

Cosmic Order and Divine Power

Pseudo-Aristotle, *On the Cosmos*

Scripta Antiquitatis Posterioris
ad Ethicam REligionemque pertinentia
XXIII

Mohr Siebeck

SAPERE

Scripta Antiquitatis Posterioris
ad Ethicam RELigionemque pertinentia

Schriften der späteren Antike
zu ethischen und religiösen Fragen

Herausgegeben von

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unter der Mitarbeit von

Natalia Pedrique, Andrea Villani
und Christian Zgoll

Band XXIII



Cosmic Order and Divine Power

Pseudo-Aristotle, *On the Cosmos*

Introduction, Text, Translation and
Interpretative Essays by

Johan C. Thom, Renate Burri, Clive Chandler,
Hans Daiber, Jill Kraye, Andrew Smith,
Hidemi Takahashi, and Anna Tzvetkova-Glaser

edited by

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SAPERE

Greek and Latin texts of Later Antiquity (1st–4th centuries AD) have for a long time been overshadowed by those dating back to so-called ‘classical’ times. The first four centuries of our era have, however, produced a cornucopia of works in Greek and Latin dealing with questions of philosophy, ethics, and religion that continue to be relevant even today. The series SAPERE (*Scripta Antiquitatis Posterioris ad Ethicam Religionemque pertinentia*, ‘Writings of Later Antiquity with Ethical and Religious Themes’), now funded by the German Union of Academies, undertakes the task of making these texts accessible through an innovative combination of edition, translation, and commentary in the form of interpretative essays.

The acronym ‘SAPERE’ deliberately evokes the various connotations of *sapere*, the Latin verb. In addition to the intellectual dimension – which Kant made the motto of the Enlightenment by translating ‘*sapere aude*’ with ‘dare to use thy reason’ – the notion of ‘tasting’ should come into play as well. On the one hand, SAPERE makes important source texts available for discussion within various disciplines such as theology and religious studies, philology, philosophy, history, archaeology, and so on; on the other, it also seeks to whet the readers’ appetite to ‘taste’ these texts. Consequently, a thorough scholarly analysis of the texts, which are investigated from the vantage points of different disciplines, complements the presentation of the sources both in the original and in translation. In this way, the importance of these ancient authors for the history of ideas and their relevance to modern debates come clearly into focus, thereby fostering an active engagement with the classical past.

Preface to this Volume

The treatise *De mundo* (dated around the 1st cent. BCE) offers a cosmology in the Peripatetic tradition which draws also on Platonic and Stoic thought and subordinates what happens in the cosmos to the might of an omnipotent god. Thus the work is paradigmatic for the philosophical and religious concepts of the early imperial age, which offer points of contact with nascent Christianity.

In line with the mission and aims of the SAPERE series, this volume on *De mundo* is explicitly interdisciplinary by nature, bringing together contributions from scholars from a broad spectrum of disciplines and specialisations which focus on specific topics, each from its own disciplinary perspective.¹

The volume opens with the Greek text and a new English translation by Johan Thom, a classicist and ancient philosopher. The translation is accompanied by brief notes intended to help the reader understand difficult terms and concepts in the text itself. Thom is also responsible for the general introduction to the treatise.

The first interpretive essay is by Clive Chandler, a classicist specialising in literature and ancient philosophy. He discusses the language and style of *De mundo*, a crucial aspect of the text, not only because of the richness and diversity of its language, but also because language and style feature prominently in discussions of the text's authorship, dating, genre, and function.

In her essay Renate Burri, a classicist focussing on ancient geography, treats a section of the first, descriptive part of *De mundo*, namely the overview of the geography of the cosmos (ch. 3). She demonstrates how the author succeeds in presenting the inhabited world as a connected and integrated whole, which in turn provides the background for the theological discussion of the cosmos in the second part of *De mundo*, in which god's role in the orderly arrangement and maintenance of this whole is explained.

The next essay, by Johan Thom, focuses on the cosmotheology of *De mundo*, especially as it comes to the fore in the second part of *De mundo* (chs. 5–7). The main rationale of the treatise is indeed to provide an explanation of the way god interacts with the cosmos, despite the fact that he is independent and separate from the cosmos ('transcendent') according to Peripatetic doctrine.

¹ For more specialised treatment of details see e.g. STROHM 1970; REALE / BOS 1995.

The following four essays all discuss the reception or possible influence of *De mundo* in various intellectual traditions.

Andrew Smith, an ancient philosopher, considers common themes found in *De mundo* and in other pagan philosophical texts, as well as evidence for direct reception by pagan philosophers.

Anna Tzetkova-Glaser, who specialises in Hellenistic Judaism and early Christian literature, discusses how the crucial distinction between god's essence or substance (οὐσία) and his power (δύναμις) – one of the basic tenets of *De mundo* – is treated by Hellenistic-Jewish and Christian authors from the 2nd century BCE to the 5th century CE.

Hidemi Takahashi, a Syriac specialist, provides an overview of the various Syriac and Arabic versions of *De mundo* and their relationships.

The essay by Hans Daiber, an Orientalist, considers possible 'echoes' of *De mundo* in the broader Arabic-Islamic world, including Islamic, Christian, and Jewish intellectuals.

The final essay is by Jill Kraye, an intellectual historian and former librarian. She demonstrates that the current debate regarding the authorship of *De mundo* is by no means a recent phenomenon: the same arguments underlying the current discussion, that is, arguments based on the language, style, and doctrines of *De mundo*, have already been used for or against Aristotelian authorship from the early modern period to the 19th century.

We would like to express our sincere thanks to the editors of the SAPERE series, Reinhard Feldmeier, Heinz-Günther Nesselrath and Rainer Hirsch-Luipold, who initiated the project and without whose invaluable comments and support it would not have been completed. We are also very grateful for the friendly and efficient administrative and editorial assistance provided by Christian Zgoll, Natalia Pedrique, Barbara Hirsch and Andrea Villani.

Stellenbosch, February 2014

Johan Thom

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A. Introduction

Introduction

Johan C. Thom

The short treatise *On the Cosmos* (Περὶ κόσμου = *De mundo*) ascribed to Aristotle¹ attempts to provide an explanation of the role of god in preserving and maintaining the cosmos while at the same time upholding the notion of his transcendence and independence. In doing so it draws on and interacts with various philosophical traditions, although it retains a Peripatetic foundation. Intended for a general audience, this treatise is an important example of the kind of eclectic popular philosophy found in the Hellenistic-Roman period.²

1. Author and Date

Although *De mundo* is attributed to Aristotle, its authenticity remains a contentious issue. The text did not form part of Andronicus of Rhodes's edition of Aristotelian texts that was published around the middle of the 1st century BCE.³ The first definite testimony providing a plausible *terminus ante quem* is a reworked translation or adaptation of *De mundo* ascribed to Apuleius of Madaura (b. c. 125 CE). The authenticity of this work has been debated since the middle of the 19th century, but recent scholarship again tends to come out in support of Apuleian authorship.⁴ The evidence of this testimony is, however, somewhat ambiguous. From the closing sen-

¹ It occupies only 11 pages in the Berlin edition (BEKKER 1831, 391a–401b).

² A very valuable overview of research on *De mundo* up to 1995 may be found in REALE / BOS 1995, 357–411. For the notion popular philosophy, see K. ZIEGLER, "Plutarchos von Chaironeia", *RE* 21.1 (1951) 636–962; M.-O. GOULET-CAZÉ, "Popular Philosophy", *Brill's New Pauly* 11 (2007) 617–8; L. VAN DER STOCKT, "Semper Duo, Numquam Tres? Plutarch's Popularphilosophie on Friendship and Virtue in On Having Many Friends", in: G. ROSKAM / L. VAN DER STOCKT (eds.), *Virtues for the People. Aspects of Plutarchan Ethics. Plutarchea Hypomnemata* 4 (Leuven 2011) 19–39; PELLING 2011; J. C. THOM, "Popular Philosophy in the Hellenistic-Roman World", *Early Christianity* 3 (2012) 279–95. For *De mundo* as popular philosophical text, see also FESTUGIÈRE 1949, 478.

³ See BESNIER 2003, 475; FLASHAR 2004, 271. For the text tradition of *De mundo* see LORIMER 1924. For the date of Andronicus's edition of Aristotle's school treatises, see GOTTSCHALK 1987, 1095–6.

⁴ See the discussion by BEAUJEU 1973, IX–XXIX; also REGEN 1971; HIJMANS 1987, 408; A. MARCHETTA, *L'autenticità apuleiana del De mundo*. *Collana di filologia classica* 6 (L'Aquila 1991); M. ZIMMERMAN, "Ap(p)uleius III. Apuleius of Madaura", *Brill's New Pauly* 1 (2002) [905–9] 907.

tence of the Preface, it appears that Apuleius presents this adaptation as his own work in which he will discuss the heavenly system “following Aristotle, the wisest and most learned of philosophers, and the authority of Theophrastus.”⁵ This may suggest that Apuleius considers the material of his source to be Aristotelian, but the expression Theophrastean.⁶ It therefore appears unlikely that Apuleius thought the original Greek text was written by Aristotle.⁷ If Apuleius is indeed the author of this translation, we have a *terminus ante quem* of c. 150 CE. It has been argued that Maximus of Tyre (2nd cent. CE) was influenced by *De mundo*, which would support such a terminus,⁸ but the evidence is suggestive rather than certain.⁹

Other explicit *testimonia* are much later.¹⁰ Proclus (410/12–485 CE) is dubious about the authenticity of *De mundo*.¹¹ Stobaeus (5th cent. CE), on the other hand, includes extensive excerpts from *De mundo* (altogether about two-thirds of the text) in his *Anthology*, all of which he attributes to Aristotle’s *Letter to Alexander*.¹² Philoponus (c. 490–575 CE) likewise accepts that the work (which he refers to as a ‘book’ [βιβλίον] or a ‘treatise’ [λόγος]) was written by Aristotle.¹³ David (6th cent. CE) calls *De mundo* a ‘treatise’ (πραγματεία) addressed to “king Alexander”, but he makes no mention of the author.¹⁴

⁵ Apul. *Mund.* pifat. *fine*, § 289 Beaujeu: *nos Aristotelen prudentissimum et doctissimum philosophorum et Theophrastum auctorem secuti ... dicemus de omni hac caelesti ratione.*

⁶ Thus HIJMANS 1987, 429.

⁷ See DIHLE 1997, 12.

⁸ See e.g. ZELLER 1885, 400–2; LORIMER 1925, 141–2; POHLENZ 1965, 376 n. 1; MORAUX 1984, 67–8. See on Maximus also Smith’s essay, below pp. 122–123.

⁹ There may be a reference to *De mundo* in [Justin] *Cohortatio ad Graecos* (see Krayer’s essay, below pp. 181, 188), but the identification is not certain.

¹⁰ See also Smith’s essay, § 2 (Named References to *On the Cosmos*). For possible echoes of *De mundo* in the Arabic-Islamic world, see Daiber’s essay.

¹¹ οὐτε [εἰμαρμένη] ὁ νοῦς τοῦ παντός, ὡς πού φησι πάλιν Ἀριστοτέλης, εἶπερ ἐκεῖνον τὸ Περὶ κόσμου βιβλίον, “The mind of the universe is also not destiny, as Aristotle somewhere claims, if the book *On the Cosmos* is indeed his” (in *Ti.* 3, p. 272.20–1 Diehl). Proclus’s reference to the *nous* as destiny is not found anywhere in *De mundo*, however; see MANSFELD 1992, 403 n. 4. Smith, in his essay (below, pp. 127–129) suggests Proclus is thinking of *De mundo*’s identification of god with fate in ch. 7.

¹² Stob. *Ecl.* 1.40 (vol. 1, pp. 255–72 Wachsmuth) = *Mund.* 391b9–397b8; 1.1.36. (vol. 1, pp. 43–6) = *Mund.* 400b6–401a27; 1.5.22 (vol. 1, pp. 82–3) = *Mund.* 401b8–27.

¹³ Philoponus *Aet. mund.* pp. 174.25–175.2 and 179.11–17 Rabe, quoting *Mund.* 397b13–6.

¹⁴ *In cat.* p. 113.22–3 Busse; see MANSFELD 1992, 397. See in general also the essay by Smith, below.

Most modern scholars, however, agree that the treatise was not written by the Stagirite.¹⁵ Factors relevant to the debate about authorship and date include the following:¹⁶

1.1. Doctrinal position and philosophical locus

The philosophical position in *De mundo* differs in some significant respects from that found in other authentic Aristotelian writings. One of the most important of these is the doctrine about god's involvement in the cosmos which conflicts with Aristotle's view elsewhere of god as the Unmoved Mover.¹⁷ Other differences include the statement in *De mundo* that the air is by nature cold and dark (a Stoic doctrine), while according to Aristotle it is warm and humid,¹⁸ and the fact that the Caspian Sea in *De mundo* is open to Oceanus, while in Aristotle it is landlocked (see below).

Scholars have furthermore identified similarities to Platonic, Stoic and Neopythagorean doctrines which may point to post-Aristotelian influences. Parts of *De mundo* indeed appear to have been influenced by, or to react against Stoic positions.¹⁹ The title Περί κόσμου already suggests that the author composed his work as an Aristotelian alternative to Stoic discussions of the world, since this form of the title is elsewhere only used for Stoic works.²⁰ It is clear, however, that *De mundo* is based on Aristotle and his school in many of its main doctrines. This includes, *inter alia*, the doctrines about the fifth element,²¹ the two exhalations, the eternity of the world, the geocentric world with concentric spheres, the division

¹⁵ The most notable exceptions are Paul Gohlke, Giovanni Reale, and Abraham Bos; see e.g. GOHLKE 1936; id. 1968; REALE 1974; BOS 1989; id. 1990; REALE / BOS 1995. An early dating near the time of Aristotle is also supported by SARRI 1979; RADICE 1994; M. ANDOLFO, "La storia degli influssi del De mundo sino al terzo secolo dell'era cristiana, alla luce delle recenti acquisizioni sulla sua paternità e datazione", *Rivista di filosofia neoscolastica* 89 (1997) 82–125. For the extensive debate on authorship in the early modern period see Krayer's essay.

¹⁶ See also the arguments used in the early modern debate as discussed in Krayer's essay, § 2.

¹⁷ The author of *De mundo* in fact tries to reconcile Aristotle's position with the notion of god's involvement in the world, but this will be discussed in more detail below in my essay on Cosmotheology.

¹⁸ See MAGUIRE 1939, 124; MORAUX 1984, 14–5.

¹⁹ Cf. e.g. the definition of κόσμος in *Mund.* 2, 391b9–12 and the phrase συνεκτική αἰτία in *Mund.* 6, 397b9; see DUHOT 1990; MANSFELD 1992, 401, 405 n. 24. For the anti-Stoic tendency of *De mundo*'s theology see GOTTSCHALK 1987, 1137. The view of earlier scholars that *De mundo* was extensively influenced by the Stoic philosopher Posidonius (e.g. ZELLER 1919–23, 3.1:664–70; VON WILAMOWITZ-MOELLENDORF 1902, 1:186; CAPELLE 1905) is however no longer tenable; see MAGUIRE 1939; STROHM 1987.

²⁰ See MANSFELD 1992.

²¹ Although there are differences between Aristotle and *De mundo* concerning the ether; see E.-O. ONNASCH, "Die Aitherlehre in de Mundo und ihre Aristotelizität", *Hermes* 124 (1996) 170–91.

into a supralunary region and the sublunary world, and the transcendent god. There are also many similarities between chapter 4 and the first three books of Aristotle's *Meteorology*, although *De mundo* is probably dependent on Theophrastus rather than Aristotle.²² The attribution of the text to Aristotle further confirms the author's primary philosophical allegiance.

1.2. Language and style

Some of the words and linguistic expressions used in *De mundo* point to a date after the time of Aristotle. These include hapax legomena or words not found elsewhere before the 3rd century,²³ or the use of conjunctions such as *καίτοι* and *τε καί*.²⁴ Instead of the type of argumentation found in other writings by Aristotle, we find in *De mundo* an exposition without substantiation. *De mundo* has (in parts) a more elevated 'literary' style than the normal technical style we find in Aristotle's other treatises;²⁵ it simply states instead of providing proofs, using images and comparisons instead of syllogistic arguments.²⁶ Its citation of Homer furthermore differs from the usage typical of Aristotle.²⁷

1.3. Geographical knowledge

There are several geographical details that appear to be based on post-Aristotelian developments.²⁸ A few examples will have to suffice: the existence of Taprobane (present-day Sri Lanka) was unknown to the Greeks before a naval expedition to the southern coast of Asia launched by Alexander. According to Aristotle, the Caspian Sea was completely enclosed by land mass, while *De mundo* considers it to an embayment of Oceanus.²⁹ Aristotle nowhere discusses the divisions between the three 'continents' Europe, Asia, and Libya, but the author of *De mundo* refers to two different theories, namely, that they were divided either by isthmuses or by rivers.

²² See STROHM 1953; id. 1987; MORAUX 1984, 20–3.

²³ BARNES 1977; SCHENKEVELD 1991; MARTÍN 1998 (lexical evidence points to the early Imperial period).

²⁴ P. BOOT, "An Indication for the Date of the Pseudo-Aristotelian Treatise *De Mundo*", *Mnemosyne* 34 (1981) 139–40 (on the use of *καίτοι*; but see the criticism of MORAUX 1984, 82 n. 266); DIHLE 1997, 8 (on the use of *τε καί*).

²⁵ A brief discussion is found in RUDBERG 1953, 10–2, 36 who suggests Posidonius may have been a decisive influence for this kind of style. See on *De mundo*'s style also STROHM 1970, 269; MORAUX 1984, 57–75; SCHENKEVELD 1991, 226–7; Chandler's essay below.

²⁶ MORAUX 1984, 57.

²⁷ M. SANZ MORALES, "Las citas homéricas contenidas en el tratado 'De mundo', atribuido a Aristóteles, prueba de su inautenticidad", *Vichiana* 4 (1993) 38–47. On the style of *De mundo* see further Chandler's essay, and for early modern debates regarding the style of *De mundo* see Krayer's essay.

²⁸ For more detail, see Burri's essay, below pp. 89–94.

²⁹ See CATAUDELLA 2003.

In all these cases *De mundo* probably depends on Eratosthenes (c. 285–194 BCE), even if through an intermediary source.³⁰

1.4. Cultural-historical background

Some of the images and comparisons would not have been used by someone in Aristotle's time. The description of the palace and reign of the King of Persia is not based on knowledge by a contemporary, but rather on literary allusions.³¹ In the same way the description of Phidias's statue of Athena, which will fall apart if the self-portrait of the artist placed in the centre of the shield is removed, is also a literary topos; Aristotle himself, having seen the statue, would have known that this portrait was not located at the centre of the shield.³²

Such arguments are not all equally cogent, but taken together they have lead most scholars to the conclusion that *De mundo* cannot be dated in the time of Aristotle (384–322 BCE). Even among scholars who do not accept the authenticity of the treatise there is, however, a broad range of suggested dates, which varies from just after the time of Aristotle up to the mid-second century CE.³³ In view of the fact that the treatise displays tendencies similar to Middle Platonism (i.e. the combination of Platonic, Aristotelian, and Stoic ideas), and that neither Cicero nor Philodemus seems to have known *De mundo*,³⁴ a date around the turn of the era seems reasonable,³⁵ although an earlier date cannot be ruled out.

³⁰ Cf. MORAUX 1984, 16–20; DIHLE 1997. See further Burri's essay, below pp. 105–106.

³¹ REGEN 1972; MORAUX 1984, 66.

³² MANSFELD 1991, 541–3.

³³ Cf. e.g. BARNES 1977 (3rd cent. BCE); SCHENKEVELD 1991 (350–200 BCE); RUNIA 2002, 305 (200 BCE); RIEDWEG 1993, 94 (first half of 2nd cent. BCE); ZELLER 1919–23, 3.1:653, 664–70 (not before the 1st cent. BCE); FURLEY 1955, 339–41 (around the time of Andronicus's edition, i.e. second half of 1st cent. BCE); FESTUGIÈRE 1949, 477 and GOTTSCHALK 1987, 1138 (after Andronicus's edition); MANSFELD 1992, esp. 391 (not before the end of the 1st cent. BCE); MAGUIRE 1939, 113 (around turn of the century); VON WILAMOWITZ-MOELLENDORF 1902, 1:186 (first half of the 1st cent. CE); POHLENZ 1965, 382–3 and MORAUX 1984, 6–7, 77, 81–2 (near the time of Philo of Alexandria [c. 15 BCE–c. 50 CE]); LORIMER 1924, 1 n. 2 (c. 40 CE); MARTÍN 1998 (1st cent. BCE or CE); FLASHAR 2004, 272 (1st cent. CE); STROHM 1970, 268 (between the time of Plutarch [c. 45 CE–before 125 CE] and that of Apuleius [middle 2nd cent. CE]).

³⁴ Philodemus *Rhet. PHerc.* 1015/832 col. LVI 15–20 explicitly states that Aristotle did not try to persuade Alexander to study philosophy (καὶ διότι σχεδὸν ἐκ βασιλείας παρεκάλει [Φ]ίλιππον τότε, καὶ τῆς Περσικῆς διαδοχῆς ἐπικρατοῦντ' ὤφ[ε]λε, "Und weil er beinahe von der Königsherrschaft hinweg Philippos damals (zum Philosophieren) zu überreden suchte, hätte er es auch bei einem sich der persischen Thronfolge Bemächtigenden (= Alexander) tun sollen"; ed. and trans. GAISER 1985, 465–7), which means that he either was unaware of *De mundo* or did not consider it to be written by Aristotle; see MANSFELD 1992, 391.

³⁵ Cf. MANSFELD 1992, 400: "In my view, a Peripatetic philosopher of Platonic leanings using a Stoic book-title can hardly be dated earlier than the late first cent. BCE."

Earlier attempts by scholars to identify either the author or the addressee of *De mundo* have since been rejected. Bergk, for example, suggested that the author was Nicolaus of Damascus and the addressee the son of Herod the Great, while Bernays proposed Tiberius Alexander, the nephew of Philo of Alexandria, as addressee.³⁶ The most plausible explanation, however, is that someone from the Peripatetic tradition wrote the treatise and addressed it to Alexander the Great to lend it more credibility.³⁷

2. Sources and Other Texts

One of the vexed issues in the debate about the dating of *De mundo* is its relationship to other authors and texts. Several authors and texts have been adduced, either as sources used by *De mundo*, or as texts influenced by *De mundo*, in an attempt to establish *termini a quo* or *ad quem*, respectively. In many cases the chronological relationship cannot, however, be established with certainty.

De mundo contains several quotations, all of which are from authors and texts prior to Aristotle: Homer, *Iliad* 1.499 = 5.754 = 8.3 (*Mund.* 397b26); 15.192 (*Mund.* 400a19); *Odyssey* 5.64 (*Mund.* 401a4); 6.42–5 (*Mund.* 400a10–14); 7.115 = 11.589 (*Mund.* 401a7); 7.116 = 11.590 (*Mund.* 401a1–2); Heraclitus (fl. c. 500 BCE) *DK* 22 B 10 (*Mund.* 396b20–2); *DK* 22 B 11 (*Mund.* 401a10–11); Empedocles (c. 492–432 BCE) *DK* 31 B 21.9–11 (*Mund.* 399b25–8); Sophocles (c. 495–406 BCE), *Oedipus Tyrannus* 4–5 (*Mund.* 400b5–6); Plato (c. 429–347 BCE), *Laws* 715e–716a, 730c (*Mund.* 401b24–9); Orphic fr. 31 Bernabé = 21 Kern (*Mund.* 401a27–b7).³⁸ The fact that no quotation is from a text later than Aristotle could be an argument for the authenticity of *De mundo*, but it can equally be explained as the author's attempt to maintain the fiction of Aristotelian authorship.

More contentious are other, less obvious, potential sources. Posidonius (c. 135–c. 51 BCE) has long been proposed as a significant source for the meteorological section (ch. 4), but his influence has indeed been seen in

³⁶ BERGK 1882; BERNAYS 1885, 278–82 (cf. POHLENZ 1965, 376, 382–3.). For criticism of these proposals see ZELLER 1885. For an extensive overview of the debate during the early modern period see Krayer's essay.

³⁷ ZELLER 1885.

³⁸ The dating of the Orphic fragment is uncertain, but it could be a version of the Orphic hymn underlying the Derveni Papyrus, in which case it may pre-date Plato and Aristotle; see MORAUX 1984, 5–6; W. BURKERT, "Die neuen orphischen Texte: Fragmente, Varianten, 'Sitz im Leben'", in: W. BURKERT / L. GEMELLI MARCIANO / E. MATELLI / L. ORELLI (eds.), *Fragmentsammlungen philosophischer Texte der Antike - Le raccolte dei frammenti di filosofi antichi* (Göttingen 1998) [387–400] 398; BERNABÉ 2004, 44.

other parts of *De mundo* as well.³⁹ Extensive Posidonian influence in our text has, however, now been called into question. According to Joseph Maguire, many of the perceived parallels may be explained as either commonplaces or by the use of common sources. He contends that there are clear indications that Pseudo-Aristotle depends on 'neo-Pythagorean' (= Hellenistic Pythagorean) sources, most of them with a Peripatetic character, rather than on Posidonius.⁴⁰ Although he allows for Stoic influence in, for example, *De mundo* chs. 2–3 and 7, this ultimately goes back to Chrysippus. Pseudo-Aristotle did not, however, use Chrysippus directly, but depends on Stoic material reworked by other intermediaries such as Antiochus of Ascalon (b. c. 130 BCE) or Arius Didymus (court philosopher of Augustus).⁴¹ Maguire's view has in turn been attacked by Francesco Sarri, who tries to show on the basis of linguistic and doctrinal evidence that *De mundo* must have served as a source for the Hellenistic Pythagorean authors, rather than vice versa. According to him, the Pythagoreans modernised the language of *De mundo*; they also combined an Academic-Peripatetic transcendentalism with a Stoic immanentism, while the latter is absent in *De mundo*.⁴² Hans Strohm also takes a strong position against Posidonius as source of the meteorological section, arguing that Theophrastus was used (directly or indirectly) as source, instead.⁴³ *De mundo* as a whole is not based on Stoic sources, but represents the kind of rapprochement between Aristotelian and Platonic thought also found in a Middle Platonist like Plutarch.⁴⁴

Another textual relationship worthy of mention is that between *De mundo* and Hellenistic-Jewish authors, namely Aristeas (2nd or 1st cent. BCE?), Aristobulus (2nd cent. BCE) and Philo of Alexandria. *Letter of Aristeas* 132 and Aristobulus frs. 2 and 4 refer to the power of god in a manner reminiscent of *De mundo*, while Philo also uses the notion of 'powers'

³⁹ See e.g. ZELLER 1919–23, 3.1:667 n. 1, but esp. CAPELLE 1905. For incisive criticism of Capelle's procedure see MAGUIRE 1939; STROHM 1970, 264 n. 3.

⁴⁰ MAGUIRE 1939, citing *inter alia* Ps.-Archytas, Ps.-Philolaus, Ps.-Ocellus, Timaeus Locrus, Ps.-Onatas, and Ps.-Ephantus. Cf. also ZELLER 1885, 401 for Ps.-Onatas using *De mundo*. A more circumspect position on the relationship between *De mundo* and the Pythagorean texts is taken by LORIMER 1925, 137–40. See on Onatas, Ephantus, and Ocellus also Smith's essay, below pp. 123–124, 126.

⁴¹ MAGUIRE 1939, 119–26, 162–4. For the similarities and differences between Arius Didymus fr. 31 Diehl = Chrysippus SVF 2.527 and *De mundo* chs. 2–3 see also FESTUGIÈRE 1949, 492–500; STROHM 1970, 288–90. BARNES 1977, 40–3 accepts Reale's contention that Chrysippus used the *De mundo* rather than vice-versa, but this is unlikely; see MORAUX 1984, 78 n. 263.

⁴² SARRI 1979.

⁴³ STROHM 1953; id. 1970, 295–323; id. 1987, 69–84, esp. 80.

⁴⁴ STROHM 1952; id. 1970, 265 n. 4, 267–8. Cf. also MANSFELD 1992, 410 n. 61; FLASHAR 2004, 272.

(δυνάμεις) as mediating forces functioning between god and the world.⁴⁵ This has led some scholars to suggest that *De mundo* originated within the context of Hellenistic Judaism,⁴⁶ while others maintain that the Hellenistic Jewish authors were probably influenced by *De mundo*.⁴⁷

As is clear, the precise direction of dependency (if any) between *De mundo* and the texts mentioned above is disputed in most cases. At the most, these similarities provide an indication of the philosophical milieu in which *De mundo* had its origin.

3. Composition and Contents

De mundo displays a relatively well-structured unity of composition. It consists of two main parts: a description of the cosmos; and an explanation of cosmic harmony and of god's role in the cosmos. There is a clear movement from the first half to the second; that is, the description of the cosmos is not given for its own sake, but serves as background for the discussion of god's involvement in the world in the latter half. The composition may be schematized as follows:

- I. *Introduction: Praise of philosophy (ch. 1, 391a1–b8)*
 - A. Philosophy as contemplation of what exists
 - B. Philosophy versus detailed studies
 - C. Appeal to Alexander to study philosophy
- II. *Description of the cosmos (chs. 2–4, 391b9–396a32)*
 - A. Cosmology in general (chs. 2, 391b9–3, 393a8)
 1. Definition of the cosmos
 2. The upper, unchangeable part
 - a. Ether and heaven
 - (1) Heaven
 - (2) Ether
 - (3) Stars
 - (4) Planets
 3. The lower, changeable part

⁴⁵ See MORAUX 1984, 41–4 (with extensive references); STERLING 2009 (on Aristobulus); DILLON 1977, 161–3 and RUNIA 2002, 296–9 (on Philo).

⁴⁶ Notably LAGRANGE 1927. POHLENZ 1965, 380–3 contends that *De mundo* took over 'Oriental-Jewish' ideas and that it had its origin in the same spiritual environment as Philo.

⁴⁷ RADICE 1994; RIEDWEG 1993, 88–95; RUNIA 2002, 305. For further discussion see the essay by Tzvetkova-Glaser.

- a. Fire
- b. Air
- c. Earth and water
- 4. The five elements
- B. Geography (ch. 3, 393a9–394a6)
 - 1. Sea and islands
 - a. Islands in the Mediterranean
 - b. Ocean and seas
 - c. Islands outside the Mediterranean
 - d. Continents
- C. Meteorology (ch. 4)
 - 1. Two exhalations
 - 2. Phenomena of the wet exhalation
 - a. Mist, dew, ice, frost
 - b. Cloud, rain, snow, hail
 - 3. Phenomena of the dry exhalation
 - a. Winds
 - b. Thunder and lightning
 - 4. Phenomena in the air
 - a. Apparent (optical) phenomena
 - (1) Rainbows and streaks
 - (2) Halos
 - b. Real phenomena
 - (1) Meteors
 - (2) Comets
 - 5. Phenomena in the earth
 - a. Volcanoes
 - b. Vapours emitted from chasms
 - c. Earthquakes
 - 6. Phenomena in the sea
 - a. Chasms
 - b. Tidal waves
 - c. Volcanoes

7. The mixture of elements responsible for the preservation of the whole

III. *Explanation of cosmic harmony and of god's role (chs. 5–7, 396a32–401b29)*

- A. Cosmic harmony from opposites (ch. 5)
 1. Examples: male, female; art
 2. Preservation through mixture
 3. Cause of preservation: agreement
 4. Praise of the cosmos
 5. Order even among extreme phenomena
- B. God in relationship to the cosmos (ch. 6)
 1. God's power at work in the cosmos
 2. Examples of action at a distance
 - a. The King of Persia and the Persian empire
 - b. Engineers, puppeteers
 - c. Throwing different shapes
 - d. Setting free different animals
 3. Effect of a single movement
 - a. Movement of planets
 - b. Example: chorus
 - c. Changes on earth
 - d. Example: war
 4. Invisibility of the impulse
 - a. Example: the soul
 - b. God seen through his works
 5. God maintaining the cohesion of the cosmos
 - a. Example: keystones
 - b. Example: Phidias's statue of Athena
 6. God located in heaven
 7. Constancy of the heavens versus the changes and cataclysms on earth
 - a. God preserves the pious
 8. God's role as leader and commander in the cosmos
 - a. Example: role of law

b. Effect on plants and animals

C. God's names and functions (ch. 7)

1. God is one but named after the effects which he causes

Quotation: Orphic poem

2. God and Fate

3. Conclusion: God and Justice

Quotation: Plato, *Laws*

(I) Chapter 1 provides an introduction in which philosophy is praised as the contemplation of all that exists. Through the mind, the soul can journey even to the heavens, discover large-scale relationships, and comprehend and interpret 'the divine things' (τὰ θεῖα). Such large-scale philosophical investigations, which the author calls 'theologizing' (θεολογεῖν), are contrasted with the examination and description of small-scale phenomena. The introduction ends by exhorting the addressee, Alexander, to study philosophy.

(II) The first main part, chapters 2–4, entails a description of the cosmos, including geography and meteorology. Although it contains a lot of detail, the emphasis is not on single phenomena, but on providing an all-encompassing view of the world.⁴⁸ (A) It starts out by giving a definition of 'cosmos' and then describes the cosmos in terms of the five elements, ether, fire, air, water, and earth, each occupying a region above the next element in sequence. (B) This is followed by a section focussing on the last two elements, water and earth, which thus contains a geographical description of Oceanus with its various embayments into the inhabited world, the location of major islands, and the division of the three continents, Europe, Libya and Asia.⁴⁹ (C) The third section deals with meteorological and other phenomena of the air, earth and sea. These are mostly attributed to either the wet or the dry exhalation, that is, exhalations of the sea or of the earth. From the wet exhalation come phenomena like mist, clouds, rain and snow, from the dry exhalation winds and phenomena associated with thunder and lightning. The author also distinguishes between phenomena in the air that are real and those that have only an apparent existence, that is, optical phenomena. The latter phenomena include halos around stars, and rainbows; real phenomena are meteors and comets.⁵⁰ Next, the author describes phenomena in the earth that are formed by water, wind and fire, such as volcanoes, vapours emitted from chasms, and earthquakes. Similar phenomena occur in the sea: chasms, tidal waves and volcanoes.

⁴⁸ Cf. STROHM 1970, 265: "Blick von oben."

⁴⁹ See Burri's essay, §§ 2–3.

⁵⁰ In *Mund.* 392b2–5, however, these are located in the fire.

(III) In the second main part of *De mundo*, chapters 5–7, the author tries to explain why the various tensions and opposing principles in the cosmos have not long ago lead to its destruction.⁵¹ (A) The first explanation (ch. 5) is that nature creates harmony and concord from opposites. The cosmos as a whole has been created as a composition and mixture of opposing elements and principles. By being held within the confines of a sphere, the various opposing elements are forced into an equilibrium, which constitutes an agreement between them. This concord is the cause of the preservation of the cosmos, because through it, despite the cataclysmic forces at work in the world, the whole is kept indestructible. This chapter also contains an encomium extolling the beauty, composition, stability, diversity, etc. of the cosmos.

(B) In the next section (ch. 6) the author goes a step further: god is now explicitly identified as the cause of the cohesion of the cosmos and as the ‘begetter’⁵² of everything that comes into existence. He does not act directly, however, but through his ‘power’ (δύναμις). God himself is based in the highest point in heaven, but his power is at work by first acting on the immediately adjacent region and then on the next, and so on, until it reaches the earth. The precise mechanism of how this works is not explained, but the author tries to show by means of extensive examples how it is possible to influence events at a distance without any direct physical contact or involvement; how a single movement can result in diverse effects; and how it is possible for an invisible initial impulse to give rise to so many subsequent events.

(C) The final section (ch. 7) shows how the various names given to god are based on the effects he causes to come into existence; the variety of effects do not negate the fact that he is one. This also applies to the various names given to Destiny and Fate: god is the one who causes what we ascribe to fate.

4. Readers, Genre, and Function

De mundo has very little in common with the school treatises of Aristotle. It tries to convey insights about the cosmos in a simple manner, using images and comparisons instead of providing syllogistic proofs. It also does not enter into the various contemporary polemics regarding the topics treated in the work (e.g. ether as fifth element, or the eternity of the world). The text’s intended readers were probably persons with a good general (rhetorical) education, rather than specialized training as scientists

⁵¹ For a more detailed discussion see the essay on Cosmotheology by Thom below.

⁵² The only term used here and elsewhere for his creative activity is γενέτωρ; κτίστης or δημιουργός is not used.

or philosophers.⁵³ Significant is the fact that the author follows the literary tradition based on Eratosthenes instead of the most up-to-date scientific evidence available,⁵⁴ this would indicate that the readers have a general literary background rather than a scientific one. Although 'Alexander' is directly addressed in the first chapter, the fiction of a letter is dropped from the second chapter onwards,⁵⁵ but Alexander (as a person reputed to have a good general education) may represent the ideal audience. *De mundo* shares some of the characteristics of a handbook, but it goes beyond the dry and sober style of a mere handbook:⁵⁶ it tries to make the exposition of rather dry material more attractive with various stylistic and artistic devices such as poetic or rare words, literary quotations, rhetorical questions, ornamental epithets, elaboration, vivid descriptions, digressions, images and comparisons.⁵⁷ Such literary elaboration, the use of the arguments of beauty, possibility and usefulness, and of encomium, together with the exhortation to Alexander to study philosophy, furthermore point towards protreptic.⁵⁸ The author describes what he does as 'theologizing', θεολογεῖν (*Mund.* 391b4), and this may also indicate the function of *De mundo*: to move beyond a description of the world to an understanding of the god who maintains the cosmos.⁵⁹

⁵³ See MORAUX 1984, 57. This audience would be similar to the *pepaideumenoi* that PELLING 2011, 56–7 proposes as the target audience of Plutarch's works.

⁵⁴ DIHLE 1997, 9–11: "Der Verfasser der Schrift vom Kosmos ist der literarischen Tradition zuzuordnen, in der sich das Weltbild des Eratosthenes unbeeinflusst von den späteren Fortschritten der Wissenschaft behauptete" (p. 11). See also Burri's essay, below pp. 105–106.

⁵⁵ See MORAUX 1984, 59. Stobaeus refers to this work in each of his excerpts as "from the letter of Aristoteles to Alexander", but Philoponus and David call it a 'treatise' (λόγος, πραγματεία) or 'book' (βιβλίον); see above, p. 4.

⁵⁶ FESTUGIÈRE 1949, 479–501 contends that *De mundo* is an 'introduction' (εἰσαγωγή) in which the text of a handbook has been rhetorically expanded; see also FURLEY 1955, 334. MORAUX 1984, 58, 78, with n. 263 suggests that the author used "a dry, Stoically coloured handbook" and elaborated it with the addition of Aristotelian material. These scholars refer in particular to the similarity between *De mundo* and Arius Didymus fr. 31 Diel, but as we have seen, the exact chronological relationship between these texts is problematic. The description of *De mundo* as a compendium (GOTTSCHALK 1987, 1132) does not do justice to the literary character of the work. See Chandler's essay below.

⁵⁷ See MORAUX 1984, 61–2.

⁵⁸ MORAUX 1984, 60–1.

⁵⁹ Cf. FESTUGIÈRE 1949, 478: "The world is not studied for itself, but as a way to come to God, to get to know the providence and governance of God"; also MORAUX 1984, 77; RUNIA 2002, 305: "He [sc. the author] is not attempting to give a scientific account of the universe, but works his way towards an explanation of its features in theological terms."