesi* of Nicephorus Blemmydes and the *De virtute* of Joseph Racendytes. Her current research projects include a critical edition of Proclus' *In Platonis Timaeum Commentaria*.

Stavros Kouloumentas received his PhD in Ancient Philosophy from the University of Cambridge. He undertook various teaching and research positions in Greece (Department of Philology and Department of Philosophy, University of Patras), Germany (Institut für Klassische Philologie and Institut für Philosophie, Humboldt-Universität zu Berlin), France (Centre Léon Robin, Université Paris IV-Sorbonne), and USA (Center for Hellenic Studies, Harvard University). He is currently teaching at the University of Patras and is preparing a commentary on the fragmentary texts pertaining to Alcmaeon of Croton. His research interests cover a range of topics, including the transmission of philosophical texts in antiquity, the emergence of rational thinking, cosmological accounts, and the interaction between early Greek philosophy and Hippocratic medicine.

Michiel Meeusen (PhD, KU Leuven) is a British Academy Postdoctoral Research Associate at King's College London. He specialises in ancient science, medicine and the literature and culture of the Greco-Roman Empire, and has published numerous contributions on Plutarch of Chaeronea. He is the author of *Plutarch's Science of Natural Problems. A Study with Commentary on Quaestiones Naturales* (Plutarchea Hypomnemata, Leuven University Press, 2017), and also collaborated on the edition of Plutarch's *Quaestiones Naturales* for the Collection des universités de France (Budé). He is currently working on a project about the circulation of the Aristotelian *Problemata Physica* in the Greco-Roman Empire.

Chiara Thumiger is a Wellcome Research Fellow at the University of Warwick and a visiting scholar at the Humboldt-Universität zu Berlin. Her current research focuses on the ancient disease *phrenitis*, its various developments and afterlife in Western medicine. She has published numerous articles and chapters on ancient medicine, ancient psychology, disability, psychiatry, and patient experience in ancient medicine; she has also worked extensively on Greek tragedy and ancient representations of animals. Her book *A History of the Mind and Mental Health in Classical Greek Medical Thought* has just been published (Cambridge University Press, 2017).

Laurence Totelin is Senior Lecturer in Ancient History at Cardiff University (UK). Her research focuses on the transmission of technical knowledge in the Greek and Roman worlds, with a particular focus on pharmacology, gynaecology, and botany. She is the author of *Hippocratic Recipes: Oral and Written Transmission of Pharmacological Knowledge in Fifth- and Fourth-Century Greece* (Brill, 2009) and, with Gavin Hardy, of *Ancient Botany* (Routledge, 2016). She is currently working on a book on the trade in pharmacological drugs in Graeco-Roman antiquity, and several articles on the symbolism of milk.

Uwe Vagelpohl is a senior research fellow at the Department of Classics and Ancient History at the University of Warwick. He has widely published on medieval medical, philosophical and scientific translations from Greek into Syriac and Arabic in late antiquity and the Middle Ages. Since 2008, he has been editing and translating the Arabic version of Galen's commentaries on the Hippocratic *Epidemics*, two volumes of which have been published so far (CMG Supplementum Orientale V 1, 2014 and V 2, 2016).

Elvira Wakelnig is a senior researcher at the Department of Oriental Studies of the University of Vienna, responsible for the project *Gathering Knowledge. Towards a Typology of Arabic Compendia* funded by the *Austrian Science Fund (FWF)*. She works on the transmission of Greek thought into Arabic and on Arabic philosophy and medicine. Her edition and translation of the Marsh manuscript 539, kept at the Bodleian library in Oxford, was published in 2014 (*A Philosophy Reader from the Circle of Miskawayh*, Cambridge University Press).

Sophia Xenophontos (DPhil, Oxford) is Lecturer in Classics at the University of Glasgow. Her research interests are in the literature, philosophy and culture of the Imperial period. She is the author of *Ethical education in Plutarch: moralising agents and contexts* (Berlin-Boston: de Gruyter, 2016) and of several articles and book chapters on practical ethics and the therapy of the emotions in post-Hellenistic philosophical writings. Another strand of her research is the reception of the Greek ethical tradition (especially Plutarch and Aristotle) in Byzantium and the Enlightenment. Her current book project is on Galen's works of popular philosophy and their interplay with his medical theory and practice.

Preface

This edited volume emerged out of an international conference on *Greek medical texts and their audience: perception, transmission, reception*, which took place on 12–13 December 2014 at King’s College London. The event stimulated considerable interest in the interrelation between Greek medical literature and its readers and brought together scholars from a variety of disciplines, who offered their expertise on different aspects of this topic. The editors of this volume, who were also the conference organisers, are deeply grateful to the Centre for Hellenic Studies for hosting the conference, Dionysios Stathakopoulos, and particularly the Director of the Centre, Roderick Beaton, for wholeheartedly embracing our initiative and enabling us to proceed with its realisation. This conference would not have been possible without the generous support of the A.G. Leventis Foundation and the Institute of Classical Studies, School of Advanced Study, University of London. Special thanks go to Laura Douglas and the entire AHRI team at KCL for organisational arrangements. The editors would also like to thank all the speakers, chairs (Michael Trapp, Peter Singer, Peter Pormann, Barbara Zipser), and participants, who contributed to the lively discussions. We are also grateful to Daniel Bertoni, Jordi Crespo Saumell, Lesley Dean-Jones, Christophe Erismann, Maria Luisa Garofalo, Dimitris Karambelas, Joshua Olsson, and Katherine van Schaik, for their stimulating papers, although these do not appear in the present volume. We would like to thank Glen Cooper, Aileen Das, Jason König, Orly Lewis, G. E. R. Lloyd, Ralph Rosen, Thomas Rütten, and John Wilkins, for providing expert advice and comments on different sections of the volume. The editorial process has been smooth and efficient due to the encouragement and intense support of Michael Trapp, who has been the ideal series editor throughout the various stages of preparing this volume, not least by meticulously reviewing the complete manuscript. Thanks also go to John Smedley and Michael Greenwood at Routledge for their help.

Petros Bouras-Vallianatos
King’s College London

Sophia Xenophonos
University of Glasgow

August 2017

Note to the reader

Original medical sources are cited by the name of the ancient author, followed by the title of the work, the numbering of the traditional division into books and/or sections where applicable, as well as a reference to the edition (volume in Roman numerals, page and line in Arabic numerals), e.g. Galen, *Loc. Aff.*, 3.14, ed. Kühn (1824) VIII.214.2–4. Latin abbreviations for original titles feature in the volume's Index.

Introduction

Petros Bouras-Vallianatos and Sophia Xenophontos

Over the last few decades there has been growing scholarly activity in the area of ancient medical literature. This activity has explored medical works in connection with the history of their transmission and textual criticism,¹ for their technical content,² their form,³ and also their function as manuals on medical theory and practice.⁴ Moreover, the significance of those texts as products of their societies has been well acknowledged;⁵ however, less work has been done specifically on their relationship with their audience or on how medical authors attempted to appeal to particular groups of readers.

This edited volume aims to make an important contribution to understanding the role of the audience in the contextualisation of Greek medical texts by looking into the interaction between authors and readers and offering insights into how the author's background, experience, and skills condition his readership, methodology, and mode of exposition. One of the novelties of this volume is that it examines for the first time Greek medical texts which for the most part have been little studied and poorly understood. In addition, by delving into the reception of these texts in later socio-cultural settings, it throws light on the subject of subsequent audiences and the widening of the horizon of expectations. The book does not aim to offer an exhaustive treatment of all the subjects it addresses but rather aims to demonstrate that many important issues concerning the impact of Greek medical texts on contemporary and later audiences, such as the interplay between medicine and philosophy, authorial narrative techniques, or purposeful transformation of the original material, require further investigation. The broader objective is to promote fresh interest both in the particular thinkers included here and in the variety of ways in which their works were revived, thus cultivating an appreciation of medical writing both as a literary genre and a form of expression.

The extended timespan and the geographical spread covered by the contributions to this volume are both distinctive and informative. The book is divided into four parts according to the historical and cultural setting that frames each text: chapters concerned with medical works of the Classical and the Imperial period form Parts I and II, while the introduction and dissemination of Greek medical works in the medieval Islamic and Byzantine world are addressed in Parts III and IV.

The three chapters of Part I are especially concerned with contemporary groups of intellectuals active in different contexts. In Chapter 1, **Stavros Kouloumentas**

2 Introduction

looks at Alcmaeon of Croton's (fifth century BC) incipit, the longest surviving extract from his treatise *On Nature*. By taking into account the fragmentary evidence for Alcmaeon's doctrines, his alleged connection with the Pythagoreans, and the opening sections of other contemporary philosophical and medical essays, Kouloumentas offers a new interpretation of the treatise's target groups: i.e. a narrow and specialised audience, comprising the members of a Pythagorean group active in the same competitive setting as Alcmaeon, and a broader audience, including, for example, any attendee at contemporary philosophical contests. The next two chapters centre on texts of the Hippocratic collection. **Laurence Totelin** (Chapter 2) explores *On Winds*, a text of a rhetorical character, and investigates how the reader might have reacted to its several allusions to wind and bloated bellies, starting from the observation that terms denoting farting were normally found in ancient comedy and satire, where the audience were expected to laugh. Building on the accepted view that people with no medical training (ἰδιῶται) read medical texts in antiquity, she argues that they would surely have found these wind theories amusing, although the Hippocratic author(s) would never have intended them to be humorous. **Chiara Thumiger** (Chapter 3) examines the patient reports found in the seven books of the *Epidemics*, informing her discussion by comparisons with modern approaches to clinical training, especially that relating to a doctor's communication with patients. Her analysis emphasises that both Hippocratic authors and their intended audiences were medical professionals. She also proposes a new reading of such cases by looking at them as manifestations of "mnemonic effort", which in itself reflects the audience-directedness of these texts, particularly in the light of the fact that contemporary medical practice was mainly dependent on oral learning and teaching.

The theme of the identity of the addressee of the text, which runs through the above mentioned contributions, is more explicitly brought out in the two chapters comprising Part II. **Sophia Xenophontos'** contribution (Chapter 4) focuses on the influential physician Galen and explores a lesser-known aspect of his profile, namely his identity as a moralist and soul-doctor, on the basis of his rather overlooked treatise *Exhortation to the Study of Medicine*. She discusses Galen's moralising methods and the educational elements of the essay, suggesting that its intended audience consisted of beginners in philosophy who were being urged to continue their professional studies on to medicine. She also draws thought-provoking links between Galenic and Plutarchan moralism, arguing that Galen's moral writings need to be placed squarely in the tradition of the practical ethics of the Imperial period. **Michiel Meeusen** (Chapter 5) discusses another didactic work, the *Medical Puzzles and Natural Problems* ascribed to Alexander of Aphrodisias, a hitherto unexplored collection from the early centuries AD, which belongs to the broader tradition of Aristotelian natural philosophy. This work has attracted very little scholarly attention, and here Meeusen explores the preface to the first book of questions, arguing that it points to a dynamic relationship between author and reader in the context of a medical school setting. Its format, which reflects its affiliation with question and answer literature, has implications for the way the author communicates knowledge to his reader through the application of authoritative strategies that ensure the reader's attentiveness.

Part III turns to the influence of Greek medical literature, particularly Galen, in the medieval Islamic world with special emphasis on the importance of translators and their role as mediators and disseminators of the Galenic legacy. **Uwe Vagelpohl** (Chapter 6) discusses Ḥunayn ibn Ishāq, the ninth-century translator of Greek medical texts into Syriac and Arabic, and the different strategies he applies in order to make his translations resonate with his audience: a) amplification of the source text with the ultimate aim of giving his reader an accurate account of Galenic medical knowledge; b) annotation of his translations; and c) reworking of the medical content of translated texts in the form of summaries that worked as manuals or textbooks for a variety of audiences including physicians, medical students, and scholars. Another distinctive feature of Ḥunayn's work, according to Vagelpohl, is that his translations accommodated the stylistic preferences of the patron who commissioned them. Beyond the strictly textual level, Vagelpohl also shows that the revived Galenic texts were meant to be used by practising physicians for diagnostic and therapeutic purposes and therefore the accuracy of Ḥunayn's translations potentially impacted on contemporary healing practices. **Elvira Wakelnig** (Chapter 7) considers mainly how Galen's *On the Usefulness of the Parts* was adapted in the Arabic-Islamic world of the ninth to the twelfth century to meet the needs and expectations of a non-medical as well as a medical audience. She explains how the Arabic translation of the Galenic work, which was most probably made by Ḥubaysh in the mid-ninth century, focuses exclusively on the role of the Creator rather than on Galen's emphasis on personified Nature. These adaptations serve the translator's intended readership, who were physicians but also scholars sensitive to teleological arguments. In the Arabic rendering, the Galenic work was received more as a philosophical-theological treatise than a strictly physiological one.

Lastly, Part IV of the volume turns its attention to the Byzantine world. **Erika Gielen** (Chapter 8) concentrates on two Byzantine texts on human anatomy, i.e. the *Constitution of Man* by Meletios and the *Epitome on the Nature of Men* by Leo the Physician, both works largely neglected by modern scholars, and she offers novel insights into the history of medical anthropology in the early Middle Ages. In particular, Gielen shows how Greek medical texts were reworked in the Byzantine period to meet the expectations of contemporary audiences. Meletios often presents his contemporaries with Galenic material on the anatomy and physiology of various parts of the body in a Christian-friendly version by supplementing his account with quotations from the Church Fathers. One of the original contributions made by this chapter is the first ever critical discussion of the relationship between these two works by Meletios and Leo. Although Leo seems to be excerpting from Meletios, he often adapts the text to a more professional audience by eliminating references to patristic literature. **Petros Bouras-Vallianatos** (Chapter 9) reflects on key themes in this volume, especially the role of authority and expertise in the appropriation of Galenic material in educational contexts and the practical implications of the appropriated treatises on tackling disease. He shows that Byzantine scribes, medical authors, and practising physicians, through their active involvement with the transmission and dissemination of Galen's *Therapeutics to Glaucou*n, were able to regulate and/or enhance direct or indirect access to

4 Introduction

the text. By presenting their own perspective on reading the text, early Byzantine commentators offered it a strong didactic twist, in order to make it part of a medical curriculum. Furthermore, Byzantine practising physicians carefully singled out specific parts of the Galenic treatise to include in their own practical manuals in order to serve contemporary and future physicians.

We hope that this volume will constitute the starting point for more extensive research into the significant role of the audience in the understanding and interpretation of ancient and medieval medical texts. In the light of the contributions in Parts III and IV, this book also aims more specifically to focus further scholarly attention on the reception of the Greek medical tradition in medieval Islamic and Byzantine societies.

Notes

- 1 E.g. Garzya and Jouanna (1999).
- 2 See, for example, the recent volume edited by Horstmanshoff, King and Zittel (2012). See also the edited volume by Maire (2014) on exchanges between Greek and Latin ancient medical texts.
- 3 See Formisano (2001); Fögen (2005); and Asper (2007).
- 4 E.g. Horstmanshoff (2010).
- 5 Eijk, Horstmanshoff and Schrijvers (1995); see also section 2 and 4 of Eijk (2005). Another strand of research is concerned with the construction of authority; see, for example, Asper (2013), Taub and Doody (2009), and now König and Woolf (2017).

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Part I

The Classical world



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1 Alcmaeon and his addressees

Revisiting the incipit*

Stavros Kouloumentas

Alcmaeon's (fifth century BC) incipit constitutes one of the few surviving prefaces of early Greek prose and the longest verbatim quotation from his treatise conventionally called *On Nature*. It consists of a formal introduction of the author, a reference to three addressees, and a statement concerning the limits of human knowledge in contrast to the clarity attained by the gods. The text is preserved by Diogenes Laertius (third century AD) in his history of Greek philosophy, a work that lays special emphasis on the lives of the philosophers and summarises their main doctrines:

ἦν δὲ Πειρίθου υἱός, ὡς αὐτὸς ἐναρχόμενος τοῦ συγγράμματός φησιν·
“Ἀλκμαίων Κροτωνιῆτης τάδε ἔλεξε Πειρίθου υἱὸς Βροτίνῳ καὶ Λέοντι καὶ
Βαθύλλῳ περὶ τῶν ἀφανέων περὶ τῶν θνητῶν σαφήνεια μὲν θεοὶ ἔχοντι, ὡς
δὲ ἀνθρώποις τεκμαίρεσθαι” καὶ τὰ ἐξῆς.¹ [unpunctuated asyndeton]

The incipit is probably drawn from works which Diogenes Laertius often uses as his source: Callimachus' (third century BC) *Tables*, an elaborate catalogue of the holdings of the Alexandrian library that divided authors into classes and listed the representatives of each genre alphabetically along with some information concerning their life and writings, and Demetrius of Magnesia's (first century BC) *On Poets and Authors of the Same Name*, a biographical handbook with similar content.² The fact that Diogenes Laertius declares that he quotes from the very beginning of Alcmaeon's treatise and that the fragment contains traces of the Doric (ἔχοντι) and Ionic (Κροτωνιῆτης . . . Πειρίθου . . . ἀφανέων) dialects is a strong indication of its genuineness. The other words, however, are preserved in the Attic dialect (e.g. σαφήνεια instead of the Ionic σαφηνεῖην or the Doric σαφανείαν), an indication that Alcmaeon's wording was modified in part during the scribal transmission.

There are several difficulties that complicate our effort to unravel the function and meaning of the incipit. First of all, two textual problems should be examined: the asyndeton in the middle of the fragment (περὶ τῶν ἀφανέων περὶ τῶν θνητῶν) and the syntactically incomplete statement at the end (ὡς δὲ ἀνθρώποις τεκμαίρεσθαι).³ But in addition to this, we have to conjecture as to how the incipit is connected with the other known sections of Alcmaeon's treatise, which focus

on microcosmic structures and processes. It is also unclear whether the incipit was constructed for oral or written presentation and whether it was intended to persuade a target group, such as friends, students, or members of a Pythagorean group, of Alcmaeon's views.

The aim of this chapter is to reassess these interconnected problems by surveying the existing literature and taking into account the fragmentary evidence concerning Alcmaeon's doctrines, his alleged connection with the Pythagoreans, and the opening sections of contemporary philosophical and medical treatises. I shall suggest that Alcmaeon's reference to three addressees may well be polemical, as was common in the archaic era, and that his incipit can be seen as providing evidence for the clash between empiricism and inspiration in early Greek thought.

Alcmaeon and his audience

Different suggestions have been proposed concerning the punctuation and interpretation of the fragment (see Table 1.1), as well as the relationship between Alcmaeon and the figures referred to in the incipit.

To begin with, Reiske suggests that the asyndeton should be divided into two parts with the conjunction "or".⁴ On this reading, the reference to "things that are non-manifest" is followed by an additional phrase, probably inserted by Diogenes Laertius into Alcmaeon's text, which specifies that these things are subject to death. Other scholars delete the second part of the asyndeton in order to produce a smoother text. Wachtler, for instance, argues that the phrase *περὶ τῶν θνητῶν* has been interpolated by a careless scribe who thought that Alcmaeon draws a contrast between *ἀθάνατα* and *θνητά* (a common polarity in ancient literature), and he attempts to reconstruct the original linguistic form of the fragment by transforming all words into Ionic.⁵ Wachtler thus believes that *περὶ τῶν θνητῶν* should be deleted and *περὶ τῶν ἀφανέων* should be replaced by *περὶ τῶν ἀθηήτων* ("concerning things that are unseen"). Although a few scholars accept this drastic emendation, Cobet (who produced the first critical edition of the text of Diogenes Laertius) and others agree that the phrase *περὶ τῶν θνητῶν* can hardly go back to Alcmaeon.⁶

Gomperz attempts to interpret the incipit from a different perspective. He suggests that the first part of the asyndeton indicates the topic of the discourse and so functions as a sort of title, while the second part constitutes the beginning of Alcmaeon's demonstration. He thus divides the asyndeton into two parts with a semicolon: "concerning things non-apparent: Concerning mortals (*or* things mortal) the gods [alone] have precise insight".⁷ In Gomperz's view, the discourse was not a fixed account but embodied a general introduction to medical issues given by Alcmaeon to three disciples on a particular occasion. This suggestion is built on the assumption that Alcmaeon was a sort of teacher who offered private lectures. We thus possess extracts from Alcmaeon's notes or written records of his students. Nevertheless, Diogenes Laertius clearly refers to a prose work that has a systematic content and reports that Alcmaeon was the first to compose a treatise *On Nature*, a claim found in other authors too (DK 24 A1–2). Indeed, the fact that

Table 1.1 The punctuation and translation of Alcmaeon's fragment

Reiske (in Wachtler 1896)	–	Αλκμαίων Κροτωνίτης τάδε ἔλεξε Περίθου υἱὸς Βροτίνῳ καὶ Λέοντι καὶ Βαθύλλῳ· περὶ τῶν ἄφανέων <η> περὶ τῶν θνητῶν σαφήνειαν μὲν θεοὶ ἔχοντι, ὡς δὲ ἀνθρώποις τεκμαίρεσθαι . . .
Cobet (1850)	Alcmaeon Crotoniates haec dixit, Piriithoi filius, Brontino et Leonti et Bathyllo: De invisibilibus, [de mortalibus] manifestam quidem scientiam habent dii; quantum vero conjectare hominibus licet (tr. Cobet).	Αλκμαίων Κροτωνίτης τάδ' ἔλεξε, Περιθόου υἱὸς, Βροντίνῳ θνητῶν σαφήνειαν μὲν θεοὶ ἔχοντι· Περὶ τῶν ἄφανέων, [περὶ τῶν τεκμαίρεσθαι . . .
Wachtler (1896)	–	Αλκμαίων Κροτωνίτης τάδε ἔλεξε, Περίθου υἱὸς, Βροντίνῳ καὶ Λέοντι καὶ Βαθύλλῳ· περὶ τῶν ἀθητῶν [περὶ τῶν θνητῶν] σαφήνειαν μὲν θεοὶ ἔχουσι· ὡς δὲ ἀνθρώποις τεκμαίρεσθαι . . .
Gomperz (1928)	Alkmaion of Kroton, the son of Peirithos, spoke thus to Brotinos and Leon and Bathyllos concerning things non-apparent: Concerning mortals (<i>or</i> things mortal) the gods [alone] have precise insight; but as far as men may judge by indications (tr. Gomperz).	Αλκμαίων Κροτωνίτης τάδε ἔλεξε Περίθου υἱὸς Βροτίνῳ καὶ Λέοντι καὶ Βαθύλλῳ· περὶ τῶν ἄφανέων· περὶ τῶν θνητῶν σαφήνειαν μὲν θεοὶ ἔχοντι, ὡς δὲ ἀνθρώποις τεκμαίρεσθαι . . .
Diels-Kranz (1951–2)	Alkmaion aus Kroton sprach folgendes, <i>er</i> , des Peirithos Sohn, zu Brotinos und Leon und Bathyllos: Über das Unsichtbare wie über das Irdische haben Gewisheit die Götter, <i>uns</i> aber als Menschen <i>ist nur</i> das Erschließen <i>gestattet</i> (tr. Diels-Kranz).	Αλκμαίων Κροτωνίτης τάδε ἔλεξε Περίθου υἱὸς Βροτίνῳ καὶ Λέοντι καὶ Βαθύλλῳ· περὶ τῶν ἄφανέων, περὶ τῶν θνητῶν σαφήνειαν μὲν θεοὶ ἔχοντι, ὡς δὲ ἀνθρώποις τεκμαίρεσθαι . . .
Gemelli Marciano (2007)	Alcméon de Crotonne, fils de Piriithos, a dit ces choses à Brotinos, Léon et Bathyllos : sur les choses invisibles concernant les mortels les dieux possèdent la certitude, mais dans la mesure où aux hommes, [il est possible] de tirer des indices (tr. Gemelli Marciano).	Αλκμαίων Κροτωνίτης τάδε ἔλεξε Περίθου υἱὸς Βροτίνῳ καὶ Λέοντι καὶ Βαθύλλῳ· περὶ τῶν ἄφανέων περὶ τῶν θνητῶν σαφήνειαν μὲν θεοὶ ἔχοντι, ὡς δὲ ἀνθρώποις τεκμαίρεσθαι . . .
Dorandi (2013)	Alcmaeon of Croton, the son of Peirithos, said these words to Brotinos and Leon and Bathyllos concerning things that are non-manifest: the gods possess clear knowledge concerning things that are mortal, but insofar as humans may judge from signs (tr. Kouloumentas).	Αλκμαίων Κροτωνίτης τάδε ἔλεξε Περίθου υἱὸς Βροτίνῳ καὶ Λέοντι καὶ Βαθύλλῳ· περὶ τῶν ἄφανέων· περὶ τῶν θνητῶν σαφήνειαν μὲν θεοὶ ἔχοντι, ὡς δὲ ἀνθρώποις τεκμαίρεσθαι . . .

Alcmaeon introduces himself by mentioning both his origin and his father's name is a strong indication that the discourse was not confined to a small and select group.⁸ Alcmaeon's intention is to make his ideas available to a wide public.

Other scholars, including Burnet, Diels-Kranz, and Marcovich (the Teubner editor of the text of Diogenes Laertius), place a comma between the two parts of the asyndeton, thus supposing that we should understand an "and" or "as well as" coordinating the second part with the preceding part. This seems to be an appropriate way to punctuate the asyndeton for the two parts may well be supplementary: what is hidden refers to beings and processes that are mortal. The term ἀφανέα literally means "non-manifest", and so it is sharply contrasted with things which are visible through the sensory organs, especially the eyes that constitute the best medium for the research based on autopsy. It also has the connotations of "obscure" and "uncertain" for what cannot be seen is beyond our limited powers of comprehension. To cite some examples, invisible structures include the secret thoughts of the gods which cannot be understood by humans (Solon, fr. 17, ed. West); the depths of Tartarus (Pindar, fr. 207, ed. Snell-Maehler); distant things in the heavens and under the earth whose nature is perplexing (*On Ancient Medicine*, 1);⁹ non-manifest and difficult diseases about which a doctor can only conjecture (*On Winds*, 1);¹⁰ and obscure natural phenomena (Herodotus, 2.24). The term θνητά designates beings which are subject to death, namely humans, animals, and plants (Plato, *Sophist*, 265c1–2), in contrast to ἀθάνατα which designates immortal beings, such as the gods (DK 31 B147), primary stuffs (DK 12 B3), and celestial bodies (DK 24 A12). Most of the subjects examined in Alcmaeon's treatise are indeed microcosmic structures and processes: health and disease, the substance and origin of semen, and the formation and nourishment of the embryo. Hence the insertion of a comma in the middle of the asyndeton that some scholars make presents Alcmaeon as dealing with the latent level of reality and focusing on beings that are born, grow up, and perish.

Alcmaeon's reference to the latent level of reality presupposes another realm that is manifest. This realm should be the world of things and processes that can be seen clearly and analysed with some certainty. However, there were different views as to its significance in elucidating what is hidden. Heraclitus, for instance, believes that it provides evidence of lower validity (DK 22 B54) and so can be deceptive, since even Homer was unable to grasp a children's riddle about manifest things (DK 22 B56). Other thinkers suggest that "signs" or "tokens" help us to interpret invisible structures (τεκμαίρομεσθα τοῖς παροῦσι τὰφανῆ, Euripides, fr. 574, ed. Kannicht). Applications of this idea can be found in early philosophical and scientific writings, which often assert that what is apparent and familiar is the starting point to gain some understanding of what is hidden and vague. Herodotus, for example, argues that the length and course of the Nile are symmetrical to its counterpart in Europe, the Danube, thus drawing conclusions on the unknown nature of a river by means of data that are available to him (Herodotus, 2.33). In a similar vein, the author of *On Regimen* (1.11) attempts to show how the characteristic activities of each craftsman resemble a series of macrocosmic and microcosmic processes and how apparent oppositions are different aspects of the same process, and the author of *On Ancient Medicine* (22) considers objects outside the

body in order to illustrate the structure and functioning of its internal organs.¹¹ Alcmaeon can be interpreted as concurring with these thinkers in that he takes into account the data collected from the sensory organs in order to understand the realm of invisible structures and mortal beings.

Gemelli Marciano proposes a different interpretation.¹² She omits the comma that divides the asyndeton into two parts and asserts that the second part depends on the preceding part rather than being coordinated with it, thus offering the following translation: “about things that are invisible concerning the mortals the gods have clarity”. She suggests that the invisible structures refer to the interior of the body and the various diseases that are known to the gods but are not perceptible to humans.¹³ Sections of Hippocratic treatises provide parallels for the difficulties in understanding internal functions and non-manifest diseases (οἱ τὰ ἀφανέα νοσέοντες, *On the Art*, 11; cf. Herodotus, 2.84),¹⁴ and stress the importance of the doctor’s judgement, which is based on the proper evaluation of signs (*On the Art*, 11–12; *On Winds*, 1; *On Diseases*, 4.55).¹⁵ On this reading, Alcmaeon presents his treatise as the record of a speech of instruction offered to a group of students. After first underlining the difficulties in acquiring secure knowledge in medical issues, Alcmaeon seems to assert that these problems can be overcome with the appropriate teaching, which can be found in his discourse.

A problematic aspect of this interpretation is the construal of the asyndeton. It would be more natural to assume a dittography,¹⁶ thus reading “concerning non-manifest mortal things” (περὶ τῶν ἀφανέων {περὶ τῶν} θνητῶν), rather than a repetition of “concerning”, which is quite awkward in Greek (even if we accept the interpretation of Gemelli Marciano, such a construal is a *hapax*). Regardless of this textual point, there is no evidence that Alcmaeon had his own circle of disciples or that he acquired a reputation as a medical theorist or seer-doctor in Magna Graecia in contrast to Pythagoras, Parmenides, and Empedocles.¹⁷ Alcmaeon’s absence from the extant part of the doxography on the aetiology of disease preserved in the *Anonymus Londiniensis* and his exclusion from Galen’s list of doctors from Italy (Philistion, Empedocles, Pausanias, and their disciples who are contrasted with the medical groups of Cos and Cnidos) indicate that his reputation was not primarily that of a medical theorist.¹⁸ We cannot, of course, dismiss the various reports about his strong interest in life sciences and exclude the possibility that he trained some students in Croton, which gained a reputation for its excellent doctors (Herodotus, 3.131), but medical issues are not his sole concern. The extant sources show a wide range of interests that are not limited to the interior of the body, but are extended to animals, plants, celestial bodies, and even principles. For this very reason, Alcmaeon is often mentioned along with the protagonists of early Greek philosophy, and his doctrines are examined in the *Metaphysics* and *On the Soul* (DK 24 A3, A12), as well as in the Theophrastean doxography (DK 24 A4–10, A13–14, A17).

Alcmaeon versus the Pythagoreans?

Let us now turn to the scanty evidence concerning the identity of Alcmaeon’s addressees. All of them are among the numerous Pythagoreans listed by Iamblichus

at the end of *On the Pythagorean Life*, but two names are probably misspelled in the catalogue: a Brontinus and a Leon are included among the thirty-eight Pythagoreans from Metapontum, an important Pythagorean centre known for its cult of Apollo and its close links with Croton,¹⁹ and a Bathylaus is found among the seven Pythagoreans from Poseidonia, which is not far away from Croton (DK 58 A1). Indeed, the name Bathyllus is recorded in Magna Graecia, and the name Leon is quite widespread in the same region.²⁰ It is thus reasonable to assume that these figures were known in Alcmaeon's hometown. They probably shared a set of common beliefs and formed a Pythagorean group to which Alcmaeon had some personal or philosophical relationship.

We possess no further pieces of information concerning Leon and Bathyllus (perhaps because they merely adopted the Pythagorean lifestyle without contributing to some intellectual field), but Brotinus seems to have established a close connection with Pythagoras himself.²¹ Moreover, Clement of Alexandria reports that, according to Epigenes, a grammarian of Hellenistic era who appears as an expert in poems circulating under Orpheus' name, Brotinus composed two works at least:

It is said that the oracles attributed to Musaeus were composed by Onomatocritus, Orpheus' *Mixing-Bowl* by Zopyrus of Heraclea, and the *Descent into Hades* by Prodicus of Samos. Ion of Chios in the *Triads* reports that Pythagoras also attributed some works to Orpheus. But Epigenes in *On the Poetry Ascribed to Orpheus* says that the *Descent into Hades* and the *Sacred Account* are works of Cercops the Pythagorean, and the *Robe* and the *Physics* are works of Brontinus.²²

The authorship of the aforementioned writings was a controversial issue in antiquity, as the fullest known catalogue of Orphic poems in the *Suda* confirms: Brotinus is credited with the *Physics* (Φυσικά), but the *Robe* (Πέπλος) and the *Net* (Δίκτυον) are attributed either to the shadowy Zopyrus of Heraclea or to Brotinus (DK 17 A4). However, if the reports of Epigenes and the Byzantine encyclopaedia contain even a part of the truth, it can be concluded that Brotinus represented the religious and mystical facet of Pythagoreanism and was connected with the Orphic circles of Magna Graecia.²³ In his monograph *The Orphic Poems*, West suggests that the *Net* probably describes the gradual formation of living beings as the knitting of a net, an image which indicates that the soul is air filling the bodily parts (*Orphic Fragment*, 404, ed. Bernabé = Aristotle, *On the Generation of Animals*, B 1, 734a16–20).²⁴ West also believes that the *Robe* contains an early version of an Orphic rhapsody which describes a weaving process that produced Persephone's mantle as symbolising the seasonal decoration of the earth with flowers and crops (*Orphic Fragment*, 407, ed. Bernabé = Clement, *Stromata*, 5.8.49–50). In a more focused study, Gagné argues that the *Physics* can be reconstructed from two Orphic fragments that combine theogonic and anthropogonic material with a theory of the soul as wind which enters into the body when we breathe (*Orphic Fragment*, 421, 802, ed. Bernabé).²⁵

How, then, can these interests be related to what we know about Alcmaeon? The fact that Alcmaeon mentions some shadowy figures associated with Pythagoreanism in his incipit does not necessarily presuppose advocacy of their lifestyle or agreement with their ideas. We cannot, of course, exclude the possibility that Alcmaeon dedicated his treatise to them as a matter of admiration or gratitude, but other possibilities should be examined.²⁶ It has been suggested by Vlastos, for instance, that Alcmaeon was trying to persuade them to adopt his views, thus offering a sort of instruction, like Empedocles.²⁷ According to Diogenes Laertius, Empedocles addressed the whole of the *On Nature* to Pausanias, his alleged student and lover (“and you Pausanias, son of wise Anchites, hear me”, DK 31 B1). The extensive surviving extracts from Empedocles’ poem do indeed show a regular use of the second-person singular, as Pausanias is instructed in the complex workings of the cosmic cycle and the emergence of life forms. Hence Empedocles’ poem has a rhetorical goal, trying to persuade his addressee of a novel interpretation of reality through reasoning and direct appeal to observable evidence. What sort of instruction is preserved in Alcmaeon’s treatise is an issue worth exploring: it may include an exhortation, it may be structured as an exposition of a topic, or it may reflect a contest which first took place during a private or public debate and then was presented as Alcmaeon’s formal position concerning current ideas in a wider audience. The following points can be cited to support the third possibility.

First and foremost, the author’s self-identification as “Alcmaeon of Croton” suggests that he intends to establish contact with a public which is not limited to his hometown. The structure of his opening statement conforms to some extent to the conventional patterns of the incipits of early philosophical and scientific writings, although there was no uniformity as to how they commenced.²⁸ An early Greek prose author usually introduces himself by mentioning his name, place of origin, and/or father’s name (Ἀλκμαίων Κροτωνήτης . . . Πειρίθου υἱός; cf. Herodotus, 1.1; Thucydides, 1.1; *FGrH* 555, fr. 2; a comparison between incipits of contemporary prose authors, excluding medical writers, can be found in Table 1.2). He also formally states that his account begins by using the demonstrative pronoun and a verb of saying or writing (τάδε ἔλεξε; cf. Thucydides, 1.1; *FGrH* 1, fr. 1a; *FGrH* 555, fr. 2).²⁹ By using this formula, the so-called “seal” (σφραγίς), a prose author could assert his responsibility for and ownership of a specific work.³⁰ After declaring that his account begins, a prose author normally makes brief remarks concerning the scope and subject matter of his work, the validity and limitations of his account, and the method adopted, as can be seen in the incipits of Heraclitus (DK 22 B1), Ion of Chios (DK 36 B1), and Diogenes of Apollonia (DK 64 B1). What is not attested in the surviving prefaces is Alcmaeon’s combination of a verb of speaking with indirect object datives (τάδε ἔλεξε . . . Βροτίνῳ καὶ Λέοντι καὶ Βαθύλλῳ), since other prose authors who use a verb of saying or writing in their incipit do not specify addressees (Thucydides, 1.1; *FGrH* 1, fr. 1a; *FGrH* 555, fr. 2) and those opening sections of poems that do mention addressees introduce them in the vocative (Hesiod, *Works and Days*, 10; Theognis, 19; Pindar, *Pythian Ode*, 5.5). Does this unique formula imply that Alcmaeon wished to respond to Brotinus, Leon, and Bathyllus?