

The Concept of Cosmos in Milesian Philosophy

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Tiivistelmä – Referat – Abstract <p>Tämä tutkielma käsittelee kreikan sanan <i>kosmos</i> käyttöä aikaisessa esisokraattisessa filosofiassa, eli miletoslaisten Thaleen, Anaksimandroksen, sekä Anaksimeneen ajattelussa. Tutkielman tavoite on haastaa nykyään yleinen ajatus siitä, että miletoslaiset olisivat olleet puhtaita luonnonfilosofeja, tutkimalla moniselitteisen <i>kosmos</i>-sanon käyttöä. Tämä saavutetaan kokoamalla kaikki näitä ajattelijoihin koskevat tekstit, joissa kyseinen sana esiintyy. Ensin tekstit käännetään alkukielestä ja ne analysoidaan filologisesti. Filologisten havaintojen perusteella tekstit asetetaan seuraavaksi niiden filosofiseen kontekstiin, jolloin voidaan osallistua kirjallisuudessa käytävään keskusteluun näiden ajattelijoiden kokonaisfilosofiasta. Lopuksi esitetään vielä <i>excursus</i> liittyen kahteen muuhun keskeiseen esisokraattiseen termiin, <i>phusis</i> ja <i>arkhê</i>. Taustalla tässä työtavassa on ajatus siitä, että esisokraattisen filosofian tutkimuksessa on vuosisatojen saatossa muodostanut tiettyjä perusoletuksia, jotka eivät kaikki ole perusteltuja. Onkin siis arvokasta perehtyä teksteihin itseensä mahdollisimman tarkasti ja systemaattisesti. Lopputuloksena todetaan, että tutkielma tuo esille arvokkaita uusia näkökulmia nykykeskusteluun miletoslaisesta filosofiasta sekä vakavasti kyseenalaistaa Aristoteleesta kumpuavan perinteen, jonka mukaan nämä filosofit olivat puhtaita luonnonfilosofeja. Suositellaan jatkotutkimusta <i>kosmos</i>-sanon käytössä miletoslaisia seuraavien esisokraattisten filosofien teksteissä pitäen mielessä sanan monimuotoisuus ja aristotelisen perinteen vaikutus nykykäsityksiin heidän filosofiastaan. Meillä on vielä opittavaa esisokraatikoista ja esisokraatikoilta.</p>			
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1 Introduction

This study will contribute to the ongoing debates surrounding the early Presocratic thinkers from Miletus: Thales, Anaximander, and Anaximenes. I have taken as my focus the concept of cosmos in the thought of the Milesians, and one of the reasons for this is that they are often labelled the first cosmologists and cosmogonists. Further, the received wisdom holds that the Milesians were natural philosophers preoccupied with the physical world and natural phenomena. It is my view, however, that the Milesians, as well as other Presocratic philosophers, were more holistic thinkers than they are often given credit for.

In order to test this hypothesis, I chose the multi-sided word κόσμος as a case study. In the texts of the Milesians as well as later Presocratics, the word is usually rendered ‘world’ or ‘world-order’ without much attention paid to the semantic range it has. At the same time, there are some reasons to think that the Greek philosophers did not use κόσμος terminologically to mean ‘world’ until Plato.

What I will accomplish in this study is a systematic overview of the usage of the word κόσμος (or rather, the word root κόσμ-) in the texts of the Milesian philosophers, which will allow me to show that we would do well to be sensitive to the whole range of meanings the word has when interpreting them as well as allowing me to make contributions to several philosophical discussions on the interpretation of the thought of the Milesians.

In this introduction I will first outline the goals and methodology of this study, then briefly describe who were the Presocratics in general and the Milesians in particular as well as their significance, and finally discuss the concept of cosmos.

In the second section of this work, I will explore the traditional understanding and interpretation of the Presocratics in general and discuss the motivation for the present project, which is to sharpen that understanding and improve that interpretation through this case study of the concept of cosmos.

In the third section, I will conduct a philological analysis of the relevant “cosmic” texts pertaining to my three chosen thinkers. By focussing on possible alternative meanings of κόσμος instead of automatically translating it as “cosmos” I will be able to give the Greek of the texts an alternative interpretation and translation.

I will follow up this philological study with a philosophical one in the fourth section. There I will be able to put the freshly interpreted texts in their philosophical context and show how we are afterwards well placed to contribute to ongoing philosophical debates about the interpretation of the Milesian philosophers. At the end of the fourth section I will also present an excursus outlining a case analogous to that of κόσμος involving Aristotle’s and his predecessors’ use of the terms ἀρχή and φύσις.

Finally I will summarise my findings in the concluding section.

1.1 The goals and methodology of this study

1.1.1 Goals

An important goal of this study is to contribute to the lively discussion that has recently reawakened on early Greek philosophy. Patricia Curd has published an excellent article documenting the surge of interest in the Presocratics in the twenty-first century¹ and it is my intention to partake in this

¹Curd (2011). Her bibliography includes some 150 articles and books published in since 1990 on the Presocratics. The 2013 Oxford bibliography by Richard McKirahan (McKira-

new wave of scholarship on these most fascinating thinkers.

My larger hypothesis, from which the inspiration for this case study stems, is that the Presocratics do not get enough credit for the holism and all-embracing nature of their thought. Too often they are reduced to caricatures like “Thales thought everything is water”, “Heraclitus thought everything is fire”. They are also, following Aristotle’s treatment of them, traditionally conceived of as purely natural philosophers.² It is becoming recognised, however, that at least some of the Presocratics, for example the late Presocratic Democritus, did practice what Socrates is supposed to have originated, which is ethics and the philosophy of human life.³

To begin to point a way in which this hypothesis could be shown to be valid, I chose to study the semantically multi-faceted word κόσμος, which is traditionally understood to signify ‘world’ in philosophical texts. The word however has both aesthetic and ethical connotations, and thus is open to multiple interpretations. I set out to see whether, if we approach the Milesians’ “cosmic” fragments with these multiple possible connotations in mind, we could say something interesting about their thought and its scope. I will speak some more about the aims of this study in section 2.2.

1.1.2 Methodology

This study was conducted by way of close readings of the relevant texts of the Milesian philosophers. A philological study was made of the materials⁴ which was then followed by followed by a philosophical analysis setting the earlier findings in their context within the known texts. This analysis in

han (2013)) includes nine works published during that time just on the three individual Milesians alone and a plethora of other works dealing with Presocratics in general.

²I will discuss the traditional interpretation of the Presocratics below in section 2.

³Annas (2002), Warren (2002), Vlastos (1975), Taylor (1999).

⁴All translations from Greek and Latin are my own unless otherwise indicated.

turn made it possible to make contributions to ongoing philosophical debates surrounding the interpretation of the Milesians.

The material used was gathered from the digitised collection of ancient Greek texts found at the *Thesaurus Linguae Graecae* (hence TLG). The criterion for inclusion in this study was the presence of the word root κόσµ- in the text. As the texts in TLG which relate to the Milesians derive mainly from Diels and Kranz's monumental collection of Presocratic fragments,⁵ which saw its latest edition published in 1952, the texts have been supplemented by consulting the latest collection of Presocratic texts by Graham.⁶

Working with Presocratic materials is notoriously complex due to the scarcity and the nature of our evidence. With reference to the latter, I wish to say a few words about the doxographical tradition in general and about Aristotle, who is in many cases our best source for the Milesians, in particular.

The doxographical tradition broadly construed, or the tradition of writers recording the opinions (*doxai*) of their predecessors, is generally traced back to two sophists, Hippias and Gorgias. Plato and Aristotle in turn were presumably aware of and influenced by the works of these two.⁷

There are two kinds of writing broadly construed to be doxographical. The first kind, what is called doxography in the narrow sense of the term, includes cataloguing the thought of earlier thinkers presumably with the intention of being faithful to their original thought. These catalogues were written by topic and by thinker and the authors generally do not engage with the ideas they set out. A second kind of doxography is the kind practiced by Plato and Aristotle. They are engaged in philosophical inquiry themselves

⁵Diels and Kranz (1951), hence DK.

⁶Graham (2010), hence TEGP.

⁷Mansfeld (1990).

and mention previous thinkers in order to engage with their thought.

Especially when dealing with Aristotelian reports of the Presocratics, it is imperative to keep in mind that Aristotle often has an agenda when speaking about his predecessors and that there is very little incentive or desire for him to be as faithful to the original as possible. In all cases of doxography it is important to be aware of the context in which a fragment or a testimonium has been preserved, and especially so when it comes to material preserved through Aristotle.

I have tried to be as sensitive to the nuances of working with doxographical material as possible and attempted to indicate any problems in reliability of our sources where necessary.

1.2 Introduction to the Presocratics and the Milesians

1.2.1 Who are the Presocratics?

The Presocratics were a group of thinkers usually considered to include philosophers from Thales in the sixth century BC to the atomists Leucippus and Democritus of the fifth. The term, coined in the eighteenth century AD and popularised by Herman Diels in the nineteenth, is notoriously inexact. The latest so-called Presocratics were contemporaries Socrates, who died in the first year of the fourth century BC. It tends also to exclude for example medical writers of the same period as well as those described as Sophists.

The distinction attempted by labelling philosophers pre- or post-Socratic was one between objects of inquiry. The Presocratics were described as being concerned with cosmological and physical, or natural, phenomena and issues as opposed to Socrates, who invented moral speculation. It is widely accepted these days, however, that this distinction is not entirely accurate

and that several of the Presocratic thinkers studied distinctly human affairs such as ethics.

Further, the term Presocratics implies a kind of unity among the thought of these philosophers, who in fact were a diverse group each if thinkers with their individual preoccupations and approaches to philosophy. Some scholars deliberately refrain from using the term because of these issues here described.⁸ In this work I use the term loosely to refer to philosophers uninfluenced by Socrates' philosophy and retaining the traditional sense which excludes the Sophists, with whom I am not here concerned.

In the sense of the word in which I will be using it, the Presocratics were roughly 14 thinkers commonly described as natural philosophers from different places in the Greek-speaking world surrounding much of the Mediterranean sea. They wrote prose or poetry treatises on diverse topics, most of which are now entirely or at least largely lost. Most of what we have left of their thought is preserved as fragments or reports in other, later writers' works, which presents considerable challenges to their interpreters. This much unites the Presocratics. I will now give brief details of the three thinkers with whom I am here concerned, the first three philosophers Thales, Anaximander, and Anaximenes. I will justify my selection of these three thinkers below in section 1.3.2.

1.2.2 The Milesians: Thales, Anaximander, and Anaximenes

1.2.2.1 Thales Thales was born c. 624 BC at Miletus in Ionia, on what is now the west coast of Turkey. He was revered as one of the seven sages and famed for his political acumen. He is best known for his theory of water

⁸E.g. Daniel W. Graham, the author of the latest handbook and collection of texts of the Presocratics, calls his work *Texts of the Early Greek Philosophers*. For discussions on the notion of "Presocratic philosophy" see e.g. Long (1999).

as the source of all things and his (supposed) prediction of a solar eclipse probably in 585 BC. He died c. 546 BC.

1.2.2.2 Anaximander Anaximander was born c. 610 BC also in Miletus, which makes him about 15 years Thales' junior. He is the first thinker for whom a detailed cosmology is attested. He is also credited with positing something boundless as the first principle, inventing the gnomon and being the first to draw a map of the world. He died c. 546, or around the same time as Thales.

1.2.2.3 Anaximenes Anaximenes's *floruit* dates are usually given as 546-526 BC. He was the younger contemporary of Anaximander and a fellow Milesian. His *Urstoff* is reported to have been air and he continued in the what is commonly called the cosmological tradition of Anaximander.

1.2.3 The significance of the Presocratics

With the Presocratics we are at the very fount of Western thought. "Philosophy begins with Thales" is a famous echo of Aristotle by Bertrand Russell,⁹ and with Thales begins the Presocratic era in particular. One of the reasons we ought to study the Presocratics has to do with those who came after them. No one would deny the place in the history of philosophy of, or the substantial contribution made to philosophy by, Plato and Aristotle. It is important to bear in mind that these two monumental thinkers did not spring to philosophical life like Athena, fully formed and armed, from the cloven head of Zeus, but rather they were the products of their culture. That culture was one that was already possessed of a way of doing philosophy—several of

⁹Russell (1961) 25.

them, in fact.¹⁰ These were the result of the work of the Presocratics, and this alone makes them worthwhile philosophically as well as historically. As James Warren writes in the introduction to his *Presocratics*: "[Plato and Aristotle] both saw that it was important to engage with the work of their philosophical predecessors".¹¹

But the merits of the Presocratics need not be purely derivative. Most importantly the Presocratics brought forth a novel way of thinking and of answering the fundamental questions about the human experience and the world around us. It has in the past been stressed on the one hand that it is the fact that the Presocratics first raised the questions they did that makes them significant in the history and development of philosophical thought.¹² On the other hand the diametrically opposite point has been made: it is not the questions that the Presocratics asked but rather the entirely novel answers they gave to those questions that mark them as worthy to be called the first philosophers.¹³

I suspect, however, that the stress in these analyses is misplaced. As opposed to the former point that stresses the questions, I argue that the Greeks were long before the Presocratics preoccupied with the idea of the origin of the world (see the various cosmogonies of Hesiod and others), the mechanics of natural phenomena (for example the wrath of Zeus as the source and cause of lightning), and the place of man in the universe (for

¹⁰See e.g. Aristotle's catalogue of views on the soul at *De Anima* 1.2.

¹¹Warren (2007) 3.

¹²"[T]he importance of this early thinker [Thales] lies in the fact that he raised the question, what is the ultimate nature of the world; and not in the answer that he actually gave to that question or in his reasons, be they what they may, for giving that answer." Copleston (1946) 23.

¹³"[T]he Presocratics differ ... from their predecessors not so much in the kinds of questions they asked (above all, "What is the nature of reality?"), but in the kinds of answers they gave ... For the first time they asked and answered searching questions about the distant past of the universe and all its parts." Waterfield (2000) xxiv.

example humankind as the progeny of Zeus and the Titans). For the pre-philosophical mythical thinker may raise the question “Why does the sun rise in the east?”—a meteorological issue such as one of those that occupied the earliest philosophers—only to answer it with “As the Muse-inspired poets tells me it is because that is where Helios and his horse-drawn chariot emerge after travelling through the earth-encircling Oceanus from the west at night.” I will discuss the intellectual background of the Presocratics in more detail in section 2.1.1.

As opposed to the latter point that stresses the answers we may remark simply that in light of modern science they are just plain false. Everything is not composed of water or air. We can analyse these substances and point to their constituent elements (molecules) and again to their constituent materials (atoms). We thus know that ‘water’ or ‘air’ is not the correct answer to the question about of what everything is ultimately made up.

Instead, my contention is that it is not the questions the Presocratics raised nor the answers that they gave but rather the method by which they reached the answers to their questions that makes them important contributors to the practice of philosophy. I do not claim that the Milesians were necessarily aware of their method or consciously applying a methodology they had explicitly formulated. But this is not necessary for there to *be* a method which they can be seen to have used.

Do they arrive at their answers by following their senses and logical thought, or by relying on authority and mystery? Waterfield writes eloquently of the significance of this method “in not adhering to the traditional framework, in assigning the functions of the gods to natural phenomena, in using what we can recognise as logic to reason things through coherently, in forming general philosophical hypotheses and embracing reductionism

rather than pluralism, and [doing so] in an unrestricted, even iconoclastic spirit of enquiry”.¹⁴

This, then, is why we should study the Presocratics. Not only were they formative to the thought of Plato and Aristotle, but most significantly they point the way to an entirely novel way of approaching and answering the age old questions of why are we here and how did all this around us come to be.

1.3 Introduction to the concept of cosmos

I have chosen the concept of cosmos and the Greek word κόσμος in particular as the subject of this study because of their centrality to the thought of the Milesians. In this section I will first discuss the meanings of the word κόσμος, then discuss the dating of its terminological use as ‘universe’ or ‘world’, and finally discuss the role of the concept of cosmos in Presocratic philosophy.

1.3.1 Meanings of ΚΟΣΜΟΣ

What lies at the heart of the Greek noun κόσμος and its cognate verb κοσμέω is the idea of order. The noun is defined in Liddel and Scott’s *Greek Lexicon*¹⁵ as (A) ‘order’; (2) ‘good order’, ‘good behaviour’; (3) ‘form’, ‘fashion’; (4) of states, ‘order’, ‘government’, ‘constitution’; (II) ‘ornament’, ‘decoration’; (2) ‘honour’, ‘credit’; ... (IV) ‘world-order’, ‘universe’, ‘region’ of the universe; (2) ‘microcosm’; (3) ‘the known or inhabited world’; (4) ‘men in general’. The verb has the following definitions: (A) ‘order’, ‘arrange’, ‘set in array’, ‘marshal’; (2) ‘arrange’, ‘prepare’; (II) ‘order’, ‘rule’; (III) ‘adorn’, ‘equip’,

¹⁴Waterfield (2000) xxiv.

¹⁵Liddell and Scott (1968), hence LSJ. Some regional meanings have been omitted from the list.

‘dress’; (2) ‘adorn’, ‘embellish’; (3) ‘honour’; (IV) (in the passive voice) ‘to be assigned, ascribed to’. As we can see, the root ‘κόσμι-’ has a large semantic range from the political and the military through the ethical and the aesthetic to the cosmic proper, so to speak. However, most often in translations of the texts of the Presocratics the word is rendered uniformly as “world-order”, meaning the beautiful or fine arrangement of the universe. The notion of κόσμος as signifying the “combination of order, fitness and beauty”¹⁶ is however speculative, as Finkelberg rightly points out in his 1998 article:

“[T]he association of the derivative sense—‘world’—of κόσμος with its other derivative sense ‘adornment’, and with its primary meaning, ‘order’, has never been empirically proved ... and the divergent senses of a word do not produce a cumulative meaning.”¹⁷

I think this point cannot be stressed enough. The fact that a word has more than one meaning does not mean that one can mix and match to create hybrid meanings. Consider for example the English word “order”. It has both the meanings of a “brotherhood” (as in “the Dominican order”) and “sequence” (as in the order in which things are done) but not the combined meaning of a “sequence-brotherhood”. Hence I agree with Finkelberg in that the chimera translation “world-order” had best fall into disuse. It is my purpose here to demonstrate that the use of κόσμος is more nuanced in the texts of the Milesians.

A related observation, which serves partly as the inspiration for the current study, is made by Finkelberg in the article quoted above. He makes

¹⁶Guthrie (1981) 1.208 n. 1.

¹⁷Finkelberg (1998) 104.

the point that there seems to be a kind of circularity at play when arguments are made concerning the word κόσμος in the Presocratics and then interpretations are formed of the overall meaning of their theories. First an assumption is made that the word κόσμος is an established Presocratic term for the world, then the argument is presented based on the use of the word κόσμος that the early Presocratics were mainly concerned with the natural phenomena of the universe, and finally this supposed focus of their philosophy is cited as evidence for the meaning of κόσμος that was assumed in the first place.¹⁸

1.3.2 Dating the terminological use of ΚΟΣΜΟΣ

There is some considerable scholarly disagreement over exactly when the word κόσμος acquired its specialised meaning ‘world’. Ancient sources, chiefly Diogenes Laërtius, date the innovation to the time of Pythagoras who used it to refer to the sky or the heavens.¹⁹ While the historical accuracy of attributing this acquisition of terminological status and meaning ‘world’ to Pythagoras are not uncontroversial,²⁰ there is undoubtedly something of value we can learn from this report by Diogenes. As Raymond Geuss writes in his essay “Wisdom of Oedipus and the idea of a moral cosmos”:

¹⁸ “[A] circular way of reasoning runs from the supposed meaning of κόσμος to an interpretation of the general purport of Presocratic theories, and from these theories to the meaning of κόσμος.” Finkelberg (1998) 105.

¹⁹ “τὸν οὐρανόν”. Diogenes Laërtius, *Vitae* viii.48.

²⁰ Finkelberg writes of the alleged Pythagorean origins of the term as follows: “The beginning of the terminological career of κόσμος is traditionally associated with Pythagoras whom, it is generally maintained, Greek doxography credited with using the word as ‘world’. Yet the examination of the testimony hardly warrants this view.” Finkelberg (1998) 107. It is important to keep in mind that other terms, like ‘philosophy’ and ‘category’ have also been attributed originally to Pythagoras. At least for ‘category’ this is clearly wrong. Finkelberg goes on to argue for a rather late date for the beginning of the “terminological career” of κόσμος with Plato, but for the purposes of the present work I will remain agnostic about this claim.

Even if Diogenes is completely wrong about Pythagoras, it is important that he has the feeling that it is not natural, self-evident, or universally accepted that one may use the word ‘cosmos’ in a more general way, that is, ... to refer to the sky, the heavens, or indeed the world as a whole considered as a unitary, attractively ordered structure. Rather than being obvious, this, he thinks, needs some further explanation, and he thinks there was a time when people did *not* use ‘cosmos’ to refer to the world as a whole, as they did by his time. So there has been, he thinks, a change that is significant enough conceptual change to require some account of how and when that happened.”²¹

It is also my feeling that Diogenes’ intuition is right and, further, that the Milesians thought and wrote using the word κόσμος *before* it acquired its terminological status and the technical meaning ‘world’.

I have chosen the three early Milesian thinkers because of their position at the head of the tradition of philosophy as well as their close association both temporally and geographically. They will have shared a similar cultural and intellectual background and will most certainly have been aware of each other. They therefore make up a coherent unit to be studied together. I will treat the three thinkers separately in sections three and four, but will draw on my findings in each case in my concluding section five.

It is worth noting here that it has been argued by Finkelberg that “the earliest indubitably authentic occurrence of κόσμος in the philosophical context is ... in Heraclitus”,²² who is traditionally estimated to have been the junior contemporary of Pythagoras (c. 535–c. 475 BC). Finkelberg’s reas-

²¹Geuss (2014) 202-3.

²²Finkelberg (1998) 110.

ons for concluding this are however somewhat hasty: he only considers the authenticity of two fragments, Anaximander testimonium A 11 and Anaximenes fragment B 2, in addition to a pseudo-Hippocratic tract *De hebdomadibus*. What I shall attempt to do is to show that the word was in fact used already by some of the Milesians already.

1.3.3 Cosmos as a central concept in Presocratic philosophy

The idea of cosmos is absolutely essential to our understanding of the Presocratics. Especially the early thinkers from Ionia are routinely called “cosmologists” and their thinking is said to present a “cosmogony”.²³ McKirahan, tracing the importance of cosmos all the way back to Hesiod, writes: “Hesiod’s belief that the world is ordered in a way that humans can understand—in other words that it is a kosmos (world order, ordered world)—is a fundamental article of faith for the Presocratics.”²⁴

Raymond Geuss speaks of the centrality of the concept of cosmos and the notion of order in the essay quoted in section 1.3.2. He first quotes of the gnomic poet Phocylides of Miletus (born c. 560 BC, making him junior to the Milesian philosophers):

Καὶ τόδε Φωκυλίδου· πόλις ἐν σκοπέλωι κατὰ κόσμον
οἴκεῦσα σμικρὴ κρέσσων Νίνου ἀφραινούσης.²⁵

²³See e.g. Graham (2010) 2-3, Kirk (1974) 296.

²⁴McKirahan (2010) 8. Interestingly enough, the root κοσμο- occurs in Hesiod only seven times: twice in the *Theogony*, four times in *Works and Days*, and once in the fragments. In the *Theogony* the occurrences are at line 573: ζῶσε δὲ καὶ **κόσμησε** θεὰ γλαυκῶπις Ἀθήνη· “And the bright-eyed goddess Athene girded and **adorned** her” and at line 587: αὐτὰρ ἐπεὶ δὴ τεῦξε καλὸν κακὸν ἀντ’ ἀγαθοῖο / ἐξάγαγ’ ἔνθα περ ἄλλοι ἔσαν θεοὶ ἠδ’ ἄνθρωποι, / **κόσμῳ** ἀγαλλομένην γλαυκώπιδος Ὀβριμοσπάτρης· “But when he had made the beautiful evil to be the price for the blessing, he brought her out, delighting in the **finery** which the bright-eyed daughter of a mighty father had given her, to the place where the other gods and men were.” (Latter translation by Evelyn-White (1914).)

²⁵Phocylides, *Sententiae* 4.

“This, too, is <a wise saying> of Phokulides: a polis on a rocky outcrop that is living according to proper order, even if it is small, is stronger than inprudent Niniveh.”²⁶

Geuss then continues to remark that the phrase κατὰ κόσμον—‘in good order’—appears often in the Homeric epics and is thus very old. In the *Iliad* and the *Odyssey*, where the expression κατὰ κόσμον occurs 13 times and the word root κόσμ- a total of 44 times,²⁷ the word is more often than not used to refer to the marshalling of troops and not to anything relating to the universe. However, as Finkelberg remarks, since the hugely influential chapter “Discovery of the world-order” in Werner Jaeger’s *Paideia* of 1947, the word κόσμος has largely been treated as “the acknowledged Presocratic term for the new and distinctive vision of the world” of the early Greek thinkers.²⁸ Jaeger himself writes of Anaximander that his vision of the world was a “triumph of geometrical imagination” and “a visible symbol of the idea of proportion, which is deeply rooted in the thought and life of archaic man”.²⁹ It is precisely this idea of proportion which is at play also in the concept of cosmos. Discussing Anaximander’s famed map of the world, Jaeger continues to say that Anaximander and those who preceded him are to be credited precisely for the discovery that “the world is built up on a system which is orderly, not chaotic”.³⁰

This idea of the world as an “orderly” system, a system κατὰ κόσμον, is what scholars regularly interpret as the standard meaning of the word κόσμος in the early Presocratics thinkers.³¹ In any case the centrality of

²⁶Translation by Geuss, page 202.

²⁷Interestingly enough the root occurs only a total of 6 times in Hesiod: twice in the *Theogony* and four times in the *Works and Days*.

²⁸Finkelberg (1998) 103.

²⁹Jaeger (1944) 157.

³⁰Jaeger (1944) 158.

³¹It is interesting to note that a poet like Phocylides, writing *after* Anaximander, still uses

this idea of nature as something governed by intelligible laws in an orderly fashion cannot be disputed.

the word κόσμος in a widely distinct sense from the one that, according to Jaeger and most scholarship on the subject since, was adopted by his fellow Milesians before him.

2 The traditional understanding of the Presocratics and the motivation for this study

2.1 The traditional understanding of the Presocratics

2.1.1 The intellectual background of the Presocratics

As I already hinted in section 1.2.3 I do not think it wise to consider the Presocratics in isolation from their intellectual and cultural background, of which the mythology as organised by Homer and Hesiod in particular form a major part. It is my intention here to briefly sketch the existing understanding of the relationship between mythology and religion on the one hand and the beginning of philosophy on the other.

The traditional story about this period in time, the advent of philosophy in the sixth century BC, told of a major and sudden break away from μῦθος and into the arms of the awaiting λόγος.³² The so-called “mythical thinking” of the Greeks before the activities of Thales is contrasted sharply with the dawning era of “rational thinking” that he helped usher in.³³ This sudden break does not seem entirely plausible to me, nor to the majority of later scholars. According to Kirk’s analysis its roots are in German philosophy of the late eighteenth and early nineteenth centuries, especially Kant, Fichte, Shelling, and Hegel. The sharp distinction between “mythical” and “rational” seems to Kirk to have hinged upon a distinction made by Kant between perceiving and conceptualising as well as the assertion by Fichte

³²Vernant describes this traditional story as follows: “All of a sudden, on the soil of Ionia, *logos* presumably broke free of myth, as the scales fell from the blind man’s eyes. And the light of reason, revealed once and for all, has never ceased to guide the progress of the human mind”, Vernant (1984) 104.

³³G. S. Kirk has much to say of, and against, this kind of story in chapter 12 “From Myths to Philosophy?” (pp. 276-303) of his *The Nature of Greek Myths* Kirk (1974).

and Shelling that there is a mode of direct apprehension without conceptualisation in the case of aesthetic judgement. Finally the Hegelian idea of the movement of the human spirit from simpler to more nuanced forms of thought provides the motivation for the traditional story.³⁴ Against this type of story Kirk argues forcefully that there is no such thing as an irrational “mythical thinking”³⁵ from which the early philosophers could break away but rather that there had always been *a kind of* rationality to the religion of the Greeks.³⁶

Against this traditional idea that mythology was suddenly somehow entirely abandoned and “rationality” embraced by this new movement of Milesian philosophers Kirk also argues that their thinking involves significant features of the myths by which they grew up surrounded.³⁷ This is undoubtedly true and Kirk’s view, one that has gained support in subsequent literature, is based on an emphasis on the continuity of thought from the myths to philosophy. Even Burnet, elsewhere hostile to the idea of myth leading to philosophy,³⁸ writes that “the rudiments of what grew in to Ionic science and history are to be found in [Hesiod’s] poems”.³⁹

³⁴Kirk (1974) 284-5.

³⁵“[M]ythical thinking’ can be clearly seen for what it is: the unnatural offspring of a psychological anachronism, an epistemological confusion and a historical red herring”, Kirk (1974) 268.

³⁶“[P]hilosophy has no monopoly of either rationality or speculative interest”, Kirk (1974) 300; “Should the acceptance of divine elements in myths be associated with a special kind of thought, precisely? At any rate it has nothing to do with an exclusive kind of ‘mythical thinking’, since what is entailed is clearly, if anything, religious thinking. ... religious thinking of the kind implicit in Homer is not the polar opposite of rational thinking. Rather it implies a different logic, a small number of shifts in the basic assumptions about cause and effect or, in more general terms, the nature of reality.” Kirk (1974) 292.

³⁷Kirk (1974) 293, 295-7.

³⁸For example: “[T]he theory, so commonly held by the earlier philosophers, that the earth had been originally in a moist state, was not mythological in origin, but was based on, or at any rate confirmed by, biological and paleontological observations of a thoroughly modern and scientific type”, Burnet (1908) 30.

³⁹Burnet (1908) 7.

It is worth noting here that Hesiod was not the only one to provide a cosmogony in the century or centuries preceding and contemporaneous with the Presocratics.⁴⁰ The structure of these cosmogonies, the best known of which is of course Hesiod's, arguably provided a conceptual framework within which the early philosophers presented their findings. Graham identifies six features of this framework that are found both in Anaximander's philosophical system (as Graham reconstructs it) and Hesiod's *Theogony*: (1) There is a source from which everything arises. (2) There is a process by which the constituents of the world arise out of the originative stuff. (3) The constituent stuffs of the world are organised into the material layers of the world. (4) The structures and materials of the world are stabilised into the state of affairs we are familiar with in the world. (5) Living things emerge. (6) A wide variety of phenomena are explained by the model.⁴¹ It has likewise been noted that the Hesiodic system of cosmogony was deeply *genetic* in form and that the early Presocratics' use of embryological terms that "simultaneously evoke and rationalise the themes of sexual generation and sacred marriage"⁴² is therefore a significant nod in the direction of mythology.

It is a consequence of these similarities between the structure and content of mythology and the first philosophies that another strand of the traditional understanding states that philosophy began merely as a rationalising of the traditional mythology. Instead of creating a new science or philosophy, the Milesians merely took mythology and the worldview it encompassed and

⁴⁰Hesiod is believed to have been active between 750 and 650 BC, around the same time as Homer. "We have records of great activity in the production of cosmogonies during the whole of the sixth century BC, and we know something of the systems of Epimenides, Pherekydes, and Akousilaos. As there were speculations of this kind even before Hesiod, we need have no hesitation in believing that the earliest Orphic cosmogony goes back to that century too", Burnet (1908) 9.

⁴¹Graham (2009) 16-17.

⁴²Vernant (1984) 106-7. Examples of terms are γόνιμον, ἀποκρίνεσθαι, φλοιός.

clothed in new garments, those of secularity and abstraction. Further the questions answered were the same as those answered by mythology and did not look for regularities or laws of nature.⁴³ Kirk argues against this view on the grounds that philosophy did more than *merely* naturalise existing myths. According to Kirk, the shift into philosophy ought first and foremost be characterised as a shift in attitude towards the world and of human thought.⁴⁴ Further Vernant argues that although the Milesians were indebted to mythology, they wrought a profound kind of change on the intellectual attitude independently of this relation. His argument is that borrowing from the orderliness they observed in the human sphere, and making liberal use of the mathematics and astronomy they had learnt from the Egyptians and Mesopotamians, they imposed a new geometrical order upon the natural sphere that was unlike anything found in mythology.⁴⁵

As a final note here I would like to quote the apt words of Kirk:

⁴³E.g. Vernant, paraphrasing Cornford, describes this view in Vernant (1984) 104.

⁴⁴“[T]he emergence of philosophy in Greece cannot have depended simply on the rationalising of myths, as is sometimes believed, and that even this process involves more than meets the eye. For the rejection of traditional and mythical accounts of the world entailed a radical change of attitude what is interesting and important in the world, a further extension of thought from the particular to the general, and a desire to widen the range of systematic reasoning from the practical to the theoretical”, Kirk (1974) 289. A little later Kirk writes of the so-called “mythical thinking” that preceded philosophy that it “was not a mode of thinking in itself, but rather ... it depended on an *attitude* to the past, and the inherited myths, that determined men’s intellectual approach to life in general”, Kirk (1974) 291, emphasis original. See also Vernant (1984) 107: “Despite these echoes and analogies, however, there is no real continuity between myth and philosophy. The philosopher was not satisfied to repeat in terms of physis what the theologian had expressed in terms of divine power, Corresponding to the change in tone and the use of a secular vocabulary was a new mental attitude, a different intellectual climate.”

⁴⁵Vernant (1984) 107-8: “If it is true that the Milesians borrowed from mythology, they also profoundly altered the image of the universe by integrating it within a spatial framework, according to a more geometrical model. In constructing the new cosmologies, they made use of ideas elaborated by moral and political thought, projecting onto the world of nature that conception of order and law whose success in the city had made the human world a cosmos”, and again at 121: “Its geometrical structure gave the cosmos a kind of organization that was contrary to the one ascribed to it by myth”.

“[T]he process by which Greek myths gave way to philosophy was far from a straightforward one. There was no simple and uninterrupted process from the irrational to the rational, from dreams to logic, from the visual to the conceptual, from darkness to light.”⁴⁶

Any answer to the question of exactly how the process took place must necessarily be inconclusive, but I hope to have suggested some lines of interpretation I view as most fruitful and plausible. To recap my main points: (1) The process of the decline of mythology on the one hand and the rise of philosophy on the other was neither sudden nor a transition from irrationality to rationality. (2) The first philosophers owe a great debt to the mythology of their culture and can be seen clearly as retaining features of it. (3) Their project was however more than dressing the old stories in new, secularised terms. (4) The birth of philosophy signalled a new kind of intellectual attitude toward nature and humankind.

2.1.2 The thought of the Presocratics

James Warren, in the introduction to his 2007 book *Presocratics*, writes the following:

“[A]lthough they did not refer to anyone as a ‘Presocratic’, ancient writers nevertheless often identify a specific phase in the development of Greek philosophy before Socrates and give a narrative account of its development, characterizing it as driven by some shared general concerns, principally concerns in “natural philosophy”: the study of the nature, origin and processes of the

⁴⁶Kirk (1974) 302.

natural world. ... In brief, this story of Presocratic philosophy begins with Thales and the other Milesians, who are principally interested in the question of what is the original material principle out of which all things in the universe are made or from which all things originate. ... Each Milesian offers a different candidate and goes on to offer a description of how the universe and the workings of the natural world can be explained in these terms.”⁴⁷

This idea that the Presocratics were solely preoccupied with nature is a common trope in accounts of the Presocratics. Frederick Copleston writes as follows of the very beginnings of philosophy in Ionia:“... in the period of philosophy’s childhood it was Nature as a whole which first occupied their attention.”⁴⁸ A little later he tells a story, familiar from introductory courses on the history of philosophy, of what the earliest philosophers’ project was. His story is remarkably similar to that of Warren but written fifty years prior:

”In spite of the melancholic side of the Greek, his perception of the constant process of change, of transition from life to death and from death to life, helped to lead him, in the person of the Ionian philosophers, to a beginning of philosophy; for these wise men saw that, in spite of all the change and transition, there must be something permanent. Why? Because change is from something into something else. There must be something that was primary. Ionian philosophy or cosmology is therefore mainly an attempt to decide what this primitive element or *Urstoff* of all things is, one philosopher deciding for one element, another on

⁴⁷Warren (2007) 2-3.

⁴⁸Copleston (1946) 14.

another element.”⁴⁹

Statements like those by Warren and Coplestone, written over half a century apart, represent both the traditional and the current understanding of the work of the Presocratics. Not much has changed over the course of the latter half of the twentieth century and the first years of the twenty-first. But there have also been those who understand the early Presocratics slightly differently. For example Bréhier construes the bias of our Aristotelian sources significantly differently from the generally accepted picture:

“Now, what Aristotle looked for above all in their [the Presocratics’] teaching was an answer to this question: What is the matter of which things are composed? It was Aristotle who put the question and he put it in the language of his own doctrine. *We have no proof that the Milesians themselves were concerned with the problem for which a solution was sought in their writings.*”⁵⁰

I spoke earlier in section 1.1.2 of the inherent difficulties in reading the Presocratics’ thought from the words of Aristotle and we won’t revisit those difficulties here. What I wish to emphasise here is rather the fact that the current understanding of the Presocratics operates upon a multitude of assumptions. Some spring from our earliest sources like Aristotle and his school, some from later scholarly work.

Jaeger, to whom Finkelberg attributes the origin of some of the widely held suppositions upon which most scholarship operates, writes that the

⁴⁹Copleston (1946) 19-20.

⁵⁰Bréhier (1963) 37, emphasis mine. This view, with which I concur, is not uncontroversial. For example Kirk argues that the Milesians, influenced by the genetic model of explanation explicit in Hesiod, thought that “the most revealing thing one could say about the world was *what single material it was ultimately derived from*”, Kirk (1974) 297, emphasis original.

inquiry of the earliest Presocratics was into the the φύσις of things, their nature. The word φύσις shared with γένεσις the idea of origin, not just the resulting form. Hence the Presocratics, according to Jaeger, were chiefly engaged in what we could classify a *metaphysical* activity, and their (merely) physical theories and discoveries were subordinate to this overarching concern with the origins of things around us.⁵¹ I would like to add to this that, although Jaeger is right in pointing out the paramount importance of cosmogony, or the beginning of the world, to the earliest philosophers, what are subordinate to it are not only their physical theories and discoveries but also their observations of human experience. But Jaeger explicitly contrasts the sophists, whom he calls “really cultural innovators” and whose interests are traditionally seen as primarily political and ethical, often focussing on issues of rhetoric and persuasion as well as justice and power,⁵² with “the early ontologists and natural philosophers”. He then goes on to charge the Presocratics of “long neglecting the problem of the nature of human areté”.⁵³

As a first step towards challenging this supposition that all of the Presocratics were merely ontologists and natural philosophers, this present work seeks to reexamine the first of the early Greek thinkers and in particular their concept of cosmos. As Jaeger himself notes: “there is no discontinuity between Ionian natural philosophy and the Homeric epics”,⁵⁴ which are chockfull of tales of human ἀρετή. In support of this alternative approach we may cite Warren, who writes of the traditional view of the Presocratics that in emphasising their physics and metaphysics one excludes or at least

⁵¹Jaeger (1944) 155. On the word φύσις and its relation to γένεσις, see Jaeger (1947) 20, especially note 5. I will return to the idea of φύσις in the thought of the Milesians in section 4.4.

⁵²See for example Warren (2007) 6.

⁵³Jaeger (1944) 150-1.

⁵⁴Jaeger (1944) 151.

downplays other important elements of Presocratic thinking. He lists areas of inquiry such as what we would now call ethics, epistemology, and theology as these elements.⁵⁵

It is my overall hypothesis that just like the Homeric epics were not “only mythology” and somehow devoid of philosophic ideas, so too Presocratic philosophy was not purely “natural” to the exclusion of the human. In fact I wish to assert that the Presocratics were engaged in an all-encompassing pursuit that was not limited to the ontological and the physical but rather sought to explain *all* of the universe including human experience and ἀρετή.⁵⁶ We shall turn to this idea of the Presocratics as holistic thinkers in more detail next in section 2.2.1 below.

2.2 Motivation for the present project

2.2.1 The Presocratics as holistic thinkers

The tendency to treat the Milesians together as “proto-scientists” (and only that) does to them a disservice in two ways. First, it gives the impression that the Milesians were all interested in the same things, in the same way, and went about their inquiries by some identical method. While it is becoming increasingly well understood that the thought of the Presocratics taken as a whole did not form a unified body of theory but rather they were distinct and discrete thinkers with their individual preoccupations, it is still a commonplace in the history of philosophy to treat the Milesians together

⁵⁵Warren (2007) 5.

⁵⁶For example Graham (2010) 2-3:“The Presocratics ... explained the origin and present composition of the world, and almost everything in it. They offered a comprehensive account which would explain everything from heavenly bodies to human society.” See also Waterfield (2000) xx.

as somehow contiguous and tightly bound together.⁵⁷ But it is important in the context of this present study to keep in mind that though Thales, Anaximander, and Anaximenes were, according to tradition,⁵⁸ linked in a chain of teacher—pupil relations, they had their individual interests and ways of reaching their conclusions.

The second way in which treating the Milesians as a school of proto-scientists does them a disservice is that we can easily get the impression that what they were interested in were physical and meteorological phenomena alone. But in fact, as we find Waterfield remarking, “*in all its phases* Presocratic thought was holistic: it was an attempt to give a systematic account of the whole known universe and all its major features”.⁵⁹ What I wish to achieve in this study is to begin to pave the way for establishing that the earliest philosophers were interested in more than just φύσις, or nature, and that we may need to reconsider to what the ancient texts exactly referred when they used that term in connection with the Milesians. In the section below I elaborate more on the choice of *cosmos* as the focus of my investigation.

2.2.2 Why this study into the concept of cosmos?

In an inspiration for the current work Finkelberg writes, and I agree, that “[i]t seems to me somewhat too liberal to grant conveniently the cosmological

⁵⁷A striking example of these two trends together is found in Waterfield: “The idea that [the Presocratics] collectively brought something new into the world, a scientific or proto-scientific attitude, a reliance on *logos*, is too simple and broad a picture. It is in fact rather naïve to lump all the Presocratics together as if they were somehow identical, although it has been a tendency in the history of philosophy from Aristotle onwards. Nevertheless, it is clear that not all the people standardly classified as Presocratic philosophers fall comfortably into the Aristotelian mould. They range from shamans like Empedocles, through mystics like Pythagoras and prophets like Heraclitus, to metaphysicians like Parmenides, philosophers such as Anaxagoras and proto-scientists like the Milesians and the Atomists.” Waterfield (2000) xvi.

⁵⁸E.g. DL i.13.

⁵⁹Waterfield (2000) xx, emphasis mine.

application of κόσμος in a given Presocratic text without seriously checking the possibility of other meanings.”⁶⁰ This work seeks to undertake this very task of checking the possibility of other meanings specifically in the earliest of known Presocratics.

The word κόσμος or one of its cognates occurs as follows in the fragments and testimonia (number of fragments/number of testimonia) of each thinker: Thales 1/6, Anaximander 1/15, Anaximenes 1/3.⁶¹ Given the paucity of textual material for these thinkers and the centrality of the concept for which it is held to stand, this is sufficient evidence for a plausible interpretation.

Copleston writes that the Greeks “first sought knowledge for its own sake, and pursued knowledge in a scientific, free and unprejudiced spirit”.⁶² In this same spirit I will now turn to an examination of each of the “cosmic” texts relating to the Milesian thinkers: first to evaluate the texts based on themselves, then to put these texts in their philosophical context, and finally to show how this fresh analysis can contribute to the discussion concerning these thinkers.

⁶⁰Finkelberg (1998) 105.

⁶¹As we can see, with each thinker the occurrences in the testimonia outnumber those in the fragments and it will be imperative to examine carefully the context of the reports to determine whether we can assume that its use of the word is authentic or anachronistic. More of this has been said in the preceding section 1.1.2.

⁶²Copleston (1946) 16.

3 Textual analysis of the relevant fragments of the Milesians

In this section, I will conduct a philological examination of all the fragments and testimonia of the Milesian Presocratics (Thales, Anaximander, and Anaximenes) relevant to the employment of the word κόσμος and its cognates. This is done with the aim of being afterwards better equipped to understand the philosophies of these thinkers. For if we are to claim that these thinkers had something to say about the *cosmos*, an ordered universe, we must first make sure that they had such a concept and term at their disposal.

3.1 Thales

Thales is commonly regarded as the first philosopher, a tradition that dates back to Aristotle. His dates are roughly 634 - 546 BC. Whether or not Thales left any writings, from which we can assume certain fragments and testimonia derive, is a matter of scholarly controversy. I align myself with Patricia F. O'Grady, who argues that Thales indeed did record the results of at least some of his speculations.⁶³

We have some 4 fragments and 23 pieces of testimonia concerning Thales. The word root κόσμ- appears once in the fragments as collected in DK and in the testimonia 5 times. We will begin with the fragment, DK 11 B 3, in its context.

⁶³O'Grady (2002) chapter 2.

3.1.1 Fragment DK 11 B 3

GALEN In Hipp. de hum. I 1 Θ. μὲν εἶπερ καὶ ἐκ τοῦ ὕδατος φησι συνεστάναι πάντα, ἀλλ' ὅμως καὶ τοῦτο βούλεται [sc. μεταβάλλειν εἰς ἄλληλα τὰ στοιχεῖα]. ἄμεινον δὲ καὶ αὐτοῦ τὴν ῥῆσιν προσθεῖναι ἐκ τοῦ δευτέρου Περὶ τῶν ἀρχῶν ἔχουσιν ὧδέ πως· ‘τὰ μὲν οὖν πολυθρύλητα τέτταρα, ὧν τὸ πρῶτον εἶναι ὕδωρ φαμὲν καὶ ὡσανεὶ μόνον στοιχεῖον τίθεμεν, πρὸς σύγκρισίν τε καὶ πήγνυσιν καὶ σύστασιν τῶν **ἐγκοσμίων** πρὸς ἄλληλα συγκεράννυται. πῶς δέ, ἤδη λέλεκται ἡμῖν ἐν τῷ πρώτῳ.’⁶⁴

Richard McKirahan, in a recent edition of the surviving material on Thales, renders the passage the following way:

Even if Thales declares that all things are composed of water, he still wants this as well [namely, that the elements change into one another]. But it is better to add his own statement from the second book of *On Principles*, which goes something like this: “The famous four, of which we say the first is water and which we posit as if it is the only element, are blended together with one another for the combination, solidification and formation of **the things in the cosmos**. We have already said how in the first book.”⁶⁵

This is a very literal translation of the word but assumes that κόσμος already means ‘world’ by Thales’ time. There is only one instance of the compound of

⁶⁴For a discussion on the authenticity of this passage see Wöhrle (2014) 161 n. 1 and my reflections at the end of this section.

⁶⁵Wöhrle (2014) 161.

the prefix ἐν- ‘in, into’ and the root κοσμ- in extant texts before the fragment of Thales, and that is in Homer (eighth century BC) at *Odyssey* 15.218:

Τηλέμαχος δ' ἐτάροισιν ἐποτρύνων ἐκέλευσεν:
ἔγκοσμεῖτε τὰ τεύχε', ἐταῖροι, νηϊ μελαίνῃ,
αὐτοί τ' ἀμβαίνωμεν, ἵνα πρήσσωμεν ὁδοῖο.

And Telemachus called to his men, and gave command to them, saying: “**Set** all the gear **in order**, men, in the black ship, and let us go on board ourselves, that we may speed on our way.”⁶⁶

The meaning of the verb ἐγκοσμέω here is clearly a combination of the prefix ἐν- ‘in, into’ and the primary meaning of κοσμέω, ‘order, arrange’ and has nothing to do with anything cosmic.

The adjectival form ἐγκόσμιος is first attested in this fragment of Thales and remains relatively rare until well into the current era when the Neoplatonist Proclus (fifth century AD) takes it up and uses it 540 times in his works. After Thales, the next instance of the word stem ἐγκοσμ- in our texts is in a fragment of Democritus (c. 460 – c. 370 BC), again in its adjectival form.

πρῶτον δὲ τάς τε ὑπερκοσμίους τε καὶ ἐγκοσμίους δυνάμεις
συστησάμενος, εἶθ' οὕτως οὐρανόν τε καὶ γῆν πλάνητάς τε καὶ
τοὺς ἀπλανεῖς τῶν ἀστέρων δημιουργεῖ μήτε χρόνου μήθ' ἐτέρωθεν
ὑλῆς προσδεθεῖς ...

And first when he had arranged in order both the supramundane and the **mundane** powers, next similarly he fashioned the heaven

⁶⁶Translation by Murray (1919).

and the earth and the planets and the fixed stars, but not of time
or of material from elsewhere had he bound them ...⁶⁷

For my purposes it is permissible to assume that by this relatively late date the term κόσμος and along with it ἐγκόσμιος had acquired their sense of ‘world’ and hence ‘mundane, worldly’, which is the LSJ definition of the word. This is so especially since it is here contrasted by what I have, again following LSJ, translated as ‘supramundane’: ὑπερκόσμιος.⁶⁸

Given these two distinct meanings found temporally either side of Thales, ‘to set in order’ in Homer and ‘worldly’ in Democritus, we are left wondering what exactly Thales meant when he employed it. It is my contention that Thales was closer to Homer than Democritus semantically. This contention will gain credibility when we examine the usage of κόσμος in Thales’ successors, Anaximander and Anaximenes below in sections 3.2 and 3.3. It will emerge there that there are serious questions we need to ask about what exactly they were saying when, or if, they were using κόσμος.

In light of the above discussion my translation of the fragment runs as follows:

Indeed if Thales also says that all things are composed out of water, still he similarly also means this [sc. that the elements change into each other]. But [it is] better to add also his saying from the second [book of his] *On the Principles* which goes somehow as follows: “For certainly the much-discussed four, of which we say the first is water and [which we] as it were make

⁶⁷DK 68 B 5.2 1-4.

⁶⁸Note here that the prefixes ἐν- and ὑπερ-, especially the latter, indicate that the *cosmos* of Democritus was not all-encompassing or a gloss for an expression for the totality of things like τὰ πάντα. There existed in his universe powers (δυνάμεις), whatever they were, which exist outside or beyond the *cosmos*. See LSJ: “in composites ὑπέρ signifies over, above, in all relations”.

the only element, [they] blend with each other for the formation and putting together and composition of **things that have been ordered**. But how [this happens], has already been said by us before.”

There is of course an alternative approach. There are features of this quotation by Galen which may be seen to suggest that the entire fragment is spurious and should not be assigned the status of verbatim quotation. These features include the fragment’s late date (Galen, if he is the author of the text, wrote in the second century AD), it refers to a piece of writing which may or may not have ever been produced (and which almost certainly originally bore no name let alone the one ascribed to it by Galen), it makes reference to the four elements which were first explicitly brought together by Empedocles, and it includes the Aristotelian term στοιχεῖον to denote an element.

What follows in the next section may serve to strengthen the notion that this fragment, or at the very least its use of the term ἔγκοσμός, should in fact be considered spurious. I have nonetheless wanted to give it due attention and discuss it in detail because I believe it contains important information about Thales’ thought in general and I will refer to it below in section 4.1.

3.1.2 Testimonia

The root κόσμ- appears five times in the testimonia for Thales: DK 11 A 1.44, 11 A 1.128, 11 A 3.6, 11 A 13b.1, 11 A 23.1 and a testimonium not included in DK but found in TEGP 16.15. I wish to argue that the usage in these passages is reflective of their later date by which time the word κόσμος had acquired its terminological meaning and that they are glosses for original

expressions like τό πᾶν, ‘the whole’.⁶⁹ We find two of the testimonia in Diogenes Laërtius’ *Vitae*, three in Aëtius, and one probably from Hesychius.

3.1.2.1 (1) DK 11 A 1.44 and (2) DK 11 A 1.128

(1) Diogenes Laërtius I 22–44 l. 44 ἀρχὴν δὲ τῶν πάντων ὕδωρ ὑπεστήσατο, καὶ τὸν **κόσμον** ἔμψυχον καὶ δαιμόνων πλήρη.

He conceived that the principle of all things is water and that the *cosmos* is ensouled and full of divine powers.

(2) Diogenes Laertius I 22–44 l. 128 Φέρεται δὲ καὶ ἀποφθέγματα αὐτοῦ τάδε: πρεσβύτατον τῶν ὄντων θεός: ἀγέννητον γάρ. κάλλιστον **κόσμος**: ποίημα γὰρ θεοῦ. μέγιστον τόπος: ἅπαντα γὰρ χωρεῖ. τάχιστον νοῦς: διὰ παντὸς γὰρ τρέχει. ἰσχυρότατον ἀνάγκη: κρατεῖ γὰρ πάντων. σοφώτατον χρόνος: ἀνευρίσκει γὰρ πάντα.

Also these apothegms are assigned to him: The oldest of beings is god; for he is uncreated. The finest is the *cosmos*; for it is the work of god. The greatest is space; for it holds all. The fastest is mind; for it speeds through all. The strongest is necessity; for it rules all. The wisest is time; for it discovers all.

These passages date from the early 3rd century AD by which time the term κόσμος as ‘universe’ was well established. The first (1) is an echo of what we find in Aristotle’s *De Anima* at 411a7-8 where πάντα is used instead of κόσμος:

⁶⁹Furley (1989) argues for a distinction between the ideas behind the terms κόσμος and τό πᾶν: “*Mundus* in Latin and *kosmos* in Greek meant a limited, organized system, bounded by the stars: the universe as a whole was called by Greek writers τό πᾶν, and by Latin writers (cursing their language for the absence of a definite article) *omne quod est, omne immensum*, and so on” (2). I will return to this argument in section 4 in my philosophical analysis of the fragments and testimonia here philologically examined.

καὶ ἐν τῷ ὅλῳ δὴ τινες αὐτὴν μεμῖχθαί φασιν, ὅθεν ἴσως καὶ
Θαλῆς ᾤθη **πάντα** πλήρη θεῶν εἶναι.

”Some say that [soul] is mixed in the whole, this is perhaps why
Thales thought that **everything** is full of gods.”

The second passage (2) from Diogenes Laërtius is similar in style to what
find in the doxographical tradition and in the earlier writer Aëtius (to be
dated to the 1st or perhaps early 2nd century AD) to whom we shall turn
next.⁷⁰

3.1.2.2 (3) DK 11 A 13b, (4) DK 11 A 23, and (5) TEGP 16

(3) AËT II 1, 2 (D. 327) l. 1. Θ. καὶ οἱ ἀπ’ αὐτοῦ ἓνα τὸν
κόσμον.

Thales and his followers say the *cosmos* is one.

(4) AËT I 7, 11 (D. 301) l. 1. Θ. νοῦν τοῦ **κόσμου** τὸν θεόν, τὸ
δὲ πᾶν ἔμψυχον ἅμα καὶ δαιμόνων πλήρες· διήκειν δὲ καὶ διὰ
τοῦ στοιχειώδους ὑγροῦ δύναμιν θείαν κινητικὴν αὐτοῦ.

Thales [said] the mind of the *cosmos* is God, and that everything
is together ensouled and full of divine powers.⁷¹

(5) AËT I 3, 1, l. 15 τρίτον, ὅτι καὶ αὐτὸ τὸ πῦρ τὸ τοῦ ἡλίου
καὶ τῶν ἄστρων ταῖς τῶν ὑδάτων ἀναθυμιάσει τρέφεται καὶ
αὐτὸς ὁ **κόσμος**.

⁷⁰The status and even existence of Aëtius’ doxographical work *Placita* is still debated.
For an overview of the doxographical tradition and Aëtius’ place in it, see Mansfeld (2016).

⁷¹See the end of the testimonium in DK: CIC. d. deor. n. I 10, 25 *Th. enim Milesius qui
primus de talibus rebus quaesivit, aquam dixit esse initium rerum, deum autem eam mentem,
quae ex aqua cuncta fingeret.* The word used here is *cuncta*, ‘all’, which likely translates an
original τό πᾶν.

Third, [he infers from this, [namely]] that the fire of the sun and the stars itself is nourished by the raising vapours of water as is the *cosmos* itself.

The first testimonium from Aëtius (3) is from a chapter entitled Περὶ κόσμου, ‘On the Cosmos’ and refers to the (supposed)⁷² material monism of Thales and the other Milesians. Incidentally, this very chapter begins with the following disclaimer:

Πυθαγόρας ὃς καὶ πρῶτος ὠνόμασε τὴν τῶν ὅλων περιοχὴν **κόσμον** ἐκ τῆς ἐν αὐτῷ τάξεως.

Pythagoras first called the extent of the whole ‘**cosmos**’ because of the order in it.

It is clear, therefore, that Aëtius does not mean for us to take it that Thales literally said that the cosmos is one but rather that his theory was that everything was made up of one thing, water. This is the vein which I believe we must interpret the following two testimonia from Aëtius (4) and (5) as well: as short summaries paraphrasing what Thales proposed. Of course the latter half of (4), from a chapter entitled Περὶ θεοῦ, ‘On God’, already sounds familiar based on what we read in Diogenes Laërtius and Aristotle above. Passage (5), from a chapter entitled Περὶ ἀρχῶν, ‘On the first principles’, also echoes Aristotle, this time in the *Metaphysics* (983b22-24):

... λαβὼν ἴσως τὴν ὑπόληψιν ταύτην ἐκ τοῦ **πάντων** ὁρᾶν τὴν τροφήν ὑγρὰν οὔσαν καὶ αὐτὸ τὸ θερμὸν ἐκ τούτου γιγνόμενον καὶ τούτῳ ζῶν ...

⁷²For a rather radical reinterpretation of the physical theory held by the Milesians see Graham (2009).

... [Thales] perhaps taking this assumption [that everything is water] from seeing that the nutrition of **all things** is moist and that heat itself comes to be from this and lives by it ...

3.1.2.3 (6) DK 11 A 3.6 Finally of the Thales testimonia that contain the word κόσμος we have the following, which dates to after the sixth century AD:

(6) Scholia in Platonem Res publica, probably from Hesychius
ἀρχὴν δὲ τῶν στοιχείων τὸ ὕδωρ. τὸν δὲ **κόσμον** ἔμψυχον
ἔφη καὶ δαιμόνων πλήρη.

The principle of the elements [he said is] water. He said the **cosmos** is ensouled and full of divine forces.

Again we find the familiar idea of an animate world full of divine forces or gods. It is likely that this derives ultimately from the passage in Aristotle quoted above.

I have now examined all the passages we have regarding Thales, fragments and testimonia, that contain the word root κόσμ- from a philological perspective. I will draw on the observations here in section 4, but before moving on to the philosophical implications I will turn to Thales' (perhaps) pupil, Anaximander.

3.2 Anaximander

Anaximander, son of Praxiades, a fellow Milesian, is believed to have lived c. 610 – c. 546 BC. He is most famous for positing the boundless, τὸ ἄπειρον,⁷³ as the first principle. The term κόσμος appears 17 times in the texts on

⁷³See e.g. Graham (2009) ch. 2.1.1 for the translation 'boundless'.

Anaximander. It is a matter of scholarly debate whether a clause containing κόσμος is considered a part of the verbatim quotation preserved to us by Simplicius. DK do not think so, others disagree.⁷⁴ To me, it seems most prudent not artificially to chop up what in Simplicius is contiguous text and so I have decided to treat DK 12 A 9 and B 1 as one text and I begin my discussion of the “cosmic” texts of Anaximander with it.

3.2.1 DK 12 A 9 + B 1

Simplic. Phys. 24, 13-21 τῶν δὲ ἓν καὶ κινούμενον καὶ ἄπειρον λεγόντων Ἀ. μὲν Πραξιάδου Μιλήσιος Θαλοῦ γενόμενος διάδοχος καὶ μαθητῆς ἀρχὴν τε καὶ στοιχεῖον εἶρηκε τῶν ὄντων τὸ ἄπειρον, πρῶτος τοῦτο τούνομα κομίσας τῆς ἀρχῆς. λέγει δ' αὐτὴν μήτε ὕδωρ μήτε ἄλλο τι τῶν καλουμένων εἶναι στοιχείων, ἀλλ' ἑτέραν τινὰ φύσιν ἄπειρον, ἐξ ἧς ἅπαντας γίνεσθαι τοὺς οὐρανοὺς καὶ τοὺς ἐν αὐτοῖς **κόσμους**. ἐξ ὧν δὲ ἡ γένεσις ἐστὶ τοῖς οὐσί, καὶ τὴν φθορὰν εἰς ταῦτα γίνεσθαι κατὰ τὸ χρεῶν. διδόναι γὰρ αὐτὰ δίκην καὶ τίσιν ἀλλήλοις τῆς ἀδικίας κατὰ τὴν τοῦ χρόνου τάξιν, ποιητικωτέροις οὕτως ὀνόμασιν αὐτὰ λέγων·

[Report of the interpretation of Theophrastus:] Of those who say the first principle is one and moving and boundless, Anaximander, son of Praxiades, of Miletus, the successor and student of Thales, said the first principle and element of things that are is the boundless, being the first to apply this term to the first principle. And he says it is neither water nor any other of the so-called elements, but some other boundless nature, from which come to be all the heavens and the *cosmoi* in them; out of these [things?

⁷⁴For discussion on the issue see e.g. Mansfeld (2011).

cosmoi?] comes the coming to be of beings, and the perishing into the same comes to be according to necessity; for they grant justice and recompense to each other according to the order of time, speaking thus with rather poetic terms.

Of note here is the distinction made between the heavens (οὐρανοί) and the *cosmoi in them*. It is clear from this passage that any κόσμος of Anaximander's does not refer to the entire universe but rather to a part of it. We find this distinction reflected elsewhere in the testimonia as well.

3.2.2 DK 12 A 10

[PLUT.] Strom. 2 (D. 579) μεθ' ὃν Ἀναξίμανδρον Θάλητος ἑταῖρον γενόμενον τὸ ἄπειρον φάναι τὴν πᾶσαν αἰτίαν ἔχειν τῆς τοῦ παντὸς γενέσεώς τε καὶ φθορᾶς, ἐξ οὗ δὴ φησι τοὺς τε οὐρανοὺς ἀποκεκρίσθαι καὶ καθόλου τοὺς ἅπαντας ἀπείρους ὄντας **κόσμους**. ἀπεφήνατο δὲ τὴν φθορὰν γίνεσθαι καὶ πολὺ πρότερον τὴν γένεσιν ἐξ ἀπείρου αἰῶνος ἀνακυκλουμένων πάντων αὐτῶν. ὑπάρχειν δὲ φησι τῷ μὲν σχήματι τὴν γῆν κυλινδροειδῆ, ἔχειν δὲ τοσοῦτον βάθος ὅσον ἂν εἴη τρίτον πρὸς τὸ πλάτος. φησὶ δὲ τὸ ἐκ τοῦ αἰδίου γόνιμον θερμοῦ τε καὶ ψυχροῦ κατὰ τὴν γένεσιν τοῦδε **τοῦ κόσμου** ἀποκριθῆναι καὶ τινα ἐκ τούτου φλογὸς σφαῖραν περιφυῆναι τῷ περὶ τὴν γῆν ἀέρι ὡς τῷ δένδρωι φλοιόν· ἦστινος ἀπορραγείσης καὶ εἰς τινὰς ἀποκλεισθείσης κύκλους ὑποστῆναι τὸν ἥλιον καὶ τὴν σελήνην καὶ τοὺς ἀστέρας.

After Thales his associate, Anaximander, said the boundless seems to contain the entire cause of coming to be and perishing of the whole, from which [whole? boundless?] he says both the heavens are separated off and generally all the *cosmoi*, which are

boundless. And he declared perishing to come to be, and the much earlier coming to be, from the boundless age of all their revolutions. He says the earth is cylindrical by shape and has the depth of one third of its width. He says that that which is generative of hot and cold for the coming to be of this *cosmos* was separated off out of what is eternal and from this a kind of sphere of flame grew around the air about the earth like bark around a tree; when this had broken off, it was closed into certain circles to to give substance to the sun, the moon, and the stars.

The construction τούς τε οὐρανοὺς ... καὶ ... τοὺς ... κόσμους in the first sentence is significant. It may be read to signify that these are two different sets of things that both need to be mentioned. But if we take into account the word καθόλου, ‘generally’, it may be taken to mean that the heavens are a subset of the *cosmoi*. To this latter interpretation lends further credence the assertion that the *cosmoi* are described as ”boundless”.

It is further significant to note that the singular *cosmos* in this passage is qualified by the demonstrative pronoun ὅδε, ‘this’. LSJ point out that ὅδε, like οὗτος, as opposed to ἐκεῖνος, is used to designate what is nearer as opposed to what is more remote; but ὅδε, as contrasted with οὗτος, refers more distinctly to what is present, to what can be seen or pointed out. This seems to indicate that we live in a *cosmos*, but one which is not unique in the universe or totality of things.

A final significant feature of this passage is that the boundless is used both as a noun and as an adjective in the very first sentence. We will come across this phenomenon later in DK 12 A 14 and I will discuss it in more detail there.

3.2.3 DK 12 A 11

HIPPOL. Ref. I 6, 1–7 (D.559 W. 10) Θαλοῦ τοίνυν Ἀναξίμανδρος γίνεται ἀκροατής. Ἀ. Πραξιάδου Μιλήσιος· οὗτος ἀρχὴν ἔφη τῶν ὄντων φύσιν τινὰ τοῦ ἀπείρου, ἐξ ἧς γίνεσθαι τοὺς οὐρανοὺς καὶ τὸν ἐν αὐτοῖς **κόσμον**. ταύτην δ' αἰδίων εἶναι καὶ ἀγήρω, ἦν καὶ πάντα περιέχειν τοὺς **κόσμους**. ... τὰ δὲ ἄστρα γίνεσθαι κύκλον πυρός, ἀποκριθέντα τοῦ κατὰ τὸν **κόσμον** πυρός, περιληφθέντα δ' ὑπὸ ἀέρος.

Anaximander was the student of Thales. Anaximander, son of Praxiades, of Miletus. He said the first principle of things that are is some nature of boundless, out of which come to be the heavens and the **order** in them. This [nature] is everlasting and ageless, which also surrounds all the *cosmoi*. ... The stars come to be a circle of fire, having been separated off from the **orderly** fire, and being surrounded by air.

In this passage we find the already familiar distinction between heaven and *cosmos*, only this time it's a singular *cosmos* in plural heavens. This might suggest that we had better understand κόσμος here as simply 'order' rather than 'world'. Matters are however complicated in the very next sentence which introduces the plural *cosmoi* again.

The phrase κατὰ κόσμον, which we find in the final sentence, is common in Homer (it appears 14 times) and means nearly every time "in an orderly way" or "in good order". It seems a similar meaning is intended here. TEGP translates τοῦ κατὰ τὸν κόσμον πυρός as "from the cosmic fire". This translation seems to imply that the adjective κόσμιος is used, but instead we find the noun in the accusative with the preposition κατὰ. I believe this

is an echo of the Homeric formula with a similar meaning. It is not that the fire is somehow cosmic, it is rather that the fire is arranged according to an order, orderly. Compare for example the “sphere of flame” that appears in connection with the coming to be of the *cosmos* in Pseudo-Plutarch (DK 12 A 10): φησὶ δὲ τὸ ἐκ τοῦ αἰδίου γόνιμον θερμοῦ τε καὶ ψυχροῦ κατὰ τὴν γένεσιν τοῦδε τοῦ κόσμου ἀποκριθῆναι καὶ τινα ἐκ τούτου φλογὸς σφαῖραν περιφυῆναι τῷ περὶ τὴν γῆν ἀέρι ὡς τῷ δένδρωι φλοιόν.

3.2.4 DK 12 A 14

ΑἸΤ. de plac. I 3, 3 (D. 277) Ἀναξίμανδρος δὲ Πραξιάδου Μιλήσιος φησὶ τῶν ὄντων ἀρχὴν εἶναι τὸ ἄπειρον· ἐκ γὰρ τούτου πάντα γίνεσθαι καὶ εἰς τοῦτο πάντα φθείρεσθαι. διὸ καὶ γεννᾶσθαι ἀπείρους **κόσμους** καὶ πάλιν φθείρεσθαι εἰς τὸ ἐξ οὗ γίνεσθαι.

Anaximander, son of Praxiades, of Miletus, says that the first principle of things that are is the boundless; for from this everything comes to be and into this everything perishes. This is why boundless *cosmoi* both come to be and again perish into that out of which they come to be.

This is a rather puzzling passage in that the quintessential Anaximandrian term ἄπειρον, ‘boundless’, is used both as a noun on its own (τὸ ἄπειρον, ‘that which is boundless’ or literally ‘the boundless’) and as an adjective (ἀπείρους κόσμους, ‘boundless *cosmoi*’). We saw boundless do this type of double duty earlier in DK 12 A 10. In the extremely sparse fragments we have of Anaximander (DK count six in number and for example Graham (2010) seems to feel they were generous in their estimate) the term ἄπειρον appears only in the substantival form τὸ ἄπειρον.

It is worth noting that the boundless is described in the fragments as *αίδιον*, ‘everlasting’, and *ἀγήρω*, ‘ageless’ (DK 12 B 2) as well as *ἀθάνατον*, ‘immortal’, and *ἀνώλεθρον*, ‘indestructible’ (DK 12 B 3). With the exception of *αίδιον*, each of these adjectives is formed with the alpha privative prefix just like *ἄπειρον* itself. Because the last term is so intimately bound up with Anaximander’s name it’s possible that other similar adjectives begun to be replaced by *ἄπειρον* and this is the reason we see the term appearing in two distinct ways.

Another point worth noting here is the phrase I’ve translated as “boundless *cosmoi*”. I take the meaning to be that the *cosmoi* are boundless in number rather than magnitude, though the latter interpretation is equally plausible. We will come across an echo of this in DK 12 A 17 where I will be in a position to justify this reading.

3.2.5 DK 12 A 15

ARIST. Phys. Γ 4. 203b 6 ... τοῦ δ' εἶναί τι ἄπειρον ἢ πίστις ἐκ πέντε μάλιστα ἂν συμβαίνοι σκοποῦσιν, ... μάλιστα δὲ καὶ κυριώτατον, ὃ τὴν κοινὴν ποιεῖ ἀπορίαν πᾶσιν· διὰ γὰρ τὸ ἐν τῇ νοήσει μὴ ὑπολείπειν καὶ ὁ ἀριθμὸς δοκεῖ ἄπειρος εἶναι καὶ τὰ μαθηματικὰ μεγέθη καὶ τὸ ἔξω τοῦ οὐρανοῦ· ἀείρου δ' ὄντος τοῦ ἔξω, καὶ σῶμα ἄπειρον εἶναι δοκεῖ καὶ **κόσμοι**.

... The belief in something boundless would seem to arise from five considerations ... But the main and chief reason, which makes for puzzlement common to all [is this]: because we cannot imagine an end of the series, number seems boundless, and likewise mathematical magnitudes and also what is outside heaven. And if what is outside [heaven?] is boundless, so it seems that body

and *cosmoi* are too.

Here we see the by now familiar distinction between heaven (this time in the singular) and plural *cosmoi*. It is not quite clear what the relationship between heaven and a *cosmos* is supposed to be here, but they are clearly two different things. It is plausible the Aristotle is here echoing an original Anaximandrian dictum that *cosmoi* surround heavens or that heavens are somehow inside *cosmoi*. We already saw Aristotle's commentator Simplicius in DK 12 A 9 using this kind of phrasing.

3.2.6 DK 12 A 17

T1. SIMPL. de caelo 615, 13 ... καὶ κόσμους δὲ ἀπείρους οὗτος καὶ ἕκαστον τῶν κόσμων ἐξ ἀπείρου τοῦ τοιούτου στοιχείου ὑπέθετο ὡς δοκεῖ.

... and [Anaximander] assumed, as it seems, that *cosmoi* are boundless and that each of the *cosmoi* [is made up of] such boundless elements.

T2. AĒT. II 1, 3 (D. 327) Ἀ. ... ἀπείρους κόσμους ἐν τῷ ἀπείρῳ κατὰ πᾶσαν περιαγωγὴν sc. γίνεσθαι καὶ φθείρεσθαι.

Anaximander ... [said that] the *cosmoi* are boundless, in the boundless, throughout the whole revolution, sc. coming to be and perishing.

T3. AĒT. II 1, 8 (D. 329) τῶν ἀπείρους ἀποφηναμένων τοὺς κόσμους Ἀ. τὸ ἴσον αὐτοὺς ἀπέχειν ἀλλήλων.

Of those who claimed that *cosmoi* are boundless, Anaximander [said that] they are equally far from each other.

T4. AĒT. II 4, 6 (D. 331) Ἄ. ... φθαρτὸν τὸν **κόσμον**.

Anaximander [said that] the *cosmos* is perishable.

T5. Simpl. Phys. 1121, 5 οἱ μὲν γὰρ ἀπείρους τῷ πλήθει τοὺς **κόσμους** ὑποθέμενοι, ὡς οἱ περὶ Ἄ. καὶ Λεύκιππον καὶ Δημόκριτον καὶ ὕστερον οἱ περὶ Ἐπίκουρον, γινομένους αὐτοὺς καὶ φθειρομένους ὑπέθεντο ἐπ' ἀπειρον, ἄλλων μὲν ἀεὶ γινομένων ἄλλων δὲ φθειρομένων καὶ τὴν κίνησιν ἀίδιον ἔλεγον· ἄνευ γὰρ κινήσεως οὐκ ἔστι γένεσις ἢ φθορά.

For those who assumed that *cosmoi* are boundless in number, like those associated with Anaximander and Leucippus and Democritus and later those associated with Epicurus, they assumed them coming to be and perishing for a boundless [time], forever some coming to be while others are perishing, and they said motion is everlasting; for without motion there is no coming to be or perishing.

The passages collected in DK as 12 A 17 (T1-T5 above) reinforce the idea that for Anaximander *cosmoi* were ἀπειροί, what I have consistently translated as 'boundless'.

In T5 from Simplicius we find a somewhat curious qualifier to the boundlessness of Anaximander's *cosmoi*. It is one of the only two texts in which the boundlessness of *cosmoi* is given a description. I have chosen to translate τῷ πλήθει as "in number" here, although at first it seems unclear whether πλήθος refers to number or magnitude. I take my cue from DK 12 A 14 where we took "boundless *cosmoi*" to refer to *cosmoi* boundless in number as well as from another passage from Simplicius, though from a different work. Let us turn to that next.

3.2.7 TEGP 4

SIMPL. de cael. 202.11-16 οἱ μὲν ἓνα **κόσμον** καὶ πεπερασμένον ἔλεγον ... οἱ δὲ καὶ τῷ πλήθει ἀπείρους **κόσμους**, ὡς Ἀναξίμανδρος μὲν ἄπειρον τῷ μεγέθει τὴν ἀρχὴν θέμενος ἀπείρους ἕξ αὐτοῦ τῷ πλήθει **κόσμους** ποιεῖν δοκεῖ ...

Some said that the *cosmos* is one and bounded ... others that *cosmoi* are boundless in number, such as Anaximander when he made the first principle boundless in magnitude and out of this [first principle?] he seems to make *cosmoi* boundless in number...

The contrast between τῷ πλήθει ἀπείρους κόσμους and ἓνα κόσμον here is a clear indication that πλήθος is meant in the sense of ‘great number’. This interpretation is further supported by the fact that Simplicius describes Anaximander’s ἀρχή as ἄπειρον τῷ μεγέθει, ‘boundless in magnitude’, contrasting μέγεθος with πλήθος.

To conclude, I will now turn to a rather curious testimonium from the philosopher and mathematician Theon of Smyrna.

3.2.8 DK 12 A 26

THEO SMYRN. p. 198, 18 Hill. Ἄ. δὲ ὅτι ἡ γῆ μετέωρος· καὶ κινεῖται περὶ τὸ τοῦ **κόσμου** μέσον.

Anaximander [says] that the earth hangs in the air unsupported; and it moves around the middle of the *cosmos*.

This testimonium seems to be somewhat of an outlier in the context of other texts we’ve examined that contain the word κόσμος. Given the prevalence

of the word κόσμος in the totality of available testimonia for Anaximander, and the similarity of the contexts in which it appears for the most part, it is very tempting to think that he used the word himself in some, if still somewhat mysterious, way. The elaboration of the philosophical import of this must wait until section 4 and for now let us turn to Anaximander's Milesian successor Anaximenes.

3.3 Anaximenes

Anaximenes has left us four fragments believed to be genuinely his writing in addition to some twenty testimonia. The word κόσμος appears once in the fragments and in three of the testimonia.⁷⁵ Let us begin again with the fragment, DK 13 B 2.

3.3.1 Fragment DK 13 B 2

Αἰτ. I 3, 4 (D. 278) Ἀ. Εὐρυστράτου Μιλήσιος ἀρχὴν τῶν ὄντων ἀέρα ἀπεφήνατο· ἐκ γὰρ τούτου πάντα γίνεσθαι καὶ εἰς αὐτὸν πάλιν ἀναλύεσθαι. ‘οἷον ἢ ψυχὴ, φησὶν, ἢ ἡμετέρα ἀἷρ οὖσα συγκρατεῖ ἡμᾶς, καὶ ὅλον τὸν **κόσμον** πνεῦμα καὶ ἀἷρ περιέχει’ (λέγεται δὲ συνωνύμως ἀἷρ καὶ πνεῦμα).

Anaximenes of Miletus, son of Eurystatus, declared air to be the first principle of things that are; for from this all things come to be and back into the same they dissolve. ‘As our soul,’ he says, ‘which is air, controls us, so also breath and air contain the whole

⁷⁵In what follows will ignore the rather cryptic note from Aëtius which forms DK 13 A 12. For the sake of completeness I present the text here: Αἰτ. II 2, 4 (D. 329b not.) καὶ οἱ μὲν μυλοειδῶς, οἱ δὲ τροχοῦ δίκην περιδινεῖσθαι, τὸν κόσμον. “Also there are those who say the *cosmos* is like a millstone, and those who say it spins round in the manner of a wheel.”

cosmos,' (he uses 'air' and 'breath' synonymously).

The passage quoted by Aëtius is believed to be genuine Anaximenean text. What is important to note here is that if the use of κόσμος is genuine and authentic, then its meaning is something limited. The first principle, air or breath, contains or surrounds (the verb used is περιέχω) the *cosmos*. In other words there is something that lies beyond, or outside, the *cosmos*. There is no hint of multiple *cosmoi* in the style of Anaximander here, but the sense that a *cosmos* is not the totality of all things remains. The surrounding air is something perhaps even chaotic: pure, unorganised, original stuff. What it contains is that same stuff but ordered into the comprehensible world we perceive around us.

3.3.2 Testimonia

Next we turn our attention to the two relevant testimonia, both found in Simplicius' works, which describe Anaximenes' thought and which feature the word κόσμος.

3.3.2.1 DK 13 A 11 The first testimonium is found in Simplicius' commentary on Aristotle's *Physics*.

SIMPL. Phys. 1121, 12-17 γενητὸν δὲ καὶ φθαρτὸν τὸν ἓνα **κόσμον** ποιοῦσιν, ὅσοι ἀεὶ μὲν φασιν εἶναι **κόσμον**, οὐ μὴν τὸν αὐτὸν ἀεὶ, ἀλλὰ ἄλλοτε ἄλλον γινόμενον κατὰ τινὰς χρόνων περιόδους, ὡς Ἀναξίμενης τε καὶ Ἡράκλειτος καὶ Διογένης καὶ ὕστερον οἱ ἀπὸ τῆς Στοᾶς. καὶ δῆλον ὅτι καὶ περὶ κινήσεως οὗτοι τὴν αὐτὴν ἔχουσι δόξαν· ὅτε γὰρ κόσμος ἦν, τότε κίνησιν ἀναγκαῖον εἶναι.

They, such as Anaximenes, Heraclitus, Diogenes, and later the Stoics, make the one *cosmos* generable and perishable, who say that the *cosmos* is always, but is not always the same, but rather becomes at another time different according to certain cycles of times. And it is also clear that they held this belief about motion: for when there was a *cosmos*, then there necessarily is motion.

Terms for ‘coming to be’, in γενητὸν derived from γίγνομαι, and ‘perishing’, φθαρτὸν derived from φθείρω, familiar already from Anaximander, make a reappearance here in Simplicius’ report of Anaximenes’ theory of *cosmos*. So, although Anaximenes makes *cosmos* one and not multiple, it is clear again here that it is not all there is. The reference to coming to be and perishing can be understood in terms of what we read in the fragment above: that all things come to be from air and dissolve again into it. There is a reality beyond *cosmos*, in a way more real than the world we observe, from which all things materialise and into which they fade again according to some certain intervals of time.

I wish also to point to an echo perceptible here of the famous fragment of Anaximander, DK 12 B 1, discussed already above in section 3.2.1. Anaximander is quoted as saying the following:

SIMPLIC. Phys. 24, 19-20 διδόναι γὰρ αὐτὰ δίκην καὶ τίσιν ἀλλήλοις τῆς ἀδικίας κατὰ τὴν τοῦ χρόνου τάξιν.

For they grant justice and recompense to each other for their injustice *according to the order of time*.

The structures of the two phrases κατὰ τινος χρόνων περιόδους in Anaximenes and κατὰ τὴν τοῦ χρόνου τάξιν in Anaximander are nearly identical. The preposition κατὰ, ‘according to’, followed by a noun indicating a regular

rhythm (περίοδος, ‘cycle’ and τάξις, ‘regularity’) in the accusative with the preposition or pronoun separated from the noun by the word time, χρόνος, in the genitive.

Both passages are to be found in the same work by Simplicius and so there is a chance that the formulation is his rather than original to the Presocratics on whom he is reporting. As the Anaximander fragment is believed to be authentic, however, it is plausible that this type of phrasing was one that was used by the school at Miletus. If anything, I would suggest that these parallels indicate familiarity on the part of Anaximenes with his predecessor’s work and perhaps even continuation with it. It may be argued that Anaximenes adopts the idea of multiple *cosmoi* of Anaximander, only he makes them explicitly successive and not coexistent as Anaximander’s *cosmoi* have been suggested to be. I shall turn to these ideas multiple *cosmoi* in both Anaximander and Anaximenes again in the following section 4.

3.3.2.2 TEGP 4 Finally we turn our attention to the another testimonium from Simplicius, this time from *De Caelo*.

SIMPL. de cael. 202.11-14 οἱ μὲν ἓνα **κόσμον** καὶ πεπερασμένον ἔλεγον... ὡς Ἀριστοτέλης καὶ Πλάτων, οἱ δὲ ἓνα ἄπειρον, ὡς Ἀναξίμενης, ἀέρα ἄπειρον τὴν ἀρχὴν εἶναι λέγων ...

Some said that the *cosmos* is one and bounded ... such as Aristotle and Plato, some that it is one and boundless, such as Anaximenes when he said that boundless air was the first principle ...

Keeping in mind fragment DK 13 B 2 above, it is not hard to see what Simplicius means by calling Anaximenes’ *cosmos* one but boundless, though the term κόσμος seems to be used in two different senses in them. In the frag-

ment DK 13 B 2 and discussed above in section 3.3.1, which I treat as authentic,⁷⁶ κόσμος was encompassed by air. There we said κόσμος to refer to the closed, ordered system which we observe around us. *Outside* this system, then, exists the air from which all things come to be and into which they dissolve. In the testimonium quoted here, Simplicius seems to be using κόσμος in a different sense, the one found in Plato and Aristotle perhaps, where it denotes the totality of all things that are.⁷⁷

This concludes my textual analysis of the cosmically relevant fragments and testimonia of the Milesian thinkers Thales, Anaximander, and Anaximenes. In the next section I will present some potential new lines of interpretation of these philosophers' thought based on the examination of their use of the word κόσμος.

⁷⁶It has also been suggested that the fragment in actuality derives from Diogenes of Apollonia. See e.g. Graham (2010) 90.

⁷⁷See Graham (2010) 90 for a comment on Simplicius' peculiar use of κόσμος here.

4 New lines of interpretation of the Milesians

To recap, in section 3 I presented, translated, and discussed the "cosmic" fragments and testimonia of the three Milesian philosophers Thales, Anaximander, and Anaximenes. The discussion was focussed on the philological aspects of these texts and pointed to some interesting questions about their philosophical interpretation. In this section I will again examine each thinker individually, this time contextualising the texts of the preceding section and pointing to possible fresh angles from which to approach their philosophical import and examine their place in the reconstruction of the thought of the Milesians.

4.1 Thales

In section 3.1 I examined the extant texts of Thales relevant to this study, one fragment and five testimonia, and came to the preliminary conclusion that the usage of the compound adjective ἐγκόσμιος, used in fragment DK 11 B 3 substantivally in the form τῶν ἐγκοσμίων, is to be interpreted as something akin to 'things that have been ordered' or 'arranged' if to be considered authentic at all. Further, I argued that the instances of κόσμος in the testimonia do not reflect an original usage of the term in Thales' philosophy.

Why is this significant and what does it allow us to say about Thales' thought? The received interpretation says that Thales had a theory about the *cosmos*: it was made up of water. But in light of the fact that he probably never used the term himself, can we be justified in attributing to him a cosmic theory? *Cosmos* is something structured and whole. What seems to have been Thales' preferred expression, τὰ πάντα, has no such connotations. Let me first discuss briefly a few concepts relevant to Thales' thought before

turning to the larger issue of attributing cosmic theories to him.

4.1.1 ΚΟΣΜΟΣ and ΤΑ ΠΑΝΤΑ

As noted in section 3.1, it seems that Thales did not use the word κόσμος to refer to the world. Subsequent attributions of cosmic theories seem all to use κόσμος as a gloss for an expression like τά πάντα. This view is strengthened by the fact that there exist also ancient sources that do not use this gloss but rather preserve what I take to be formulations closer to the original language used by Thales, such as Hippolytus' *Refutatio* 1.1.1-4, which uses the expression τά πάντα exclusively. Hippolytus (third century AD) is considered to be one of the most trustworthy of the biographical doxographers.⁷⁸

4.1.2 ΘΕΟΣ and ΨΥΧΗ

Aristotle reports that Thales' ψυχή, usually rendered 'soul', was κινητικόν τι, 'something motive', because of the observed magnetism of certain substances.⁷⁹ This means two things: magnetic rocks and their ilk possess souls and soul is somehow connected with motion. A little later, he reports Thales to have claimed that πάντα πλήρη θεῶν εἶναι, 'all things are full of gods'.⁸⁰

Thales' gods and souls are connected by Diogenes Laërtius who, attributing the claim to the poet Choerilus among others, reports that Thales was the first to call souls immortal: ἔνιοι δὲ καὶ αὐτὸν πρῶτον εἶπεῖν φασιν ἀθανάτους τὰς ψυχάς, 'Some say that he was the first to say that souls are

⁷⁸O'Grady (2002) xxi.

⁷⁹Arist. DA 405a19-21, DK 11 A 22. Observed magnetism is cited as a source for attributing soul to inanimate (or literally 'soulless') things also by Diogenes Laërtius at 1.24.8-10.

⁸⁰Arist. DA 411a7-8, also echoed by DL 1.27.1-2. Note that Thales' gods are never personified or in any significant way reminiscent of the Homeric or Hesiodic Olympian clan. They are strictly demythologised and the use of language is metaphorical. I suspect that in order to communicate his naturalistic explanation for observable phenomena, Thales has to resort to terms his peers can readily understand.

deathless',⁸¹ where a standard epithet of the gods, ἀθάνατος, is used. Also Cicero says: *Thales ... aquam dixit esse initium rerum, deum autem eam mentem, quae ex aqua cuncta fingeret*, 'Thales said that water is the beginning of things, but god is the mind which formed all things from water'.⁸²

It seems, then, that Thales had a theory according to which there was a feature, variously called ψυχή or θεός or some word for the divine, which is responsible for both the form and motion of everything, and that this feature was present in all things. This theory is further attested in Aëtius, whose account is strikingly similar to that of Cicero: Θαλῆς νοῦν τοῦ κόσμου τὸν θεόν, τὸ δὲ πᾶν ἔμψυχον ἅμα καὶ δαιμόνων πλήρες· διήκειν δὲ καὶ διὰ τοῦ στοιχειώδους ὑγροῦ δύναμιν θείαν κινητικὴν αὐτοῦ, 'Thales held that the mind of the cosmos was god, that the whole is at the same time ensouled and full of gods; also that a divine motive power pervades the elementary moisture of this'.⁸³ This is evidence for my assertion that later doxography tends to conflate ideas and is at times contaminated in a way that obscures the original usage of terms.

It will become important in section 4.1.3 to keep separate the ideas of water on the one hand and soul and divinity on the other. This passage from Aëtius seems, however, to intimately link the two: a divine power pervades the elementary moisture. I believe we will do well to disregard this as evidence for a connection between water and divinity or for the claim that Thales' water *is* divine. This passage is obviously very late in date and ancient testimonia and doxography seem to become increasingly bent on conflating the key elements of an original body of theory into a succinct phrase as decades and centuries pass.⁸⁴ The passage also includes the very

⁸¹DL 1.24.1.

⁸²Cic. De Natura Deorum 1.10.25, DK 11 A 23.

⁸³Aët. P 1.7.11, S 1.1.29b.

⁸⁴E.g. Mansfeld (2016) writes: "However, when one compares Aëtian lemmas concerned

late term στοιχειώδης, which Thales certainly did not use.

4.1.3 Water as a cosmic motive force

Both O’Grady and Gregory put forth theories according to which water has the property of being motive, that soul is a feature of water, and that water may even be divine. O’Grady:

“My understanding is that Thales envisaged soul as a capacity of water, a force that was inherent in water; that it was motive force, but not an additional part or unit; that the power of water which abided in the one material principle of all things ... therefore manifested in all things and was that which caused change.”⁸⁵

Gregory writes:

The Milesian thinkers give us the first cosmogonies as opposed to mythical creation stories or theogonies. The nature of these cosmogonies is contested. Here I argue a common line for Thales, Anaximander and Anaximenes, that they believed that their principal substance, be it water, the unlimited or air, had an inherent ability to steer the processes leading to the formation of the *kosmos*.⁸⁶

O’Grady also attributes to Thales a theory of cyclical change. This theory is said to derive from the observation that water can change its state (for example it can evaporate and become air, only to condense again and descend

with tenets of extant authors, like Plato or Aristotle, with the doctrines found in the original texts, it becomes clear to what extent these doxai have been adapted and distorted, or ‘modernized’, in some sense of the word”.

⁸⁵O’Grady (2002) 108.

⁸⁶Gregory (2007) 26.

as rain) and to account for these modifications. O’Grady also argues that this theory posits water as “the causal agent which brings about all change”.⁸⁷ This is a remarkably Aristotelian formulation of Thales’ thought. O’Grady points out that it “complies with Aristotle’s description of the process of change”⁸⁸ and all her arguments for this theory derive almost exclusively from Aristotle. Thus, I believe it ought to be treated with some caution.

I wish especially to challenge the notion that both Gregory and O’Grady seem to have, that Thales called water the cause of change and motion. Keeping in mind that the ideas of motion and change are intimately bound up in Aristotle’s thought, note what was observed in section 4.1.2: for Thales, what was κινητικόν τι was ψυχή or θεός and not water.

From Diogenes Laërtius we learnt of Thales: ἀρχὴν δὲ τῶν πάντων ὕδωρ ὑπεστήσατο, καὶ τὸν κόσμον ἔμψυχον καὶ δαιμόνων πλήρη.⁸⁹ What is said here is that Thales claimed that water is the ἀρχή and the world is ensouled and full of gods. The two statements attributed to Thales are joined by the conjunction καί, which does not indicate any kind of special relationship between them, they are merely listed.

We find the ideas of motion and ἀρχή joined in Simplicius. Thales is mentioned explicitly in a passage that begins with the words τῶν δὲ μίαν καὶ κινουμένην λεγόντων τὴν ἀρχήν, ‘Of those who say that the first principle is one and in motion ...’⁹⁰ It is safe to assume, however, that Simplicius is here copying Aristotle⁹¹ and I do not consider this as evidence that Thales

⁸⁷O’Grady (2002) 45.

⁸⁸O’Grady (2002) 46.

⁸⁹DL 1.27.1-2, see section 3.1.2.1 for a translation and an analysis of this testimonium.

⁹⁰Simpl. Phys. 23.21.

⁹¹The exact phrase τῶν δὲ μίαν καὶ κινουμένην λεγόντων occurs also in the commentaries on Aristotle’s *Physics* by Philoponus and Theophrastus and probably derives from the Aristotelian text at 184b15-18: Ἀνάγκη δ’ ἦτοι μίαν εἶναι τὴν ἀρχὴν ἢ πλείους, καὶ εἰ μίαν, ἦτοι ἀκίνητον, ὡς φησι Παρμενίδης καὶ Μέλισσος, ἢ κινουμένην, ὡς περ οἱ φυσικοί, οἱ μὲν ἀέρα φάσκοντες εἶναι οἱ δ’ ὕδωρ τὴν πρώτην ἀρχήν.

connected the ideas of water and the causality of change.

From Aëtius we learned that τρίτον, ὅτι καὶ αὐτὸ τὸ πῦρ τὸ τοῦ ἡλίου καὶ τῶν ἄστρον ταῖς τῶν ὑδάτων ἀναθυμιάσει τρέφεται καὶ αὐτὸς ὁ κόσμος.⁹² The world itself is *nourished* by water, nothing else. Yet, we find Gregory arguing that “soul here would not be something separate or independent from water, but would be an aspect or quality of water”. A little later on, he goes as far as to assert the possibility that, according to Thales, “a cosmic intelligence inherent in water guided the processes which brought a *kosmos* into being out of primordial water”.⁹³ For this, I see no basis in the texts we have. It is certainly true that water and the motive force, be it soul or the divine, both have a kind of universality. It is important to note, however, that water is the *origin of* everything, whereas soul is *in* everything. These do not amount to the same thing.

The only extant text that makes an explicit connection between water and motion is found in Hippolytus’ *Refutatio*: ἀφ’ οὗ καὶ σεισμοὺς καὶ πνευμάτων <συ>στροφὰς καὶ ἄστρον κινήσεις <γίνεσθαι>. καὶ τὰ πάντα φέρεσθαι τε καὶ ῥεῖν, τῇ τοῦ πρώτου ἀρχηγοῦ τῆς γενέσεως αὐτῶν φύσει συμφερόμενα., ‘from [water] <come> earthquakes and windstorms and the **motion** of stars. And the world is borne and flows, carried along by the nature of the first originator of their coming to be’.⁹⁴ There are at least two sources predating Hippolytus that mention the fact that the earth, according to Thales, rests on water: Aristotle at *De Caelo* 294a28-33 (DK A14) and Seneca at *Nat. Qua.* 3.14.1 (DK A15). Only the later source, Seneca, includes a mention of the motion of the waves as a source of earthquakes. It should be noted that it was a common idea in Greek mythology that Poseidon, the god of the

⁹²AĒT I 3, 1, l. 15, see section 3.1.2.2 for a translation and an analysis of this testimony.

⁹³Gregory (2007) 28.

⁹⁴Hipp. Ref. 1.1.2-3

sea, was responsible for earthquakes. In my opinion this is not sufficient to attribute to Thales a cosmic theory of water as a motive force, especially as we have textual evidence that he spoke of something divine or like the soul explicitly as a motive force in nature.

In addition to our texts suggesting that Thales did not in fact use the term κόσμος, they do not yield support for a cosmic theory of the kind offered by O’Grady and Gregory. Their theories seem to hinge on the attribution of some divine, or psychic, or motive power to Thales’ water. This, however, is not attested in the texts available to us.

Gregory asks: “Should we accept that Thales was interested in cosmogony, as opposed to an analysis of the world around him?”⁹⁵ I claim that the dichotomy he presents is mistaken. Thales was primarily engaged in the study of φύσις, which I will below in section 4.4 argue to stand primarily for ‘origin’. He was also manifestly interested in the world around him (as evidenced by his meteorological work). What he did not have, was a concept of an organised *cosmos* whose genesis he purported to study. Rather the texts indicate that he observed his surroundings and tried to trace what he saw back as far as logically possible.⁹⁶

⁹⁵Gregory (2007) 28-29.

⁹⁶See e.g. Proclus On Euclid 65.7-11: Θαλῆς δὲ πρῶτον εἰς Αἴγυπτον ἐλθὼν μετήγαγεν εἰς τὴν Ἑλλάδα τὴν θεωρίαν ταύτην καὶ πολλὰ μὲν αὐτὸς εὔρεν, πολλῶν δὲ τὰς ἀρχὰς τοῖς μετ’ αὐτὸν ὑφηγήσατο, τοῖς μὲν **καθολικώτερον** ἐπιβάλλων, τοῖς δὲ **αἰσθητικώτερον**. ‘Thales first, having gone to Egypt, brought with him to Greece this theory. And he discovered many things himself, and he instructed those with him in the first principles of many things, applying himself to some things **more universally** and to others **more through sense-perception**.’

4.2 Anaximander

4.2.1 ΚΟΣΜΟΣ and ΟΥΡΑΝΟΣ

In his article on the fragment of Anaximander, discussed as DK 12 A 9 + B 1 in section 3.2.1, Mansfeld argues that both the plural terms οὐρανοί and κόσμοι in the texts of Anaximander ought to be understood in their peripatetic senses.⁹⁷ For the former this means ‘world’ and for the latter ‘region’, where there may be multiple regions in a world. Mansfeld also refers to a passage hitherto undiscussed, Aristotle’s *Meteorology* 2.2.355a21-25, which Mansfeld takes to contain a description of specifically Anaximander’s thought:

τὸ δ’ αὐτὸ συμβαίνει καὶ τούτοις ἄλογον καὶ τοῖς φάσκουσι τὸ πρῶτον ὑγρᾶς οὔσης καὶ τῆς γῆς, καὶ τοῦ **κόσμου** τοῦ περὶ τὴν γῆν ὑπὸ τοῦ ἡλίου θερμαινομένου, ἀέρα γενέσθαι καὶ τὸν ὅλον **οὐρανὸν** ἀύξηθῆναι, καὶ τοῦτον πνεύματά τε παρέχεσθαι καὶ τὰς τροπὰς αὐτοῦ ποιεῖν.

This same absurdity necessarily follows also for those who assert that at first the earth was moist and the *cosmos* around the earth was warmed by the sun, air came to be and the entire **heaven** grew, and this produced winds and made the solstices themselves.

The description is undoubtedly similar to accounts that we have of Anaximander’s theory and it does contain both the terms we’ve come familiar with in our previous examination of the cosmic fragments, οὐρανός and κόσμος. Mansfeld argues forcefully that the Aristotelian universe, as described in the

⁹⁷Mansfeld (2011).

Meteorology, contains multiple *cosmoi*, and that this is the peripatetic sense in which we ought to understand Simplicius' account of Anaximander's plural *cosmoi*.⁹⁸

Mansfeld then goes on to examine some of the other texts we observed in section 3.2 where multiple οὐρανοί and κόσμοι make an appearance. He notes that the text in Hippolytus (HIPPOL. Ref. I 6, 1–7, DK 12 A 11, discussed in section 3.2.3) is the only one which retains the expression ἐν αὐτοῖς as compared to the text in Simplicius, but it has lost the word ἅπαντα and reduced the plural *cosmoi* into one. I took this as a cue to translate κόσμος there as simply order; Mansfeld suggests that the singular may be a mistake as that the following ἐξ οὗ δὴ φησι τοὺς τε οὐρανοὺς ἀποκεκρίσθαι καὶ καθόλου τοὺς ἅπαντας ἀπείρους ὄντας κόσμους retains ἅπαντας as well as the plurality of *cosmoi*. I find this suggestion that the singular may be a mistake on the part of Simplicius is acceptable.

But are we to accept Mansfeld's claim that the Aristotelian evidence shows the fact that, for Anaximander, κόσμοι were regions of worlds and that οὐρανοί denote “world-systems” as Mansfeld calls them? Let us examine the evidence. First, we have the passage discussed by Mansfeld, from Simplicius: (1) ἐξ ἧς ἅπαντας γίνεσθαι τοὺς οὐρανοὺς καὶ τοὺς ἐν αὐτοῖς κόσμους. Second, is the passage in Hippolytus which Mansfeld also discusses: (2) ἐξ ἧς γίνεσθαι τοὺς οὐρανοὺς καὶ τὸν ἐν αὐτοῖς κόσμον. But there is also a third. Pseudo-Plutarch gives us the following: (3) ἐξ οὗ δὴ φησι τοὺς τε οὐρανοὺς ἀποκεκρίσθαι καὶ καθόλου τοὺς ἅπαντας ἀπείρους ὄντας κόσμους. In my discussion of this passage in section 3.2.2, I noted

⁹⁸Note, however, Aristotle's language about the “region around the earth” in another passage where he is referencing Anaximander's theory (*Mete.* 353b6-7, DK 12 A 27): εἶναι γὰρ τὸ πρῶτον ὑγρὸν ἅπαντα τὸν περὶ τὴν γῆν τόπον, where τόπος, ‘place’ or ‘region’ takes the place of κόσμος. This usage is echoed by Alexander in his commentary on Aristotle's *Meteorology* at 67.4: ὑγροῦ γὰρ ὄντος τοῦ περὶ τὴν γῆν τόπου.

that the οὐρανοί here seem to be a subset of the κόσμοι, and not the other way around. It also retains the word ἅπαντα. It may not, therefore, be entirely unproblematic to claim that Anaximander used κόσμος to denote a region of the world. I will return to this issue after examining a related subject of scholarly debate discussed by Mansfeld, namely the “infinity” or at least plurality of *cosmoi* in Anaximander’s thought.

4.2.2 The plurality of *cosmoi*

One of the main observations made in section 3.2 was that the testimonia repeatedly and conspicuously use the plural of the word κόσμος. We saw plural *cosmoi* in for example DK 12 A 9 + B 1 in section 3.2.1, which is Simplicius’ report of Theophrastus’ interpretation of Anaximander. In their influential work on the Presocratics, Kirk, Raven, and Schofield argue that attributing a plurality of *cosmoi* to Anaximander is a mistake, and that the word ἅπαντας should be ignored here.⁹⁹ Mansfeld discusses the issue in his article on the Anaximandean fragment.¹⁰⁰ He recognises in the Anaximandean texts a tradition to describe the κόσμοι as “infinite”, which is Mansfeld’s preferred translation for ἄπειρον, but argues that this description is a mistaken one. He points to the Simplicius text already discussed, containing some verbatim Anaximander, where the word used to describe the heavens and the *cosmoi* is ἅπαντα, not ἄπειρον. Commenting that these two words do not amount to the same thing, which is certainly true, he claims that it is a mistake to attribute to Anaximander a conception of multiple *cosmoi*.

We did, however, encounter multiple descriptions in the “cosmic” texts of Anaximander of the *cosmoi* as boundless. Let us review: (1) Pseudo-

⁹⁹Kirk, Raven, and Schofield (1983), hence KRS, 122-126.

¹⁰⁰Mansfeld (2011).

Plutarch (DK 12 A 10): τοὺς ἅπαντας ἀπείρους ὄντας κόσμους; (2) Aëtius (DK 12 A 14; 17, T2; 17, T3): ἀπείρους κόσμους, ἀπείρους κόσμους, τῶν ἀπείρους ἀποφηναμένων τοὺς κόσμους; (3) Aristotle (DK 12 A 15): καὶ σῶμα ἄπειρον εἶναι δοκεῖ καὶ κόσμοι,¹⁰¹ (4) Simplicius (DK 12 A 17, T1; 17, T5; TEGP 4): κόσμους δὲ ἀπείρους, ἀπείρους τῶι πλήθει τοὺς κόσμους, ἀπείρους κόσμους. We have references to ἄπειροι κόσμοι in texts regarding Anaximander by four authors (including Aristotle) and totalling eight instances. The evidence seems overwhelmingly to support the idea that Anaximander did describe his *cosmoi* as boundless. For comparison, of the “cosmic” fragments only four do not explicitly call *cosmoi* boundless. I do not, then, concur with Mansfeld’s conclusion that describing *cosmoi* as boundless is a mistake and unattributable to Anaximander’s original use.

If we accept the boundlessness of Anaximander’s *cosmoi*, we also find more problems for Mansfeld’s claim that οὐρανοί in Anaximander’s fragment denote “world-systems” whereas κόσμοι are regions within those systems. If the *cosmoi* are indeed boundless in number, it seems difficult to explain where they all fit within a single world-system. I would rather argue for one of two possibilities, the first being that Anaximander is was not entirely consistent in his use of words, as the idea of a consistent terminology (I would argue) postdates him. It is conceivable that he used οὐρανός in one instance (DK 12 B 1) and κόσμος in another to denote the same thing, namely one world of many. Different later sources then used one or the other word in their accounts. Another possibility is that Anaximander was consistent in using a term, οὐρανός, to denote a world-system, but that this term was later glossed more or less consistently as κόσμος once that term

¹⁰¹Mansfeld states that this passage refers exclusively to the Atomists Leucippus and Democritus, but I retain the passage as referencing Anaximandean thought.

had become the default term for ‘world’.¹⁰² Both routes lead to the conclusion that in fragment B 1, τοὺς οὐρανοὺς καὶ τοὺς ἐν αὐτοῖς κόσμους, the *cosmoi* in question would have some specialised meaning, perhaps derived from the sense ‘order’ of κόσμος, denoting perhaps regions of the world or even human organisations such as cities, πόλεις. In any case, as Mansfeld also writes, “to reject out of hand that more than one world-system is involved is to contradict the evidence”.¹⁰³

4.3 Anaximenes

4.3.1 Microcosm-macrocosm analogy

The only surviving fragment from Anaximander was treated above in section 3.3.1. As I have mentioned, some doubts have been cast over its authenticity, but those doubts centre primarily on the word συγκρατεῖ, which is deemed anachronistic. To my knowledge no one has challenged the authenticity of κόσμος in this text.

This passage is the first explicit instance of microcosm-macrocosm analogy in Greek philosophy, “the view that humans and the universe are constructed or function similarly”.¹⁰⁴ The interpretation here is that ὄλον τὸν κόσμον means ‘the universe’. I would qualify this somewhat. For Anaximenes κόσμος is something that is surrounded by air. It seems then that Anaximenes had a concept of *cosmos* but that it cannot be said to be the equivalent of “universe”, which contains everything there is. Anaximenes

¹⁰²See e.g. Hippolytus, who reports οὐρανός in his *Refutatio* 1.6.2-3: πρὸς δὲ τούτῳ κίνησιν αἰδίων εἶναι, ἐν ἧ συμβαίνει <ν> γίνεσθαι τοὺς οὐρανοὺς. Also Aristotle *Phys.* 203b23-25: διὰ γὰρ τὸ ἐν τῇ νοήσει μὴ ὑπολείπειν καὶ ὁ ἀριθμὸς δοκεῖ ἄπειρος εἶναι καὶ τὰ μαθηματικὰ μεγέθη καὶ τὸ ἔξω τοῦ οὐρανοῦ.

¹⁰³Mansfeld (2011) 25. Still, rejections have been articulated, e.g. recently by Gregory (2007) chs. VI-IX.

¹⁰⁴McKirahan (2010) 54.

speaks of the heaven as a semi-sphere and likens it to a felt hat. Affixed to this surface are the stars. This seems to be the boundary of his *cosmos*, outside of which he conceives masses of pure air (which, for example, hold the earth in place).

The microcosm-macrocosm analogy is somewhat unclear, however, as the soul is said to “hold together and control”¹⁰⁵ us, and breath or air is said to “surround” the *cosmos*. There is a sense in which the verb περιέχω, translated as ‘surround’, signifies something that permeates or comprises the object of the verb. This sense would be closer to that of συγκρατέω. If we take περιέχω here to mean something like permeate or comprise, we will naturally have to concede the point made above about Anaximenes’ *cosmos* and the totality of the universe being separate.

4.3.2 Coming to be and perishing of the *cosmos*

We read above in section 3.3.2.1 Simplicius’ report that Anaximenes considered the cosmos generable and perishable because he says that it is not always the same. The description of what happens, that the *cosmos* becomes different according to certain cycles of times, sounds actually very much like what happens to *air* in Anaximenes’ theory, and not the *cosmos* as a whole. According to Anaximenes, air famously becomes wind, mist, cloud, water, mud, and finally stone, when it condenses and fire when it becomes rarefied. All along it *is* air, but with a different density and hence different properties. It may be, then, that Simplicius is confusing his sources somewhat here.

The other “cosmic” testimonium, TEGP 4 discussed in section 3.3.2.2, we noted seemed to employ κόσμος in a distinctly different sense from the usage in the fragment. There, too, what Simplicius says about Anaximenes’s

¹⁰⁵Following KRS 159 n.

cosmos seems to fit better with what Anaximenes believed about air.¹⁰⁶ It is plausible, then, that when Simplicius is discussing the κόσμος of Anaximenes, he is in fact speaking of his theory of air, which is one and boundless and has different properties at different times.

4.4 Excursus: ΑΡΧΗ and ΦΥΣΙΣ

I wish finally to spend some time on the idea of ἀρχή, ‘first principle’, and how it relates to another term that appears in much of the surviving discussion of the Milesians’ thought, φύσις, ‘nature’. This excursus will illustrate a case analogous to the one I have been pursuing in this work, namely the interpretation of the word κόσμος, where later terminological use can be seen to have been anachronistically imposed on earlier texts.

According to Aristotle, Thales held that water was the ἀρχή, ‘first principle’, of all things, that for Anaximander it was the boundless, and for Anaximenes air. But there is a philological question about whether the early Presocratics used ἀρχή in this technical sense of ‘first principle’. The first substantive uses of ἀρχή can only be found in Diogenes of Apollonia (fifth century BC) and Philolaus (c. 470–c. 385 BC) and even then we cannot be confident of how technically it is employed.¹⁰⁷ So it may well be that when Aristotle attributes to the Milesians theories of a first principle he is speaking anachronistically at least insofar as he calls Thales the founder of the kind of philosophy that *called* a first principle ἀρχή.¹⁰⁸

Graham sees anachronism further in Aristotle’s attributing to Thales a

¹⁰⁶This is a reason also why I see no reason to posit multiple *cosmoi*, coexistent or successive, to Anaximenes.

¹⁰⁷Graham (2010) 39.

¹⁰⁸It has been also argued that Thales actually used the word ἀρχή (O’Grady (2002) 37–39). I find these arguments unconvincing and what follows will hopefully make it clear why.

theory of a changeless being (first made explicit by Parmenides) and a view that makes a distinction between a thing and its properties (first clearly articulated in Plato).¹⁰⁹ As Schofield puts it, this attribution is "apparently due to Aristotle's inability to refrain from imposing a straitjacket of his own categories on earlier thought".¹¹⁰ Schofield's article examines the ways in which the various meanings of the word ἀρχή have been used in philosophical and scientific thought from Anaximander to Aristotle. The sense of 'first principle', which I have used throughout in my translations, is chronologically an Aristotelian one, according to Schofield.

But what does ἀρχή have to do with φύσις and the thought of the Milesians? Allow me to begin by quoting from the *Metaphysics* of Aristotle.

τῶν δὴ πρώτων φιλοσοφησάντων οἱ πλεῖστοι τὰς ἐν ὕλης εἶδει
μόνας ᾤθησαν **ἀρχὰς** εἶναι πάντων· ἐξ οὗ γὰρ ἔστιν ἅπαντα
τὰ ὄντα καὶ ἐξ οὗ γίνεταί πρῶτου καὶ εἰς ὃ φθείρεται τελευταῖον,
τῆς μὲν οὐσίας ὑπομενούσης τοῖς δὲ πάθεσι μεταβαλλούσης,
τοῦτο στοιχεῖον καὶ ταύτην **ἀρχήν** φασὶν εἶναι τῶν ὄντων, καὶ
διὰ τοῦτο οὔτε γίνεσθαι οὐθὲν οἴονται οὔτε ἀπόλλυσθαι, ὡς
τῆς τοιαύτης **φύσεως** ἀεὶ σωζομένης, ὥσπερ οὐδὲ τὸν Σωκράτην
φαμέν οὔτε γίνεσθαι ἀπλῶς ὅταν γίγηται καλὸς ἢ μουσικὸς
οὔτε ἀπόλλυσθαι ὅταν ἀποβάλλῃ ταύτας τὰς ἕξεις, διὰ τὸ ὑπομένειν
τὸ ὑποκείμενον τὸν Σωκράτην αὐτόν, οὕτως οὐδὲ τῶν ἄλλων
οὐδέν· ἀεὶ γὰρ εἶναι τινα **φύσιν** ἢ μίαν ἢ πλείους μίᾳ ἐξ ὧν γίνεταί
τᾶλλα σωζομένης ἐκείνης. τὸ μέντοι πλῆθος καὶ τὸ εἶδος τῆς
τοιαύτης **ἀρχῆς** οὐ τὸ αὐτὸ πάντες λέγουσιν, ἀλλὰ Θαλῆς μὲν
ὅ τῆς τοιαύτης ἀρχηγὸς φιλοσοφίας ὕδωρ φησὶν εἶναι (διὸ

¹⁰⁹Graham (2010) 40.

¹¹⁰Schofield (1997) 220.

καὶ τὴν γῆν ἐφ' ὕδατος ἀπεφήνατο εἶναι), λαβὼν ἴσως τὴν ὑπόληψιν ταύτην ἐκ τοῦ πάντων ὁρᾶν τὴν τροφήν ὑγρὰν οὔσαν καὶ αὐτὸ τὸ θερμὸν ἐκ τούτου γιγνόμενον καὶ τούτῳ ζῶν (τὸ δ' ἐξ οὗ γίγνεται, τοῦτ' ἐστὶν ἀρχὴ πάντων)—διὰ τε δὴ τοῦτο τὴν ὑπόληψιν λαβὼν ταύτην καὶ διὰ τὸ πάντων τὰ σπέρματα τὴν φύσιν ὑγρὰν ἔχειν, τὸ δ' ὕδωρ ἀρχὴν τῆς φύσεως εἶναι τοῖς ὑγροῖς.

Of the first ones pursuing philosophy, most thought that singular entities in the class of matter are the **first principles** of all things. For that out of which all beings are formed, and that first thing out of which they come to be and that final thing into which they perish (with that being remaining while changing properties), they say that this is the element and this is the **first principle** of all beings. And because of this they think that nothing either comes to be or is destroyed, inasmuch as such a **nature** is always preserved. Just like we say that Socrates does not come to be simply when he becomes elegant or skilled in music, nor is he destroyed when he loses these skills, because Socrates himself, the underlying thing, remains. In this same way not one of the other things [comes to be or is destroyed]. *For there always exists some nature, either one or more than one, out of which the other things come to be, while that [nature] is preserved.* Indeed not all say the same about the number and form of such a **first principle**, but Thales, the founder of such philosophy, said that water is [such a first principle]. (This is the reason he also proclaimed that the earth is on water.) He perhaps takes this notion from the observation that the nourishment of all things is wet and heat

itself comes to be from this and lives by it. (That from which they come to be, that is the **first principle** of all things.) He takes this notion from the preceding as well as from the fact that the **nature** of the seeds of all things is wet, and water is the **first principle** of the **nature**¹¹¹ of wet things.¹¹²

Commenting on this passage, Graham distinguishes three different senses of ἀρχή which Aristotle seems to have had in mind:

(1) the primeval element that constituted the primitive state, from which all the bodies of the present world were formed; (2) that same fundamental elements insofar as it even now constitutes the world; (3) the principle of explanation, or explanatory source (identified with the primeval element), that logically and causally accounts for the phenomena of the world.¹¹³

To these senses I wish to add a fourth: the literal origin or beginning of things.

What especially strikes me in this passage of *Metaphysics* is how the words ἀρχή and φύσις seem to be used almost interchangeably, note especially the emphasised sentence. Note that the most common senses (and translations) of these two words, '(first) principle' for the former and 'nature' for the latter, conceal how close these words actually are semantically. Investigating their etymologies will be illuminating in this sense. The word ἀρχή derives from the same root as the verb ἄρχω, 'to be first'.¹¹⁴ On the other hand

¹¹¹This instance of φύσις is commonly translated as 'growth'. For present purposes I have decided to translate all instances in this passage as 'nature'.

¹¹²Arist. *Met.* 983b6-27, DK 11 A 12.

¹¹³Graham (2010) 39.

¹¹⁴Note also the use of ἀρχή in Homer, e.g. at *Iliad* 22.116 and *Odyssey* 8.81, to mean beginning or source.

the word form φύσις can be traced back to the same root as the verb φύω, whose primary meaning is to ‘bring forth’ or to ‘produce’. Accordingly ‘origin’ can be seen as the primary sense of φύσις.¹¹⁵ It is not, then, entirely surprising that Aristotle would use these two words, ἀρχή and φύσις, as nearly synonymous: they both have connotations of originality. In fact Aristotle himself makes the connection between the two explicit at the outset of book three of his *Physics*: ἐπεὶ δ’ ἡ φύσις μὲν ἐστὶν ἀρχὴ κινήσεως καὶ μεταβολῆς, ‘nature is the **first principle** of motion and change’.¹¹⁶

If we return now to the *Metaphysics*, what follows immediately after the passage quoted above serves to further suggest that the meaning of φύσις in question is not nature as it is now, but rather the beginnings or origins thereof.

εἰσὶ δὲ τινες οἱ καὶ τοὺς παμπαλαίους καὶ πολὺ πρὸ τῆς νῦν γενέσεως καὶ πρώτους θεολογήσαντας οὕτως οἴονται περὶ τῆς φύσεως ὑπολαβεῖν· Ἰκεανὸν τε γὰρ καὶ Τηθὺν ἐποίησαν τῆς γενέσεως πατέρας, καὶ τὸν ὄρκον τῶν θεῶν ὕδωρ, τὴν καλουμένην ὑπ’ αὐτῶν Στύγα [τῶν ποιητῶν]· τιμιώτατον μὲν γὰρ τὸ πρεσβύτατον, ὄρκος δὲ τὸ τιμιώτατόν ἐστιν. εἰ μὲν οὖν ἀρχαία τις αὕτη καὶ παλαιὰ τετύχηκεν οὔσα περὶ τῆς φύσεως ἢ δόξα, τάχ’ ἂν ἄδηλον εἶη, Θαλῆς μέντοι λέγεται οὕτως ἀποφίνασθαι περὶ τῆς πρώτης αἰτίας ...

There are also those who think that those people who first discoursed on the gods (very ancient people [who lived] much be-

¹¹⁵O’Grady points out that φύσις is used once in Homer where she interprets it to mean ‘nature’ in a sense that includes the non-visible qualities of a thing. It is my reading of the passage in question, Hom. *Od.* 10.302-3, that Homer is speaking quite literally external characteristics, perhaps the root, of the plant. This interpretation is supported by the verb used, δείκνυμι, which connotes literal bringing to light. (O’Grady (2002) 33, 35.)

¹¹⁶Arist. *Phys.* 200b12-13.

fore the present generation) believed thus about **nature**: they made Oceanus and Tethys the parents of coming to be and they make water the object by which the gods swear, and which is called by [the poets] the Styx. The oldest thing is the most worthy, and the most worthy is the object by which one swears. If there is some such original and ancient opinion about **nature**, which is perhaps unclear, Thales is indeed said to have said this about the first cause ... ¹¹⁷

The topic of discussion here is very much the *origin* of the world and yet Aristotle uses the word φύσις to describe his topic. Consider the reference to myths featuring Oceanus and Tethys, god and goddess of the primeval water, as well as the use of θεολογέω, ‘discourse on the gods’, combined with the words ποιέω and ποιητής, ‘make’ (and also ‘compose’) and ‘poet’, which together clearly point to Hesiod and other early theogonists.

After noting this peculiar use of φύσις, I find it suggestive that Aristotle on the one hand characterises Thales and his Milesian successors as “natural philosophers” or “philosophers of nature” (φυσικοί, for example at *Metaphysics* 1005a34), and on the other hand attributes to them theories about an ἀρχή. Did the Milesians discuss *nature* as we think of it or rather the *origins* of things? When Aristotle attributes to them theories of an ἀρχή, is he actually exploiting the double senses that the word has acquired by his time and partly through his innovation? Is he playing with the senses of ἀρχή as *origin*, an idea that the early Presocratics undoubtedly did discuss but mostly using the term φύσις,¹¹⁸ as opposed to the sense of *primary principle* which

¹¹⁷Arist. *Metaphysics* 983b27-984a3.

¹¹⁸See e.g. Anaximenes A5, *Simpl. Phys.* 24.26-27: Ἀναξιμένης δὲ Εὐρυστράτου Μιλήσιος, ἑταῖρος γεγονώς Ἀναξιμάνδρου, μίαν μὲν καὶ αὐτὸς τὴν ὑποκειμένην φύσιν καὶ ἄπειρόν φησιν ὡσπερ ἐκεῖνος ...

Aristotle himself used?¹¹⁹

Malcolm Schofield seems to agree with conjectures made along these lines. In the article quoted earlier, he makes the distinction between these two senses of ἀρχή:

As construed by Aristotle and the Aristotelian tradition, Thales made water the ἀρχή of all things, in the sense once again of the material principle underlying all change. On Aristotle's view, water is what in his system supports and sustains e.g. the coming into being and growth of all living things; and on grounds of this kind he counts water as Thales' ἀρχή: it is the ontological primitive in *his* theoretical system. But modern scholarship takes it to be much more likely that the role Thales assigned to water was — as with Anaximander's infinite — that of ἀρχή in a different and earlier sense: the origin of things, where and what they came from.¹²⁰

What I wish to do is take this line of thinking one step further and link to ἀρχή the semantically closely related term φύσις. The reason Aristotle is speaking of the ἀρχαί of the early Presocratics is that they spoke of beginnings, only they were using terms like φύσις for this concept.¹²¹

¹¹⁹In any case it seems Aristotle was not unaware of differing meanings of φύσις. He writes later in the *Metaphysics* the following: **φύσις** λέγεται ἓνα μὲν τρόπον ἢ τῶν φυσόμενων **γένεσις**, ... ἓνα δὲ ἕξ οὗ φύεται πρῶτου τὸ φυσόμενον ἐνυπάρχοντος, (1014b16-18).

¹²⁰Schofield (1997) 219, emphasis original.

¹²¹Schofield makes a connection between ἀρχή and the word γένεσις (Schofield (1997) 220). This connection is however made only with reference to the late fifth century sophist Hippias, who according to our sources compiled a list of poets and thinkers, grouping together those with similar ideas. He includes Thales in a list of those who made water the γένεσις of things, or the answer to the question of how and when they began. (See Graham (2010) 41-42 for brief remarks on Hippias as a source for Thales' philosophy. See also my discussion in section 2.1.1 of the mythological background of the Presocratics to which Gra-

Note here what Plato writes in the *Laws* about what some unnamed "they" claim about φύσις. The Athenian stranger first declares that the term φύσις is a misnomer, and he's immediately asked for an explanation for this claim. Arguing for the metaphysical primacy of ψυχή, the stranger replies, φύσιν βούλονται λέγειν γένεσιν τὴν περὶ τὰ πρῶτα, 'they want to say that "nature" is the origin of primary things'.¹²² It is not unreasonable to think that Plato is here referring to some of his philosophical predecessors as well as contemporary practice. In any case the passage makes it explicit that there existed an established usage of φύσις as a synonym for γένεσις, or origin, in Plato's time.

There is also a passage in Simplicius' *Physics*, at 23.21-23, that supports the idea that there might be something interesting going on when Aristotle calls the Milesians φυσικοί:

τῶν δὲ μίαν καὶ κινουμένην λεγόντων τὴν ἀρχήν, οὓς καὶ φυσικοὺς
ἰδίως καλεῖ, οἱ μὲν πεπερασμένην αὐτὴν φασιν, ὥσπερ Θαλῆς
 μὲν Ἐξαμύου Μιλήσιος ...

Graham renders this text as "Of those who say the principle of all things is one and in motion, whom [Aristotle] **properly** calls natural philosophers, some say it is limited in number, such as Thales, son of Examyus, of Miletus." His translation of ἰδίως as 'properly' is certainly justifiable; there is a sense of the adjective ἴδιος in which it which means 'proper'. I would, however, suggest we note that the adverbial form carries the primary meanings

ham alludes.) Γένεσις, the substantival form of γίγνομαι, 'come to be', appears three times in Thales, 12 in Anaximander, and twice in Anaximenes as collected in DK. (The verb occurs much more commonly, roughly thirty times in the combined fragments and testimonia of each thinker.) For comparison, φύσις occurs 12 times in Thales, ten in Anaximander, and four times in Anaximenes, again as collected in DK.

¹²²Pl. *Leg.* 892c2-3.

of ‘peculiarly’ and ‘severally’ and that the attendant verb is καλέω. Citing Aristotle’s *De Mundo*, LSJ list a distinct meaning of the phrase ἰδίως καλεῖσθαι: ‘to be called specifically’.

If we understand Simplicius’s claim to be that that Aristotle’s nomenclature is not ‘proper’ or ‘appropriate’, but rather ‘specific’ or ‘peculiar’, we come away with the notion that describing the Milesians as φυσικοί might actually be an Aristotelian innovation. This notion is further supported by the fact that the earliest references LSJ provide for the adjective φυσικός are the one instance in Xenophon’s *Memorabilia* followed by Aristotelian texts. (The word does not occur in Plato.) Under the entry for the substantive form of the adjective, ὁ φυσικός, references begin with the multiple instances in Aristotle.

If we accept that calling the Milesians φυσικοί originates with Aristotle, it is a testament to just how enormous an influence on the history of philosophy Aristotle and the Aristotelian tradition have had, so ingrained is the idea that the Milesians were simply philosophers of nature.

But to return to an earlier question posed, what does all this have to do with the Milesians’ philosophy in general and to the present inquiry into the concept of cosmos therein? The twin observations above are that Aristotle was plausibly the first person to refer to the Milesian school as φυσικοί and that by doing this Aristotle may actually be referring to their interest in the origins of all things rather than “the natural world”. The relevance of this observation to my present discussion on the concept of *cosmos* in the early Presocratic thinkers turns on the hypothetised holism of the Presocratics.

I spoke earlier in section 2.2.1 about the Milesians, and about the Presocratics more generally, as holistic thinkers as opposed to purely natural scientists. If we have a reason to suppose, as I think we do based on the evid-

ence here discussed, that Aristotle's original references to the early Presocratics as φυσικοί have been somewhat misunderstood by his successors and historians of philosophy, we also have a reason to approach these thinkers as something more than mere proto-scientists and philosophers of nature: as thinkers with more varied preoccupations than merely the ones which Aristotle has attributed to them.

Once we are willing to grant that there may have been aspects, perhaps even significant ones, of early Presocratic thought that do not strictly concern nature, we are in turn more open to interpretations other than 'the physical world' or 'the universe' when we encounter the word κόσμος in the texts of the early Presocratics and our perspectives will have widened.

5 Conclusion

This study grew out of a sense of curiosity about the multifaceted word κόσμος and the concepts it comes to embody. I set out to investigate whether a study into the word in the earliest of the Presocratics might shed some new light on the thought of the Milesians, especially hoping to discover evidence about the range of issues to which they applied themselves. I have approached the extant texts featuring the word in a systematic way in order to better understand how these thinkers employed the term and whether interpretations of their views may have been skewed by assuming the terminological status of κόσμος in them.

The results of this investigation allow us to conclude for the need to substantially revise the scope of the Presocratics' philosophical interests and some of the claims that have been made about their use of κόσμος in the existing literature. These results achieved in three different areas: in the case of Thales, I was able to challenge the prevalent notion of Thales possessing an explicitly cosmic theory of water as a motive force based on the lack of evidence that Thales in fact ever employed the term κόσμος himself.

With Anaximander, we first noted the curious way in which κόσμος was being used in the extant texts: being somehow contrasted with the idea of οὐρανός. Upon investigation, I was able to challenge the influential interpretation by Jaap Mansfeld that it is in fact mistaken to attribute to Anaximander a multiplicity of *cosmoi*.

Third, we examined the evidence for an Anaximenean *cosmos* which is surrounded by his *Urstoff*, air. In my philosophical discussion I was able to consider some possible ways in which the seemingly inconsistent ways in which the word κόσμος appears in our texts might be harmonised.

Finally, I presented a small case study of the Aristotelian terms ἀρχή and φύσις. This excursus serves to illustrate another reason we might have to regard the claim that the Milesians were exclusively preoccupied with the study of nature with some suspicion.

It would be worthwhile to pursue these observations further by investigating the thinkers that followed in the Milesians' footsteps: Xenophon, Heraclitus, and the later Presocratics. It would contribute further to our understanding of the variety and nuance of the thought of these first philosophers to trace through time both the use of the word κόσμος specifically, and generally the idea that "Presocratics as purely natural philosophers" may be an artificial Aristotelian construct.

On the whole, what I discovered during this investigation was that there are still new insights to be had about the thought of the Milesians today. This is the most significant contribution this study makes to the discipline of ancient philosophy: the book on the Milesians, and the Presocratics, is far from closed.

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