



UNIVERSITÀ
DEGLI STUDI
FIRENZE

FLORE

Repository istituzionale dell'Università degli Studi di Firenze

Orly Lewis, Praxagoras of Cos on Arteries, Pulse and Pneuma: Fragments and Interpretation (Leiden-Boston: Brill, 2017), pp. 375,

Questa è la Versione finale referata (Post print/Accepted manuscript) della seguente pubblicazione:

Original Citation:

Orly Lewis, Praxagoras of Cos on Arteries, Pulse and Pneuma: Fragments and Interpretation (Leiden-Boston: Brill, 2017), pp. 375, ('Studies in Ancient Medicine', 48), ISBN: 978-90-04-33742-8/978-90-04-33743-5 / Daniela Manetti. - In: MEDICAL HISTORY. - ISSN 0025-7273. - STAMPA. - 63:(2019), pp. 240-242. [10.1017/mdh.2019.20]

Availability:

This version is available at: 2158/1154027 since: 2019-04-26T10:39:27Z

Published version:

DOI: 10.1017/mdh.2019.20

Terms of use:

Open Access

La pubblicazione è resa disponibile sotto le norme e i termini della licenza di deposito, secondo quanto stabilito dalla Policy per l'accesso aperto dell'Università degli Studi di Firenze (<https://www.sba.unifi.it/upload/policy-oa-2016-1.pdf>)

Publisher copyright claim:

(Article begins on next page)

Medical History

Date of delivery: **January 23, 2019**Journal and vol/article ref: **mdh** **1900020**Number of pages (not including this page): **3**

page 1 of 2

This proof is sent to you on behalf of Cambridge University Press.

Authors are strongly advised to read these proofs thoroughly because any errors missed may appear in the final published paper. This will be your ONLY chance to correct your proof. Once published, either online or in print, no further changes can be made.

Please check the proofs carefully, answering concisely any author queries from the copy editor at the appropriate place in the main text and making any necessary corrections directly on the proofs. You can mark up and return the proofs in the following ways.

Electronic mark up (preferred). The pdf file has been enabled so that you can annotate it on screen (via Tools/Comment & Mark up, or using the Comment & Mark up toolbar). Using your cursor select the text for correction and use the most appropriate single tool (i.e. 'Replace', 'cross out', 'insert' or 'Add note to text'). *Please do not* use the 'Sticky note' function as its placement is not precise enough. 'Show comments' allows all marks to be clearly identified, please do not emphasise your marks in any way. Please email the corrected pdf file to the address given below.

Hardcopy mark up. Please write your corrections directly on the proofs using standard proofing marks (a list is provided). Please ensure that corrected proofs are scanned and returned as quickly as possible via email. Contact details are given below.

Please return the corrected proofs as soon as possible (**no later than 7 days after receipt**) to:

mdh@sunrise-setting.co.uk

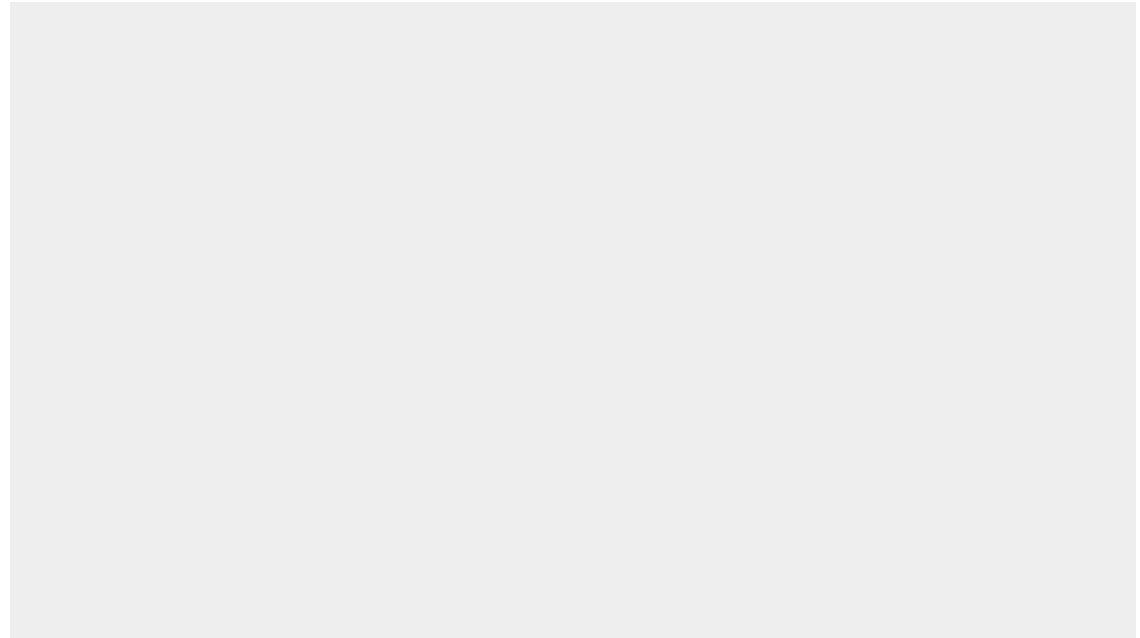
Postal address - **to be used only where other options are not possible**

Mrs A. R. James, Journals Department
Cambridge University Press
University Printing House
Shaftesbury Road
Cambridge
CB2 8RU
UK

Tel: +44 (0)01223 326061.

Upon publication the corresponding author will be sent an electronic file (pdf) of the published article. Hardcopy offprints are available for purchase, please order these using the attached form which must be returned with the corrected proofs.

Medical History



Please note:

- The proof is sent to you for correction of typographical errors only. Revision of the substance of the text is not permitted, unless discussed with the editor of the journal. Only **one** set of corrections are permitted.
- Please answer carefully any author queries.
- Corrections which do NOT follow journal style will not be accepted.
- A new copy of a figure must be provided if correction of anything other than a typographical error introduced by the typesetter is required.
- If you have problems with the file please contact

ajames@cambridge.org

Please note that this pdf is for proof checking purposes only. It should not be distributed to third parties and may not represent the final published version.

Important: you must return any forms included with your proof.

Please do not reply to this email

NOTE - for further information about **Journals Production** please consult our **FAQs** at http://journals.cambridge.org/production_faqs

Book Review

Orly Lewis, *Praxagoras of Cos on Arteries, Pulse and Pneuma: Fragments and Interpretation* (Leiden–Boston: Brill, 2017), pp. 375, ('Studies in Ancient Medicine', 48), ISBN: 978-90-04-33742-8/978-90-04-33743-5.

Here is a long needed and excellent work on Praxagoras of Cos, even if it is not a new 'complete' edition of his fragments. The book is the mature outcome of a doctoral fellowship in the Classics Department at Humboldt University in Berlin, as part of a research group funded by the Alexander von Humboldt-Stiftung, directed by Philip van der Eijk and entitled *Medicine of the Mind, Philosophy of the Body: Discourses of Health and Well-Being in the Ancient World*. The book focuses on a particular but fundamental part of Praxagoras' doctrines, i.e. his ideas on the arteries, the pulse and the pneuma.

After F. Steckerl's edition (*The Fragments of Praxagoras and his School*, Leiden, 1958), which offers no commentary on the context and significance of the fragments, no thorough study of Praxagoras' doctrines has been produced. This is in a way surprising, because Praxagoras has always been considered a turning point in the history of medical and philosophical thought of the fourth century BC.

The study is divided into two parts: in part 1, after a methodological introduction on collecting and editing fragments, the text and translation of the fragments are given, followed by a commentary on all the fragments and by a list of verbatim citations (pp. 1–212); part 2 is devoted to the interpretation and reconstruction of Praxagoras' anatomy and physiology of the arteries, which he identified as a distinct vascular system, together with Praxagoras' definition and physiology of the pulse and his doctrines on pneuma, its transmission and function in the body (pp. 215–309). The two parts are complementary: first the sources and a 'fragmented' analysis of their context, afterwards a broader interpretation of the fragments considered as a whole and intended to answer specific questions.

The fragments (text and English translation) are presented in a thematic order: anatomy of arteries, physiology of arteries, pneuma and soul, pathology of arteries and pneuma. This choice means that the editor has a pragmatic perspective and consequently no ambition to identify the original context in which Praxagoras' ideas were stated: in fact only in two fragments (2b, 21) is there an indication of the works in which they originally appeared.

Lewis also includes some 'hidden fragments' – i.e. passages where the name of Praxagoras is not cited – which were not in Steckerl's edition (frgs. 29–32). They all concern the pathology of arteries and pneuma and are taken from the Anonymous Parisinus, *On Acute and Chronic Diseases*, a text which lists the causes and symptoms of many diseases, starting with a doxographical section that is based exclusively on the four 'ancient' (as the author says) physicians Hippocrates, Diocles of Carystus, Praxagoras of Cos and Erasistratus. When the author believes that they had a common opinion, he refers to them by terms such as 'the ancients' or 'the four'. One can therefore infer that the described opinion was shared by Praxagoras.

The lemmatic commentary of the fragments is consistently preceded by two useful preliminary sections: the first, 'Contents', singles out the essence of the fragment, the

second, ‘Context’, is particularly important because it informs the reader about the source from which the fragment is taken and explains the whole discussion of the source-author, the possible manipulation or misinterpretation of Praxagoras’ thought and the role that the ‘fragment’ in question plays in it, thus making it easier for the reader to access the detailed commentary that follows. The inspiring model is Philip van der Eijk’s edition of Diocles of Carystus’ fragments (vol. 2, Brill, 2001).

The second part of the book consists of two chapters: 1) Praxagoras on arteries and pulse (pp. 215–251); 2) Praxagoras on pneuma (pp. 252–298). After a short introduction on the ancient debate about the vessels in the human body, the fundamental question is: ‘What are the arteries?’ Through a close analysis of the relevant sources, Lewis outlines the distinctive properties of arteries according to Praxagoras. He was the first to develop a clear conception of two distinct types of vessels – arteries and veins. The arteries stem from the left side of the heart through the ‘thick artery’ and have three distinctive properties: a sinew-like appearance (particularly in their extremities, where they are no longer hollow), a constant natural motion (pulsation) and naturally containing only pneuma. The last two properties prompted Praxagoras to make a physiological distinction by reference to function, because for him the arteries and their pulsation guarantee the supply of pneuma throughout the body. First, Lewis refutes the common opinion that Praxagoras held that arteries actually *become neura* (sinews) in their extremities, insisting that Praxagoras, like Aristotle, focuses on the arteries’ *appearance*.

But more interesting (and new) is Lewis’ attempt at explaining the possible origins of Praxagoras’ ideas. In the face of a critical common view according to which Praxagoras arrived at his doctrine purely on the basis of a ‘theoretical demand’ (i.e. to separate the streams of pneuma and blood), this chapter argues plausibly that observation of a different appearance and motion of the vessels led him to the conclusion that there are two types of vessel, and this in its turn led him to seek the reason for the difference he perceived. So, empirical evidence and a teleological frame of mind (and perhaps an analogy with the respiratory motion of lungs and heart) have contributed to the formation of Praxagoras’ solution. Lewis focuses very properly on the similarities with Aristotle’s description of the distinctive morphology of the aorta and its branches and of the pulse as a natural phenomenon, which may have been part of Praxagoras’ anatomical and physiological epistemology.

An extensive debate with Steckerl’s opinions (and those of other scholars, such as Solmsen) runs through the following chapter: Lewis refutes the idea that Praxagoras thought that the origin of arterial pneuma was not only the heart but also provided by the perspiration of the body, and she subsequently claims that for Praxagoras the only source of pneuma is air inhaled through respiration (possibly perspiration as a secondary source), rendered dense and moist by encountering the flesh of the body, *not* air as a byproduct of digestion.

In the last section (4) of the chapter, Lewis argues vigorously that Praxagoras considered the *neura*-like extremities of the arteries the final conductors of pneuma (even if they are not hollow) and transmitted the motor function to the different parts; she also argues that the pneuma is only the transmitter of sensory activities, which are directed by the heart. Finally, she refutes Steckerl’s opinion that for Praxagoras the soul is pneuma, through a strict interpretation of the rhetoric in Galen’s text of frg. 16 (*Usu resp.*), and she even casts doubt on whether Praxagoras actually asked himself questions such as ‘what is the soul?’.

Lewis’ method is always sound in offering a thorough and precise reinterpretation of all the ancient sources and in positioning Praxagoras’ arguments against the background of

the epistemological framework of his time: the very last pages of the book offer a precious synthesis just of the cultural context ('Praxagoras in Context: the Place of his Doctrines in the History of Greco-Roman Medicine and Philosophy', pp. 303–309). Lewis' will be the reference book on Praxagoras from now on.

93
94
95
96

Q1
Q2

Daniela Manetti
University of Florence, Italy

97
98

Please do not answer on this page but find the appropriate point in the text and make your annotation there.

Author Queries

Journal: MDH
Article id: 00020
Author: Book Review
Short title: Book Review

Q1 (Page 3)

Au: Please insert page numbers against all quotes taken from the text.

Q2 (Page 3)

Au: The distinction between surnames can be ambiguous, therefore to ensure accurate tagging for indexing purposes online (eg for PubMed entries), please check that the highlighted surnames have been correctly identified, that all names are in the correct order and spelt correctly.