

## TELEOLOGY IN THE ANCIENT WORLD

The ancient origins of teleological concepts are sometimes either conveniently forgotten or given a distorted appearance. On the one hand, ancient teleology has been obscured by the theological cloak of creationism. On the other, Darwinists have sometimes failed to give due consideration to the variety and subtlety of teleology's intellectual antecedents. The purpose of this book is to restore the balance by looking at the manifold ways in which teleology in antiquity was viewed. The volume, consisting of twelve essays by leading authorities in their fields, examines the ways in which teleological arguments were used in antiquity and how these discussions inform and influence current debates on evolution, creationism, and intelligent design. As well as examining philosophical contributions to the subject, a specific aim is to examine ancient medical thinking on this topic and its relationship to ancient philosophical ideas.

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TELEOLOGY IN THE ANCIENT  
WORLD

*Philosophical and Medical Approaches*

EDITED BY

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To the memory of Samuel Scolnicov and Robert Sharples

*Some thinkers hold that it is by nature that people become good, others that it is by habit, and others that it is by instruction. The bounty of nature is clearly beyond our control; it is bestowed by some divine dispensation upon those who are truly fortunate.*

*Nicomachean Ethics, X. 1179b20–23 (tr. Tredennick)*

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## *Preface*

This volume arose from an international conference held at the University of Exeter in July 2009, the purpose of which was to examine some of the ways teleological concepts were used in medicine and philosophy in antiquity, and to show how these arguments, albeit at times improperly interpreted and transmitted, nonetheless continue to inform and influence the often fractious debates concerning evolution, creationism, and its latter day offspring, intelligent design. All the chapters in this volume appear here, with one exception, for the first time. James G. Lennox, who was unable to attend the conference, generously contributed a chapter especially for inclusion in this collection.

The conference was made possible by the generous support of the Wellcome Trust, the British Academy, the Classical Association, the Hellenic Society, the Leverhulme Trust, and the University of Exeter. Gratitude is expressed to all the contributors and the participants of the conference, who together fostered an atmosphere of dynamic, fruitful inquiry. Christopher Gill was responsible for the administrative tasks of the conference, without which it would not have taken place. I am also grateful to Philip Van der Eijk, who through the offices of the Alexander von Humboldt Foundation provided funds which enabled this work to be completed. I am immensely indebted to Michael Sharp and Elizabeth Hanlon of Cambridge University Press for their courtesy, patience, and professionalism. The comments of the two anonymous readers were incisive and valuable.

This volume is dedicated to the memory and legacy of Samuel Scolnicov and Robert Sharples. The passing of two such exemplary scholars, humanists in the fullest and truest sense of the word, represents a personal and professional loss. That their work will live on is both a consolation and inspiration.



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## *Abbreviations and Conventions*

Abbreviations for Greek and Latin authors are those given in H.G. Liddell, R. Scott and H.S. Jones, 1940. *A Greek-English Lexicon*, 9th edition, Oxford, 1996, and P. Glare (ed.), 1982. *Oxford Latin Dictionary*, Oxford. Other abbreviations, not listed in either of these works, are as follows:

<i>ANRW</i>	H. Temporini, W. Haase (eds.), 1972–. <i>Aufstieg und Niedergang der römischen Welt</i> , Berlin.
<i>CMG</i>	Various eds. 1907–. <i>Corpus Medicorum Graecorum</i> , Leipzig and Berlin.
DK	H. Diels., W. Kranz (eds.), 1951–1952. <i>Die Fragmente der Vorsokratiker</i> , 6th Edition, Berlin.
Herophilus	H. von Staden. 1989. <i>Herophilus. The Art of Medicine in Early Alexandria</i> , Cambridge.
KRS	G.S. Kirk, J.E. Raven, M. Schofield. 1983. <i>The Presocratic Philosophers</i> , 2nd Edition. Cambridge.
LS	A.A. Long, D.N. Sedley. 1987. <i>The Hellenistic Philosophers</i> , Two volumes, Cambridge.
<i>RUSCH</i>	<i>Rutgers University Studies in Classical Humanities</i> , New Brunswick, NJ.
<i>SM</i>	I. Marquardt, I. Müller, G. Helmreich (eds.). 1884–1893. <i>Claudii Galeni Pergameni Scripta Minora</i> , Leipzig, reprinted Amsterdam, 1967.
<i>SVF</i>	H. von Arnim (ed.), 1903–1924. <i>Stoicorum Veterum Fragmenta</i> , Leipzig, reprinted Munich, 2004.
<i>TEGP</i>	D.W. Graham, 2010. <i>The Texts of Early Greek Philosophy</i> , Two volumes, Cambridge.

Galen is referenced according to the edition of C.G. Kühn, 1821–1833, *Claudii Galeni Opera omnia*, Leipzig, reprinted Hildesheim, 1964–1965; Oxford, 1976; Cambridge, 2011 (= K). Where a critical edition exists, it is given alongside the Kühn reference. Thus *De foetuum formatione* 66,19–24 Nickel; IV. 663 K, refers to the page and line numbers of the CMG edition (V 3,3) and to volume IV, page 663 of Kühn's edition. The titles of Galen's texts are abbreviated according to the conventions used by R.J. Hankinson (ed.), 2008, *The Cambridge Companion to Galen*, Appendix I. Those that appear in this volume are cited as follows (square brackets indicate a spurious work):

<i>AA.</i>	<i>De anatomicis administrationibus. Anatomical Procedures</i>
<i>At.Bil.</i>	<i>De atra bile. On Black Bile</i>
<i>Caus.Morb.</i>	<i>De causis morborum. On the Causes of Diseases</i>
<i>Caus.Puls.</i>	<i>De causis pulsuum. On the Causes of Pulses</i>
<i>Caus.Symp.</i>	<i>De symptomatum causis. On the Causes of Symptoms</i>
<i>[Def.Med.]</i>	<i>Definitiones medicae. Medical Definitions</i>
<i>Foet.Form.</i>	<i>De foetuum formatione. On the Formation of the Foetus</i>
<i>Hipp.Art.</i>	<i>In Hippocratis De articulis. On Hippocrates' 'On Joints'</i>
<i>Hipp.Elem.</i>	<i>De elementis ex Hippocrate. On the Elements according to Hippocrates</i>
<i>Hipp.Epid.</i>	<i>In Hippocratis Epidemiarum. On Hippocrates' 'Epidemics'</i>
<i>Hipp.Prorrh.</i>	<i>In Hippocratis De praedictionibus. On Hippocrates' 'Prorrhetics'</i>
<i>HNH.</i>	<i>In Hippocratis De natura hominis. On Hippocrates' 'Nature of Man'</i>
<i>Loc.Aff.</i>	<i>De locis affectis. On the Affected Parts</i>
<i>MM.</i>	<i>De methodo medendi. On the Therapeutic Method</i>
<i>Nat.Fac.</i>	<i>De naturalibus facultatibus. On the Natural Faculties</i>
<i>PHP.</i>	<i>De placitis Hippocratis et Platonis. On the Doctrines of Hippocrates and Plato</i>
<i>Prop.Plac.</i>	<i>De propriis placitis. On My Own Opinions</i>
<i>Symp.Diff.</i>	<i>De symptomatum differentiis. On Different Kinds of Symptoms</i>
<i>Sem.</i>	<i>De semine. On Semen</i>
<i>Temp.</i>	<i>De temperamentis. On Mixtures</i>
<i>UP</i>	<i>De usu partium. On the Function of the Parts</i>
<i>Ut.Resp.</i>	<i>De utilitate respirationis. On the Use of Breathing</i>

*List of Abbreviations and Conventions*

xv

There is no standard abbreviation of the works of William Harvey.  
The following are used here:

- CS.        *De circulatione sanguinis.*  
DC.        *De conception.*  
DMC.     *Exercitatio de motu cordis et sanguinis in animalibus.*  
EGA.      *Exercitationes degeneratione animalium.*