Alexander of Aphrodisias on the first cause, divine power, the city and the household

Haas, F.A.J. de; Mouzala, M.G.

NATURE AND HUMAN NATURE
IN ANCIENT GREEK PHILOSOPHY AND ITS RECEPTION

EDITED BY
MELINA G. MOUZALA

PUBLICATIONS OF THE
NETHERLANDS INSTITUTE AT ATHENS X

To Asia Minor, to Ionia, to Magnesia

Smyrnē 1922

Eternal Memory

NATURE AND HUMAN NATURE
IN ANCIENT GREEK PHILOSOPHY AND ITS RECEPTION

EDITED BY
MELINA G. MOUZALA

PUBLICATIONS OF THE
NETHERLANDS INSTITUTE AT ATHENS X

Published by Sidestone Press, Leiden
www.sidestone.com
info@sidestone.nl
(+31)(0)71-7370131

Lay-out & cover design: Sidestone Press
Photograph cover: Magnesia on the Maeander: Propylaia (Ionia–Asia Minor)

ISBN 978-94-6426-376-3 (softcover)
ISBN 978-94-6426-377-0 (hardcover)
ISBN 978-94-6426-378-7 (PDF e-book)

ISSN 2452-3836 (print) | 2590-3039 (online)

DOI 10.59641/3t038uwv

Contents

Alexander of Aphrodisias on the first cause, divine power, the city and the household

Frans A.J. de Haas

Leiden University

Being a power from the gods, nature is capable of preserving the right order of movement according to a certain harmonious sequence, not in virtue of any reasoning process or thought *(noesis)*, but because it is from the gods.
ἡ φύσις … τῷ ἀπὸ θεῶν οὖσα δύναμις τὸ εὔτακτον τῆς κινήσεως σώζειν κατὰ ἀκολουθίαν τινὰ ἡρμοσμένην, μὴ κατὰ λογισμόν τινα καὶ νόησιν, ἀλλὰ τῷ ἀπ᾽ ἐκείνων εἶναι.
(Alex. *in Metaph.* 104.7-10)

Abstract

Alexander of Aphrodisias (c. 200 CE) was concerned to show that Peripatetic philosophy provided the most successful theory about the relation between the universe, and the First Cause that is responsible for the unity and order of the universe. In this paper I first describe the state of the discussion between Stoics, Platonists and Peripatetics on this issue. Then I examine how Alexander introduced a divine power, which he identified with the non-rational nature at work in each natural thing. This power resides in the outer sphere of the universe as an effect of its rational desire for the First Cause, and is transmitted all the way down to the nature of the elements in prime matter. Thus the First Cause is a form that is responsible for all forms; and an intellect that is responsible for all intelligibility and intellection in the universe. In this way Alexander made the most of Aristotelian principles, while rejecting the Platonic World Soul and Forms, as well as the Stoic all-pervading material God.

Alexander of Aphrodisias is a major source for theories concerning the order of nature. He attempted to put together a coherent Peripatetic theory of the universe which would do justice both to Aristotle's texts, and to all the questions Aristotle's text had raised before his time, with fellow Peripatetics and opponents alike. The question on which we shall focus here is the nature of the relationship between the First Cause, Aristotle's Unmoved Mover, and the rest of the universe. Since this issue has been the subject of an impressive amount of scholarship already, I will here limit myself to providing an outline of the various philosophical challenges Alexander was faced with. Then I shall highlight the main features of the way Alexander set out to meet those challenges, notably the introduction of a divine power. In particular I shall focus on how Alexander illustrated his novel account of cosmic order by means of adopting and adapting two familiar analogies, viz. the rule of the city, and the organization of the household. I conclude by assessing how and to what extent Alexander succeeded in providing a Peripatetic cosmology that made good on the questions of his

in: Mouzala, M.G. (ed.) 2025: *Nature and Human Nature in Ancient Greek Philosophy and Its Reception*. Leiden: Sidestone Press, pp. 61-74.

Peripatetic predecessors, and steered safely between the Stoic Scylla and the Platonic Charybdis while adopting some of the benefits of their respective philosophical positions.

Philosophical challenges: setting the stage

In Aristotle's works the order of the universe is explained by the interplay of four causal powers, summarized in the maxim 'nature is the cause of order in everything' (*Physics* VIII.1, 252a12). As is well-known, in *Phys.* VII-VIII Aristotle tries to reduce all change to circular motion, and circular motion to a first cause of motion which is completely unmoved, hence without potentiality, incorporeal, and eternal. But how can such a baffling cause be the starting-point of motion? In *Physics* VIII Aristotle does not say.

In *Metaph.* XII Aristotle starts by suggesting that whether the universe is a whole, or coheres by virtue of an ordered succession, substance plays the most prominent role in it.[1] In *Metaph.* XII.2-4 Aristotle reminds us of the physical model of underlying subject, form, and privation, supplemented by the distinction between potentiality and actuality, which both apply to all four kinds of change (viz. change in place, quantity, quality, and substance). In this analogical sense the principles are the same for everything, although they are different in each particular case.[2] Hence this model, Aristotle insists, also applies to eternal heavenly bodies that only change in place: they must have a matter for change in place,[3] as well as a cause of their change. What is the cause of their change?

As is well-known, *Metaph.* XII.6-9 develops a sustained argument for the existence of such a special kind of substance. A substance that is both eternal and not subject to any change fills a necessary spot next to substances that come to be and perish (in the sensible world), and eternal substances that are subject to motion (the heavenly bodies).[4] The *eternal* circular movement of the heavenly bodies cannot exist without a cause that eternally remains the same in actuality, while they are subject to motion. The cause of their motion must be external to them.[5] The activity that constitutes its being is the highest activity in Aristotle's universe: thinking. Since it is the highest substance it can only think about itself, for thinking something else would make it dependent on something lesser than itself. Thus the first cause is a thinking of thinking (νόησις νοήσεως).[6]

However, this self-contained first substance creates a major problem: *how* does it cause the eternal motion of the heavenly bodies? And how is it related to the rest of the universe, both supralunary and sublunary, which, Aristotle claims, depends on it?[7] Here Aristotle famously introduces the way in which an object of desire and an object of thought can cause motion: without themselves being moved in any way.[8] In *De anima* III.9-10 and *De motu animalium* Aristotle discussed in more detail how objects of desire (in all animals) and objects of thought (in human beings) cause the soul to initiate a cascade of physiological changes that issues in locomotion and other actions. These two kinds of object initiate motion as unmoved movers: final causes that may be real or apparent goods concerned with actions.

At the start of *De motu animalium* 6 Aristotle refers back to both his *De anima* and *Metaph.* XII, when he clearly sets apart the application of this theory to the movement of the outer sphere from other applications.[9] For objects of desire and thought in animals constitute limited goals that cause limited motions, whereas the movement of the outer sphere is unlimited because it is directed towards that which is eternally beautiful and truly and primarily good.[10] In short: the hierarchy of final causes at which motions are aimed is the explanation for this difference between the motions caused. Moreover, according to *MA* 1-2 self-movement in animals requires a point of rest inside the animal (e.g. a joint at which arms and legs bend for locomotion), as well as outside the animal (e.g. the earth against which a walker pushes himself forward). The movement of the universe as a whole can only be explained when it has a cause of motion outside itself (*MA* 3-4).[11] The model of desire and thought, then, requires that the heavenly bodies have souls with a desire towards the first principle.

This approach can be regarded as a further development of the theory that Aristotle's explored in *De caelo* II.[12] In *Cael.* II.1, 284a18-24, when assessing the 'mythical' views of his predecessors, Aristotle denies the existence of souls in heavenly bodies; but in *Cael.* II.12, he acknowledges that it would solve many problems if one would ascribe 'activity and life' to them (*praxis kai zōē*, 292a18-22). He explains the increasing number of different motions in the universe from the degree to which each member of the universe succeeds in reaching the first, or a more limited, goal.

The resulting picture is described in *Metaph.* XII.7:

> **T1** There is, then, something which is always moved with an unceasing motion, which is motion in a circle; and this is plain not in theory only but in fact.

1 Arist. *Metaph.* XII.1, 1069a19-21.
2 *Metaph.* XII.4-5. On *Metaph.* XII see e.g. Frede, and Charles (2000).
3 *Metaph.* XII.2, 1069b24-26 with *Metaph.* VIII.1, 1042b5-6.
4 *Metaph.* XII.6, 1071b3-11, cf. XII.1 1069a30-33, with the corresponding distinction into three types of study (πραγματεία) at *Phys.* II.7, 198a29-31.
5 *Metaph.* XII.6, 1071b19-22; 1072a9-18; XII.7, 1071a21-26.
6 *Metaph.* XII.7, 1072b14-30; 1073a3-13; XII.9, esp. 1074b34-35.
7 *Metaph.* XII.7, 1072b13-14, quoted below T1 (last sentence).
8 *Metaph.* XII.7, 1072a26-30.
9 *MA* 6, 700b4-11.
10 *MA* 6, 700b13-701a2.
11 For a detailed analysis of *MA* see Primavesi, and Corcilius (2018) and Rapp, and Primavesi (2020).
12 On the interpretative problems surrounding Aristotle's theory of heavenly bodies see esp. Bodnár (1997).

> Therefore the first heaven (*prōtos ouranos*) must be eternal. There is therefore also something which moves it. And since that which is moved and moves is intermediate, there is a mover which moves without being moved, being eternal, substance, and actuality. And the object of desire and the object of thought move in this way; they move without being moved.
> The primary objects of desire and of thought are the same. For the apparent good is the object of appetite, and the real good is the primary object of wish. But desire is consequent on opinion rather than opinion on desire; for the thinking is the starting-point. And thought is moved by the object of thought, and one side of the list of opposites is in itself the object of thought; and in this, substance is first, and in substance, that which is simple and exists actually. […] But the good, also, and that which is in itself desirable are on this same side of the list; and the first in any class is always best, or analogous to the best. […]
> But since there is something which moves while itself unmoved, existing actually, this can in no way be otherwise than as it is. For motion in space is the first of the kinds of change, and motion in a circle the first kind of spatial motion; and this the first mover sets in motion (*kinei*). The first mover, then, of necessity exists; and in so far as it is necessary, it exists in a good way (*kalōs*), and in this sense it is a first principle.
> For the necessary has all these senses – that which is necessary perforce because it is contrary to impulse, that without which the good is impossible, and that which cannot be otherwise but is *absolutely* necessary. On such a principle, then, depend the heaven (*ouranos*) and the world of nature (*phusis*).[13]

As moved mover, the eternal circular motion of the heavens requires an unmoved mover – such as objects of desire and thought are. This particular object of desire and thought has to be an eternal substance in actuality. The second paragraph provides a further specification that is necessary if we want to apply the general notion that all objects of desire and thought are unmoved movers, to the object of desire and thought that is the Unmoved Mover of the universe. Aristotle loosely refers to a list of opposites with positive and negative terms, which elsewhere he regards as a Pythagorean legacy,[14] and reduces to the opposites being and non-being.[15] He assumes that the members of the positive column are all objects of thought. Among beings, simple substance in actuality is first, among desirable objects that which is beautiful and desirable in itself is first. All firsts coincide in being the best, if only by analogy.

This is meant to entail that the Unmoved Mover has to be both the *primary* object of desire (which has to be an object of *rational* desire for a *real* good, whose eternity renders it absolutely *necessary* and the *primary* good without which no goodness exists),[16] and thereby the *primary* object of thought – which will be the reason why its thinking is directed at its own activity of thinking as well.[17] The hierarchies of objects of desire and thought converge in a single first principle. It is this principle which causes the circular motion of the heaven, always in actuality, which is the first among spatial motions, which in their turn are prior to all other motions. The first heaven is the moved mover that is (somehow) responsible for all other motions.[18]

This theory seems to imply that the first principle does not *directly* affect everything in the universe, but only by mediation of the heavenly bodies. Strictly speaking, the first principle might serve as direct object of rational desire *only* for the soul of the outer sphere, which then somehow transmits its movement to the other spheres. One type of transmission of motion is suggested in *Metaph.* XII.8 where Aristotle uses contemporary astronomy to provide the most likely explanation of the successive motions of the heavenly bodies. The changing position of the sun moving along the ecliptic causes the seasons, which cause processes of generation and corruption.[19] The heat of the sun also causes exhalations from water and earth, which cause further geological and meteorological phenomena.[20] But these processes seem rather haphazard and crude. Where does the precise order and diversity in all these processes come from?

Alternatively, each of the heavenly bodies independently desires the same first principle, but then the issue arises how to explain the differences between their heavenly trajectories. They are all made of the same ether, and if they all strive for the same final cause, why

13 *Metaph.* XII.7, 1072a21-32, 34-b1, b7-14, transl. Barnes (1991) with modifications (cf. note 18).

14 In *Metaph.* I.5, 986a22-31 Aristotle lists limit-unlimited, odd-even, one-manifold, right-left, male-female, at rest-in motion, straight-curved, light-dark, good-bad, and square-rectangular as a list of proposed principles of nature which he does not himself endorse, cf. *Metaph.* XIII.6, 1093b7-21.

15 Cf. *Metaph.* IV.2, 1004b27-1005a3; this is part of his argument to establish being-qua-being as the proper subject of first philosophy, to which our text can be compared as a further application.

16 If all three senses of 'necessary' apply to the Unmoved Mover, I am tempted to regard the first type, the necessity that opposes natural impulse, as an indication of how this theory of the Unmoved Mover supersedes the circular motion inherent in ether, by explaining more than just the kind of its motion.

17 *Metaph.* XII.9.

18 I pass over the difficulty that T1 starts by identifying the *first* heaven, i.e. the outer sphere, but seems to comprise (the spheres of) *all* heavenly bodies in its last sentence. The Barnes translation obscures this problem by translating 'heavens' in plural.

19 Cf. e.g. *Metaph.* XII.5, 1071a13-17; *GC* II.10, 336a32-b2, b17-19.

20 Cf. e.g. *Mete.* I.2, 339a21-32; I.4, 341b5-18.

do they move in different circles at different speeds? Do their differences depend on their individual natures, i.e. their souls, or perhaps on their distance from the first principle, or both? In view of Alexander's solution it is important to note in advance that the final causation of the first principle neither explains the existence of the heavenly bodies, nor the coming to be and perishing of sublunary substances and their natures – even though both heaven and nature depend on the first principle. More is needed to explain the order exhibited by the universe.

More explanation is exactly what Theophrastus' summoned the Peripatetics to provide through the incisive questions that fill his so-called *Metaphysics*.[21] In this area Theophrastus was to set the Peripatetic agenda, as he also did in the context of e.g. the ancient commentaries on *De anima* III.[22] A quick survey may show the penetrating nature and exhaustiveness of his questions, and at the same time suggest a possible motivation for Alexander's theory.

In Aristotle the sublunary realm is severed from the heavenly spheres by the fact that the latter consist of ether which does not interact with the four elements of the sublunary world; in addition, the whole edifice is crowned by a separate self-absorbed intellect. Theophrastus wonders why the universe does not fall apart because the intelligible and sensible are never unified (aporia 2 and 5). He speaks approvingly of the superior power (*dunamis*) of the first principle that lies in its nature of being an object of desire, but complains that it is rather the notion of desire (*ephesis*) on the part of the heavens that leaves much to be explained (aporia 6). What is the final cause of their seemingly opposed rotations? Do they each have a different unmoved mover, and if so how many are there (aporia 7)? Why do the heavenly bodies pursue motion rather than rest if the first principle they desire is at rest? If desire implies soul, is not that soul's thinking (*dianoia*) the first motion, and prior in rank to the rotation of the heavens because soul causes life and desire itself (aporia 8)?[23] Furthermore (aporia 9), why are only the rotations of the heavens explained by desire, and not also the changes in the sublunary world down to the centre? Is the first principle too weak to reach so far down (*pace* Homer), or is the sublunary world somehow unreceptive of its power, so that the changes in it come out as merely accidental?[24] Focusing on the heavenly bodies, one might ask whether their desire for the first principle is accidental or belongs to their essence (aporia 11). The last question Theophrastus raises for our topic deserves to be quoted in full because, I propose, it makes a suggestion that Alexander's theory fleshes out in more detail:[25]

> **T2** (Aporia 14.2) Again, it is difficult to ascribe to each [set of things] its [own] formal principles by a collective referral to a final cause in all [cases]-both in animals and in plants and even in the very bubble[26]-unless it happens that, by reason of the order and change of *others*, there come about all manner of shapes and varieties of atmospheric and terrestrial [things]; of which in particular some make the greatest paradigmatic [cause] to be the [things] relating to the seasons of the year, in which [seasons] there are generated alike animals and plants and fruits, with the sun being, as it were, the begetter.[27]

The multitude of formal principles is hard to refer to a final cause, Theophrastus suggests, unless cosmic variety arises from the order and change of other things, under the general influence of the seasons caused by the sun as general cause of generation and corruption. We shall see that Alexander will try to establish exactly what Theophrastus considers difficult: to refer the multitude of forms to the final cause, which thereby also assumes a role in establishing the order and changes of all things due to their individual nature.

It seems fair to say that the Stoic view of the universe was designed to avoid all of the aforementioned problems.

---

21 See Gutas (2010) for the Greek, Arabic, and Latin versions of this text, with translation and extensive commentary. Gutas prefers the title *On first principles* preserved in the Latin version. In the text I use his numbering of "aporiae".

22 For the role of Theophrastus' questions on intellect see De Haas (2020) 24 with n. 46.

23 For the reduction of the primary type of desire, rational wish, to thought see T1 above.

24 Note that *GC* II.10, 336a1-337a7 makes clear that the rotation of the heavenly bodies, esp. sun and moon, is the medium by which sublunary rectilinear motions, as well as the eternal cycle of generation and corruption of individuals of the species can be said to refer back to the first principle, there referred to as 'god' (336b32). 'Nature in all cases desires the better' (336b27-28) already suggests that desire may not be limited to the heavenly bodies. This passage also states that there is corruption (non-being) because not everything can always have being 'since they are too far removed from the principle'. We shall see this principle return in Alexander.

25 See below, p. 68-71.

26 As Gutas notes, this is probably a reference to the 'bubble' of air and vital heat that is the beginning of spontaneous generation according to Aristotle, cf. *GA* III.11, 762a21-25.

27 Theophr. *Metaph.* 7a19-b5 transl. Gutas.-The last sentence refers to Aristotelian doctrine, cf. *Metaph.* XII.5 1073a15-23: "But the distinction of actuality and potentiality applies differently to cases where the matter is not the same, in which cases the form also is not the same but different; e.g. the cause of man is the elements in man (viz. fire and earth as matter, and the peculiar form), and the external cause, whatever it is, e.g. the father, and besides these the sun and its oblique course, which are neither matter nor form nor privation nor of the same species with man, but moving causes." (transl. Barnes (1991)). Cf. note 19.

Their god, an active material principle, is in no way separate from the universe, but thoroughly pervades it. The cohesion or tension in bodies, the nature in plants, soul in animals, and rationality in humans are all manifestations of this same principle.[28] The complete unity of the resulting universe, which obeys the same principles down to the smallest detail, is a serious challenge to Peripatetic physics.

An influential earlier Peripatetic answer to Theophrastus and the Stoics exists in the pseudo-Aristotelian *De mundo* – which Alexander probably knew.[29] In the *De mundo*, we find a single power or nature pervading the universe in order to create and preserve its order, which is clearly set off against the substance (*ousia*) of the first principle: the principle's *substance* remains aloof as is befitting for a god and ruler, only its *power* pervades the universe.[30] Furthermore, this power controls the balance and agreement (*homologia*) of the four elements of the sublunary sphere,[31] and holds the universe together as a cohesive cause.[32] Despite this distinction, and despite the contributing role of the elements and other opposites that operate in the universe, god fully deserves the title of creator and preserver of the universe.[33] Surely this first principle is more involved with the universe than Aristotle (and therefore Alexander) would allow, but it makes for a strong alternative to Stoic philosophy.

A further interesting feature of *De mundo* is a series of analogies used to illustrate the author's cosmology, in which each analogy emends a deficiency in a previous one, or expands on it creating a cumulative effect.[34] Among them we find the lawgiver and military commander that have a long history in ancient philosophy.[35] From God as the lawgiver, the author of *De mundo* moves to his final image of God as the law:

> **T3** For [God], established in the immovable, moves all things with power and leads them around, where and how he wills, in different forms and natures, just as, for instance, the law of the city, being immovable in the souls of those who use it, administers all things in public life. For it is clear that in obedience to the law the chief magistrates go to their offices, the junior magistrates to the appropriate courts, and the councillors and members of the assembly to their respective meeting-places; one man walks to the town-hall to eat, another to the courts to defend himself, still another to prison to die. Ordained by law there are also public feasts and annual festivals, sacrifices to the gods, cults of heroes, libations to the deceased.[36]

This analogy affirms both the immovable and separate nature of the first principle, and the power by which he is present in the different officials and citizens that each make their contribution to the city according to the law engrained in them.

> **T4** So we must also think about the greater city, I mean about the cosmos: for god is an evenly balanced law to us, admitting no correction or change, but stronger, I think, and surer than those inscribed on the triangular tablets. When he leads in an unmoved and harmonious manner, the whole orderly arrangement of heaven and earth is administered, distributed to all things through their own seeds, and to plants and animals according to genus and species.[37]

The law present in nature causes the orderly arrangement of the universe, including the variety of seeds, plants, and animals, by means of their own principles or natures. In *De mundo* the analogies illustrate the position of the first principle, which comprises both its own nature and its power – in Alexander, as we shall see, the same analogies illustrate *not* the separate first principle, but the all-pervading divine power that the first principle has established in the outer heaven by being the object of its desire – to which we shall return below in more detail.

Meanwhile, Alexander does not only have to deal with this Peripatetic agenda. The Platonists were experiencing problems of their own, and sought to oppose Stoic materialism at the same time. The Platonic view of the order in the universe largely depends on the interpretation of Plato's *Timaeus*, but that dialogue had been a source of rival interpretations ever since it had been written. What

28 See e.g. Long, and Sedley (1987) section 46A-D, 47A and O, with Sellars (2006) ch. 4. Within the confines of this paper I can only skim the surface of Stoic (meta)physics.

29 See esp. Thom (2020), with Thom (2014) and Gregorić, and Karamanolis (2020). Moraux (1984) 35-38 has discussed the influence of Theophrastus on this work, albeit mainly on its meteorology. Genequand (2001) 6 and Fazzo (2002) 164-168, 184-186 infer from the parallels in Alexander's *On the principles of the universe, On providence* and *Quaestio* II.3 that Alexander knew *De mundo*; given that he changes its cosmology significantly (see below) I suspect he is treating the work as a Peripatetic precursor rather than as a genuine work of Aristotle.

30 *De mundo* 6, esp. 397b19-30, specifying that the region closest to god profits most from this power. Cf. *De mundo* 6, 398b21-27.

31 *De mundo* 6, 396b34-397a5.

32 *De mundo* 397b9, appropriating the Stoic term for the Peripatetic alternative.

33 God is begetter (γενέτωρ), cf. *De mundo* 6, 397b21, 399a31, as wel as its cause of preservation (σώτηρ, σωτηρία), cf. *De mundo* 5, 397a30-31; 6, 397b16-24, 398a4, 400a4-5.

34 For the nature and interconnection of the analogies in *De mundo* see esp. Betegh, and Gregorić (2014), further pursued in Betegh, and Gregorić (2020).

35 *De mundo* 6, 400b608. See Adamson (2016) for a recent survey of analogies connecting soul, household, city, and cosmos.

36 *De mundo* 6, 400b11-23 transl. Thom (2014).

37 *De mundo* 6, 400b27-34 transl. Thom (2014).

is the status of the Demiurge in relation to the model he used for his creation of the universe, the world of Forms? What is the status and role of the World Soul, both created by the Demiurge, and the immaterial source of orderly motion in the entire material universe? Is a different soul responsible for the disorderly motion that exists prior to the Demiurge's interventions?[38]

Against this background Atticus (fl. 176 CE), who held the chair of Platonism in Athens shortly prior to Alexander's appointment in the chair of Aristotelianism in the same city around 200 CE, launched a series of criticisms at Peripatetic philosophy that may well have made a Peripatetic reply even more urgent for Alexander.[39] In Fr. 8 Des Places Atticus complains that (1) Aristotle denies that nature is soul: everything on earth is organised by nature, but without proper explanation he assigns different causes to different things (fate for heavenly bodies; nature for sublunary things; intelligence, providence and soul for humans). Although this summary also seems to reflect later Peripatetic developments of Aristotle's philosophy, esp. providence, he is right that Aristotle denies the existence of a unifying world soul – and his complaints about unity echo Theophrastus. And while Aristotle's set of four causes and the potentiality/actuality distinction apply everywhere, Aristotle indeed insists on identifying different causes in each case.[40]

Atticus further complains (2) that 'if there is not a single animate power pervading all and binding everything and keeping it together, the universe could not be arranged in a reasonable or beautiful way.' He emphasizes the problem by means of an analogy of the universe as a well-organized city:

> **T5** It would be as short-sighted to hope that a city could ever come to be well arranged without a unifying principle as it is to think that one could advance an argument to preserve this universe, supremely beautiful as it obviously is, which did not bind it together and harmonise its parts by having them share in one common thing. Aristotle, then, said that there was something like this, which pervades everything as a principle of motion; but he would not allow that it is soul – even though Plato had shown that soul is the "principle and source" of motion for all moving things (*Phdr*. 245c). What ought to be work of rational, thinking soul, namely to "make nothing in vain", this Aristotle attributes to nature (e.g. *DA* 432b21).[41]

Atticus does not deny that Aristotle has 'something like this which pervades everything as a principle of motion' but he is right that it is not a soul. To this extent Atticus seems to echo Theophrastus' concerns, that all parts of the universe do not share in one common thing. At the same time we see that Atticus sets up Plato's World Soul for the same job that the Stoics assigned to their all-pervading first principle (which itself may well have been inspired by Plato).

To summarize, these are the most important challenges Alexander has to meet:[42]

1. make good and coherent sense of all relevant Aristotelian texts;
2. answer Theophrastus' concerns;
3. replace the Stoic all-pervading god with an Aristotelian principle or power;
4. answer the Platonic criticism of Aristotle by (e.g.) Atticus.

Alexander on the first cause

Alexander clearly identifies the Unmoved Mover of *Phys.* VIII with the God of *Metaph.* XII. In *Quaestio* I.1 he combines arguments from *Phys.* VIII and *Metaph.* XII.6-7 into an argument by analysis that serves to establish the nature of the first cause.[43] As we should expect, Alexander largely follows Aristotle. Alexander's first cause must also be single, eternal, unmoved, incorporeal, and pure actuality, if it is to cause the heavens to move with the only movement that is eternal and continuous: motion in a circle. The first cause is also the highest object of *desire*, because it is beautiful (*kalos*) to the highest degree among substances. And it is the highest

38 For a representative sample of issues concerning the World Soul in the later philosophical tradition see Boys-Stones (2017) chapter 8, and Helmig, and Marongiu (2020).

39 For the fragments of Atticus see Des Places (1977), esp. Fr. 8 apud Eus. *PE* 15.12.1-4, transl. Boys-Stones, fr. 11B, p. 336. In addition, Porphyry *On Principles and Matter* §§73-83 (edition Arzhanov (2021) 112-119) has preserved a concise summary of Atticus' own views on first principles. For Atticus as a motivation for Alexander see e.g. Sharples (1992) 94n307 (on *Quaest.* II.3 discussed below).

40 The text quoted in note 27 above nicely illustrates the tendency in Aristotle to find explanations specific to each case.

41 Transl. Boys-Stones (2017), p. 336, Text 11B.

42 Of course I do not claim to be exhaustive: I am sure Alexander was motivated by a larger set of interconnected issues, both in Peripatetic thought and in his philosophical environment. One important issue I have to leave out of consideration here is the introduction of providence in Aristotelian physics, in response to the Stoic and Platonic insistence on divine providence (see p. 71-72 below). In Alexander's thought the cosmology expounded in the main text of this paper *also* serves as the backbone of a Peripatetic version of providence down to the preservation of species. The main sources for Alexander's view of providence are Alex. *On providence* (with Fazzo, and Zonta (1999), Thillet (2003)), *Quaestio* I.25, II.19, II.21, *Princ.* 91, and an extended report on Alexander's conception of providence in Simpl. *in Phys.* II.3, 194b26ff, 310.25-311.38 Diels (translation in Fleet (1997) 67-69). I am grateful to Orna Harari for alerting me to this last text.

43 Cf. Sharples (1992) 16-19, Bodnár (1997), Fazzo (2008), Bodnár (2014), and De Haas (2024). See the magisterial article by David Twetten (2016) for a survey of the entire Greek and Arabic tradition on Aristotelian cosmology.

object of thought, and therefore the most intelligible thing. Nothing surprising so far.[44]

But in *Quaestio* I.1, and more elaborately in his *On the principles of the universe*, Alexander modifies Aristotle's argument in at least three highly significant ways:

1. Alexander argues that the first cause can only cause the best movement in *the best of bodies* (*ariston tōn sōmatōn*). The best of bodies is not only eternal but also ensouled (*empsychon*), because ensouled body is prior to inanimate body.[45] If it has a soul, this soul must be moved in accordance with impulse (*hormē*) and desire (*ephesis*) towards something in desire for which it is moved in its eternal movement.[46] Hence this divine body will be moved by thinking the first substance, and by desiring to become similar to it (*homoiōsis*).[47]

By introducing an ensouled divine body as the best of bodies necessarily moved by impulse and desire, Alexander addresses Theophrastus' concerns about the essential nature of the unflinching desire that is the necessary link between the first cause and the eternal superior motion it causes.[48] In addition, he prepares a proper seat for the divine power (*theia dunamis*) which, as we shall see, works downwards from the first divine body. Meanwhile, the soul of the divine body is still *not* self-moved (against Platonists), but moved by a specific rational desire for the first cause, which is prior to it.[49]

2. We have seen that the first cause is the first intelligible object, and intelligible to the highest degree. Alexander insists that the first intelligible properly speaking (*kuriōs*) is to be identified as *form* rather than matter, which is intelligible only by analogy or, 'as Plato says (*Tim.* 52b2), by "bastard reasoning"' (4.10-11). What kind of form is at stake here? Form in the category of substance ranks higher than form in other categories, and among forms in the category of substance the form that is by nature most simple and always in actuality ranks highest – this explains why it is most intelligible.[50] The first cause is also to be identified as form because it is the first object of desire: the most beautiful (*kalos*) is form rather than matter, and it is the most determinate in actuality, which again points to substantial *form*.[51]

The explicit identification of the first cause as the highest *substantial form* in both these ways not only confirms the Aristotelian convergence of the hierarchies of objects of thought and desire, but it will enable Alexander to relate the first cause to the existence of *forms* throughout the universe. For this purpose Alexander needs one more ingredient.

3. Enmattered forms become intelligible (or: objects of thought, *noēta*) when the mind separates them from that in which they are, and regards them as if they are simple. Such is the nature of the substance that moves all, i.e. separate, simple, and therefore most intelligible.[52]

This argument assumes the identification of the first cause and the famous active intellect of *De anima* III.5, 430a10-15 which Alexander describes in similar terms in his own *De anima*.[53]

In this context it becomes clear that the object with the highest intelligibility is also responsible for the intelligibility of everything intelligible. This is an instance of Alexander's so-called 'principle of causality of the maximum' which he most likely derived from Aristotle *Metaph.* II.1, 993b23-31.[54] In this disputed text, considered genuine by Alexander, Aristotle states that the highest instance of a mode of

44 Alex. *Princ.* 4-5, 24-54, 57-80, 94-103 argues for the same view. The work survives in different Arabic versions, one of which has been translated into English in Genequand (2001). My interpretation is based on Genequand's translation of Text A. In the footnotes below I register the main parallels between the concise *Quaestio* I.1 and the far more elaborate *On the principles of the universe*.

45 *Quaest.* I.1, 3.9-14; cf. *Princ.* 7-8, 94; *Quaest.* II.18.

46 *Quaest.* I.1, 3.14-4.1; cf. *Princ.* 5-14, and 76, where Alexander adds the specification that the relevant type of desire is not appetite or passion but will, or rational wish (*boulēsis*). The soul of the best of bodies is only rational, and it has no other desire than rational wish always aimed at the good that exists in god alone.

47 *Quaest.* I.1, 4.1-4. This brief mention of similarity (*homoiōsis*) leaves unsolved the unclarity about similarity (*mimēsis*) that Theophrastus indicated. In *Princ.* 21-23, 76-81 Alexander explicitly expands this impulse to all things in the universe, albeit with different results according to their specific natures. In *Princ.* 86 he explicitly discards the option that each heavenly body has its own unmoved mover: they all know and strive for the first cause.

48 *Princ.* 55, 76-78, 82 emphasize that the divine body imparts motion simultaneously to all things that follow it in virtue of its own essential motion, thus adding a further guarantee against Theophrastus' concerns. Cf. *Quaestio* II.19.

49 See also Alex. *Quaest.* II.2 and II.10, and the sustained argument against self-motion in *Princ.* 32-50.

50 *Quaest.* I.1, 4.9-15; cf. *Princ.* 100-102.

51 *Quaest.* I.1, 4.17-26; cf. *Princ.* 17-19, 92-96 where it is specified that whereas composite bodies have a motion that derives from their material constituents in addition to the motion that derives from their soul, which is their nature, in the simple divine bodies there is no such difference: their nature is their soul, and they have no other motion than the motion caused by their soul. The different motions of the incorporeal spheres are attributed to the differences between their individual souls. This seems to remove the natural motion of ether from the picture entirely.

52 *Quaest.* I.1, 4.15-17.

53 See e.g. Alex. *DA* 84.6-9, 85.14-19, 87.24-25 (knowing enmattered forms is regarding them as separate from their material conditions); 87.24-27 (forms that exist *per se* are *noēta* properly speaking); 89.16-19 (the First Cause has been shown to be an intellect properly speaking because a non-enmattered form is an intellect properly speaking). For these complex issues in Alexander and other commentators see e.g. Bergeron, and Dufour (2008) for Alex. *DA*; De Haas (2019), (2020), and (2023) with the extensive secondary literature listed there.

54 For this "principe de causalité du maximum" see the excellent analysis by Guyomarc'h (2015) 104-111. For another instance at Alex. *in Metaph.* 11.19-21 see De Haas (2021) 90, and T6 below.

being is the cause of, or somehow responsible for (*aitios*), all inferior degrees of that mode of being in everything else. For instance fire, as the hottest substance, is responsible for the heat in everything else; the highest eternal truth is responsible for the truth of all beings.

Alexander's account of the active intellect in his *DA* 88.26-89.11 is a most instructive application of this same principle:

> **T6** For in all cases, something that is a certain kind of thing properly speaking and to the highest degree is responsible (*aition*) for other things being that kind of thing as well. For what is visible to the highest degree – such as light – is responsible for other visible things being visible too. So too, what is primarily good to the highest degree is responsible for other goods being such, since other goods are distinguished by means of the contribution they make to it.
> It is reasonable, then, that what is intelligible (*noēton*) to the highest degree and by its own nature, is responsible for the thinking (*noēsis*) of other things too; and since it is this kind of thing, the active intellect would be [responsible for this]. For if there would not be something intelligible by nature, nothing else would be intelligible either, as stated above. For in all cases in which one thing is a certain kind of thing properly speaking, and another in a secondary sense, the one that is so in the secondary sense gets its being from the one that is so properly speaking. Furthermore, if the First Cause, which is responsible for the being of everything else as its origin and principle, is this kind of intellect, then it would also be productive (*poiētikos*) in such a way as to be responsible for the being of all things thought.[55]

Alexander first provides two additional examples of his principle: he credits light, being visible to the highest degree, with the responsibility for the visibility of everything else; and he credits the highest good with the responsibility for the goodness of everything else that is measured after its contribution to the highest good. Then he applies the principle to his understanding of the active intellect of *DA* III.5: the First Cause, which meets the criteria of Aristotle's active intellect, is not only the cause of the *being* of all other beings, but also for their being *objects of thought*.

It is hard not to be reminded of the comparison between the Good and the sun in Plato, *Rep.* VI, 506d-509d. Like the positive reference to Plato's *Timaeus* we saw earlier, this adumbration of Platonic insights on the part of Alexander may have had as one of its purposes to win Platonists over to the Peripatetic camp by providing a proper philosophical home for their most cherished doctrines – the converse of multiple Platonic attempts to align Aristotle with Platonic philosophy.[56]

In this way Alexander has managed to merge the first principles of Aristotelian physics, metaphysics, and philosophy of mind into one. The first cause is the first cause of all physical motion by being the most eligible object of both desire and thought for the soul of the divine body engaged in the most perfect spatial motion; as the highest being, a pure substantial form always in actuality, it is the first cause of all beings; and as the highest object of thought, it is the first cause of the intelligibility of all things thought. It now seems that – at least in formal terms – the connections between Aristotle's separate immaterial principle and the universe have been strengthened. But the question remains: if the first cause remains separate, how exactly does its influence manage to pervade the universe in all of these ways?

Alexander on divine power

For this purpose Alexander has developed his own characteristic notion of a divine power (*theia dunamis*), which can be regarded as his alternative for both the Stoic all-pervading material god, and the Platonic all-pervading immaterial World Soul. It constitutes both his most comprehensive reply to Theophrastus' query in T2, and a correction of the Peripatetic *De mundo*.[57]

For the divine power we have to turn to two further works of Alexander. Alexander's longest sustained argument on the first cause and its relation to the universe is found in his *On the principles of the cosmos.* Here I shall limit myself to one interesting feature of *On the principles* that we need for the purposes of this paper: the power of the divine bodies (127-128), and its illustrations (128-137).[58] In addition, the deliberations in *Quaestio* II.3 show how exactly the effect of the divine power may be conceived to reach down to the lowest physical level of the Peripatetic universe. In this context the insight that the first cause is the highest *form* will prove valuable again.

In *On the principles* 127-128 Alexander introduces the divine power in the following way:

55 Alex. *DA* 88.26-89.11 (my translation); cf. *Princ.* 97-126.

56 Here one example may suffice: Golitsis (2018) has shown how Simplicius, in his turn, criticizes Alexander for ignoring the intelligible world, and argues that according to Aristotle's *Physics* the first cause is also an efficient cause; see also Bodnár in this volume. A full survey of Alexander's use of Platonic doctrine is still a desideratum of scholarship.

57 Cf. Fazzo (2004).

58 Bodnár in this volume uses the same passages from *On the principles* and *Quaestio* II.3 in order to verify to what extent Simplicius' rendering of Alexander's philosophy is correct.

T7 (127) Since the First Mover is as we have described it, and the things moved by it without intermediary are also in that state,[59] there follows from the motion of these things the generation and change of the perishable bodies having matter, according to the power of those <heavenly bodies> reaching them according to <the former's> diversity, and according to the assimilation of those different things which we have mentioned, because of the change and diversity of their motion, as we said before.
(128) This nature and power are the cause of the unity and order of the world. In the same way as happens in one city having one ruler residing in it, not separate from it, we also say that a certain divine power[60] penetrates the whole world and holds its parts together. (129) Since the city is ruled by one authority only which is its leader or established law, so is the one world, since it is one body, continuous, eternal, imperishable, containing and encompassing all things, and comprehending them, and all things which are in it seek to be in contact with the thing which is unchangeable and aim at material union <among them> thanks to[61] that which rules and governs <the world> and preserves its arrangement and order by a power which penetrates all parts of it which deserve that it should penetrate them according to what <the ruler> thinks, not the people.[62]

Here nature as a whole is identified with the divine power located in the heavenly bodies, which regulates all generation and corruption in the sensible world. The power in the heavenly bodies differs according to the differences in their natures and movements – which also help explain the variety in the sensible world. The analogies of the ruler and the law of a city now clearly turn on a principle that is *present in*, not separate from, the whole, unlike Aristotle's first cause. The city has unity and order when it is ruled by a single authority 'resident in it' (whether as a single leader or the established law), 'not separate from it'. With the help of the same analogy in *De mundo* (T3) we may expand: the law regulates all the various goal-directed activities of the members of the citizens, and does so without being visible except by reason, effortless, without any help, and without any change in itself – assuming that the law is in the souls of the citizens, or rather the object of their thought.

This analogy also reminds us of Aristotle *Metaph.* XII.10, 1075a11-18 where Aristotle is deliberating how the good is present in the universe: as something separate, as the order, or both? The latter option is illustrated by an army: on the one hand there is the general, on the other the order, and the order exists because of the general (not vice versa); indeed the best authority is a single authority (1076a4). But a single authority does not rule out variety: despite the variety of species and their mutual interaction it is true to say that everything in the universe has been co-ordinated (*suntetaktai*) towards a single goal.[63]

In T7 Alexander presents the sensible world as one body, continuous, eternal, imperishable, containing and encompassing all things: as a whole it is a remarkable expression of the properties of the divine body as well as its first cause, to which all things in the universe strive. The letter of this description matches Stoic and Platonic descriptions of the coherence of the universe. This confirms our hypothesis that Alexander introduced the divine power not only to give the best possible interpretation of Aristotle, but also to present an alternative to the Stoic and Platonic cosmologies while preserving some of their virtues.

By means of the power which penetrates all parts of the universe from the first divine body downwards, the first cause can be held responsible for the arrangement and order of the world and their preservation without forfeiting its separate position. Alexander differs from the author of *De mundo* in that for him the divine power is not a power *of* the first cause, but of the divine body: it is enshrined in its essential circular motion that issues from the desire of the divine soul for the first cause.

Princ. 127 repeatedly refers back to earlier chapters in which Alexander has explained in more detail how the variety exhibited in both the supralunary and sensible worlds is to be explained by two complementary principles:

1. differences in their respective natures: these are set in a fixed hierarchy of nobility, but also reflect their providential purpose in the universe, and even their knowledge of the world of generation and corruption;[64] in addition there is
2. the distance from the first cause, which results in different ways in which subsequent natures are capable of receiving the effects of divine power, in other words: the different levels of perfection they can achieve by their desire for the first cause.[65]

The first point is repeated in *Princ.* 127: each heavenly body moving according to its own nature (= soul) has a different effect on the sublunary world. For instance, only the sun, moving along the ecliptic, causes the seasons.

59 I.e. have an eternal happy life, *Princ.* 126.

60 See Genequand (2017) 128 for taking 'spiritual' in the sense of 'immaterial' or 'divine' in this context.

61 Here I follow the revised (French) translation in Genequand (2017) 90, with p. 141 ad loc.

62 *Princ.* 127-129 transl. Genequand 2001.

63 Cf. the mention of the commander of a military camp at *De mundo* 400b8.

64 *Princ.* 91-96 with 56, 78, 85.

65 *Princ.* 21-22, 78. For the distance from the first cause as an explanation of variety cf. Arist. *GC* II.10, 336b25-337a7.

For the notion that individual natures constitute a different effect of the same power, we may compare Aristotle *De motu animalium* 10, 703a29-b2. There Aristotle supports a different point, viz. the position of the soul in the heart, by an analogy with the monarch in a city: once order has been established the king does not have to be involved in everything all the time, but can reside in a single place. The whole body is alive because it has grown onto the soul, not because soul is present throughout the body. Despite the different context, it is interesting to see that Aristotle holds nature in general (703a35) and the natural constitution of each of the bodily parts (703b2) responsible for this. This comes close to what Alexander does here: every part of the whole expresses the order of nature: it does what it needs to do for the benefit of the whole due to its own nature.

The relevance of (2) the distance from the first cause, is further illustrated in *On the principles* by means of an analogy with the household. In Aristotle *Metaph.* XII.10 a comparison with a household followed the analogy with the army referred to above.[66] In Aristotle the variety in the universe is compared to the position of free men, slaves, and domestic animals in a household. Free men contribute most to the common cause; by consequence, they have less freedom to do what they want. Slaves and domestic animals contribute less to the common cause, which results in more freedom to do whatever they like. By way of explanation Aristotle states: 'Such a principle is the nature of each' (1075a22-23). Once more, this analogy connects the explanation of different contributions to the whole by means of the nature of each.[67] Here is how Alexander inserts the household analogy in his own cosmology:

> **T8** (133) Just as all the parts of the house aim at one and the same thing, viz. that which will bring it about and fit it together so that it becomes one, so is the state of free men: they do all that they do, or most of it, according to an arrangement and an order, and their aim in all that they do is the preservation of the household, since there is no way for them to live as free men in opposition to that. (134) But the slaves and suchlike have only a feeble share in this order and disposition which have been established in the interest of the whole; and because of this feeble share they also endure, since they are a part of the house. Most acts issuing from this class are merely by chance and spontaneity. For the nature proper to it, which is in all its parts principle and cause of its being, does not receive anything of importance in the way of good organization and order.[68]

Alexander's text follows his Aristotelian model closely. The differences in nature, however, are attributed to the different share that free men and slaves have in the general order established in the interest of the whole. Because of this, their nature does not receive 'anything of importance in the way of good organization and order'. When Alexander applies both analogies to the universe we get:

> **T9** (135) The state of the world is similar to that of the city or the house: among the things which are in it, the nature proper to them has caused some of them to happen always according to organization and order, because they are not susceptible to any kind of disturbance, I mean lack of order; others are in this state most of the time; others still have a feeble share in this state, I mean the state of organization and order. (136) By this kind of organization and government, the universe remains eternal and imperishable: part of it is such in number, and part of it is in this state in species because of the continuous motion, ordered according to its diversity and variety, of which we have said that eternity belongs to it in number.[69]

There is a fixed distribution and hierarchy of natures: some are eternal in number, viz. each individually, and allow no disturbance (the heavens); some are stable most of the time (perishable substances), but have eternity only in species – thanks to the continuous motion of the heavens; some share even less organisation and order. Nevertheless everything contributes to the whole – or at least does not jeopardize it.

> **T10** For all things existing by nature have in the very nature appropriate to them an impulse towards the thing which is the First Cause and better than all things, since nature and all things existing by it do what they do according to the nature proper to them out of desire to imitate that thing from which they were generated primarily.[70]

In this section of *On the principles* Alexander states in the clearest possible terms that *all things existing by nature* have an impulse directed towards the first cause. For whatever they do according to the nature proper to them, they do out of desire to imitate the first cause. So this is not

66 See above p. 69.

67 As moved movers these natures can be regarded as instrumental causes, cf. Alex. ap. Simpl. 315.12-18, 317.20-28 (see further Bodnár in this volume).

68 *Princ.* 133-134, transl. Genequand (2001). Cf. *Princ.* 80-81.

69 *Princ.* 135-136, transl. Genequand (2001).

70 *Princ.* 21 with commentary in Genequand (2017) 110-111 ad loc.

only true for the natures (= souls) of the heavenly bodies, but also for everything else that has a nature.

However, one problem is still out. In T7 (129) Alexander emphasizes that it is the 'ruler, not the people' who somehow decides what mode of reception of divine power each nature has. In T7-9 the hierarchy of natures appears as a given: because each thing has a specific share of order, it is capable of specific, limited contributions to the order of the whole. In T10 everything acts in accordance with its nature out of desire for the first cause. But *how* does the divine power issuing from the heavenly bodies determine the extent to which perishable beings receive the divine power? The problem becomes more acute in light of the metaphysical speculations recorded above: if the first cause is the first being, the first good and the first intelligible object, and as such somehow responsible for all being, goodness and intelligibility in all lesser beings, how does the divine power achieve this?

Divine power in *Quaest.* II.3: how the final cause causes forms

This is the question that led to Alexander's famous *Quaestio* II.3 on the divine power.[71] The problem it puts on the table is: 'What is the power that comes to be, from the movement of the divine body, for the body adjacent to it which is mortal and subject to coming-to-be?' (47.28-29) So the question zooms in on the relation between the heavens and the sublunary world, which was Theophrastus' second aporia:[72] how does the divine power that issues from the heavens act on the sublunary world? Alexander explores two possible solutions: (1) either the divine power is a nature *different from* the nature of each of the natural bodies, i.e. their principle of motion and rest;[73] or (2) the divine power *comes to be* the nature of the simple bodies.[74]

The first option (1) quickly runs into difficulties (48.1-22). Since each body is either a simple or compound body in actuality, what does the nature that is the divine power *add* to such an already existing nature? What is transmitted from fire, which the divine power affects first, down to the other elements and their mixtures? On this view, the four elements already have the natural movement towards their proper place. In the case of compound bodies it would contribute nothing to their being inanimate, or to their having a soul of some kind, being a human or a plant. Worst of all: what is left of providence, which supposes that the divine power is responsible precisely for, e.g., humans having rational souls and all the benefits that come with it.[75]

If we stick with this approach (1) nonetheless (48.22-49.4), and the divine power only adds a nature, we best assume that the divine power adds itself from the outside *only* to the four elements – these at least show no sign of having a soul or anything divine in them *by themselves*. So let each of the four elements receive a share of the divine power that is proportional to their proximity to the divine body: fire most, then air, then water, and earth least of all. All composites that come to be as mixtures of the elements will then have the divine power 'sown' into them in proportion with the elements that constitute them. This would explain how, in addition to the natural inclination that they also derive from their mixture of elements, they acquire a further psychic motion, and a kind of soul proportionate to the divine power added to the elements. More earth leads to a less perfect soul, more fire leads to a more perfect soul.[76] There would be one exception: this only works in the case of genuine mixtures,[77] not in cases of mere composition and juxtaposition of the simple bodies: in those cases the divine body does not add another nature (49.4-28).

In the characteristic style of many of the *Quaestiones*, Alexander provides no words of assessment or transition to the next option, so at this point we have to guess whether it is the incompatibility with providence, or something else that renders an alternative option necessary.

Anyway, Alexander continues to discuss the second option (49.28-50.27). What if the divine power is itself the cause of the difference between the elements and their coming to be, by itself *becoming their form and nature*? In this case we assume that prime matter (which by itself has neither form nor shape) is given form and shape by the power that comes to be in it from the divine bodies. Now the rule of proximity to the divine body directly explains that fire is hot and dry as the first affections that the sublunary world receives from the divine bodies. The divine power also constitutes the nature of the elements themselves, not only that of their mixtures. Generation and corruption of the elements comes to be when cold and/or wet are coupled with hot and/or dry as a result of different relations, viz. changing proximity,

71 See Moraux (1967), Sharples (1992) 93-98, Fazzo, and Zonta. (1999) 195-219, and especially Fazzo (2002) 175-212.

72 See above p. 64.

73 *Quaest.* II.3, 47.31-49.27. Fazzo (2002) 184-187 highlights the parallels with *De mundo* 6.

74 *Quaest.* II.3, 49.28-50.27.

75 Cf. *Mant.* §23, 172.17-173.3.

76 Although the text at *Quaest.* II.3, 48.27-49.4 is not crystal clear in this respect, I take it to mean *not* that the divine power is added to each of their natures at each instance that a mixture comes to be, but rather that on top of the contribution of the usual properties of an element to their mixture, they receive a measure of that element's share in divine power as well. This is 'sown' into the mixture with the element as much as it was 'sown' into the element in the first place. Cf. *Quaest.* II.3, 49.14-18: the divine power uses the simple natural bodies as material for the coming-to-be of bodies that are more perfect and animate.-For this notion in Aristotle cf. *GA* II.l, 732b31-733b16.

77 For Alexander's theory of mixture see esp. Alex. *Mixt.* XIII-XV, with Guyomarc'h, and De Haas (2023).

between the e.g. the sun and the moon, and the sublunary world. By consequence, mixtures of the four elements will be compounded and more perfect than each of the elements, because they share in several elements and their powers. Moreover, *their* form and perfection becomes different precisely in accordance with the proportion of the elements that contribute to their mixture. Closer to the divine motion = rare and more active = more perfect form; further away from the divine motion = denser and more passive = less perfect form. On this note *Quaestio* II.3 ends.

Again, Alexander does not assess option (2), nor does he conclude *Quaestio* II.3 with anything resembling a conclusion. However, scholars have rightly noted that option (2) has much in common with the description of the coming to be of complex forms and souls in Alexander's *De anima*, and the description of the role of divine power in *On providence*. Although *De anima* is often read in isolation as a strictly materialist account of the generation of soul and form, Fazzo was right to emphasize that this is only half the story.[78] *On providence* and *Quaestio* II.3 insist on the role of divine power, which renders Alexander's cosmology a genuine rival of Stoic and Platonist theories without coinciding with either. In all of this we need to keep in mind that *Quaestio* II.3 does not give us a story of creation: the universe is eternal, so this theory expresses causal dependence and hierarchy rather than stages in a creation process.

This cosmology is both top-down and bottom-up in a remarkable way. The divine power 'arrives' in sensible nature top down, from the divine body, and 'creates' the elements in the order of their natural places in the universe from the top down (fire, air, water, earth); the divine power is also stronger in the elements closest to the divine; and providence reaches down until the level of the species. At the same time it 'creates' the universe bottom up, by in-form-ing prime matter with the basic qualities that constitute the four elements, which then 'build up' the forms of higher compounds and animate substances to which providence applies.

From our examination it should be clear that we need option (2) *also* to understand how the first cause, by means of the divine power it has sparked, is responsible for the *forms* of the elements – and through them, for all higher forms including the variety of souls. Only in this way Alexander has the theory to explain how the first cause *qua* form can be held responsible for the being, goodness, and intelligibility of all lesser beings. Indeed, the hierarchy and order of nature, including the desire for the first cause itself, come to the universe in accordance with the nature of each thing. We now know that each nature and soul *is* the divine power. Each form arises in accordance with the natural interaction that occurs between all things, both eternal and perishable, again in accordance with their nature that is the divine power. It is in this way that the first cause is responsible for all forms that constitute the natural order in Alexander's universe.

This bold theory has further benefits for our understanding of the polemical purposes of Alexander's corpus. For instance, it explains how, against Platonists and Stoics alike, Alexander can hold both that nature is a demiurge, even a divine art, *and* an irrational power, not divine because it uses a divine model, or divine reasoning, but because it comes from the gods. Without reason nature cannot contemplate a model, let alone execute a divine plan.[79] Instead, the first cause as intellect and highest object of thought remains a separate first final cause, which does not meddle with the details of the universe, but is nevertheless responsible for the existence and intelligibility of everything in the universe, through the forms it causes by means of the divine power, among which we find the potential intellect that allows humans to understand.[80] Against Atticus Alexander can affirm that all forms, hence all natures and souls, are the effects of a single first cause – but continue to deny with Aristotle both that nature is a (world) soul, and that all motion derives from souls. To the Stoics Alexander can offer a single divine power that permeates the entire universe from the outer sphere down to prime matter, which at the same time underlies (his own version of) providence – without turning the first cause into an efficient cause. Finally, he can reassure Theophrastus: the unity and order of the cosmos is safe. The very variety and differentiation that seemed to threaten it turn out to be the expression of its first final cause along an unbroken chain of natures with each an essential desire towards their single cause.

*****

78 Fazzo (2002) 179.

79 Cf. Alex. *in APr* 3.17-21; *in Metaph.* I.9, 103.45-104.14; *Prov.* 151.23-153.20, and Alex. ap. Simpl. *in Phys.* II.3, 310.25-311.38.

80 Cf. the grand summary of the role of the agent intellect in the universe, including criticism of the Stoic God, in *Mant.* §2, 113.4-24.

Bibliography

Adamson, P. (2016): "State of Nature: Human and Cosmic Rulership in Ancient Philosophy". In: Höfele, A. and Kellner, B. (eds): *Menschennatur und politische Ordnung*. Paderborn: Wilhelm Fink, pp. 79-94.

Arzhanov, Y. (2021): *Porphyry, On Principles and Matter. A Syriac Version of a Lost Greek Text with an English Translation, Introduction, and Glossaries*. *Scientia Graeco-Arabica*, edited by Marwan Rashed, vol. 34. Berlin-Boston: De Gruyter.

Bergeron, M., and Dufour, R. (2008): *Alexander Aphrodisiensis. De l'âme. Texte grec introduit, traduit et annoté*. Paris: Vrin.

Betegh, G. and Gregorić, P. (2020): "God's Relation to the Cosmos (Chapter 6)". In: Gregorić, P. and Karamanolis, G.: *Pseudo-Aristotle: "De Mundo" ("On the Cosmos"): A Commentary*. Cambridge-New York: Cambridge University Press, pp. 176-212.

Betegh, G. and Gregorić, P. (2014): "Multiple Analogy in Ps.-Aristotle *De mundo* 6". *Classical Quarterly* 64, No. 2: pp. 574-591.

Bodnár, I. (1997): "Movers and Elemental Motions in Aristotle". *Oxford Studies in Ancient Philosophy* 15: pp. 81-118.

Bodnár, I.M. (2014): "Alexander's Unmoved Mover". In: Cerami, C. (ed.): *Nature et sagesse. Les rapports entre physique et métaphysique dans la tradition aristotélicienne. Recueil de textes en hommage à Pierre Pellegrin*. Leuven: Peeters, pp. 387-416.

Bodnár, I.M. (1997): "Alexander of Aphrodisias on Celestial Motions". *Phronesis* 42, No 2: pp. 190-205.

Boys-Stones, G. (2017): *Platonist Philosophy 80 BC to AD 250. An Introduction and Collection of Sources in Translation*. Cambridge: Cambridge University Press.

De Haas, F.A.J. (2020): "Aristotle and Alexander of Aphrodisias on Active Intellectual Cognition". In: Decaix, V. and Mora Márquez, A.M. (eds.): *Active Cognition. Challenges to an Aristotelian Tradition*. Studies in the History of Philosophy of Mind. Edited by Lagerlund, H. and Yrjönsuuri, M., vol. 23. Dordrecht: Springer, pp. 13-36.

De Haas, F.A.J. (2021): "Deduction and Common Notions in Alexander's Commentary on Aristotle's *Metaphysics* A 1-2". *History of Philosophy & Logical Analysis* 24: pp. 71-102.

De Haas, F.A.J. (2019): "Intellect in Alexander of Aphrodisias and John Philoponus: divine, human or both?". In: Sisko, J.E. (ed.): *Philosophy of Mind in Antiquity*. The History of the Philosophy of Mind. Edited by Copenhaver, R. and Shields, Ch., vol. 1. London-New York: Routledge, pp. 299-316.

De Haas, F.A.J. (2023): "Alexander of Aphrodisias on the Ancient Debate on Hylomorphism and the Development of Intellect". In: Charles, D. (ed.): *The History of Hylomorphism. From Aristotle to Descartes*. Oxford: Oxford University Press, pp. 174-196.

De Haas, F.A.J. (2024): "Alexander of Aphrodisias on Analysis to the First Principle". *Studia graeco-arabica* 14: pp. 59-68. doi:10.12871/97912560807006

Des Places, É. (1977): *Atticus Fragments*. Paris: Les Belles Lettres.

Fazzo, S. (2002): *Aporia e sistema. La materia, la forma, il divino nelle Quaestiones di Alessandro di Afrodisia*. Pisa: Edizioni Ets.

Fazzo, S. (2004): "Sur la composition du traité dit *de motu animalium:* contribution à l'analyse de la théorie aristotélicienne du premier moteur". In: Laks, A. & Rashed, M. (Eds.): *Aristote et le mouvement des animaux. Dix études sur le De Motu Animalium*. Presses universitaires du Septentrion, pp. 203-229.

Fazzo, S. (2008): "L'exégèse du livre *Lambda* de la *Métaphysique* d'Aristote dans le *De principiis* et dans la *Quaestio* I.1 d'Alexandre d'Aphrodise". *Laval théologique et philosophique* 6, No 3: pp. 607-626.

Fazzo, S. and Zonta M. (1999): *Alessandro di Afrodisia. La Provvidenza – Questioni sulla provvidenza*. Milano: Biblioteca Universale Rizzoli.

Fleet, B. (1997): *Simplicius: On Aristotle's "Physics 2"*. Ithaca: Cornell University Press.

Frede, M., and Charles, D. eds. (2000): *Aristotle's Metaphysics Lambda, Symposium Aristotelicum*. Oxford.

Genequand, C. (2001): *Alexander of Aphrodisias on the Cosmos*. *Islamic Philosophy, Theology and Science. Texts and Studies*. Edited by Daiber, H. and Pingree, D., vol. 44. Leiden-Boston-Köln: Brill.

Genequand, C. (2017): *Alexandre d'Aphrodise. Les Principes du tout selon la doctrine d'Aristote. Introduction, texte arabe, traduction et commentaire.* Paris: Librairie Philosophique J. Vrin.

Golitsis, P. (2018): "Alexandre d'Aphrodise, Simplicius, et la cause efficiente de l'univers". In : Balansard, A. and Jaulin, A. (Eds.): *Alexandre d'Aphrodise et la métaphysique aristotélicienne*. Aristote. Traductions et Études. Edited by Destrée, P. Leuven: Peeters, pp. 217-235.

Gregorić, P. and Karamanolis, G. eds. (2020): *Pseudo-Aristotle: "De Mundo" ("On the Cosmos"): A Commentary*. Cambridge-New York: Cambridge University Press.

Gutas, D. (2010): *Theophrastus on First Principles (known as his Metaphysics)*. *Philosophia Antiqua*, vol. 119. Edited by Algra, K.A., De Haas, F.A.J., Mansfeld, J., Rowe, C.J., Runia, D.T. and Wildberg, Ch. Leiden-Boston: Brill.

Guyomarc'h, G. (2015): *L'unité de la métaphysique selon Alexandre d'Aphrodise*. *Textes et Traditions*. Edited by Goulet-Cazé, M.-O., Goulet, R. and Hoffmann, P. vol. 27. Paris: Librairie Philosophique J. Vrin.

Guyomarc'h, G. and De Haas, F.A.J. eds. (2023): *Studies on Alexander of Aphrodisias' On Mixture and Growth*. *Philosophia Antiqua*, vol. 170. Edited by De Haas, F.A.J. Leiden-Boston: Brill.

Helmig, C. and Marongiu, L. eds. (2020): *World Soul – Anima Mundi. On the Origins and Fortunes of a Fundamental Idea. Topics in Ancient Philosophy / Themen der antiken Philosophie*. Vol. 8. Edited by Jansen, L., Jedan, C. and Rapp, C. Berlin-Boston: De Gruyter.

Long, A. A., and Sedley, D.N. (1987): *The Hellenistic Philosophers. Volume 1: translations of the principal sources, with philosophical commentary*. Vol. 1. 2 vols. Cambridge: Cambridge University Press.

Moraux, P. (1967): "Alexander von Aphrodisias Quaest. 2,3". *Hermes* 95, No. 2: pp.159-169.

Moraux, P. (1984): *Der Aristotelismus bei den Griechen. Von Andronikos bis Alexander von Aphrodisias. Der Aristotelismus im I. und II. Jahrhundert n.Chr.* Vol. II. *Peripatoi. Philologisch-historische Studien zum Aristotelismus*, vol. 7. Edited by Moraux, P. Berlin-New York: Walter de Gruyter Verlag.

Primavesi, O. and Corcilius, K. (2018): *Aristoteles De motu animalium. Über die Bewegung der Lebewesen*. Edited by Primavesi, O. and Corcilius, K. Hamburg: Felix Meiner Verlag.

Rapp, C. and Primavesi, O. eds. (2020): *Aristotle's De motu animalium (Symposium Aristotelicum)*. Oxford: Oxford University Press.

Sellars, J. (2006): *Stoicism*. *Ancient Philosophies*. Chesham: Acumen.

Thillet, P. (2003): *Alexandre d'Aphrodise. Traité de la providence (*Περὶ προνοίας*). Version arabe de Abū Bišr Mattä ibn Yūnus*. Lagrasse: Verdier.

Thom, J.C. (2014): *Cosmic Order and Divine Power: Pseudo-Aristotle, On the Cosmos*. Scripta Antiquitatis Posterioris ad Ethicam REligionemque Pertinentia (SAPERE) XXIII. Tübingen: Mohr Siebeck.

Thom, J.C. (2020): "The power of god in Pseudo-Aristotle's *De mundo*: An alternative approach". In: Helmig, C. and Marongiu, L. (Eds.): *World Soul – Anima Mundi. On the Origins and Fortunes of a Fundamental Idea*. Topics in Ancient Philosophy / Themen der antiken Philosophie. Edited by Jansen, L., Jedan, C. and Rapp, C. Vol. 8. Berlin-Boston: De Gruyter, pp. 135-152.

Twetten, D. (2016): "Aristotelian Cosmology and Causality in Classical Arabic Philosophy and Its Greek Background". In: Janos, D. (ed.): *Ideas in Motion in Baghdad and Beyond. Philosophical and Theological Exchanges between Christians and Muslims in the Third/Ninth and Fourth/Tenth Centuries*. Islamic History and Civilization. Studies and Texts. Edited by Biesterfeldt, H., Günther, S. and Kadi, W. Vol. 124. Leiden-Boston: Brill, pp. 312-433.