COSMOS IN THE ANCIENT WORLD

EDITED BY PHILLIP SIDNEY HORKY

DEDICATION

Ad Robertum, magistrum meum.

‘Qui strepitus circa comitum! Quantum instar in ipso!

Sed nox atra caput tristi circumvolat umbra.’

-Virgil, *Aeneid* 6.865-6

Mundus est universitas rerum, in quo omnia sunt et extra quem nihil, qui graece dicitur κόσμος.

-Lucius Ampelius, *Liber Memorialis* 1.1 (third century CE?)

That as the greater world is called Cosmus, from the beauty thereof the inequality of the Centre thereof contributing much to the beauty and delightsomenesse of it: so in this Map or little world of beauty in the face, the inequality affords the prospect and delight.

- John Bulwer, *Anthropometamorphosis: man transform'd* (1653: 242)

CONTENTS

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LIST OF ABBREVIATIONS

This volume standardly employs abbreviations for ancient texts from the *Oxford Classical Dictionary*, 4th edition (Oxford, 2012). These abbreviations will be listed in the *Index of Passages* at the end of the book. Diels-Kranz' edition of the Presocratic fragments is cited according to the standard convention of using 'A' for biography, titles of works, and testimonies; 'B' for fragments; and 'C' for imitation by later authors. In the process of preparing the manuscript, the impressive new 9-volume Loeb Classical Library edition of *Early Greek Philosophy*, edited and translated by André Laks and Glenn W. Most (Cambridge, MA: Harvard University Press), appeared in publication, but it arrived too late to be consulted by the authors included in this volume.

The following list of abbreviations refers to standard collections of ancient materials (fragmentary, epigraphical, numismatic, papyrological, etc.) and other resource works.

Amato = Amato, E. (ed. and trans.) 2010. *Favorinos d'Arles: Oeuvres, Tome III, Fragments*. Paris: Les Belles Lettres.

Cardauns = Cardauns, B. (ed.) 1976. *M. Terentius Varro, Antiquitates Rerum Divinarum*, 3 vols. Mainz: Akademie der Wissenschaften und der Literatur Mainz Geistes- und Sozialwissenschaftliche Klasse.

Cèbe = Cèbe, J.-P. (ed.) 1972-99. *Varron: Satires Ménippées*, 13 vols. Rome: Publications de l'École Française de Rome.

DHR = Dareste, R., Haussoullier, B., and Reinach, T. (eds.) 1891-1904. *Recueil des inscriptions juridiques grecques*, 2 series. Paris: Ernest Leroux.

DK = Diels, H. and Kranz, W. (eds.) 1960. *Die Fragmente der Vorsokratiker*, 6th ed., 3 vols. Berlin: Weidmann.

FGrH = Jacoby, F. 1923- (ed.). *Die Fragmente der griechischen Historiker*, 18 vols. Berlin: Weidmann.

Düring = Düring, I. (ed.) 1960. *Aristotle's* Protrepticus. Götheburg: Acta Universitatis Gothoburgensis.

G.-M. = Goldberg, S., and Manuwald, G. (trans.) 2018. *Ennius, Fragmentary Republican Latin, Volume II: Ennius, Dramatic Fragments, Minor Works*, Loeb Classical Library 537. Cambridge, MA: Harvard University Press.

IC = Guarducci, M. (ed.) 1935-50. *Inscriptiones Creticae*, 4 vols. Rome.

IGR = Cagnat, R., et al. (eds.) 1906 -. *Inscriptiones Graecae ad res Romanas Pertinentes*. Paris: Ernest Leroux.

FHS&G = Fortenbaugh, W.W., Huby, P. M., Sharples, R. W., and Gutas, D. (eds.) 1993. *Theophrastus of Eresus: Sources for his Life, Writings, Thought and Influence*. Parts 1 and 2. Leiden: Brill.

Fortenbaugh and Schütrumpf = Fortenbaugh, W. W. and Schütrumpf, E. (eds.) 2000. *Demetrius of Phalerum: Text, Translation and Discussion*. New Brunswick: Transaction Publishers.

G.-P. = Gow, A. S. F. and Page, D. L. (eds.) 1968. *The Greek Anthology: the Garland of Philip and Some Contemporary Epigrams*, 3 vols. Cambridge.

IP = Isnardi Parente, M. (ed. and trans.) 1980. *Speusippo: Frammenti*. Naples: Bibliopolis.

IP² = Isnardi Parente, M. and Dorandi, T. (eds. and trans.) 2012. *Senocrate e Ermodoro: Testimonianze e Frammenti*. Pisa: Scuola Normale Superiore.

Jocelyn = Jocelyn, H. D. (ed.) 1969. *The Tragedies of Ennius*. Cambridge.

LfgrE = Thesaurus Linguae Graecae (1955-), *Lexicon des früh griechischen Epos*, 25 vols. Berlin: Vandenhoeck & Ruprecht.

K.-A. = Kassel, R. and Austin, C. (eds.) 1998-. *Poetae Comici Graeci*, 8 vols. Berlin: Walter de Gruyter.

Kidd = Edelstein, L. and Kidd, I. G. (eds. and trans.) 1972-88. *Posidonius*, 3 vols. Cambridge.

Koerner = Koerner, R. (ed.) 1993. *Inschriftliche Gesetzestexte der frühen griechischen Polis*. Cologne: Böhlau-Verlag.

Lasserre = Lasserre, F. (1966) *Die Fragmente des Eudoxos von Knidos*. Berlin: Walter de Gruyter.

L&S = Long, A. A. and Sedley, D. (eds. and trans.) 1987. *The Hellenistic Philosophers*, 2 vols. Cambridge.

LSJ = Liddell, H. G., Scott, R., and Jones, H. S. 1996. *A Greek-English Lexicon*, 9th ed. Oxford.

Merkelbach and West = Merkelbach, R., and West M. L. (eds.) 1967. *Fragmenta Hesiodea*. Oxford.

Mirhady = Fortenbaugh, W. W., Schütrumpf, E., and Mirhady, D. C. (eds. and trans.) 2001. *Dicaearchus of Messana: The Sources, Text and Translation*. New Brunswick: Transaction Publishers.

NRSV = Coogan, M. D. (trans.) 2007. *The New Oxford Annotated Bible*, Augmented 3rd ed., New Revised Standard Version. Oxford.

OLD = Glare, P. G. W. 1968. *Oxford Latin Dictionary*. Oxford.

P. Derv. = Kouremenos, T., Parássoglou, G. M., and Tsantsanoglou, K. (eds. and trans.) 2006. *The Derveni Papyrus*. Florence: Olschki.

Radt = Radt, S. (ed.) 1977. *Tragicorum Graecorum Fragmenta*, vol. 4: Sophocles. Göttingen: Vandenhoeck & Ruprecht.

Ribbeck = Ribbeck, O. (ed.) 1898. *Scaenicae Romanorum Poesis Fragmenta: Comicorum Romanorum praeter Plautum et Terentium Fragmenta*, 3rd ed., vol. 2. Leipzig: Teubner.

RO = Rhodes, P. J. and Osborne, R. (eds.) 2007. *Greek Historical Inscriptions*, 404 – 323 BC, revised edition. Oxford.

Rose³ = Rose, V. (ed.) 1886. *Aristotelis Fragmenta*. Leipzig: Teubner.

Ross = Ross, W. D. (ed.) 1955. *Aristotelis Fragmenta Selecta*. Oxford.

RRC = Crawford, M. H. (ed.) 1974. *Roman Republican Coinage*. Cambridge.

Schütrumpf = Schütrumpf, E. (ed. and trans.) 2008. *Heraclides of Pontus: Texts and Translation*. New Brunswick: Transaction Publishers.

SEG = Chaniotis, A., et al. (eds.) 1923 -. *Supplementum epigraphicum Graecum*. Leiden: Brill.

Skutsch, O. (ed. and trans.) 1985. *The Annales of Ennius*. Oxford.

Soubiran, J. (ed. and trans.) 2002. *Cicéron: Aratea, Fragments Poétiques*. Paris: Les Belles Lettres.

SVF = von Arnim, H. (ed.) 1903-21. *Stoicorum Veterum Fragmenta*, 4 vols. Leipzig: Teubner.

Thesleff = Thesleff, H. (ed.) 1965. *The Pythagorean Texts of the Hellenistic Period*. Åbo.

VA = von Herrmann, Friedrich-Wilhelm (ed.) 2000. *M. Heidegger, Gesamtausgabe*, vol. 7: 7 Vorträge und Aufsätze: 1936-53. Frankfurt am Main: Klostermann.

Wehrli = Wehrli, F. (ed.) 1967. *Die Schule des Aristoteles*, vol. 2: Aristoxenos, 2nd ed. Basel/Stuttgart: Schwabe.

West = West, M. L. (ed.) 1989-92. *Iambi et elegi Graeci ante Alexandrum cantati*, 2 vols, revised. Oxford.

Willetts = Willets, R. F. (ed.) 1967. *The Law Code of Gortyn*. Berlin: Walter de Gruyter.

INTRODUCTION

Phillip Sidney Horky

1. PREFACE

Self-reflection excites questions about our relationship to the world in which we live: is that world *a priori* ordered, or a chaos well arranged, or simply an indiscriminate chaos? If there is an observed order, is that order *merely* observed, or is it an image that obscures a more fundamental order, or *even* a disorder? If we do accept that there is a concept of 'order' at play, what is that order made up of? Does it have constituents, or perhaps properties that are unique to it? Assuming that we exist in some ordered world that we can describe, how do we set out to define it? Where, and how, do we draw its boundaries, either conceptual or physical? Is the ordered world one, or many? If many, are there ordered worlds within an ordered world, or even ordered world*s*, or are there separately existing ordered worlds? Does this order repeat? If so, what unifies it in such a way that it can be observed as persisting? Are we human beings 'ordered' in a way similar to the world around us? And if there *is* order at various levels of reality (psychological, social, natural), what is ultimately responsible for such an order?

These are not novel questions: they are just as relevant today as they were in the ancient world, from the Delphic Oracle's enigmatic injunction to know and explain oneself, to St. Augustine's search for human meaning within the world of change.[1] Modern scholars who work on 'systems theory' and 'systems philosophy' ask similar questions to these in the pursuit of a holistic understanding of the many parts of a 'system' and the ways in which they

[1] For Augustine's response to Platonic, Aristotelian, and Plotinian cosmology, see Nightingale 2010: Chapter 2.

come to relate to one another.[2] According to Alexander Laszlo and Stanley Krippner, a 'system' is most generally understood to be a 'complex of interacting components together with the relationships among them that permit the identification of a boundary-maintaining entity or process'.[3] For some scholars working in this idiom, such 'systems' can be proper to individual disciplines and areas of scientific enquiry, whereas a sort of 'suprasystem' is assumed to obtain over and above particular disciplines: the investigation of this 'suprasystem' is the project of formulating a 'general system theory', following the terminology of biologist and philosopher Ludwig von Bertalanffy.[4] So, while individual scientific pursuits might have special laws that we enquire after in the hunt for knowledge, and that condition the knowability of those sciences, there is a kind of isomorphism that obtains across the laws that govern particular sciences, which indicates the possibility of a universal system under which particular systems of knowledge fall.[5] For committed systems theorists, it is possible to discover, or at least to approximate, a general theory of systems

[2] See, e.g., Capra and Luisi 2014, Rosen 1991, Laszlo 1972, and Bertalanffy 1968.

[3] Laszlo and Krippner 1998.

[4] See Von Bertalanffy (1968: xxi): '[T]here is systems philosophy, i.e. a reorientation of thought and world view ensuing from the introduction of "system" as a new scientific paradigm (in contrast to the analytic, mechanistic, one-way causal paradigm of classical science). As every scientific theory of broader scope, general system theory has its "metascientific" or philosophical aspects.'

[5] Consider Wittgenstein's discussion of systems and their relationship to knowledge in *On Certainty* (§105): 'All testing, all confirmation and disconfirmation of a hypothesis takes place already within a system. And this system is not a more or less arbitrary and doubtful point of departure for all our arguments: no, it belongs to the essence of what we call an argument. The system is not so much the point of departure, as the element in which arguments have their life' (tr. by Paul and Anscombe).

which applies to all sciences, but most notably those that deal with the sphere of human action and experience.[6]

Recently, scholars seeking to find an ancient imprimatur for their notion of 'general system theory' turned to the ancient world, and in particular to Presocratic and Classical philosophy in Ancient Greece.[7] In particular, they noticed that a special concept that helped the Ancient Greeks to explain the many innerworkings of various spheres of life was established sometime in the mid- to late-sixth century BCE: *kosmos* (κόσμος). *Kosmos* was a term common from Homer a few centuries prior, where it was applied interestingly to the good arrangements of soldiers as well as to well-spoken words;[8] and it was also employed in political discourse from the Archaic period forward, to refer to administrators whose responsibilities must have included keeping some sort of order in the city-state it had taken on new meanings that went far beyond, and perhaps in contradistinction to, Homer's usage.[9] Still, the early usages hardly implied a 'general system', in the sense of the meta-system whose laws apply to diverse systems subordinate to it. Around the time that democracy was

[6] See, e.g., Rosen's description of the relationship between 'formal' and 'natural' systems (1991: 44): '…the extraction of a formalism from a natural language has many of the properties of extracting a system from the ambience. Therefore, I shall henceforth refer to a formalism as a *formal system*; to distinguish formal systems from systems in the ambience or external world, I shall call the latter *natural systems*. The entire scientific enterprise, as I shall argue, is an attempt to capture natural systems within formal ones, or alternatively, to embody formal systems with external referents in such a way as to describe natural ones. That, indeed, is what is meant by a *theory*.' Italics original.

[7] See Capra and Luisi 2014: 1-6 and Rosen 1991: 5, where Pythagoras is credited with establishing the dualism between idealism and materialism, the basis for his own distinction between formal and natural systems.

[8] For the significance of *kosmos* to Homeric poetics, see Elmer 2013: 49-55. Consider the challenges offered by Parmenides to the Homeric notion of *kosmos*, discussed in the chapters by Macé and Schofield.

[9] On which, see the contribution of Atack in this volume.

born in Athens, the kings expelled from Rome, and the Persian Empire established as a major world power, in the late sixth century BCE, something had changed, and *kosmos* took on a significance beyond its traditional deployment in Greek culture. Amazingly, over the next millennium – a period which saw dramatic growth and expansion in philosophy, science, music, literature, art, and performance across the Greco-Roman world – various figures involved in the production of human knowledge and art continued to investigate what sorts of 'order' could be fruitfully explained by appeal to *kosmos*. Whatever *kosmos* was taken to mean at various points throughout antiquity – at some fundamental level, it indicated an order that is somehow arranged through forces of opposition, equilibrium, or measure – the word and its derivatives were employed in order to illustrate not only how the universe, in its myriad constituent parts, works, but also how it *should* work. That is, *kosmos*, as it was deployed by ancient thinkers for their understanding of the world that surrounded them functioned both descriptively and normatively to structure knowledge of reality.

This double aspect of *kosmos*, which, as the following chapters in this volume will aim to demonstrate, persists throughout its history in Greco-Roman antiquity, reflects a similar binarism that one sometimes finds in investigation into *kosmos* and its usages: descriptive approaches to *kosmos* tend to pursue a unified notion, an absolute *kosmos*, or, if we are to go one step further, ***the*** *kosmos*; this is a powerful idea that, so far as we can tell, received its most memorable illustration in the philosopher Plato of Athens' (ca. 428/7–348/7 BCE) masterpiece *Timaeus*, probably the most influential cosmological text in the ancient world.[10] As Plato's authoritative interlocutor Timaeus of Epizephyrian Locri, who delivers Plato's most complete discussion of the universe and its nature, says:

[10] The influence of *Timaeus* upon later philosophy and science is paramount: see, among others, Baltes 1976; Reydams-Schils 1999; the essays collected in Sharples and Sheppard 2003; and the essays collected in Mohr and Sattler 2010. Excellent recent comprehensive studies of the *Timaeus* itself include Johansen 2004 and

> ‘The entire heaven – whether *kosmos*, or indeed any other name that it would be most convenient to call it by, let it be called so by us – we must make an investigation concerning it, the sort of investigation that, it is granted, should be undertaken concerning everything at first, whether it has always existed, having no origin of generation, or whether it was generated, having originated from a certain beginning. It was generated.’
>
> (Plato, *Timaeus* 28b2-7)

Hence, Plato’s character Timaeus understands that the fundamental question we face in our investigation of the universe is whether it originated from a particular beginning, or has existed eternally. It was one of the most important questions in ancient philosophy. Within the dialogue, discussion of the *kosmos* leads to examinations of its many parts, and to the question of how its parts were brought together by the divine Demiurge and his ancillaries to form a complete living universe, subject to change over time, but nevertheless eternal after its initial generation. This discussion comes to inform Timaeus’ description of the biological generation of the human being, bridging the macro- with the microcosm, as Plato sought to provide a unified image of anthropo-cosmic generation.[11]

In the same light, consider the Roman statesman and philosopher Cicero’s (106–43 BCE) marvellous Dream of Scipio, which, like the Myth of Er in Plato’s *Republic*, closed his dialogue of the same name. A young and ambitious Scipio Aemilianus gladly receives a vision of the universe, described by his grandfather Scipio Africanus, with the commitment to follow in his grandfather’s footsteps and gain glory in Rome. His adoptive grandfather

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Broadie 2012. *Timaeus* will appear in references throughout this volume, but given the ubiquity of its importance, there is no single chapter devoted to this work.

[11] The macro- and microcosm relation is drawn explicitly at the end of the dialogue (*Ti.* 89a-90d).

responds by comparing the body (*corpus*) with the *kosmos* (here using the Roman term for the same concept, *mundus*):[12]

> 'Keep at it; and know this: it is not you that is mortal, but your body. You are not what your physical shape reveals, but each person is his mind, not the body that a finger can point at. Know then that you are a god, as surely as a god is someone who is alert, who feels, who remembers, who looks ahead, who rules and guides and moves the body of which he is in command just as the leading god does for the world (*quam hunc mundum ille princeps deus*). And just as the eternal god moves the world, which is partly mortal, (*ut mundum ex quadam parte mortale ipse deus aeternus*) so too does the eternal soul move the fragile body.'[13]
>
> (Cicero, *On the Republic*, 6.26)

Scipio Africanus' association of the animal body with the *kosmos* reveals Cicero's Platonic inheritance, but it is notable that Cicero's cosmology reveals a point of ambivalence among philosophers of the Post-Hellenistic period, namely whether the *kosmos* was mortal or immortal – he claims, rather vaguely, that it possesses a 'certain mortal part'. Is this a way of accepting Plato's claim that the universe was generated? Is it a differentiation of the cosmic body from the cosmic soul (or 'World-Soul')? Or is it perhaps referring to the World-Soul's 'mortal' parts, which are the spirited and appetitive aspects? Despite the ambivalence on this point, Scipio goes onto make claims that run counter to Plato's position in the *Timaeus*, but reflect positions staked out elsewhere in his dialogues, such as in the *Phaedrus*:[14] consider the

[12] See the first epigram to this book, from the incipit of Lucius Ampelius' *Liber Memorialis* (1.1): 'Mundus est universitas rerum, in quo omnia sunt et extra quem nihil, qui graece dicitur κόσμος.'

[13] Translation after Zetzel.

[14] Cicero here is translating into Latin Plato's *Phaedrus* 245c-246a.

statement at *On the Republic* 6.28 that the soul is not generated (a claim expressly rejected by Timaeus at 34c). As soon as Plato has solidified the analogy between the generation of the *kosmos* and the human in the *Timaeus*, he initiates a messy, if persistently potent, debate that fuelled speculation for at least a millennium, in both the Greek and Roman worlds.[15]

At the other end of the historical spectrum in antiquity, the problem of relating the eternal and the generated natures of the *kosmos* is taken up by the Neoplatonist philosopher Proclus (ca. 411–485 CE). It prompts him to seek to explain how the universe could persist in its various fluctuations to and from Being:

> ...before his entire journey begins, Plato appropriately makes definitions regarding these terms, when he names the universe 'heaven' (οὐρανός) and '*kosmos*' (κόσμος) and states of 'the entire heaven' – to ensure that you do not think that he is only speaking about the divine body – 'let it be called '*kosmos*' by us or any other name' that it is 'pleased to be called' [*Ti*. 28b2-3]. It seems that he calls it 'heaven' on the grounds that it seems best to everyone, but '*kosmos*' on the grounds that [it seems best] for himself, for he says of the heaven, 'let it be called '*kosmos*' by us'. It is appropriate to apply the name '*kosmos*' because it is something crafted, even if it is also possible to call it by both [names], 'heaven' because it looks upon the things above (ὁρῶντα τὰ ἄνω) and contemplates the intelligible realm, and because it participates in the intellective essence; and '*kosmos*' because it is always filled and arranged (κοσμούμενον) apart from the beings that really exist; also 'heaven' as having reverted [to its source], '*kosmos*' as proceeding [from that source], for it is from there that it is generated, and reverts back, to Being.

[15] For the early history of the debate, see Reydams-Schils 1999: Chapter 1.

(Proclus, *Commentary on Plato's* Timaeus 2, pp. 272.26-273.10 Diehl)

Nearly nine centuries after Plato had laid the foundations for the debate concerning the *kosmos* and its nature, Proclus finds himself employing the philosophical and hermeneutic tools that had accumulated in the study of Plato – from his earliest exegetes and critics in the Academy, such as Xenocrates and Aristotle, to those who would ultimately codify his philosophical views in a new system, such as Plotinus. His account gives us a place where we might draw the line in late antiquity concerning the assessment of Platonic cosmology. Proclus' lexical analysis of the term '*kosmos*' builds from Plato's account of the generation of the universe, but employs etymologization from the term's function – the 'entire heaven' is called '*kosmos*' due to its being arranged (κοσμούμενον) apart from true beings, e.g. the Forms or the Demiurge. There is, of course, only one *kosmos*, but it undergoes constant change despite its propensity for unity and existence.[16] In this way, because the *kosmos* is the paradigm of what changes but retains its identity, it functions as a heuristic model for the individual, the person who persists in growing older while remaining the same. By understanding the universe in its manifold generation, I better understand myself as a potentially well-ordered being.[17]

Normative discussions of *kosmos* in Greco-Roman antiquity sometimes focus on the multiplicity of the term, how there can be many well-ordered things, or how many participants in the larger *kosmos* can be 'arranged' so as to be *kosmioi*: the stars, planets, and

[16] Compare with his predecessor Plotinus' presentation of the *kosmos*, discussed in Remes' contribution.

[17] See especially the contributions of Brisson and Remes.

other meteorologica,[18] city-states and their laws,[19] land and buildings,[20] speeches, poems, and other dramatic performances,[21] social practices and habits,[22] and the souls and bodies of individual human beings,[23] and the basic elements of the universe.[24] Others reject, or scorn, the centrality of the notion of *kosmos* to questions of nature or theology.[25] *Kosmos* features quite a range of applications and goes far beyond the notion of the *kosmos*:[26] the sophist Gorgias of Leontini, who flourished in the mid-fifth century BCE, contributes something quite remarkable to the history of the concept by assuming that a *kosmos* must be a *kosmos* **of something**; and that each *kosmos* of something is diverse, peculiar to that object. Or, put more philosophically, *kosmos* is fundamentally *relative*. The beauty of Gorgias' sentiment lies in in the pithiness of its expression:

> The *kosmos* of a polis is manpower, of a body beauty, of a soul wisdom, of an action virtue, of a speech truth, and the opposites of these make for *akosmia*.
>
> (Gorgias, *Encomium of Helen* 1)

[18] See Sauron's, Gagné's, and Shearin's contributions to this volume.

[19] See the contributions of Atack and Brisson.

[20] These are discussed in the contributions of Brisson, Germany, and Sauron.

[21] See Macé's, Germany's, and Gagné's contributions.

[22] See the contributions of Brisson and Boys-Stones.

[23] These topics are treated in the contributions of Brisson, Boys-Stones, and Remes.

[24] Discussed in Schofield's and both of Horky's contributions.

[25] See Johnson's discussion of Aristotle and Horky's discussion of early Christianity in this volume.

[26] In analysing the *kosmos* of law and rhetoric in Classical Athens, Wohl (2010: 2) helpfully identifies the possible divergences between 'order' and 'adornment', showing that a preference for the former is implicit in many accounts of early Greek law.

Gorgias excites the possibilities for understanding *kosmos* by grounding it in its many relative applications; but implicit is the assumption that *kosmos* itself is a meta-system with universal application across many areas of human experience, including warfare, aesthetics, ethics, and rhetoric. Indeed, Gorgias' conceptualization, marked by differentiation of 'order' from 'disorder' by contrariety, was influential in antiquity: not only does Plato mark a nuanced, if slippery, notion of *kosmos* in his dialogue concerned with challenging the dominance of rhetoric in his dialogue *Gorgias*.[27] Plato's student Aristotle (384–322 BCE) adapts Gorgias' contradistinction between '*kosmos*' (good arrangement) and '*akosmia*' (chaotic arrangement) in a fragment from one of his lost dialogues (perhaps *On Philosophy*; see Fr. 17 Rose[3]), which is used to point to the notion that a single first principle is one over many other principles:

> The first principle is either one or many. If there is one, we have the object of our investigation. If there are many, either they are ordered or disordered. If, on the one hand, they are disordered, their products are more disordered [than they are], and the *kosmos* is not a *kosmos* but an *akosmia*, and this is the thing that is contrary to nature, whereas what is in accordance with nature does not exist. But if, on the other hand, they are ordered, they were either ordered by themselves, or by some external cause. But if they were ordered by themselves, they have something in common that conjoins them, and this is the first principle.

Because this fragment was originally embedded in a dialogue, it is difficult to know whether it reflects Aristotle's alleged Platonic metaphysical inclinations, or whether it represents a summary of a Platonic 'one over many' argument that he sought to criticize elsewhere,

[27] As discussed by Horky in Chapter 1 and Boys-Stones in Chapter 5.

including his fragmentary treatise *On Ideas*.[28] It is possible that it is meant to represent a 'Platonic' view that would have been subject to dialectical challenge later on in the dialogue. Regardless, this passage supports the proposition that what is *kosmos* is, in some fundamental way, *in accordance with nature*; and what is its opposite is contrary to nature. In this way, the argument builds upon Gorgias' seemingly trifle speculations concerning the fundamental – we might even venture to say axiomatic – divergence between what is *kosmos*, and what is *akosmia*.

One of the most remarkable aspects of *kosmos* in its usage throughout antiquity is its applicability at the macro- or micro-levels. As we emphasized before, the Greeks seem to have understood *kosmos* extensively, and to have applied it in the case of all kinds of ordered beings, at all levels, from the inestimable expanses of space and time, to the imperceptible principles and elements of existence.[29] This appears to have obtained from early on in the life of the concept, and it is attested in two fragments of the Presocratic Heraclitus of Ephesus (fl. around 500 BCE) that concern themselves with *kosmos*:

> This *kosmos*, the same for all – neither did any god nor any human make it, but it eternally was, is, and will be: ever-living fire, being kindled in measures and being snuffed out in measures.
>
> (Heraclitus, DK 22 B 30)
>
> The most beautiful *kosmos* is a heap of sweepings at random.

[28] The standard work on Aristotle's criticisms of Plato's 'One over Many' arguments is Fine 1993. See Johnson's discussion of this fragment in the larger context of Aristotle's criticisms of theories of the *kosmos* and *kosmoi* on p. XXX.

[29] See especially Schofield's discussion in Chapter 3.

(Heraclitus, DK 22 B 124)

Like Gorgias, Heraclitus conceives of multiple species of *kosmos*. But Heraclitus' usage denies to *kosmos* what, in the writings of Aristotle and Plato, is a property genial to it: conceptual isomorphism in reference to the objects that take it on. In the first fragment, the *kosmos* under discussion, the one that is the 'same for all', is eternal but ungenerated, and subject to measure as it increases and decreases. One wonders, with Malcolm Schofield in his contribution to this book, whether Heraclitus is referring to ***the*** *kosmos*, i.e. the world, as Heraclitus' ancient commentators took him to be doing[30] – yet it would be difficult to account for the deictic 'this' (τόνδε) in that circumstance, and, if we compare with other fragments, the sun is revealed to be the most likely referent of the specific *kosmos* under discussion.[31] On the other hand, in the second fragment, the *kosmos* described as 'most beautiful' is but a heap of dust, collected at random.[32] It is hence an 'arrangement' of any sort that obtains in natural conditions. With Heraclitus, we are quite far from the position of, say, the mid-fifth century BCE Pythagorean Philolaus of Croton, who anticipated later philosophers, physicists, and systems theorists in believing that 'nature in the *kosmos*', as well as the 'whole *kosmos* and all things in it', were 'fitted together out of limiters and unlimiteds' (DK 44 B 1). For Heraclitus, even though it can indeed be considered at the macro- or microcosmic level, the arrangement implied in *kosmos* is not always the same for all the objects to which it is applied. Nevertheless, we could still see family resemblance between Aristotle's and Heraclitus' notions of *kosmos*: both are revealed in nature, and what this shared

[30] E.g. Clem. Al. *Strom*. 5.105.

[31] See Plato's jocund criticisms of Heraclitus at *R*. 497e-498b along with DK 22 B 94 and P. Derv. Col. IV. For a good discussion of this issue, see Hülsz 2012.

[32] The consequences of this fragment will be discussed in Wohl's Afterword.

conceptualization does is show how, throughout the ancient world, the peculiar way in which intellectuals formulated *kosmos* as a sort of good arrangement often has a knock-on effect on what they thought nature to be. And, indeed, one of the most important legacies of Presocratic philosophy was the identification of 'nature' as a fundamental object of scientific inquiry.

If Plato and Heraclitus are to be taken as roughly representative of two extreme points in the spectrum of meaning and usage for *kosmos*, we might further consider whether this notion is proprietary to Ancient Greece, or can be detected, with similar conceptual parameters, in other cultures of the ancient world. Of course, other ancient cultures had notions of an ordered universe. The Romans called this the *mundus*, and they distinguished between various sorts of *mundus* that they could, in their religious practices, observe and contemplate.[33] Some scholars have attempted to link these terms together through comparative linguistics, and although their arguments must remain tentative – nobody is actually sure exactly what the etymology of *kosmos* and related words is – there can be no doubt that the Roman and Greek notions are kindred.[34] There may be some shared semantics with Hebrew texts as well: according to *Genesis* 2:1, on the sixth day, Yahweh created the heaven and the earth, and צְבָאָם (ṣə·ḇā·’ām), a word that the Septuagint translates in the third/second centuries BCE into κόσμος, but whose semantics indicate the assembly or mass of an army (i.e. the 'host') – the translation represents a throwback to a usage found in Homer. Beyond the Greco-Roman and Jewish worlds, there are some interesting comparisons

[33] See especially Germany's contribution.

[34] Generally, see Puhvel 1976. Also see Alexander von Humboldt's (1849: 52-3) eccentric summary of the etymologies of Greek κόσμος and Latin *mundus*, which he traced back to, respectively, Sanskrit *sud*, or 'to purify' (e.g. in Greek καθαρμός), and Sanskrit *mand*, or 'to shine'. The *Etymologicum Magnum* (p. 532.12-13 Sylburg) derives κόσμος from κάζω and καίνυμαι, or 'I excel'.

with other cultures, but no strictly equivalent concepts: the Egyptians posited *Maat* as the moral ideal of order and righteousness, as did the Babylonians *Kittu* and *Misharu*[35], and the Zoroastrians *Aša*.[36] These conceptual ideals are perhaps closer to the notion of 'justice' or 'righteous order' than to *kosmos*: they refer to cosmic order as essentially just, something that was likely emphasized by Anaximander, but we must remember that justice, in the sense of equilibrium, need not be an *essential* attribute of *kosmos* (consider Gorgias' description above).[37] Moreover, from the period in which *kosmos*, conceived of as good arrangement, becomes the *kosmos*, the links to mathematics, and especially to technical harmonics, are uniquely attested in the Greco-Roman traditions.[38] Indeed, one might think that the concepts of *Maat*, *Kittu*, *Misharu*, and *Aša* are closer in meaning to early Greek Δίκη or θέμις.[39] A complete comparison of notions of 'order' or 'system' in these cultures is beyond the scope of this volume, but it would surely lead to promising results in the history of thought.[40] One might expect that it would highlight the strangeness of the Greek concept of *kosmos* in the relief of these other moral and existential ideals, which persist across ancient cultures regardless of linguistic family origin.

This book aims, among other things, to present thirteen diverse contributions to our understanding of *kosmos* as a formative concept that has had impressive effects upon Western

[35] For a useful summary of *Maat*'s attributes and scholarship relating to this topic, see Karenga 2004: 5-11.

[36] For the latter as a cosmological principle, see Horky 2009: 55-60 and West 2010: 12-13.

[37] Anaximander DK 12 B 1. See Burkert 2008: 68-9.

[38] See Horky's contribution in Chapter 1.

[39] Burkert (2008: 69 n. 29) notes that Parmenides' notion of the alternation of day and night is based on justice (DK 28 B 1.11-15); but this need not refer to *kosmos* itself, a term that Parmenides found problematic (see Schofield and Macé's contributions in Chapters 2-3).

[40] An excellent recent collection of papers on comparative approaches to cosmology and cosmogony is Derron 2015.

thinking. It is one of many core notions bequeathed by the Greco-Roman traditions to us today. Individual chapters vary in their treatment of this concept, ranging from historical-philological assessments, philosophical investigations, analyses of literary expression, and evaluations of its practical application in ancient societies. The scholars who have generously contributed their papers were encouraged to embrace the many possibilities afforded by *kosmos* and *mundus*, broadly from Homer in the eighth century BCE through Nonnus in the fourth/fifth centuries CE; each contribution is interdisciplinary, selecting as relevant the topics its pursues with a close attention to the ancient evidentiary bases available to us. The reader will encounter literary texts from the Greek and Roman canons, including poetry of various sorts (epic, lyric, and didactic/philosophical); prose texts (historical, philosophical, rhetorical, religious, and satirical); and dramatic texts (comedic and tragic). Several contributions will examine evidence from material culture, including inscriptions, architecture, and civic design. The reader will note a propensity in the contents of the volume towards philosophical texts that focus on cosmology: this is chiefly a consequence of the evidentiary base that conditions our understanding of *kosmos* in the ancient world, although the reader will also find manifestly non-philosophical expressions of *kosmos*. Indeed, what makes this a book about *kosmos* in the ancient world, and not simply about ancient *cosmology*, is this broader and more inclusive sense of the term.[41] Contributors have been encouraged to consider the chapters of other authors in composing their own, and one effect of this has been the weaving of a web of thematic connections that persists across the book. Whether this network of ideas obtains its proper measure, as does Heraclitus' sun, or assumes the character of a random whirl of stuffs, as Heraclitus' heap of sweepings, it is hoped that by seeing the ancient *kosmos* in its many manifestations, the reader will be stimulated to further

[41] Again, for cosmology, see especially the volume edited by Derron (2015).

engagement with the topic, and might even find some value in the contributions the ancient Greeks and Romans made to the universal study of 'order' – a study which has its most fundamental analogue in the study of ourselves.

2. Summary of the Contents of the Volume

Cosmos in the Ancient World is structured progressively based on topical clusters: general notions of *kosmos* and their relations especially to cosmology (Horky's first chapter, followed by those of Macé, Schofield, and Johnson); *kosmos* as applied to the individual (the contributions of Boys-Stones, Brisson, and Remes); *kosmos* and society (the chapters of Atack, Gagné, Germany, and Sauron); and *kosmos* and what lies beyond (Shearin, Horky's second chapter). The volume is closed by an afterword by Victoria Wohl, with reflections upon its contributions and suggestions about how to take the concept of *kosmos* further. Attempts to bring chapters into dialogue with one another have led to their relative proximity, although the reader is encouraged to see thematic continuity across the volume as a whole. Generally, although the design is topical, contributions tend to progress diachronically, from the late sixth and early fifth centuries BCE to the second and third centuries CE under the Roman Empire – although the volume will range as far forward as the fifth century CE (e.g. in the contribution of Gagné) and it may circle back to Archaic Greece from time to time (e.g. in the chapters of Remes and Atack). The reader may note implicit symmetries within the arrangement of contributions – this is a book on *kosmos*, after all.

The volume begins with the early history of the development of the term *kosmos* and related terms in early Greek philosophy, especially by reference to natural science, from the Presocratics to Plato and Aristotle. In **Chapter 1: 'When did *Kosmos* become the *Kosmos*?'**, **Phillip Sidney Horky** asks the fundamental question: when did *kosmos* come to

mean ‘world-order’? Horky ventures a new answer by examining later evidence often underutilized or dismissed by scholars. Two late doxographical accounts in which Pythagoras is said to be first to call the heavens *kosmos* (in the anonymous *Life of Pythagoras* and the fragments of Favorinus) exhibit heurematographical tendencies that place their claims in a dialectic with the early Peripatetics about the first discoverers of the mathematical structure of the universe. Likewise, Xenophon and Plato refer to ‘wise men’ who nominate *kosmos* as the object of scientific inquiry into nature as a whole and the cosmic ‘communion’ (*koinônia*) between all living beings, respectively. Again, later testimonies help in identifying the anonymous ‘wise men’ by associating them with the Pythagoreans and, especially, Empedocles. As Horky argues, not only is Empedocles the earliest surviving source to use *kosmos* to refer to a harmonic ‘world-order’ and to illustrate cosmic ‘communities’ between oppositional pairs, but also his cosmology realizes the mutual correspondence of these aspects in the cycle of love and strife. Thus, if later figures posited Pythagoras as the first to refer to the universal ‘world-order’ as the *kosmos*, they did so because they believed Empedocles to have been a Pythagorean natural scientist, whose combined focus on cosmology and ethics exemplified a distinctively Pythagorean approach to philosophy.

In **Chapter 2, ‘Ordering the Universe in Speech: *Kosmos* and *Diakosmos* in Parmenides’ Poem’**, **Arnaud Macé** seeks to advance beyond the traditional dilemma about Parmenides' cosmology that arises out of the fragmentary nature of our evidence. If Parmenides holds that any inquiry into physics is impossible, then how could a consistent cosmology even be found in the poem? As he suggests, its inconsistency would be the best proof of its being false. Recent scholarship, however, has sought to construct a consistent cosmology in the second part of the poem, usually referred to as the *Doxa* (‘Opinon’) and often concludes that there must therefore be some truth that can be obtained from it. Macé posits a third way, in which he constructs a nuanced theory of cosmic order in Parmenides'

Doxa, but also argues that there are clear signs that it is Parmenides himself who encourages us to reject the cosmic order as an illusion – a deceitful *kosmos*, as the Goddess puts it. Macé attempts to show that the study of Parmenides' use of the terms *kosmos* and *diakosmos* stages his critique of Homer, whose texts help the reader to reconstruct the missing steps of the *Doxa*. Parmenides transposes the Homeric vocabulary of dividing and ordering troops to the field of cosmology in order to illustrate how the words of men are hasty in their attempts to arrange a beautiful representation of the universe. The shaping and ordering of the universe is, for Parmenides, but an arrangement of words, assigned the power to construct a world in and of themselves that leads mortals astray.

Malcolm Schofield's contribution in **Chapter 3: '*Diakosmêsis*'**, bridges the contributions to the study of Pythagoras, Empedocles, and Parmenides in Chapters 1-2 with subsequent chapters on Plato and Aristotle by examining the Atomists' cosmic models. Schofield begins by noting that while deployment of the notion of *kosmos* has been much discussed in the scholarship on Presocratic philosophy, *diakosmos* and *diakosmêsis* have been almost entirely neglected. He argues that in describing the business of articulating 'mortal belief' as *diakosmos*, Parmenides bequeathed to his successors among the Presocratics a question – intended as deflationary – about the main agenda for physics and physical explanation: how is the universe arranged? As Schofield suggests, Parmenides is responsible for coining a concept designed to articulate it, an argument that extends the results of Macé's contribution. According to Schofield, *diakosmos* was a concept Parmenides' successors, especially the Atomists Democritus and Leucippus, were determined to reinforce, but only at the price of contestation between believers in a single world produced by design and proponents of infinite undesigned worlds. Finally, for Schofield, in Aristotle, *diakosmêsis* is reinvested with a hint of the deflationary.

It is in **Monte Ransome Johnson**'s contribution in **Chapter 4: 'Aristotle on *Kosmos* and *Kosmoi*'** that we see the emergence of a wide-ranging criticism of the simple natural *kosmos*-theories advanced by Plato and his predecessors, as discussed by Horky, Macé, and Schofield. As Johnson argues, while the concept of *kosmos* was central to Aristotle's predecessors and even his successors, it does not play the leading role in Aristotle's physics that it does in (say) atomistic, Pythagorean, Platonic, or Stoic physics. Aristotle may be interpreted as a transitional figure in the development of cosmology, since, as Johnson argues, his natural science prioritizes other concepts over the notion of 'order', beginning with nature itself, the forms of natural bodies, and the causal factors of change and, specifically, motion. Despite the interpretation of some ancient commentators, the work *On the Heaven* does not have as its scope the entire *kosmos*; and the spurious work *On the Kosmos*, attributed to Aristotle, is the product of a Hellenistic Peripatetic trying to fill in an evident gap in Aristotle's physics: no work explicitly dedicated to the topic of *kosmos* itself. In the fragments of Aristotle's dialogue *On Philosophy* and the esoteric treatises, Aristotle primarily utilizes the concept of *kosmos* in the context of refuting his predecessors' views about the generation (or creation, non-eternality) of the world, and about the plurality of worlds (*kosmoi*). For Aristotle, physical principles, which are explanatorily prior to cosmological ones, determine that the universe (*to pan*) and *kosmos* are identical; there can only be one *kosmos* and heaven (*ouranos*); and the singular *kosmos* cannot be generated or destroyed. Thus, his predecessors' theories about how *kosmoi* are created (*kosmopoieia*) and ordered (*diakosmêsis*) are rendered moot, because they do not start off from the proper physical principles, which necessitate a single eternal spherical *kosmos* with only internal structure and order. Johnson's chapter dovetails with Schofield's in seeing Aristotle as presenting a deflationary view of *diakosmêsis*. Despite this, so Johnson argues, Aristotle actually makes use of something like a plurality of worlds view in his own meteorological

theory, which requires a strict demarcation of 'the *kosmos* around the earth' and 'the *kosmos* around the upper motion' (i.e. the heaven), worlds understood to consist of different kinds of matter and to operate according to different physical principles of motion. This can either be seen as evidence of an earlier stage in Aristotle's regimentation of natural scientific concepts, or as an adaptation of his principles to the specialized field of meteorology. Hence, for Johnson, Aristotle's employment of the concept of *kosmos* is primarily instrumental and epexegetical, and the evidence for his contributions to natural cosmology has been overemphasised by scholars, both ancient and modern.

The volume shifts from the broader discussion of the macrocosm of the universe to the microcosms of the city and the individual that are 'well ordered' (*kosmios*) with the chapter of **George Boys-Stones**. In **Chapter 5: 'Order and Orderliness: the Myth of the "Inner Beauty" in Plato'**, Boys-Stones argues that Plato effectively pre-empts the Stoics in defining virtuous action as conformity with cosmic order. Boys-Stones notes first that scholarship has been beguiled by Alcibiades' striking analysis of Socrates in the *Symposium* as someone ugly to look at but beautiful within, and misled into thinking that Plato defines virtue as 'inner beauty', something private which only accidentally manifests itself in public benefit. As he argues, as a closer examination of Diotima's account of the lover's ascent towards beauty in the same dialogue shows, the distinction that actually interests Plato is that between the body and its activity – not the body and the soul as such. And by referencing this activity to cosmic order (as he does most clearly in *Gorgias* 507e-508a, a passage discussed extensively by Horky in his first contribution), Plato guarantees essentially that virtue is not only publicly manifest, but of essential benefit to others as well as self – a sentiment that found expression in Plato's *Laws* as well, as Brisson contends in the next chapter. Hence, as Boys-Stones argues, the manifestation of virtue in the person who is *kosmios* is of the utmost importance to Plato's moral philosophy.

Chapter 6 sees **Luc Brisson** investigating the other main Platonic political text in which *kosmos* looms large: *Laws*. In **'Polis as *Kosmos* in Plato's *Laws*'**, Brisson argues that the *Laws* are more than a legislative code, and more than a work of political philosophy. In effect, they call for the realization of a project toward which Plato's work converges, i.e. to account for the whole of reality: individual, city, and world. This discourse in which the law (*nomos*) consists derives its origin from the intellect, which represents what is most akin in the soul to the divine, because it is the principle of order (*kosmos*). This order, which is manifested in the celestial bodies, must be present in man's soul, in which the intellect has to rule over pleasures and pains. Thus, according to Brisson, an order will be assured by means of the law within the city, an order based on the contemplation of the regularity and permanence of the movements of the celestial bodies, which the citizens shall imitate, even in their movements around the territory. In the *Laws*, then, Plato brings the cosmology of the Presocratics, discussed extensively by Horky, Macé, and Schofield at the beginning of this volume, to its (natural) conclusion. The city, which is to bring about the birth of the whole of virtue in all the human beings who constitute it, is organized by means of a legislation that takes the functioning of the world as its model. The opposition between *nomos* and *physis* therefore disappears, because the law becomes the expression of nature.

In **Chapter 7: 'Relating to the World, Encountering the Other: Plotinus on Cosmic and Human Action'**, **Pauliina Remes**'s discussion of Plotinus' cosmic moral psychology takes ancient philosophers' endless fascination with Homer as a point of departure for his own philosophy of action. According to Remes, in Plotinian Neoplatonism the *kosmos* is the first ideal entity that human beings can emulate in their search for god-likeness. Unlike higher hypostases, the *kosmos* is an embodied god, involved in temporality; in it, the intelligible structures already present themselves as unfolded spatially (or materially) and in time. Its life or peculiar mode of existence is thereby closer to that of embodied human

existence than that of a pure, unembodied and eternal Intellect - not to speak of the altogether indivisible One beyond being. At the same time, the *kosmos* displays perfection, harmony and completeness. This kind of unified harmony and perfection are undeniably worthy of being ideals for human life and activity, and as such regulative of ideal selfhood. Remes's chapter aims to contextualize human action within the cosmic ideal, but to also show, importantly, the limits as such an ideal. Human action is characterized already by Plato as a complex relation of affecting and being affected: of a limited thing meeting other things external to it, and either effecting a change in the thing encountered or suffering an affecting in this encounter. In an understudied passage (3.3.5.40-6), Plotinus offers a brief but telling glimpse at the challenges of human moral life. By using the example of the Trojan War, Plotinus outlines different scenarios, that is, different kind of encounters between virtuous and vicious people. Through unravelling the Homeric example and situating it in the above Platonic framework of affecting and being affected, so Remes concludes, the passage yields an interesting opening for a theory on practical action and morality by Plotinus.

Plotinus' profound reflections upon Homer encourage us to circle back to Archaic Greece, and to investigate the meanings of the civic theories and practices related to the Greek *kosmos* and its Roman counterpart, the *mundus*. Indeed, the subsequent chapters show how notions of order reverberated throughout the Greek and Roman political and domestic worlds, especially in reference to public and private civic performance. In **Chapter 8: 'Tradition and Innovation in the *Kosmos-Polis* Analogy'**, **Carol Atack** notes that the organization of human community somehow reflected the organization of the *kosmos* as a whole was commonplace in both Archaic and Classical Greek political thought and practice. But, as Atack argues, the diversity of both Greek political arrangements and interpretations of myths of cosmic origin and change complicate the analogy. The association between human and cosmic order in the archaic age is reflected in the political terminology of historical city-

states, seen in the titles of officials from the *kosmoi* of Crete to the *kosmopolis* of Epizephyrian Locri. Aristotle, in noting the limited capacities of the Cretan *kosmoi* (*Pol*. 2.10.1272b1-11), identifies the Cretan constitution as proto-political, suggesting that the '*kosmos-polis'* analogy identifies a primitive, hierarchical form of polis society. Similarly, the order of Zeus, as related in archaic cosmological texts such as Hesiod's *Theogony*, seems to reflect stratified hierarchical societies in which individuals occupy fixed positions. In fifth-century democratic Athens, however, dramatists explored the implications of cosmic political ordering in new ways: for example, *Prometheus Bound* inverts the *kosmos-polis* analogy by describing Zeus' rule as tyranny (*PV* 324–57), whereas Aristophanes constructed an Athenian everyman whose destructive legal powers resemble those of the thunder god himself (*Wasps* 619–30). In the fourth century BCE, however, Plato reasserts the importance of a hierarchical cosmic order for politics, in describing ideal (and less-than-ideal) cities such as *Atlantis* (in the *Critias*) and Magnesia (in the *Laws*), but with his own cosmology from the *Timaeus* replacing the traditional versions.

In **Chapter 9: 'Cosmic Choruses: Metaphor and Performance', Renaud Gagné** pursues a chronologically wide-ranging study of how the motion of the heavenly bodies was conceptualized through the idea of choral dance. This chapter compares various unrelated, self-reflexive usages of the astral chorus metaphor in three genres of poetry, and briefly considers how the specificities of one illuminate the others. Instead of a teleological narrative, a dialogue of commonalities and contrasts is sought in the juxtaposition of comparable case studies; hence, Gagné's approach reflects a more Heraclitean approach to the ordering of phenomena, as discussed above and in Victoria Wohl's 'Afterword'. For Gagné, each case of astral chorus solicited develops the contours of the series, and the series gives greater relief to the unique 'texture' of each case. This is significant thematically: the striking image of the astral chorus was, among many other things, a powerful catalyst for

reflecting upon *mimesis* in action. Indeed, a vision of the cosmic order is used in all three case texts to reflect on the boundaries of poetic representation. The first text is a short epigram from the Augustan poet Marcus Argentarius (*Anth. Pal.* 9.270 = G.-P. XXVI). The second passage is the long ecphrasis of Dionysus' shield in the *Dionysica* of Nonnus of Panopolis (25.380-572), composed sometime around the fifth century CE. The third text is another shield ecphrasis, that one from the first stasimon of Euripides' *Electra* (432-86), composed sometime around 420 BCE. The readings illustrate how a key figure of cosmic harmony was revisited time and again to ponder the limits of poetic representation. Projecting itself on the *kosmos*, the idea of the choral dance could also reflect the *kosmos* back on song itself.

In **Chapter 10: 'All the World's a Stage: *Contemplatio Mundi* in Roman Theatre'**, **Robert Germany** investigates the significance that Roman augural practice, as a kindred practice to Greek θεωρία/*theôria*, held for Roman comedy and tragedy. Central to his arguments are notions of time and space that ultimately show the broad importance of Aristotelian concepts, as investigated in Johnson's chapter, to the broader Hellenistic world. Germany argues that augury-taking involved sitting in a terrestrial temple while gazing at a specially demarcated zone of sky or as it was sometimes called a 'whole-world' (*mundus*). This temporarily legible space in which the gods would direct the signifying flight of birds was more than a celestial backdrop; it was also itself a temple (*templum caeli*) and the technical term for this temple-gazing was *contemplatio*. As Germany argues, the institution of Roman theatre has not generally been associated with practices of auspication, but because of the emphatic insistence on the temporary stage, the conventional 'Unity of Time', and the probable placement of audience seating, there was a suggestive similarity between the Middle Republican audience's spectation at tragedies and comedies and traditional augural contemplation. Most tellingly, so Germany suggests, Plautus plays up this homology,

fashioning his stage as a zone of auspication for the audience, while within the play-world the characters are caught trying to predict the future of their own fictional *mundus*. The structural echo between augural and theatrical contemplation outlives the Republican temporary stage in Seneca, where it has become a distinctively Roman mode of construing the intersection of the cosmic gaze and philosophical or spectatorial θεωρία/*theôria*.

The application of Greco-Roman notions of gazing upon the various worlds, both those of the heavens and those of the earth, to architectural design motivates **Gilles Sauron's** contribution in **Chapter 11: 'The Architectural Representation of the *Kosmos* from Varro to Hadrian.'** Sauron expands upon insights in Gagné's and Germany's papers, while at the same time paying close attention to the cosmology of Plato as discussed in the contributions of Brisson and Atack, in his investigation of cosmic representation as one of the leading themes of Roman architectural decoration. As Sauron notes, while cosmic representation in the public sphere is generally well discussed in the scholarship (e.g. at the Pantheon in Rome), this phenomenon is not often examined in private spaces, despite the fact that it was of especial importance to Roman elites. His chapter addresses this topic by investigating evidence related to architecture attested in written texts and in archaeological monuments themselves which are associated with aristocratic houses or imperial palaces. Two examples of cosmic private representation, two centuries apart, are especially noteworthy for Sauron's case: the aviary that Varro had built around 80 BCE inside his Villa at Casinum, and the Teatro Marittimo that the Emperor Hadrian erected in his Villa at Tivoli. Additionally, he considers possible cosmic structures in the arrangement of the cave at Sperlonga, which was part of Tiberius' Praetorium, and the Cenatio Rotunda of Nero's Domus Aurea, to which some recently discovered monuments on the Palatine Hill have been attributed. Finally, Sauron contextualizes his analysis of trends detected in these monuments with Pompeian frescos of the so-called Second Style, which illustrate the *kosmos* through

impressive allegories situated in fantastic architectural structures. In all these cases, the representations of the private sphere are arranged according to the particular point of view of the person who frequents the place; and the inspiration for these decorations and arrangements appears to have come from philosophers, especially Plato, and from Greek astronomers who fascinated the Roman elite, such as Aratus, whose *Phaenomena* was translated into Latin first by Cicero, and then by Germanicus.

The final papers in *Cosmos in Ancient Philosophy* return our gaze to the heavens and beyond, the seat of the origins of philosophical investigation. In **Chapter 12**: **'The Deep-Sticking Boundary Stone: Cosmology, Sublimity, and Knowledge in Lucretius *De Rerum Natura* and Seneca's *Naturales Quaestiones***', **W.H. Shearin** considers the issue of contemplating the heavenly orders as discussed by Johnson, Germany, and Sauron in their contributions – but through the distinctive eyes of an Epicurean or a Stoic. As Shearin notes, Atomists generally, and the Epicurean school specifically, offer an approach to cosmology that stands in stark contrast to the main lines of the earlier ancient philosophical tradition. Dismissing the divine mind as a structuring principle, Atomists instead explain the origins of the *kosmos* (and everything in it) from the bottom up, in contradistinction to Aristotle (as formulated by Johnson). Plant life, animal life, meteorological phenomena, and natural disasters are all at root products of the chance interaction of atoms and void. On the one hand, such an approach, defined as it is in opposition to earlier tradition, grants cosmological study less inherent importance. As Shearin notes, observing the *kosmos* cannot yield any more basic insight into the structure of the universe than studying motes in a sunbeam. On the other hand, there is abundant evidence for Epicurean science and more specifically for Epicurean attempts to explain meteorological phenomena. Yet this science, as Shearin's chapter explores, is rooted first and foremost in Epicurean ethics and, for Lucretius, in the didactic aims of his poem. Its intent is not a deeper understanding of the world, but rather securing

calm and assuaging the anxieties of the troubled mind. More specifically, Shearin explores the intersection of Lucretius' and Seneca's natural scientific investigations with the sublime, a powerful sentiment that marks and models the viewer's response to the *kosmos*. He contends that we find subtle differences in Lucretius' and Seneca's approaches to the sublime, differences that are rooted in larger philosophical disparities with regard to knowledge in Stoic and Epicurean science. The Stoic Seneca grants great value to knowledge *per se*, whereas the Epicurean Lucretius views knowledge as purely instrumental to the more important aim of psychic calm. In Seneca's hands, then, the sublime is rooted in the human approach to divine omniscience, while for Lucretius, the sublime is a consequence (and reminder) of the stark limits of human knowledge.

Chapter 13, Phillip Sidney Horky's 'Cosmic Spiritualism among the Pythagoreans, Stoics, Jews, and Early Christians', traces how the dualism of body and soul, cosmic and human, is bridged in philosophical and religious traditions through appeal to the notion of 'breath' (πνεῦμα). Horky pursues this project by way of a genealogy of pneumatic cosmology and anthropology, covering a wide range of sources, including the Pythagoreans of the fifth century BCE (in particular, Philolaus of Croton), the Stoics of the third and second centuries BCE (especially Posidonius), the Jews writing in Hellenistic Alexandria in the first century BCE (Philo), and the Christians of the first century CE (the gospel writers and Paul). Starting from the early Pythagoreans, 'breath' and 'breathing' function to draw analogies between cosmogony and anthropogony – a notion ultimately rejected by Plato in the *Timaeus* and Aristotle in his cosmological works, but taken up by the Posidonius (perhaps following the early Stoa) and expanded into a rich and challenging corporeal metaphysics. Similarly, the Post-Hellenistic philosopher and biblical exegete Philo of Alexandria, who was deeply influenced by both Platonist and Stoic physics, approaches the cosmogony and anthropogony described in *Genesis* (1:1-3 and 1:7) through Platonist-

Stoic philosophy, in his attempt to provide a philosophically rigorous explanation for why Moses employed certain terms or phrases when writing his book of creation. Finally, the chapter sees a determined shift in the direction of rejecting pneumatic cosmology for a revised pneumatic anthropogony in the writings of the New Testament: by appeal to the 'Holy Spirit' or 'Holy Breath' (πνεῦμα ἅγιον), early Christians effectively adapted the Stoic metaphysics of 'breath', with its notions of divine intelligence and bonding, to the prophetic and ecclesiastical project of building a Christian community conceived of as the 'body of Christ'. Hence, according to Horky, the spiritual cosmogony of the Pythagoreans, Stoics, and Philo is effectively subordinated to the spiritual anthropogony that facilitates the construction of the Christian *kosmopolis*, only fully realized fully the form of New Jerusalem, the 'bride' which, in tandem with the Holy Spirit, calls to the anointed. At the end of the Christian world-view, the *kosmos* of Greek philosophy is supplanted by the pneumatic *kosmopolis*.

In the **'Afterword'**, **Victoria Wohl** synopsizes and synthesizes the contributions of the preceding papers. Approaching *kosmos* as a 'distribution of the sensible' (in Jacques Rancière's phrase), she traces the way *kosmos* operates to organize reality on the level of aesthetics, politics, ethics, and epistemology and to integrate these various domains into a holistic vision. The paper also stresses, however, the provisionality and partiality of that cosmic whole and considers the alternative visions of reality it precludes, the disorderly order that Heraclitus characterized as 'the sweeping of random things scattered' and that James Joyce terms '*chaosmos*'.

3. An Historical Note on Κοσμος-Terminology

The title and topic of the first chapter notwithstanding, the reader might wish to know when Ancient Greek κόσμος was translated *into English* – in the notion of the 'cosmos'. This

presents an opportunity to reflect upon the life of this concept in the English-speaking world. The word κόσμος is anglicised for the first time in Middle English in a twelfth century poem called *the Ormulum*, composed by a monk named Orm (or Orrm), and dedicated to biblical exegesis.[42] There, in a commentary on the *Gospel of John* 3:16 (in the vulgate translation into Latin, *Sic Deus dilexit mundum, et filium suum unigenitum daret*)[43], we read:

> & forr þatt manness sawle iss her
> Wel þurrh þe werelld tacnedd,
> Forr baþe fallenn inntill an
> Affterr Grickisshe spæche,
> Forr werelld iss nemmnedd Cossmós,
> Swa summ þe Grickess kiþenn,
> Forr þatt itt iss wurrþlike shridd
> Wiþþ sunne & mone & sterrness,
> Onn heffness whel all ummbetrin,
> Þurrh Godd tatt swillc itt wrohhte.
>
> (*Ormulum*, 17,555-64)

Reconstruction of the poem's contents is challenging, even for medievalists, but we can infer from the previous lines that the account here deals with the body and soul of man, both of which 'fallenn intill an' ('fall into one'). Orm explains that the 'werelld' ('world') is called 'Cossmós' in the Greek language by 'summ Grickess' ('certain Greeks'), and he provides a

[42] *The Ormulum*, with the notes and glossary of R.M. White, ed. R. Holt. Two Volumes (Oxford: Clarendon Press, 1878). On the reception of the Greek concept κόσμος in English prior to 1850, also see Algeo 1998: 65. I thank Corinne Saunders and Helen Foxhall-Forbes for guidance with this text.

[43] The original Greek text reads: οὕτως γὰρ ἠγάπησεν ὁ θεὸς τὸν κόσμον, ὥστε τὸν υἱὸν τὸν μονογενῆ ἔδωκεν...

description of the firmament as ‘wurrþlike shridd / Wiþþ sunne & mone & sterrness’ (‘richly arrayed with sun, moon, and stars’) like a ‘whel all ummbetrin’ (‘wheel all round’). The author of the *Ormulum* apparently knew that *mundus* was the Latin term for Greek κόσμος, and Greek ‘Cossmós’ is taken to refer to English ‘werelld’ for the first time, although a lack of evidence showing similar adoptions from roughly 1200 – 1650 CE would be thought to indicate that Orm’s coinage, as remarkable as it is, did not take hold.[44]

The term κόσμος once again makes its way into the English language in the seventeenth century, when it is transliterated from Ancient Greek into English via a Latinisation to ‘Cosmus’. This occurs in John Bulwer’s *Anthropometamorphosis: Man Transform’d; or the Artificiall Changeling* (first edition 1650; second edition 1653; third edition 1654), a curious work that blends medical observations, especially the physiognomy of the face, with cultural anthropology:[45]

> That as the greater world is called Cosmus, from the beauty thereof the inequality of the Centre thereof contributing much to the beauty and delightsomenesse of it: so in this Map or little world of beauty in the face, the inequality affords the prospect and delight.
>
> (Bulwer 1653: 242)

Bulwer expressly employs an argument by analogy: just as the asymmetry of the Cosmus is indicative of its beauty, so too the minor imperfections of the human face afford pleasure and

[44] Orm refers to ‘Cossmós’ twice (at lines 17,559 and 17,592), and even, in relation to this, to the ‘Mycrocossmós’, the human being, which, as Orm explains, ‘þatt nemmnedd iss / Affterr Ennglisshe spæche / Þe little werelld’ (ll. 17,593-17,597).

[45] Bulwer, a physician and author of five works that dealt with subjects like hand gesturing among the deaf, non-verbal facial communication, and comparative cultural anthropology, is comparatively poorly studied.

joy. As interesting as these texts are, neither Orm's appeal to the Cossmós nor Bulwer's employment of Cosmus would not have any traceable lasting effect on the English language.

Quite by the way, the transliteration of κόσμος most commonly recognized today, as 'cosmos', was popularised through two English translations of Alexander von Humboldt's influential five-volume work *Kosmos: Entwurf einer physischen Weltbeschreibung* (Vol. 1 published in German in 1845). The first translation of this work into English, in 1845, by A. Prichard and published by Hippolyte Baillière Publisher in London, was superseded by the authoritative version published in 1849 by Henry G. Bohn in London, and translated by E. C. Otté. Both versions of Humboldt's compendium of natural philosophy anglicised *kosmos* to 'cosmos', effectively creating the expression of a concept that would have a lasting legacy in the English-speaking world. With the Greek notion of the κόσμος, Humboldt found the concept he needed for his unique systematic contribution to the history of natural science:

> By uniting, under one point of view, both the phenomena of our own globe and those presented in the regions of space, we embrace the limits of the science of the *Cosmos*[46], and convert the physical history of the globe into the physical history of the universe; the one term being modelled upon that of the other. The science of the Cosmos is not, however, to be regarded as a mere encyclopaedic aggregation of the most important and general results that have been collected together from special branches of knowledge…In the work before us, partial facts will be considered only in relation to the whole. The higher the point of view the greater the necessity for a systematic mode of treating the subject in language at once animated and picturesque.

[46] Italics original.

(Humboldt 1849: 36, tr. Otté)

Humboldt, who is to be considered responsible for the modern conceptualisation and terminology of 'cosmos', constructed his own theory of nature in reference to ancient philosophers, and especially to the Pythagorean Philolaus of Croton (DK 44), by building upon philological work done especially by August Boeckh in his 1819 edition of Philolaus' fragments.[47] In a representatively eclectic footnote, Humboldt traced the history of the trio of concepts indicated by Greek κόσμος – Latin *mundus* – German *welt* back to Homer and worked through the evidence from Plutarch, Aristotle, the Pseudo-Aristotelian *On the Kosmos*, Ennius, Cicero, Greek inscriptions in the Roman Empire, and Hesychius.[48] The notion of 'cosmos' remained present in the popular imagination from Humboldt forward, but it was significantly re-popularised with the 1978–9 television documentary *Carl Sagan's Cosmos*, co-produced by the PBS affiliate KCET in Los Angeles and the BBC in the UK – where the editor of this volume first encountered this concept. It has remained a formative notion for his entire life. Hence, this volume is entitled *Cosmos in the Ancient World* – a nod to Humboldt's and Sagan's inspiration for conceptualising systems of order in the universe, but also to the first appearance of this word in English, as Cossmós, in Orm's elegant twelfth-century commentary on the verses of the *Gospel of John*.

For the purposes of consistency, this volume employs a strict transliteration, rather than a Latinisation, of κόσμος and related words to *kosmos* (e.g. *kosmoi*, *kosmioi*, *diakosmos*, *diakosmêsis*). This also follows for all Greek terms when they are transliterated (e.g. *koinônia*), although in the case of proper names this volume will employ the Latinised form (e.g. Empedocles of Agrigentum, rather than Empedoklês of Akragas). It will regularly refer to what in English is commonly understood to be 'the cosmos' with '**the** *kosmos*', as

[47] Boeckh 1819.

[48] Humboldt 1849: 51-3.

differentiated from the more general conceptualization of order or arrangement implied by the simple term '*kosmos*.'

4. Acknowledgements

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Xenophon's and the Roman polymath Varro's correlative theories of agronomy and cosmonomy; and imagined the flood of divine essence that, for the Islamic philosopher Avicenna, constituted the universe itself, and guaranteed its identity and knowability. Such topics express the range that was covered in the research seminar and indicate many avenues for further research on *kosmos* in the ancient and medieval worlds that remain, at this point, only partially disclosed.[49]

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[49] The contribution on Archelaus has been published as Betegh 2016, and a version of the piece on Xenophon and Varro has been published as Nelsestuen 2017.

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Just as this volume was approved for publication, one of its contributors, Robert Germany, passed away, at the untimely age of 42 years old. Robert was a perpetual source of intellectual generation, expanding the boundaries of ideas into new shapes, with colours and hues that flickered with every passing word. He thought much on life, love, fate, and the passage of time; on God, family, friends, and strangers. His was a gaze fixed incessant on the heavens. This volume is dedicated to his enduring memory.

> Et cum tempus advenerit, quo se mundus renovaturus extinguat, viribus ista se caedent et sidera sideribus incurrent et omni flagrente materia uno igni quicquid nunc ex dispositio lucet ardebit. Nos quoque felices animae et aeterna sortitae, cum deo visum erit iterum ista moliri, labentibus cunctis et ipsae parva ruinae ingentis accessio in antiqua elementa vertemur.
>
> (Seneca, *To Marcia, On Consolation* 26.6-7)