

## Aristotle's Nature-Bound Theology in *Metaphysics* Λ

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Abstract: In *Metaphysics* Λ, Aristotle appeals to the prime mover: an unmoved mover that is the first moving cause of the world. Elsewhere, he calls the science concerned with the prime mover 'theology' (*Meta.* E.1, 1026a19). But what is the point of this science? On a common view, its purpose is to give an account of the prime mover itself, and especially to prove its existence. By contrast, I argue that Aristotle's theology in *Metaphysics* Λ is 'nature-bound': it ultimately aims at explaining facts about the perceptible world, in particular, the motion of heavenly bodies and the cycle of generation of perishable substances.

Key words: Aristotle; theology; prime mover; perceptible world

In *Metaphysics* Λ, Aristotle addresses a topic to which he has alluded repeatedly in other parts of the treatise: unchangeable substance (ἀκίνητος οὐσία).<sup>1</sup> In particular, he appeals to a prime mover that moves the first heaven, and everything below it, without itself being moved (Λ.7, 1072a25–6). Here, I will discuss some details of this account, but my main question is one that is rarely raised explicitly: what is the *purpose* of discussing unchangeable substance in Λ? It is often held that the discussion of unchangeable substance is itself the purpose of Λ. By contrast, I will argue that Aristotle discusses unchangeable substance in order to complete his account of *perceptible* (and hence changeable) substance.<sup>2</sup>

A similar suggestion has been made by Michael Frede (2000a, 5–7), but it has garnered few supporters, in part because Frede does not defend it in detail, and in part because he offers it with despondence since the explanatory orientation towards perceptible substance is not what Frede would have expected from Λ.<sup>3</sup> But there is no need for despondence. For once worked out, the proposed interpretation not only restores the much-debated unity of Λ but also sheds light on Aristotle's conception of theology.

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<sup>1</sup> I will translate ἀκίνητος as 'unchangeable' except where it is clear that locomotion is at stake, when I resort to the traditional 'unmoved', as in 'unmoved mover'. A discussion of unchangeable substance that is separate from perceptible things is promised, e.g., at *Meta.* A.2, 983a5–11; Z.11, 1037a10–17; Z.17, 1041a6–9.

<sup>2</sup> At *Meta.* Λ.1, 1069b3, Aristotle infers from the perceptibility of substances to their changeability. He seems to hold that an entity is perceptible if and only if it is changeable (see Rapp 2016, 88–90 for further discussion).

<sup>3</sup> According to Frede (1987; 2000a), Aristotle's theology should have yielded an unchangeable substance that explains why other substances are what they are, not merely a first moving cause (cf. Owens 1951/78, ch.19).

Notoriously, after the introductory  $\Lambda.1$ , the book seems to split into two disparate halves, where  $\Lambda.2-5$  concerns perceptible substance and  $\Lambda.6-10$  concerns unchangeable substance. As Frede (2000a, 6–7) notes (cf. Judson 2019, 13), if both halves aim at an explanation of perceptible substance,  $\Lambda$  may emerge as a unified argumentative unit after all. More precisely, I will argue that, in  $\Lambda.6-10$ , Aristotle completes his statement of the principles of perceptible substances begun in  $\Lambda.2-5$ . Whereas in  $\Lambda.2-5$ , he states the immanent causes of perceptible substances (especially matter and form), in  $\Lambda.6-10$ , he establishes their first external moving cause, namely, the prime mover. Unchangeable substance, then, is appealed to as an explanans with the purpose of explaining facts about perceptible substances.<sup>4</sup> These facts are primarily the motion of heavenly bodies and the cycle of generation of perishable substances.

Since for Aristotle, ‘theology’ (θεολογική) (*Meta.* E.1, 1026a19) concerns ‘separate and unchangeable’ entities (χωριστὰ καὶ ἀκίνητα) (1026a16),  $\Lambda$  seems designed as a treatise in theology.<sup>5</sup> If this treatise turns out to aim at an explanation of perceptible substances, one can draw one of two lessons. The first is disappointment: theology should study separate and unchangeable substance for its own sake, and not be polluted with an ulterior purpose concerning perceptible substance. The second reaction is to adjust one’s expectations towards Aristotle’s theology in light of his theological practice. I will defend the second view. As I put it, Aristotle’s theology is ‘nature-bound’: it ultimately aims at explaining facts about perceptible substance. This theology is not naturalistic since it appeals to immaterial explanantia. But the ultimate explananda it pursues are firmly set in the natural world.<sup>6</sup>

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<sup>4</sup> Since substance is prior to the other categories, the principles of perceptible substances are also principles of all perceptible *things*, including non-substances ( $\Lambda.5$ , 1071a34–35). But Aristotle’s focus in  $\Lambda$  is on substance, and hence mostly, I will simply speak about perceptible substances, not perceptible things more broadly.

<sup>5</sup> It has been doubted that Aristotle does theology in  $\Lambda$  (see, e.g., Bodéüs 1992, 42–51; Fazzo 2014, 59–61; Berti 2017, xx–xxi; Baghdassarian 2019, 12–13). I am sympathetic to these doubts if theology is taken to aim at an account of the divine. But I will draw a different conclusion: Aristotle does pursue theology, namely, what he calls θεολογική in *Meta.* E.1, but this theology does not aim (primarily) at an account of the divine.

<sup>6</sup> The qualification ‘ultimate’ explananda matters. For, as an intermediate result, theology states a principle of unchangeable substance (namely, ἐνέργεια). Hence, theology includes unchangeable substance among its explananda, but these in turn serve to explain the ultimate explananda: perceptible substances. See section 6.

I will begin with a discussion of  $\Lambda$ .1 and outline the main exegetical options for  $\Lambda$  (section 1). I will then argue that in the two central arguments where Aristotle makes systematic use of unchangeable substance (the ‘skeletal’ (1071b5–22) and ‘full-bodied’ arguments (1072a3–27)), he appeals to unchangeable substance to explain facts about perceptible substances: the rotation of heavenly bodies and the cycle of generation of perishable substances (sections 2–3). Further, I will argue that my interpretation can accommodate overtly ‘theological’ passages in  $\Lambda$ .7–10 that seem to discuss unchangeable substance for its own sake (section 4). Finally, I will draw some conclusions about the unity of  $\Lambda$  (section 5) and address general worries about nature-bound theology (section 6).

## 1. Substance and the Programme of $\Lambda$

*Metaphysics*  $\Lambda$  opens with a programmatic statement: ‘The investigation concerns substance; for it is of substances that the principles and the causes are sought’ (Περὶ τῆς οὐσίας ἡ θεωρία· τῶν γὰρ οὐσιῶν αἱ ἀρχαὶ καὶ τὰ αἷτια ζητοῦνται) (1069a18–19).<sup>7</sup> A reader of the *Metaphysics*, as we have it, will not find this claim surprising. Already in  $\Gamma$ .2, Aristotle argued that the philosopher has to grasp the principles and causes of substances (1003b18–19). For the (first) philosopher’s task is to grasp the ‘first causes of what is insofar as it is’ (τοῦ ὄντος ἢ ὄν τὰς πρώτας αἰτίας) ( $\Gamma$ .1, 1003a31), and according to  $\Gamma$ .2, the key to this task is to grasp the first causes of the entity prior to all others, namely, substance (cf. *Meta.* B.1, 995b6–8; B.2, 996b13–14).<sup>8</sup> Similarly, in  $\Lambda$ .1, Aristotle supports his opening statement with three arguments

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<sup>7</sup> All translations are mine. As for the Greek text, I tend to follow the  $\alpha$ -tradition of manuscripts, as, e.g., in Fazzo 2012, not the  $\beta$ -tradition as, e.g., in Jaeger 1957. Manuscripts EJ are the central representatives of the  $\alpha$ -tradition, and A<sup>b</sup> is the most prominent representative of the  $\beta$ -tradition. But from  $\Lambda$ .7, 1073a1, A<sup>b</sup> is part of the  $\alpha$ -tradition, and Fazzo (2012, 113–8) argues that this is the case for all of  $\Lambda$ . For the manuscripts of  $\Lambda$ , see Alexandru 2014.

<sup>8</sup> This conclusion is backed with the *pros-hen* analysis of being: all things that are ( $\delta\upsilon\upsilon\tau\alpha$ ) are things that are either because they are substances or because they are related to substance, e.g., as affections of substance (1003b6–10; cf. Z.1, 1028a13–20). For a discussion, see, e.g., Owen 1960; Shields 1998.

for the priority of substance (1069a19–24), and an appeal to tradition: according to him, his predecessors, too, sought the principles and causes of substance (1069a25–6).

The goal of  $\Lambda$ , then, is to establish the principles and causes of substance. Beyond this basic point, however, there is little agreement as to the primary purpose of  $\Lambda$ . As I see it, we face two central questions, one about substance (S) and one about principles (P):

(S) Of which kind of substance does Aristotle seek the principles in  $\Lambda$ ?

(P) What is the purpose of establishing the principles of (this kind of) substance?

In this section, I explicate (S) and (P) and sketch my responses to them, alongside rival views. In the remainder of the paper, I will defend these responses and thereby my thesis that the goal of  $\Lambda$  is to explain facts about perceptible substances.

Let us begin with (S). In  $\Lambda.1$  (1069a30–b2), Aristotle distinguishes three kinds of substance. Two kinds are perceptible, namely, perishable perceptible substance (e.g., animals) and eternal perceptible substance (heavenly bodies) (1069a30–32), whereas one kind is ‘unchangeable’ ( $\acute{\alpha}\kappa\acute{\iota}\nu\eta\tau\omicron\varsigma$ ) (1069a33). On a common view, Aristotle seeks the principles of all three kinds of substance in  $\Lambda$  (Judson 2019, 50; cf. Oehler 1984, 33–4; Lang 1993). But Frede (2000a, 5–7) has suggested that only the principles of perceptible substances are sought. In what follows, I will defend a version of Frede’s interpretation: the goal of  $\Lambda$  is to establish the principles of perceptible substances, although as an *intermediate* result of the statement of the moving cause of perceptible substances, we also learn something about the principles of unchangeable substances, namely that  $\acute{\epsilon}\nu\acute{\epsilon}\rho\gamma\epsilon\iota\alpha$  (but not  $\delta\acute{\upsilon}\nu\alpha\mu\iota\varsigma$ ) is a principle of them.<sup>9</sup>

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<sup>9</sup> On the latter point, I largely agree with Judson (2019, 16). However, unlike Judson, I do not take it to be the *purpose* of Aristotle’s discussion to establish a principle of unchangeable substances. The overarching goal in  $\Lambda$  is to establish the principles of perceptible substances, and any conclusion concerning the principles of unchangeable substances are reached *on the way* to this overarching goal. See sections 2.2 and 5–6.

Most of this paper is dedicated to developing this interpretation. For now, let me respond to an objection to my reading of  $\Lambda.1$ . Judson (2019, 14) claims against Frede that his view requires that οὐσία in the first line of  $\Lambda.1$  (1069a18) refers to perceptible substance. I agree that this seems implausible given that Aristotle goes on to distinguish three kinds of substance (1069a30–b2). But we need not read οὐσία at 1069a18 in this way. Instead, we can take its reference to be indeterminate as to the kind of substance at stake. The restriction to perceptible substance occurs later in  $\Lambda.1$ , namely when Aristotle distinguishes perceptible from unchangeable substance. For there, Aristotle says specifically about *perceptible* substance that ‘one must grasp its elements’ (ἧς ἀνάγκη τὰ στοιχεῖα λαβεῖν) (1069a32–3), without adding any corresponding claim about unchangeable substance.<sup>10</sup> This suggests that Aristotle will seek specifically the principles of perceptible substances, not of all substances.

The proposed reading of the passage is not mandatory. After all, Aristotle does not explicitly *exclude* the principles of unchangeable substance either. My point is the more modest one that, contra Judson, the reading I endorse does not imply that ‘substance’ at 1069a18 refers to perceptible substance. One could retort that, if Aristotle imposes a restriction to perceptible substances at 1069a32–3, he ought to motivate this restriction. Admittedly, he does not offer any such motivation in  $\Lambda.1$ . But as I hope to show, he does have a philosophical motivation for the restriction which emerges gradually over the course of  $\Lambda$ .

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<sup>10</sup> There is a textual complication, namely, the duplication in most manuscripts of ἡ μὲν αἰδῖος (a29–30) and ἡ δ’ αἰδῖος (a32). MCV<sup>k</sup> do not have ἡ μὲν αἰδῖος, and Alexander may have known a text without ἡ δ’ αἰδῖος (which is also bracketed by most recent editors). As Fazzo (2013) argues, if we retain ἡ δ’ αἰδῖος, Aristotle seems to say that specifically the principles of eternal perceptible substances are sought, but if we omit it, he seems to say that specifically the principles of perishable substances are sought. Neither result is ideal since, in  $\Lambda.2$ –5, principles of both sorts of perceptible substance are discussed. Given the preponderance of the discussion of principles of perishable substances in  $\Lambda.2$ –5, my preference would be to follow most editors and bracket ἡ δ’ αἰδῖος. Thus, the claim is that the principles of perishable substances are sought which is compatible with Aristotle offering a side remark on the matter of eternal perceptible substances ( $\Lambda.2$ , 1069b25–6). Further, in the ‘full-bodied’ argument in  $\Lambda.6$ –7 (1072a7–26), the ultimate explanandum is arguably the cycle of generation of perishable substances, not the motion of heavenly bodies (which is an intermediate explanandum as well as explanans of the cycle of generation of perishable substances). Hence, it may be fine for Aristotle to say in  $\Lambda.1$  that the principles of perishable substances are sought. But what matters most for us is that, regardless of our choice here, Aristotle makes a claim about the principles of perceptible substances, not unchangeable substance. For a detailed discussion of the textual issue, see Frede 2000b, 78–80; Fazzo 2013.

First, we should be clear about the import of the restriction. As mentioned above, I think that Aristotle will state as an intermediate result that ἐνέργεια is a principle of unchangeable substance. The restriction, then, cannot imply that Aristotle does not have any interest in the principles of unchangeable substance at all (nor that unchangeable substance does not have any principles; cf. Frede 2000a, 6). In this sense,  $\Lambda$  remains compatible with the blanket assertion that the principles of substances or entities (ὄντα) are sought, as in  $\Gamma.2$  (1003b18–19) and  $E.1$  (1025b3). The restriction in  $\Lambda$  concerns rather the substances whose principles are *ultimately* sought, and these are perceptible substances. What motivates this restriction?

In response, I will argue that the principle in which Aristotle is primarily interested in  $\Lambda$  is the first moving cause. But unchangeable substances do not have a first moving cause (except perhaps accidentally). Hence, the explananda that he ultimately aims at must be substances that are subject to change, and thus perceptible substances. But this answer generates another question: why is Aristotle primarily interested in the first *moving* cause in  $\Lambda$ ? In my view, the answer is that the main task of  $\Lambda$  is to explain facts about the generation and locomotion of substances that must be answered in theology because the explanation requires unchangeable substance as an explanans – and this explanans is a first moving cause. I will return to these central issues after we have looked at Aristotle’s arguments in detail (section 5).

My answer to (S) is suggestive of my thesis that the goal of  $\Lambda$ , including the discussion of unchangeable substance, is to explain facts about perceptible substances. For the principles of perceptible substances sought in  $\Lambda$  explain something about perceptible substances, and if unchangeable substances are among these principles, it is natural to think that unchangeable substances are discussed *in order to* explain something about perceptible substances. Still, by itself, my answer to (S) is not sufficient to defend this thesis. For even if Aristotle seeks the principles of perceptible substances, and unchangeable substances are among the principles, it may not be the *purpose* of discussing unchangeable substances to explain something about

perceptible substances. Instead, the purpose may be to show something about unchangeable substances, for instance, that they exist or have certain characteristics. This brings us to (P).

The rival view I have adumbrated encapsulates an influential family of interpretations of  $\Lambda$  which I call ‘subordination readings’. These interpretations vary, but its proponents agree that the discussion of perceptible substance in  $\Lambda$  is subordinate to the discussion of unchangeable substance. The most straightforward version of the subordination reading construes (parts of)  $\Lambda$  as a proof of the existence of the prime mover that starts from perceptible substances (for a classic statement, see Ross 1924 I, cxxx–cxxxiii). This tendency is pervasive even among scholars who otherwise reject the subordination of the account of perceptible substance to the treatment of unchangeable substance (see, e.g., Judson 2019, 229). A related view formulates the subordination reading in terms of principles: the goal of  $\Lambda$  is to ascend from perceptible substances to first principles, namely, unchangeable substances (see, e.g., Patzig 1960; Frede 1987; Burnyeat 2001, 132; Menn, manuscript, Ia5).

The subordination reading arises from an answer to (P), not (S). Indeed, subordination readings are compatible with my answer to (S). For one may agree that, in  $\Lambda$ , Aristotle seeks the principles only of perceptible substances, and yet hold that the purpose of this search is to reach those principles for their own sake. Hence, to defend my reading of  $\Lambda$ , I must show not only that Aristotle seeks the principles of perceptible substances, but also that the purpose of establishing these principles, including the first external moving cause (that is, the prime mover), is to explain facts about perceptible substances.

The issues surrounding (S) and (P) are reflected in the problem of the unity of  $\Lambda$ . Beyond  $\Lambda.1$ , the book seems to split into two parts, where  $\Lambda.2$ –5 concerns perceptible substance and  $\Lambda.6$ –10 concerns unchangeable substance. This supposed split is most visible in the transition from  $\Lambda.5$  to  $\Lambda.6$ : at the end of  $\Lambda.5$ , Aristotle says that the principles of perceptible things have been stated (1071b1–2) and at the beginning of  $\Lambda.6$ , he seems to move on to the new topic of unchangeable substance (1071b3–5). There are several ways of salvaging the unity of  $\Lambda$ , to

which I will return in section 5. But two options directly track the responses to (P) sketched above. On a subordination reading, one will read  $\Lambda.2-5$  as a preparatory step towards the account of unchangeable substance in  $\Lambda.6-10$ . By contrast, I will argue that there is no split between  $\Lambda.2-5$  and  $\Lambda.6-10$  since both parts aim at establishing the principles of perceptible substances for the sake of explaining facts about the natural world.

My thesis is more ambitious when it comes to  $\Lambda.6-10$ . For  $\Lambda.2-5$  is explicitly concerned with the principles of perceptible substances which lends prima facie plausibility to the view that, in this part of  $\Lambda$ , Aristotle seeks the principles of perceptible substances and that he does so in order to explain something about them, namely, why they are the sorts of (perceptible and changeable) entities they are.<sup>11</sup> It is a much harder task to render the corresponding reading of  $\Lambda.6-10$  plausible, especially the claim that unchangeable substance is discussed in order to explain facts about perceptible substances. What is more, insofar as subordination readings of  $\Lambda.2-5$  are attractive, this attraction is inherited from a reading of  $\Lambda.6-10$ . It is the appeal to unchangeable substance in the latter part of  $\Lambda$  that may make one read already  $\Lambda.2-5$  as directed towards an account of unchangeable substance.

Hence, I will focus on  $\Lambda.6-10$ . But let me briefly sketch what I take the main results of  $\Lambda.2-5$  to be. The first is that perceptible entities have three ‘immanent’ (ἐνυπάρχοντα, 1070b22) causes or ‘elements’ (στοιχεῖα) and an ‘external’ (ἐκτός) moving cause ( $\Lambda.4$ , 1070b22–26). The three immanent causes are matter, form, and privation ( $\Lambda.2$ , 1069b32–4), whereas the external moving cause is, in the first instance, an entity that is ‘of the same form’ (ὁμοειδές, 1071a17) as the effect, such as the father of a child ( $\Lambda.3$ , 1070a4–9), but may also be an entity different in form from the effect, such as, in the case of the child, the sun and the

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<sup>11</sup> I will remain neutral on whether the explanandum is why something is the sort of substance it is (e.g., a horse) or why it is a substance at all. I discuss this issue in the context of *Meta. Z* in Meister 2023, 93–4.



ecliptic (Λ.5, 1071a14–17). The four causes are then subsumed under ἐνέργεια and δύναμις:<sup>12</sup> matter under δύναμις and the other three causes under ἐνέργεια (Λ.5, 1071a3–17).<sup>13</sup>

The second main result is that, in several ways (but not others), all perceptible things, both substances and non-substances, have the same principles. Towards the end of Λ.5, Aristotle clearly states two such ways: first, their principles, that is, matter, form, privation, and moving cause, are the same by analogy (1071a33–34; cf. Λ.4, 1070b25–26), and second, the principles of substances are principles of everything else (1071a34–35; cf. Λ.5, 1070b36–71a3). Finally, he may be alluding to a third way in which all perceptible things have the same principles by speaking of ‘what is first in actuality (ἐντελεχεία)’ (1071a36), which some scholars take to be a reference to the prime mover.<sup>14</sup> But even if he does not allude to the prime mover here, he clearly does so at the end of Λ.4 when he mentions ‘that which, as the first of all things, moves all things’ (1070b34–35). Nothing more is said about this cause in Λ.2–5, but the formulation suggests that it is a numerically single principle for all perceptible things.<sup>15</sup>

What matters most for us is that loose ends remain. In Λ.2–5, Aristotle offers an account of perceptible things which states their principles and explains in what sense those principles are the same for all of them. But this account is incomplete. In particular, Aristotle has not stated the *first* external moving cause of perceptible substances. In the chain of external moving causes of a child, for instance, we have not progressed beyond the sun and the ecliptic in Λ.5, and even these causes have not been argued for. Similarly, Aristotle has not yet provided, but only alluded to, a principle that is numerically, and not merely analogically, the same for all

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<sup>12</sup> For a discussion, see Rapp 2016, 107–11. According to Ross (1924 II, 362), Aristotle introduces ἐνέργεια and δύναμις as *additional* analogical principles, but he seems to subsume matter, form, and privation under δύναμις and ἐνέργεια at 1071a7–11 and the moving cause under ἐνέργεια at 1071a11–17 (Code 2000, 172–3).

<sup>13</sup> Except perhaps for privation. If we adopt Jaeger’s comma at 1071a9 between ἀμφοῖν and στέρησις, the text says: ‘for the form is in actuality, if it is separate, and the composite, and the privation is e.g. darkness or the sick, and matter is in potentiality’ (1071a8–10). That is, Aristotle does not subsume privation under actuality or potentiality but merely gives some examples of a privation (Code 2000, 168). Alternatively, with Ross (1924 II, 363), we could omit the comma and change the δέ into a τε so that privation, too, is subsumed under actuality.

<sup>14</sup> Ross 1924 II, 366; Rapp 2016, 110. But Judson (2019, 172–3) thinks that the expression refers to form.

<sup>15</sup> Perhaps Aristotle also treats universal sameness as a way in which the principles of all things are the same (Λ.4, 1070a32), although this option is not mentioned in the summary in Λ.5 (see Judson 2019, 166). For a full list of the identity of principles in Λ.4–5, see Crubellier 2000, 140.

perceptible things.<sup>16</sup> The incompleteness of the account of perceptible things is crucial. For, as I will argue next, it allows us to see why Aristotle presses on to unchangeable substance in  $\Lambda.6$ : to complete his account of perceptible things, especially perceptible substances.

## 2. The Skeletal Argument ( $\Lambda.6$ , 1071b5–22)

The key question that has emerged is: why does Aristotle discuss unchangeable substance? In response, we have to look at passages where he first appeals to unchangeable substance in an argumentative context. There are two such passages, both in  $\Lambda.6$ –7. I call the first the ‘skeletal argument’ ( $\Lambda.6$ , 1071b5–22) and the second the ‘full-bodied argument’ ( $\Lambda.6$ , 1072a7– $\Lambda.7$ , 1072a26) because the latter retraces the former in more detail. For it is only in the full-bodied argument that unchangeable substance is called an *unmoved* mover, and that the cycle of generation of perishable substances is treated as an explanandum in addition to the motion of heavenly bodies. But I will argue that both arguments have a single explanatory thrust: they appeal to unchangeable substance to explain facts about perceptible substance. I discuss the skeletal argument in this section and the full-bodied argument in the next.

### *2.1. A Sketch of the Skeletal Argument*

At the beginning of  $\Lambda.6$ , Aristotle revisits his distinction between three kinds of substance from  $\Lambda.1$  (1071b3–5). He calls the two kinds of perceptible substance ‘natural’ ( $\phi\upsilon\sigma\iota\kappa\alpha\acute{\iota}$ ) (1071b3) and says regarding the third kind, namely, ‘unchangeable’ ( $\acute{\alpha}\kappa\acute{\iota}\nu\eta\tau\omicron\varsigma$ ) substance:

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<sup>16</sup> In  $\Lambda.8$ , Aristotle introduces 55 unmoved movers in addition to the prime mover. This may threaten the claim that there is a numerically single first principle for all perceptible things. The worry leads to broader questions about the exact nature of Aristotle’s principle monism as he seems to defend it especially in  $\Lambda.10$  that I cannot address here. I will return to  $\Lambda.8$  and  $\Lambda.10$  in sections 4 and 5.

‘about this [substance] it must be said that it is necessary that there is some unchangeable substance’ (περὶ ταύτης λεκτέον ὅτι ἀνάγκη εἶναι αἰδιόν τινα οὐσίαν ἀκίνητον) (1071b4–5).

The ensuing skeletal argument (1071b5–22) is central because it appeals to unchangeable substance in an argumentative context for the first time in  $\Lambda$ . It divides into two parts, where the first reaches eternal *perceptible* substance (1071b5–11) and the second appeals to unchangeable substance as a moving cause of eternal perceptible substance (1071b12–22). I will be brief with the first part and focus on unchangeable substance.

In the first part of the argument, Aristotle argues that there are non-perishable substances. But these are *changeable* substances that move continuously and eternally in a circle, not unchangeable substances (cf. Oehler 1955; Berti 2000, 182; Judson 2019, 196–7). He seems to rely on a modus-tollens argument (1071b5–9).<sup>17</sup> If all substances are perishable, then all things are perishable (premise 1). But not all things are perishable since neither change nor time is perishable (premise 2).<sup>18</sup> Therefore, not all substances are perishable. The quality of the argument is questionable,<sup>19</sup> but what matters for us primarily is the consequences Aristotle draws from the argument in its immediate aftermath.

In 1071b9–11, he assumes that time is continuous and argues that, therefore, change is continuous because time is the same thing as change or an affection of change (1071b9–10; cf. *Phys.* VIII.1, 251b27–8). Further, he claims that only circular locomotion is continuous (1071b10–11; cf. *Phys.* VIII.8, especially 265a7–12). The overall conclusion is not stated but surely intended to complement the thesis that not all substances are perishable. This thesis implies that there is a non-perishable substance, and hence Aristotle spells out what this

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<sup>17</sup> I follow the standard reading advocated, e.g., by Ross 1924 II, 368; Berti 2000, 183. For an alternative reading of the section, see Judson 2019, 198–9.

<sup>18</sup> The second premise is argued for in *Phys.* VIII.1. Here, Aristotle singles out the argument that if time did not exist, there could not be a before and after (1071b8–9; cf. *Phys.* VIII.1, 251b10–11).

<sup>19</sup> As scholars have noticed, the first premise seems false (Berti 2000, 183; Judson 2019, 197–8). For there could be a non-perishable quality predicated of an everlasting sequence of perishable substances. This observation also motivates Judson’s (2019, 198) alternative reading, although he admits that a gap in the argument remains.

substance must be like: it moves continuously and eternally in a circle. The most prominent entity of this sort is the first heaven to which we will return in the full-bodied argument.

In the second part of the skeletal argument, by contrast, Aristotle turns to the *causes* of the eternal motion of heavenly bodies and thus to unchangeable substance. The argument consists of three steps that culminate in the conclusion that the causes of eternal motion, which I will call the ‘movers’, are activities (ἐνέργειαι) (1071b22):

Ἀλλὰ μὴν εἴ ἔστι κινήτικόν ἢ ποιητικόν, μὴ ἐνεργοῦν δέ  
τι, οὐκ ἔστι κίνησις· ἐνδέχεται γὰρ τὸ δύναμιν ἔχον μὴ  
ἐνεργεῖν. οὐθὲν ἄρα ὄφελος οὐδ’ ἐὰν οὐσίας ποιήσωμεν αἰ-  
δίους, ὥσπερ οἱ τὰ εἶδη, εἰ μὴ τις δυναμένη ἐνέσται ἀρχὴ (15)  
μεταβάλλειν· οὐ τοίνυν οὐδ’ αὕτη ἰκανή, οὐδ’ ἄλλη οὐσία  
παρὰ τὰ εἶδη· εἰ γὰρ μὴ ἐνεργήσει, οὐκ ἔσται κίνησις. ἔτι  
οὐδ’ εἰ ἐνεργήσει, ἢ δ’ οὐσία αὐτῆς δύναμις· οὐ γὰρ ἔσται  
κίνησις αἰδῖος· ἐνδέχεται γὰρ τὸ δυνάμει ὄν μὴ εἶναι. δεῖ  
ἄρα εἶναι ἀρχὴν τοιαύτην ἧς ἡ οὐσία ἐνέργεια. ἔτι τοίνυν (20)  
ταύτας δεῖ τὰς οὐσίας εἶναι ἄνευ ὕλης· αἰδῖους γὰρ δεῖ,  
εἴπερ γε καὶ ἄλλο τι αἰδῖον. ἐνέργειαι ἄρα.

(i) But if there is something capable of moving or bringing about [motion] that does however not act, there is no change; for it is possible that what has a capacity does not act. It is no help, then, even if we posit eternal substances, like those who posit Forms, if no principle of change is in them. But nor is this [principle] sufficient, nor a different substance in addition to the Forms. For if it does not act, there will not be any motion. (ii) Further, nor [is it sufficient] if it acts, and its substance is capacity; for there will not be eternal motion. For it is possible that what is in capacity is not. Therefore, there must be such a principle whose substance is activity. (iii) Further, then, it is necessary that these substances are without matter; for it is necessary that they are eternal, if indeed there is also something else that is eternal. Therefore, activities. (1071b12–22)

The first step (1071b12–17) is the most involved. In my view, the structure of the argument is the following.<sup>20</sup> Aristotle begins with the central premise: ‘if there is something capable of moving or bringing about [motion] (κινήτικόν ἢ ποιητικόν) that does however not act (μὴ ἐνεργοῦν δέ), there is no motion’ (1071b12–13).<sup>21</sup> Here, he attacks a view about the (first)

<sup>20</sup> For an alternative construal on which the argument begins at b14 (‘it is no help etc.’), and takes b12–13 to pre-empt the conclusion, see Judson 2019: 200–1. But in my view, the ἄρα at b14 suggests quite clearly that b14ff. follows from b12–13. Hence b12–13 cannot be the conclusion of the ensuing argument.

<sup>21</sup> I now translate κίνησις as ‘motion’ since change has been narrowed down to locomotion (cf. Judson 2019, 194–5). At b13, I read ἔστι with E and A<sup>b</sup> (not ἔσται).

cause of motion, namely that the mover is capable of bringing about motion but does not act on this capacity. According to Aristotle, if the mover is like this, then there is no motion. But, as we saw in the first part of the argument, there is motion. Hence, it is not the case that the cause of motion is merely *capable* of bringing about motion. Finally, Aristotle applies this conclusion to Platonist views. First (ἄρα, b14), it does not help to posit eternal substances, such as Platonic forms, if they do not have a principle capable of bringing about change (1071b14–16). Second (τοίνυν, b16), it is not enough either to posit such a principle in the forms, or an additional substance, if it does not act on its capacity.

As formulated, the argument has a lacuna. For even if it is possible for the mover to not act on its capacity (1071b13–14), it does not follow that there is *no* motion. Ross (1924 II, 367) therefore claims that eternal motion is at stake: if it is possible for the mover to not act on its capacity, there is not *always* motion. But it is only at the second step of the argument that Aristotle begins to speak of ‘eternal motion’ (1071b19). Throughout 1071b12–17, he says simply that there is no motion. It would be nice if we could make sense of this difference.

Hence, I suggest an alternative reading: at the first step of the argument, Aristotle discusses the view that the mover does not act on its capacity *at all*. The conditional, then, says that if there is a mover that has the capacity to bring about motion but does not act on this capacity at all, there is no motion. At the second step of the argument (1071b17–20), Aristotle adds that even if one has a mover that acts on its capacity, but its essence is capacity, there will not be ‘*eternal* motion’ (1071b19). But there is eternal motion, and hence, it cannot be the case that the essence of the mover is capacity. Rather, its essence is activity (1071b20).<sup>22</sup>

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<sup>22</sup> The argument for the claim that eternal motion is guaranteed only if the essence of the mover is activity is that ‘it is possible that what is in capacity is not’ (1071b19). Aristotle seems to assume that, if the essence of the mover were capacity, then at some point, the mover would cease to be, and hence there would not be eternal motion (cf. *Phys.* III.4, 203b30). According to Ps.-Alexander (*In Aristotelis Metaphysica Commentaria*, ed. Hayduck, 688.20), this requires the principle of plenitude (cf. Miller, Jr. 2021, 12), but Judson (2019, 203–4) argues that the principle is not needed.

Finally, in a third step (1071b20–22), Aristotle goes beyond the claim that activity is the essence of the mover to argue that the mover *just is* activity. Or, if we adopt the EJ reading (as I did), he says that the movers, several eternal ‘substances’ (οὐσίας, b21), just are activities (ἐνέργεια, b22).<sup>23</sup> This is a new step. For even if activity is the essence of the movers, they could have additional, non-essential features. Aristotle’s argument seems to be that the movers must not have matter, and hence just be activities, *because* they are eternal (note the γάρ at b21). But this argument seems bad because heavenly bodies are eternal *and* have matter (Berti 2000, 192; Judson 2019, 207). Hence, Berti (2000, 192) suggests that the τοίνυν at 1071b20 marks an inference from the conclusion that activity of the essence of the movers to the claim that they do not have matter. But this inference is equally troubling. For as noted, the claim that activity is the essence of the movers does not imply that they do not have matter.

Instead, I propose to emphasize the second half of the γάρ-clause at 1071b21–2. Aristotle says: ‘for it is necessary that they are eternal, *if indeed there is also something else that is eternal* (εἴπερ γε καὶ ἄλλο τι αἰδίων)’ (1071b21–2). The εἴπερ-clause suggests that all other eternal entities depend for their eternity on the movers. Hence, it is not just that the movers must be eternal but also that they must be eternal in such a way as to explain the eternity of other entities, especially eternal motion. In *Physics* VIII.10, Aristotle argues that the claim that the first mover causes eternal motion implies that it is indivisible, partless, and without magnitude (267b24–6; cf. Λ.7, 1073a5–11). My proposal, then, is that *Physics* VIII.10 is in the background of the third step of the skeletal argument. If the fact that the movers cause eternal motion implies that they are indivisible, partless, and without magnitude, then

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<sup>23</sup> Cf. Elders (1972, 145) and Berti (2000, 191–2). On this reading, Aristotle may be adumbrating the conclusion in Λ.8 that there are 55 unmoved movers (1074a10–14). A<sup>b</sup>, as adopted by Ross (1924 II, 369) and Jaeger (1957, 250), has ἐνέργεια in the singular. But given that Aristotle speaks of eternal substances in the plural (b21), EJ’s ἐνέργεια is preferable. – Fazzo (2012, 185; 2016, 195–6) argues that we should read the EJ text as ἐνεργεία ἄρα. Hence, the conclusion is the movers are *in* activity. But then we have not progressed beyond the first step of the argument. For already there, the movers were said to act on their capacities and in this sense to be in activity.

plausibly it also implies that they are immaterial. Thus, Aristotle can move beyond the result of the second step and conclude that the movers just are activities.<sup>24</sup>

I have argued that in the second part of the skeletal argument, Aristotle defends a view of the movers of eternal motion that culminates in the claim that the movers just are activities. The second part of his argument, then, builds on the first where he showed that there is eternal motion, namely, the circular locomotion of heavenly bodies. During my discussion, I have spoken simply of ‘movers’ or ‘moving causes’. Most scholars agree that these are *unmoved* movers, although they will not be explicitly called ‘unmoved’ until we reach the full-bodied argument.<sup>25</sup> Hence, Aristotle has moved from eternal perceptible substances in the first part of the skeletal argument to unchangeable substances in the second part.

There is, however, a further question as to the causal profile of the movers in the skeletal argument. Several commentators have argued that the mention of ‘something capable of moving or bringing about [motion]’ (κινητικὸν ἢ ποιητικόν) (1071b12) implies that they are *efficient* rather than final causes.<sup>26</sup> In my view, this interpretation is misguided. For although, at the first step, Aristotle starts out with a conception of a mover that resembles an efficient cause, he then argues for a *different* conception according to which the movers are activities. Whether he would still call a mover of this type κινητικὸν ἢ ποιητικόν is not clear, and even if he did, these terms would have to be interpreted in light of the result reached at the end of the argument. This is not to say that the movers will not turn out to be efficient causes. But the skeletal argument is not where this issue is decided. What the argument establishes is a first moving cause, without specifying further whether it moves as an efficient or final cause.

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<sup>24</sup> One might object that ἐνέργεια should be translated as ‘actuality’, not as ‘activity’. In this case, Aristotle’s conclusion allows that the movers are first-level actualities, such as intellects. But as others have argued, it is more plausible that ἐνέργεια here means ‘activity’ (see, e.g., Elders 1972, 144–5; Broadie 1993; Kosman 1994; Berti 2000, 191; Judson 2019, 205). For Aristotle speaks of ἐνεργεῖν as *acting* on a capacity throughout the passage (1071b12; b14; b17), and ἐνέργεια is best understood in the same vein.

<sup>25</sup> For a dissenting voice, see Fazzo (2014, 290–5) who claims that the passage concerns the first heaven.

<sup>26</sup> See, e.g., Ps.-Alexander 706.32; Broadie 1993; Kosman 1994, 148; Berti 2000, 186–7

## 2.2. *The Purpose of the Skeletal Argument*

With this sketch of the skeletal argument in place, what is its purpose? On the most common reading, it is an existence proof: it aims to establish the existence of unchangeable substances (see, e.g., Ross 1924 I, cxxxi–ii; Frede 2000, 30–1; Berti 2000, 182; Baghdassarian 2019, 204–7; Judson 2019, 199). On a nearby reading, often combined with the first, the skeletal argument aims to characterize the unchangeable substances as activities, or even to establish activity (ἐνέργεια) as a principle of unchangeable substances (see, e.g., Judson 2019, 16).<sup>27</sup> By contrast, I will defend a third reading according to which the purpose of the skeletal argument is to explain a fact about perceptible substances, namely, why heavenly bodies are in eternal motion.

Prima facie, the first reading is attractive. For the skeletal argument follows on the claim that ‘it should be said that it is necessary that there is some eternal, unchangeable substance’ (1071b4–5) and is introduced with a γάρ (‘for’) (1071b5). Hence, it seems that the argument is put forward in support of the existence of unchangeable substance. However, the argument evolves in a different way. For Aristotle does not seem to drive at an existence claim. The best candidate for an existential conclusion is at 1071b19–20: ‘therefore, there must be such a principle whose substance is activity’. But this conclusion, although it has the form of an existence claim, does not emphasize the existence of the principle but its *character*, namely that its substance is activity. Moreover, it is the conclusion only of the second step of the argument. The conclusion of the whole argument is that the movers do not have matter and

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<sup>27</sup> The two readings are easily combined if one takes Aristotle to establish the existence of a substance *of some sort*, where more information is added than that it is an unchangeable substance, e.g., that it is activity (see, e.g., Elders 1972, 138; Frede 2000a, 30). But the distinction between (S) and (P) makes clear that they are separable options. Proponents of the second reading must deny that, in the skeletal argument, Aristotle seeks (primarily) the principles of perceptible substances whereas advocates of the first reading can accept this answer to (S): he may prove the existence of unchangeable substances by pursuing the principles of perceptible substances.



therefore are activities. But this final conclusion, barring implausible manoeuvres,<sup>28</sup> is not an existence claim but rather a claim about what the movers are like.

The opponent should retort that the claim that the movers are activities is merely the last step towards the conclusion that there is an unchangeable substance: since the movers are pure activities, they are unchangeable substances, and therefore, unchangeable substances exist. I do not deny that Aristotle ought to accept this line of reasoning. But it is not clear that it is the central line of reasoning that he pursues in the skeletal argument. For if the primary purpose of the argument had simply been to show that unchangeable substances exist, a direct route would have been easily available: if there is a perceptible substance in eternal motion, there must be something else that moves it which, on pain of regress, is itself unmoved (cf. *Λ.7*, 1072a24–6). Instead, Aristotle argues at length for a characterization of the movers in terms of *ἐνέργεια*. Moreover, although it is meant to be the main result that unchangeable substance exists, he does not explicitly say that the movers are unchangeable, nor does he emphasize their existence. Initial appearances notwithstanding, then, it is far from obvious that the skeletal argument is primarily an existence proof.

These considerations may lead one to the second reading: the goal of the skeletal argument is to characterize the movers. Or more ambitiously, the goal of the argument is to establish the principles of unchangeable substances. In particular, the conclusion that the movers are activities may be read as an extension of the claim from *Λ.5* that *ἐνέργεια* is a principle of perceptible things to unchangeable substances: *ἐνέργεια* is also the principle of unchangeable substances (see, e.g., Judson 2019, 16). Thus, the principle established in the skeletal argument is a principle of all things, but the distinctive contribution of the argument is to show that it is a principle of unchangeable substances.

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<sup>28</sup> *ἐνέργειαί ἄρα* could be translated as ‘Therefore, there are activities’. But it is clear from the structure of the argument that the conclusion characterizes the movers as activities.

In my view, the second reading misrepresents the role of principles in the skeletal argument. For the argument concerns the mover *as a principle of something else*, not the principles of the mover. It may emerge along the way that ἐνέργεια is the principle of the mover, but first and foremost, the mover is introduced as an explanans, a moving *cause*, not an explanandum. This interpretation is supported by the fact that Aristotle refines his description of the mover *in response to explanatory demands*. First, he rejects the view that the mover does not act on its capacity because such a mover cannot explain why there is motion, and second, he rejects the view that the mover is essentially capacity because such a mover cannot explain why there is eternal motion. The explanandum here is not unchangeable substance but rather a fact about perceptible substances, namely that heavenly bodies move eternally.

The skeletal argument has a structure familiar from *Posterior Analytics* II.1 where Aristotle says that we first seek the ὅτι (the ‘that’, i.e., the fact) and then the διότι (the ‘why’, i.e., the explanation). For instance, when we know that the sun is eclipsed, we seek the reason why the sun is eclipsed (89b29–31). Similarly, in the skeletal argument, Aristotle first establishes that there are eternal perceptible substances that undergo eternal motion, and second, he states the cause that explains this fact: their movers. It is a by-product of this account that it commits Aristotle to some description of this cause as well as its existence. But this is true of any statement of the cause of a fact and does not imply that the *purpose* of the account is to characterize the cause or establish its existence. For example, the appeal to the material cause of generation in Λ.2 commits Aristotle to the existence of matter and to a description of it as underlying change (1069b6). But surely it is not the purpose of an account of generation to characterize matter or prove its existence; its purpose is to explain generation. Similarly, in the skeletal argument, the appeal to the first moving cause serves to explain that of which it is a cause, namely, the locomotion of heavenly bodies.

If this is right, what motivates the transition from Λ.5 to Λ.6 is the need for completing the account of perceptible substances by appeal to unchangeable substance. *Prima facie*, this may

not seem to sit well with the claim at  $\Lambda.6$ , 1071b4–5 that ‘it should be said that it is necessary that there is some eternal, unchangeable substance’. But we need not take this claim to initiate a discussion of unchangeable substance *for its own sake*. In light of our analysis of the skeletal argument, we can read it rather as a call for establishing a principle of perceptible substances in order to complete his account of the latter. One might object that Aristotle has completed this account by the end of  $\Lambda.5$  where he claims that ‘it has been said’ (εἴρηται) what the principles of perceptible things are (1071b1–2). But this conclusion must be restricted on *any* interpretation. For however one interprets the skeletal argument, one cannot deny that it *also* establishes a principle of perceptible substances that has only been alluded to, not fully stated, in  $\Lambda.2$ –5. I suggest the following restriction: if the investigation is limited to perceptible entities regarding *both* explananda *and* explanantia, the principles have been stated in  $\Lambda.2$ –5. But to complete the account of perceptible substances, Aristotle goes beyond perceptible explanantia, and this will be achieved only in the second half of  $\Lambda$ .

Before I extend my interpretation to later passages, let me address a general worry about the dialectic of my discussion. All interpretations presented rest on the assumption that the skeletal argument has *one* ultimate purpose (e.g., to prove the existence of unchangeable substance or to explain perceptible substance). But one could reject this assumption and choose an ecumenical approach according to which the skeletal argument has multiple purposes at once. In particular, one might hold that the argument aims *equally* at explaining perceptible substance and at establishing the existence of unchangeable substance.

I would like to make two remarks in response. First, if the ecumenical reading is true, the objector has already made a considerable concession, compared to the typical advocate of an interpretation that casts the skeletal argument as an existence proof. For it is no longer true without considerable qualification that the skeletal argument is an existence proof; it is an existence proof only *inter alia*. Second, the ecumenical interpretation is less innocuous than it sounds. It is easy to say that a single argument implies several results, as I have happily

admitted for the skeletal argument. But an ecumenical reading requires more, namely that the argument does not have one overarching aim but several at once, where it is not the case that one is subordinate to the other. But if we allow that an argument has multiple *ultimate* aims, it is no longer clear to me in what sense we are examining a single argument at all.

Instead, one may adopt a sophisticated version of the ecumenical approach, according to which the purpose of the argument is to grasp an entire explanatory structure, including both the explanans and the explanandum. For instance, one might say that the purpose of the skeletal argument is to grasp that the heavenly bodies are in eternal motion because of a mover that is pure activity. This suggestion can be spelled out in two ways. The first view has it that the purpose of the skeletal argument is to grasp the explanatory structure for its own sake. But this position does not improve over the view that we seek the first cause for its own sake. For we may again ask why we are interested in the explanatory structure.<sup>29</sup> Instead, then, one may state the suggestion differently: Aristotle aims at grasping the explanatory structure to explain why the heavenly bodies are in eternal motion. But this version of the ecumenical approach is no threat since it converges with my reading in the central respect, namely that the ultimate purpose of the argument is to explain something about perceptible substances.

Overall, then, I have argued that the skeletal argument is a sustained argument with a single aim, namely, to explain the eternal motion of heavenly bodies. More generally, the argument aims at explaining a fact about perceptible substance. I will argue next that the same holds for the full-bodied argument, although it introduces a further explanandum, namely, the cycle of generation of perishable perceptible substances.

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<sup>29</sup> The opponent could retort that grasping the explanatory structure is the ultimate goal of the argument. But if this claim is meant to differ from the claim that the goal of the argument is to explain the motion of the heavenly bodies, the only way I can make sense of the suggestion is to say that the goal is to *contemplate* the explanatory structure. I find it hard to attribute this position to Aristotle. He is interested in explaining an astronomical fact, not in contemplating the structure that explains the fact for its own sake.

### 3. The Full-Bodied Argument (Λ.6, 1072a7–Λ.7, 1072a26)

In the wake of the skeletal argument, Aristotle answers an objection to his conclusion that the movers are activities, namely that capacity seems prior to activity (1071b23–4). In response, he defends the priority of activity (1071b25–31; 1071b31–72a3) but also criticizes rivals who hold that activity is prior without spelling out this view satisfactorily (1071b31–72a3). He then presents his version of an account that accepts the priority of activity in the full-bodied argument. I will argue that, like the skeletal argument, the full-bodied argument appeals to unchangeable substance to explain facts about perceptible substances, with the difference that the ultimate explanandum involves *perishable* substances.

As I read it, the full-bodied argument begins at Λ.6, 1072a9, continues into Λ.7, and ends with the unmoved mover at 1072a26.<sup>30</sup> I divide it into two parts, marked as (A) and (B):

(A) εἰ δὴ τὸ αὐτὸ  
ἀεὶ περιόδῳ, δεῖ τι ἀεὶ μένειν ὡσαύτως ἐνεργοῦν. εἰ δὲ (10)  
μέλλει γένεσις καὶ φθορὰ εἶναι, ἄλλο δεῖ εἶναι ἐνε-  
ργοῦν ἄλλως καὶ ἄλλως. ἀνάγκη ἄρα ὡδὶ μὲν καθ' αὐτὸ  
ἐνεργεῖν ὡδὶ δὲ καθ' ἄλλο· ἤτοι ἄρα καθ' ἕτερον ἢ κατὰ  
τὸ πρῶτον. ἀνάγκη δὴ κατὰ τοῦτο· πάλιν γὰρ ἐκεῖνο  
αὐτῷ τε αἴτιον κάκεινφ. οὐκοῦν βέλτιον τὸ πρῶτον· καὶ (15)  
γὰρ αἴτιον ἦν ἐκεῖνο τοῦ ἀεὶ ὡσαύτως· τοῦ δ' ἄλλως ἕτερον,  
τοῦ δ' ἀεὶ ἄλλως ἄμφω δηλονότι. οὐκοῦν οὕτως καὶ ἔχουσιν  
αἰ κινήσεις. τί οὖν ἄλλας δεῖ ζητεῖν ἀρχάς;  
[Λ.7] Ἐπεὶ δ' οὕτω τ' ἐνδέχεται, καὶ εἰ μὴ οὕτως, ἐκ νυ-  
κτὸς ἔσται καὶ ὁμοῦ πάντων καὶ ἐκ μὴ ὄντος, λύοιτ' ἂν (20)  
ταῦτα, καὶ ἔστι τι ἀεὶ κινούμενον κίνησιν ἄπαυστον, αὕτη  
δ' ἡ κύκλω, καὶ τοῦτο οὐ λόγῳ μόνον ἀλλ' ἔργῳ δῆλον,  
ὥστ' ἀίδιος ἂν εἴη ὁ πρῶτος οὐρανός. (B) ἔστι τοίνυν τι καὶ ὁ  
κινεῖ. ἐπεὶ δὲ κινούμενον καὶ κινοῦν καὶ μέσον, τοίνυν  
ἔστι τι ὁ οὐ κινούμενον κινεῖ, ἀίδιον καὶ οὐσία καὶ ἐνέργεια (25)  
οὔσα.

(A) Now, if the same thing is always in a cycle, something must always remain that is acting in the same way. And if there is to be coming to be and perishing, there must be something else that is acting in different and different ways. It is necessary, therefore,

<sup>30</sup> The chapter division is again misleading (Judson 2019, 217). Already Ps.-Alexander (691.30–93.30) took the argument to continue down to 1072a26 (see Miller Jr. 2021, 166, n. 242).

that it is acting in this way by itself, and in this way in virtue of something else, and therefore either in virtue of another entity or in virtue of the first. It is necessary, then, that [it is acting] in virtue of the latter. For that is again a cause for it itself and for that. Hence, it is better [to say that it is] the first. For that was also the cause of what [is acting] always in the same way; and it is clear that something else [is the cause] of what [is acting] in a different way, and both of what is always acting in a different way. Therefore, the changes are in this state as well. What other principles, then, should we seek? [Λ.7] Since it is both possible to be this way, and if it is not this way, [all things] will be from night and from all things together and from what is not, these [issues] would be resolved, and there is something that is always moved in an unceasing motion, and this [motion] is the one in a circle, and this is clear not only by argument but also in fact – so that the first heaven would be eternal. (B) There is, then, also something which moves [it]. And since [the first heaven] is moved and a mover and intermediate, there is, then, something which is a mover without being moved, being eternal and substance and activity. (1072a7–26)

I will argue that the full-bodied argument aims at an explanation of the perceptible world, in roughly the following way. In (A), Aristotle first formulates the explanandum: ‘the same thing is always in a cycle’ (1072a9–10), which is a fact about the perceptible world, namely, the cycle of generation of perishable substances. Still in (A), he states the closest explanantia for this phenomenon, namely, the sphere of the fixed stars and the sphere of the sun (1072a10–12). Finally, in (B), Aristotle completes his account by appeal to the *first* explanans of the cycle of generation: the unmoved mover. As in the skeletal argument, then, he appeals to the first mover to explain a fact about the perceptible world, with two differences: the first mover is explicitly called ‘not moved’ (οὐ κινούμενον, 1072a25), and the ultimate explanandum is not the motion of the first heaven but the stable cycle of generation of perishable substances.

Let me spell out this interpretation in detail. It is helpful to first look back at Aristotle’s treatment of those who accept the priority of activity, such as Leucippus and Plato (1071b31–3). His criticism is that, although they postulate an everlasting change, ‘they do not say why and which [change], nor [that it occurs] in this way nor the cause’ (1072a33–4).<sup>31</sup> He is unhappy, then, both with their specification of the everlasting change or activity, and with

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<sup>31</sup> Unlike most editors, I retain the Greek text as we find it in the manuscripts: διὰ τί καὶ τίνα οὐ λέγουσιν, οὐδὲ ὧδὲ οὐδὲ τὴν αἰτίαν. *Pace* Ross (1924 II, 370), this does not seem ‘unmeaning’ to me.

their failure to state the cause of this activity. He adds that they do not state clearly which of the changes or activities they postulate is first (ποία πρώτη) (1071b36). In the full-bodied argument, Aristotle aims to maintain the priority of activity without these shortcomings.

His starting point is the claim that there have been ‘the same things always, either in a cycle or in another way, since activity is prior to capacity’ (1072a8–9). The option that there have been the same things always ‘in a cycle’ (περίοδος, 1072a10) is accepted by some rivals, especially Empedocles, but it is also the option assumed in the full-bodied argument.<sup>32</sup> It remains unclear what the other option is; perhaps Aristotle’s point is that the sort of detailed explanation he gives for the cyclical case would also have to be given for any alternative account (cf. Ross 1924 II, 371). At any rate, Aristotle will improve over his rivals because he spells out which everlasting cyclical activity he is talking about, and because he explicitly treats it as an *explanandum* for which he gives a full explanation.

The argument itself is terse. As most commentators since Ps.-Alexander (692.5–33) have suggested (see, e.g., Ross 1924 II, 371; Berti 2000, 198; Judson 2019, 219), it is best read in light of *GC* II.10.<sup>33</sup> Since there have been the same thing always, ‘something must always remain that is acting in the same way’ (1072a10). But because there is also generation and perishing, ‘there must be something else that is acting in a different and different way’ (1072a11–12). The first of these is the sphere of the fixed stars (or ‘the first heaven’) and the second is the sphere of the sun that carries it around the earth along the ecliptic. The latter explains seasonal variation and thus the patterns of generation of perishable substances (*GC* II.10, 336a32ff.). Further, Aristotle argues that the sphere of the fixed stars causes the sphere

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<sup>32</sup> Ps.-Alexander (692.2–5) thinks that the *other* way is Aristotle’s because he takes ‘cycle’ (περίοδος) to refer to the Empedoclean cycle where love and strife keep merging and separating the four elements (see DK 31B17). Ps.-Alexander takes the other way to be the circular motions of the heavenly bodies. But since the full-bodied argument begins by assuming the cyclical option (‘if the same thing is always in a cycle’, 1072a9–10), it is more plausible to take ‘cycle’ more broadly to include Aristotle’s cycle of generation. As reported by Ibn Rushd, the latter view was also (real) Alexander’s (see Freudenthal 1884, fr. 27; cf. Miller, Jr. 2021, 164 n. 234).

<sup>33</sup> For an alternative reading according to which the passage is concerned with the prime mover, see Elders 1972, 156–7; Fazzo 2014, 296–7.

of the sun to move around the earth in regular cycles (1072a12–16).<sup>34</sup> At 1072a17, Aristotle characterizes the cyclical activity as the activity of ‘what is *always* acting in a *different* way’, that is, it is a stable cycle of ‘generation and perishing’ (1072a11), where the circular motion of the first heaven is the cause of the *stability* of the cycle, whereas the motion of the sphere of the sun is the cause of its being a stable cycle *of generation*. Hence, ‘both [are the cause] of what is always acting in a different way’ (1072a17), that is, both the sphere of the first heaven and the sphere of the sun. Thus, the activity that has been the same always is the cycle of generation. In the first instance, this seems to be the cycle of generation of species of living things, but it may also include the transformation of elements (see, e.g., *GC* II.10, 337a1).

In this passage, then, the ultimate explanandum is the cycle of generation which, in (A), is explained by appeal to two explanantia: the sun and first heaven (where the latter is in turn prior to the former). This account is reminiscent of  $\Lambda$ .5. There, Aristotle mentioned the father as an external moving cause of a perceptible substance (a child), ‘and in addition to these the sun and the ecliptic (ὁ λοξὸς κύκλος)’ (1071a15–16). Unlike the father, these additional causes are not ‘of the same form’ (ὁμοειδές) as the effect, but they are still moving causes of it (1071a17). In the full-bodied argument, Aristotle adds the first heaven as a further external cause of the generation of perishable substances.

Finally, in (B), Aristotle argues that, since the first heaven moves, there must be something that moves it (1072a23–4), given that anything that moves is moved by something (see, e.g., *Phys.* VIII.5, 256a13–4). The first heaven is an intermediate (μέσον) mover that is itself moved (1072a24). But not every mover can be like this since otherwise there would be an infinite regress (see *Phys.* VIII.5, 256a17–19). Therefore, there must be ‘something which is a mover without being moved, being eternal and substance and activity’ (1072a25–6). This

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<sup>34</sup> Aristotle expresses this awkwardly, but τὸ πρῶτον at a14 seems to mean ‘the first thing mentioned’ and to refer to the sphere of the fixed stars. Thus, the motion of the sun that is κατ’ ἄλλο (‘according to another’) is according to the sphere of the fixed stars. For if we introduced a third thing, the sphere of the fixed stars would be the cause of both the motion of this third thing and the κατ’ ἄλλο motion of the sun (Ross 1924 II, 371; Judson 2019, 219).



unmoved mover is the *first* explanans to which Aristotle appeals: it explains the motion of the first heaven (and all other heavenly bodies) which in turn explains the cycle of generation.

What is the purpose of this type of explanation? In  $\Lambda.5$ , the answer was clear: the chain of external moving causes was introduced to explain (the generation of) a perishable substance, such as a human. In the full-bodied argument, the chain is extended beyond the sun to the first heaven and finally the unmoved mover. But the addition of two external moving causes need not change the thrust of the argument. For all we have seen, the orientation remains the same: in (A), the cycle of generation of perceptible substances is fixed as the explanandum, and in the remainder of the argument, including (B), Aristotle sets out to explain this explanandum.

In the full-bodied argument, then, the appeal to the unmoved mover seems to serve a clear purpose: it completes Aristotle's explanation of the everlasting activity to which he is committed alongside rivals such as Leucippus and Plato. But unlike his rivals, he has specified which activity he is talking about, namely, the cycle of generation of perishable entities, and he has stated the full explanation of this activity, including its first cause: the unmoved mover. If this interpretation is right, the purpose of introducing the unmoved mover is to complete the explanation of a fact about perceptible substances, namely, their cycles of generation. Hence, we get the same answer to (P) as for the skeletal argument.

The proposed interpretation is opposed to the construal of the full-bodied argument as a proof of the existence of an unmoved mover (see, e.g., Ps.-Alexander 685.26–686.2; Berti 2000, 200; Laks 2000, 207). Hence, one could object to my reading along familiar lines. In particular, one can point to the summary at the end of  $\Lambda.7$  which seems to suggest that the goal of the full-bodied argument was to establish the existence of the unmoved mover: 'it is clear from what has been said that there is some substance that is eternal, unchangeable, and separated from the perceptible things' (1073a3–4; see Laks 2000, 207). Furthermore, the conclusion of the full-bodied argument clearly has the form of an existential claim: 'there is,

then, something which is a mover without being moved, being eternal and substance and activity' (1072a25–6). How can I accommodate these claims?

My response is in the same vein as before. First, it is again noteworthy that the existential claims just quoted emphasize not the existence claim as such but the characterization of the entity in question. Most strikingly, the claim at the end of the full-bodied argument restates three of the attributes of the first mover that were mentioned already in the skeletal argument but adds explicitly that it is not moved. I have argued above that the former attributes are mentioned to complete the account of the explanandum involving perceptible entities because only a mover that just is activity can explain the eternal motion of the heavenly bodies. This response is easily extended to the additional attribute: if the first mover were not unmoved, then, given the principle that anything that moves is moved by something else, Aristotle would not have arrived at the first mover, nor therefore at the first explanans of the cycle of generation. His triumphant claim that there is such an entity simply marks the completion of his explanation of the cycle of generation of perceptible entities.

This reading can be extended to the passages that follow the full-bodied argument. First, Aristotle argues that the unmoved mover moves in the way an object of desire and thought does (1072a26). The argument culminates in the claim that 'it moves as something that is loved, and through something that is moved, it moves the others' (κινεῖ δὴ ὡς ἐρώμενον κινουμένῳ δὲ τᾶλλα κινεῖ), where 'something that is moved' seems to be the first heaven (1072b3–4). Second, he argues that the first mover is simply necessary and 'cannot be in any other state whatsoever' (οὐκ ἐνδέχεται ἄλλως ἔχειν οὐδαμῶς) (1072b8).<sup>35</sup> Once again, there is a tendency to read both passages as part of an existence proof (see, e.g., Elders 1972, 176; Judson 2019, 229). But they are better understood as contributing to the explanation of the motion of the first heaven and the generation of perishable substances.

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<sup>35</sup> Simple necessity is contrasted with hypothetical necessity and necessity by force (1072b11–13); cf. *Meta.* Δ.5, 1015b11–15.

The first passage offers a much-needed specification of the causal profile of the unmoved mover. After all, it is an unusual moving cause, and Aristotle must spell out how it operates. In my view, he does this by explaining that the unmoved mover moves as a final cause (1072b1–3), but this contentious issue is not central for us. What matters is that Aristotle’s task is to explain how an unmoved mover can cause motion. But this is not an exercise undertaken for its own sake. Rather, it is crucial for completing the explanation of the motion of the first heaven and everything caused by it, including the cycle of generation of perishable substances.

Similarly, it is crucial to show that the unmoved mover is simply necessary because only if the unmoved mover is simply necessary, it can sustain the eternal motion of the first heaven (1072b8–10). This emerges clearly from the initial statement of the necessity of the first mover (before Aristotle says that it is *simply* necessary): ‘from necessity, therefore, it is something that is; and insofar as it is by necessity, it is fine, *and in this way, it is a principle*’ (ἐξ ἀνάγκης ἄρα ἐστὶν ὄν· καὶ ἡ ἀνάγκη, καλῶς, καὶ οὕτως ἀρχή) (1072b10–11). It is important to establish the necessity of the first mover but not for its own sake. Rather, the claim that the first mover is necessary serves the further purpose of showing how it can operate as a principle of the requisite sort, namely, a cause of the eternal rotation of the first heaven. This is why Aristotle adds to the claim that the first mover is necessary that it is fine and that ‘in this way, it is a principle (ἀρχή)’ (1072b11).

The orientation of Aristotle’s arguments towards an explanation of the perceptible world is confirmed by a remark that follows directly on the discussion of the necessity of the first mover: ‘on such a principle, therefore, the heaven and nature depend’ (ἐκ τοιαύτης ἄρα ἀρχῆς ἤρτηται ὁ οὐρανὸς καὶ ἡ φύσις) (1072b13–14). This remark has the air of a conclusion of all that has come before, including the results from the skeletal and full-bodied arguments. For presumably, not only the claim that the first mover moves as an object of love and that it is simply necessary but also the claim that it is activity and unmoved are captured by the ‘such’ (τοιαύτης). But the concluding remark is neither an existential claim about the first mover, nor

does it offer a characterization of the first mover by itself. Rather, it states the first principle *of the perceptible world*. This is precisely what we should expect if the goal of the discussion has been to complete Aristotle's account of the perceptible world.

At this point, one could again object that we need not subordinate one purpose under the other but can allow that Aristotle aims in equal measure at establishing the existence of the first mover and at completing his account of the perceptible world. Since I already addressed this concern in the previous section, I will not revisit it here. I merely want to recall that such an ecumenical reading would already shift our understanding of  $\Lambda.6-7$  significantly away from the interpretation that treats the explanation of the perceptible world as a subordinate step in a proof of the existence of the unmoved mover. But now I want to address a different issue: even a sympathetic reader may doubt that my interpretation can be pushed further into  $\Lambda$ . For from the end of  $\Lambda.7$ , Aristotle appears to treat unchangeable substances *for their own sake*. I will argue next that this appearance is misleading.

#### 4. Theology Proper?

In the remainder of  $\Lambda$ , Aristotle is concerned with issues that appear to have little to do with perceptible substance, such as the character of unchangeable substance (in  $\Lambda.7$  and  $\Lambda.9$ ) and the number of unchangeable substances ( $\Lambda.8$ ). But I will argue that these overtly 'theological' passages are not only compatible with my reading but are even read more profitably in line with my interpretation than with popular alternatives. I begin with two crucial passages in  $\Lambda.7$  and  $\Lambda.9$  that seem to characterize unchangeable substance for its own sake, as well as a brief note on  $\Lambda.8$ . In second step, I will reinforce my interpretation with some remarks on  $\Lambda.10$ .

##### *4.1. The 'Theological' Passages*

Towards the end of  $\Lambda$ .7, Aristotle defends his view about the ‘living’ (διαγωγή)<sup>36</sup> of the prime mover, and for the first time in  $\Lambda$  calls it ‘god’ (1072b14–30). He concludes:

φάμεν δὲ τὸν  
θεὸν εἶναι ζῶον ἀίδιον ἄριστον, ὥστε ζωὴ καὶ αἰὼν συνεχῆς  
ἀίδιος ὑπάρχει τῷ θεῷ· τοῦτο γὰρ ὁ θεός.

And we say that the god is an eternal best animal, so that continuous, eternal life and lifespan belongs to the god; for this is the god. (1072b28–30)

In  $\Lambda$ .9, too, Aristotle seems concerned with the living of this divine entity and argues that ‘its thinking is thinking about thinking’ or even that ‘it is thinking thinking about thinking’ (ἔστιν ἡ νόησις νοήσεως νόησις) (1074b34–5).<sup>37</sup> It is controversial how  $\Lambda$ .7 and  $\Lambda$ .9 fit together (see below), but they certainly share an interest in characterizing the prime mover. This seems hard to square with my thesis that the purpose of Aristotle’s appeal to unchangeable substance is to explain facts about perceptible substances.

Generally, one may wonder how these ‘theological’ passages fit into  $\Lambda$ . At one end of the exegetical spectrum, we have the subordination readings mentioned earlier, according to which the theological passages are the culmination of  $\Lambda$  (see, e.g., Ross 1924 I, cxxx–cxxxiii; Patzig 1960; Frede 1987; Burnyeat 2001, 132; Menn, manuscript, Iα5). At the other end, there is the view that the theological passages are ‘residue’ (Judson 2019, 19). According to this view, the main task of  $\Lambda$  has been carried out before we reach our passages. Judson (2018; 2019, 15–21) thinks that the goal of  $\Lambda$  is to defend the priority of actuality over potentiality to which, in his view, the theological passages do not directly contribute. Instead, these passages deal with remaining topics that must be addressed ‘departmental theology’ (conceived of as a

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<sup>36</sup> I translate διαγωγή as ‘living’ to distinguish it from ζωή (‘life’). I prefer this to Laks’s (2000, 232) ‘occupation’ and Judson’s (2019, 32) ‘way of life’ because it brings out clearly that διαγωγή is an activity.

<sup>37</sup> On the first reading, Aristotle characterizes the object of thinking, whereas on the second, he characterizes the subject of thinking (for the latter, see De Filippo 1995; Beere 2010).

part of first philosophy). Against both views, I will argue that, in the theological passages, Aristotle further develops the account he has given of perceptible substances by refining his characterization of the first explanans, namely, unchangeable substance.

It is instructive to see how the first theological passage in  $\Lambda.7$  (1072b14–30) is introduced. Aristotle turns to the living ( $\delta\iota\alpha\gamma\omega\gamma\eta$ ) of the prime mover on the back of his claim that ‘on such a principle, therefore, the heaven and nature depend’ (1072b13–14). The ensuing theological passage, then, is not an isolated study of the prime mover by itself but an account of the principle ( $\acute{\alpha}\rho\chi\eta$ ) of the *heaven and nature*. In line with my reading of  $\Lambda.7$  above, then, the theological passage is naturally taken to make precise the explanans to which Aristotle has appealed. He has argued that it is an unmoved mover that is eternal, a substance, and an activity (1072a25), and moreover that it moves as an object of love (1072b3) and is simply necessary (1072b13). But he has not spelled out which substance and activity unchangeable substance is exactly. He now does so in terms of intellect or thinking.<sup>38</sup>

One could take this characterization itself to be Aristotle’s goal. But then one would neglect the crucial point that he is making precise ‘a principle of the heaven and nature’, that is, he is refining his description of an *explanans*. And plausibly, the description of an explanans is refined with a view to its role in explaining something else, namely, in our case, the facts about perceptible substances targeted in the skeletal and full-bodied arguments. The previous characterization of the prime mover as  $\acute{\epsilon}\nu\acute{\epsilon}\rho\gamma\epsilon\iota\alpha$  was sparse. One should wonder what exactly the prime mover is and whether there even is any activity that fits the description. Spelling out the role of the prime mover in terms of intellect or thinking is thus important for completing the explanation of perceptible substance. For it shows exactly what the prime mover is, and hence that there is indeed an  $\acute{\epsilon}\nu\acute{\epsilon}\rho\gamma\epsilon\iota\alpha$  that can play the role of the first moving cause.

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<sup>38</sup> My argument will not depend on whether unchangeable substance is an immaterial intellect or a pure activity, although I prefer the latter reading since I take the skeletal argument to characterize the movers as activities.

A similar suggestion is available for Λ.9. The chapter starts with puzzles about the intellect: ‘for it seems to be the most divine of phenomena, but [the question] in what state it would be such involves certain difficulties’ (δοκεῖ μὲν γὰρ εἶναι τῶν φαινομένων θειότατον, πῶς δ’ ἔχων τοιοῦτος ἂν εἴη, ἔχει τινὰς δυσκολίας) (1074b15–17). The puzzles concern the object of thinking. First, if the intellect thinks nothing, it does not seem ‘awe-inspiring’ (σεμνός), but if it does think something, the object of thought seems ‘superior’ (κύριον) to it (1074b17–21). Moreover, one should ask what the object of thought is (1074b21–2). As mentioned, Aristotle’s view seems to be that, strictly speaking, the prime mover is not an intellect but ‘thinking’ (νόησις) and that the object of this thinking is itself and thus, the object of thinking is not superior to thinking (1074b33–5). But what motivates the puzzles themselves?

One answer could be that Aristotle raises the puzzles because he wants to give an account of the prime mover for its own sake. But it is at least as plausible that the purpose of the puzzles is to stave off worries about the status of the prime mover as an explanans. In particular, if the object of thinking is distinct from thinking, and the object of thinking is superior, it seems that the *object* of thinking rather than thinking is the first moving cause. But now what seemed to be the first mover (the intellect or better, thinking) is not the *first* mover after all. And hence, we have not found the first mover of the first heaven’s eternal motion and the generation of perishable substances. To secure the status of thinking as the explanans, then, a different account of the object of thought is needed, according to which thinking thinks itself. But the purpose of these puzzles is to fill a lacuna in the account of perceptible substances.

I have sketched a reading of the theological passages in Λ.7 and Λ.9 according to which their aim is to complete the account of perceptible substances by making the explanans precise. Minimally, then, the theological passages are *compatible* with my interpretation of Λ. But we can venture a stronger claim, namely that the proposed reading of the theological passages is more attractive than its rivals. First, it is preferable if we do not have to treat them as residue but can take them to contribute to the central task of Λ. Moreover, the residue

reading creates a unity problem even for *the second half* of  $\Lambda$ . For it is unclear how the main task of  $\Lambda.6-10$  concerning the priority of  $\acute{\epsilon}\nu\acute{\epsilon}\rho\gamma\epsilon\iota\alpha$  fits together with the theological residue if the latter is ‘residue’ precisely because it does not contribute to carrying out that task.<sup>39</sup>

Second, my reading also has advantages over the subordination interpretation. According to this view, first philosophy culminates in the theological passages because only the theological passages are first philosophy. Thus, first philosophy proper concerns only unchangeable substance. But because only the theological passages concern only unchangeable substance, most of  $\Lambda$  turns out to be *non*-theological residue that does not directly contribute to the central task of the book. This non-theological residue must include not just  $\Lambda.2-5$ , as some scholars are happy to admit,<sup>40</sup> but also large portions of  $\Lambda.6-7$ . For even if one rejects the details of my reading, it is hard to deny that the skeletal and full-bodied arguments concern perceptible substance as an explanandum at least in part. Hence, even most of  $\Lambda.6-7$  does not directly contribute to the central theological task of  $\Lambda$ . This is awkward since now only small portions of  $\Lambda$  are concerned with what is supposed to be its main concern.

Moreover, the subordination interpretation runs into the same issue as the residue reading. For it, too, introduces a unity problem into the second half of  $\Lambda$ . After all, it is not obvious how the non-theological residue fits together with the central theological task of  $\Lambda.6-10$ . The natural response is that the non-theological residue is subordinate to the theological task, just as  $\Lambda.2-5$  is subordinate to  $\Lambda.6-10$ . But this move loses plausibility the less material we find in  $\Lambda$  which is not itself part of the central account of divine substance. Further, regardless of the plausibility of this solution, it is a disappointing consequence of the view that a second unity problem, in addition to the worry about the unity of  $\Lambda$  as a whole, even arises. By

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<sup>39</sup> Judson (2019, 18–19; 2023, 285–6) pairs the residue reading with the view that theology is a departmental science that is part of first philosophy. Hence, the natural response to my objection is that  $\Lambda.6-10$  is unified because all of it belongs to the departmental science of theology. But this merely moves the worry to a different place. For it is unclear how departmental theology is unified if some of the issues it discusses are continuous with  $\Lambda.2-5$  and directly contribute to the overall task of  $\Lambda$ , whereas others are residual theological problems.

<sup>40</sup> See especially Menn (manuscript, III $\beta$ ) who argues that  $\Lambda.2-5$  belong to the wrong path towards the first principle, namely, a path that seeks the first principle among the immanent causes of perceptible substances.



contrast, my reading does not generate a second unity problem. For the theological passages contribute to the same task as the skeletal and full-bodied arguments by making precise the first external moving cause of perceptible substances established in those arguments.

A similar point holds for Λ.8. The status of this chapter is controversial.<sup>41</sup> But on the modest assumption that Aristotle intended it to be placed in Λ, it might seem to speak against my reading of Λ. For Λ.8 asks how many unchangeable substances there are (1073a14–15), a question that does not seem to concern *perceptible* substance. Moreover, Aristotle seems to treat the claim that there are 55 spheres as a step towards the result that there are as many unchangeable substances (1073a36–73b1; 1074a15). Thus, he appears to use information about perceptible substances to arrive at a conclusion about unchangeable substances.

But once again, there is good reason to read the argument in the reverse direction. Against Eudoxus and Callippus, Aristotle says that one must add ‘rewinding’ (ἀνελιττούσας) spheres to the number of spheres they posited, ‘if all the [spheres] put together are to deliver the appearances’ (εἰ μέλλουσι συντεθεῖσαι πᾶσαι τὰ φαινόμενα ἀποδώσειν) (1073b38–74a1). And he adds ‘that only in this way it is possible that they all produce the locomotion of the planets’ (οὕτω γὰρ μόνως ἐνδέχεται τὴν τῶν πλανήτων φορὰν ἅπαντα ποιεῖσθαι) (1074a4–5). The number of spheres, then, is discussed with a view to their ability to explain phenomena involving perceptible substances, namely, the motion of planets. But once this explanatory orientation is in place, it is natural to think that the number of unmoved movers that Aristotle infers from the number of spheres is posited with the same purpose as the number of spheres: to fully account for the phenomena, namely, the planetary motions.

I have argued that even the ‘theological’ passages in Λ.7–9 are best read as serving the completion of Aristotle’s account of perceptible substances. For in these passages, he refines the first explanans from the skeletal and full-bodied arguments. This refinement is not an

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<sup>41</sup> Jaeger (1955, 366–92) and Ross (1924 II, 384) think it is in tension with the surrounding chapters and argue for a late dating of Λ.8. But see Judson (2019, 238–9) for the contrary case.

exercise undertaken for its own sake but crucial for showing that there is an entity that, as pure ἐνέργεια, can fill the role of the first moving cause. The chief advantage of this interpretation is that it preserves the unity of the second half of Λ (and Λ as a whole; see section 5). From Λ.6 all the way through Λ.9, Aristotle pursues the single task of completing his explanation of perceptible substances. This argumentative thrust is confirmed by Λ.10.

#### 4.2. *The Order of the Universe*

So far, I have shown how supposedly recalcitrant passages in Λ.7–10 are accommodated by my interpretation. But the last stretch of Λ also contains a passage that directly supports my reading, namely, the beginning of Λ.10 (1075a11–25). This passage is significant because it is the final piece of positive theory in Λ, followed by critical remarks about rivals. Hence, the text matters for our understanding of the overall explanatory orientation of Λ. The purpose of Λ.10 is a thorny issue, but one thesis is that the universe has one first principle and not, as Aristotle’s rivals maintain, several. Thus, Λ.10 concludes with a quotation from Homer: ‘the rule of the many is not good; there is one ruler’ (οὐκ ἀγαθὸν πολυκοιρανίη· εἷς κοίρανος) (1076a4). But what motivates this thesis is an explanatory concern with the perceptible world.

In Λ.10, Aristotle raises the following problem:

Ἐπισκεπτόν δὲ καὶ ποτέρως ἔχει ἡ τοῦ ὅλου φύσις τὸ  
ἀγαθὸν καὶ τὸ ἄριστον, πότερον κεχωρισμένον τι καὶ αὐτὸ  
καθ’ αὐτό, ἢ τὴν τάξιν. ἢ ἀμφοτέρως ὡσπερ στρατεύμα;  
καὶ γὰρ ἐν τῇ τάξει τὸ εὖ καὶ ὁ στρατηγός, καὶ μᾶλλον  
οὗτος· οὐ γὰρ οὗτος διὰ τὴν τάξιν ἀλλ’ ἐκείνη διὰ τοῦτόν ἐστιν.

It must be investigated also in which of two ways the nature of the whole has the good and the best, whether as something separated and itself by itself, or as the order. Or in both ways, like an army? For the good is both in the order and is the general, and more so the latter; for he is not because of the order, but it because of him. (1075a11–15)

*Pace* Sedley (2000), the ‘nature of the whole’ seems to simply refer to the universe.<sup>42</sup> Thus, Aristotle offers two ways in which the universe could have the good, as ‘something separated’ (κεχωρισμένον τι) from the universe or its order (τάξις), and claims that it has the good in both ways. His analogy is with an army. Both the general (who is separated from the army) and the order of the army are, in different ways, the good of the army. Similarly, both the prime mover and the order of the universe are, in different ways, its good. Moreover, the former is its good ‘more so’ (μᾶλλον) since the order of the universe obtains because of the prime mover (as the order of the army obtains because of the general). Aristotle argues further that ‘all things are ordered together towards one thing’ (πρὸς μὲν γὰρ ἔν ᾗ πάντα συντέτακται) (1075a18–19), as in a household (1075a19–23): as free members of a household are most constrained in their behaviour, and lower household members (e.g., slaves and animals) less, the heavenly bodies are most constrained in how they act and sublunary substances less.

It seems hardly plausible to read this passage as a discussion of the prime mover for its own sake. There is no characterization of the prime mover by itself, except implicitly as good or best. But this implicit characterization emerges in response to the question how *the universe* has the good. The argument, then, does not aim at showing that the prime mover is good but rather at explaining, by appeal to the prime mover, why the universe is good. Nor are we presented with a proof of the existence of the prime mover. One can easily imagine an attempt at such a proof with the material from the passage: since the universe is good, and since its order is good, there must be a divine entity that causes the goodness of the universe and its order, and therefore, a divine entity exists. But Aristotle does not use the material in this way.

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<sup>42</sup> According to Sedley, Aristotle introduces a distinct *nature of* the universe. His reading is based on the later occurrence of φύσις at 1075a23 which, in the manuscripts, occurs in this context: τοιαύτη γὰρ ἐκάστου ἀρχὴ αὐτῶν ἢ φύσις ἐστίν (‘for nature is such a principle for each of them’) (1075a22–3). According to Sedley (2000, 329), φύσις cannot refer distributively to the natures of the entities from the household analogy, and hence refers to the nature of the universe. But the distributive reading seems possible (Elders 1972, 273; Fazzo 2014, 397; Judson 2019, 348–9). On Sedley’s reading, my interpretation would say that the explanandum is the nature of the universe, which is still amenable to my thesis that Λ aims to explain facts about perceptible substances.

Rather, he appeals to the prime mover as an explanans to explain something else, namely, why the perceptible universe, consisting of heavenly and perishable substances, is good.

Thus, the final chapter confirms the argumentative thrust present throughout  $\Lambda$ . In  $\Lambda$ .6–10, Aristotle discusses unchangeable substance to complete his explanation of the natural world.

### 5. The Unity of $\Lambda$

I have argued that all of  $\Lambda$  is dedicated to Aristotle's search for the principles of perceptible substances. In  $\Lambda$ .2–5, he states their immanent causes: matter, form, and privation. In  $\Lambda$ .6–10, he completes the investigation of their external moving cause from  $\Lambda$ .2–5 and establishes the *first* external moving cause of perceptible substances: the prime mover. Beyond this answer to (S), I have defended a response to (P): Aristotle seeks the principles of perceptible substances in order to give an account of perceptible substances. In short, Aristotle's theology is nature-bound: it ultimately aims at explaining facts about perceptible substances. The treatment of unchangeable substance serves this purpose and is not itself the ultimate goal of theology.

This interpretation yields a natural account of the unity of  $\Lambda$ , as Frede (2000a, 5–7) notes.  $\Lambda$  does not divide into two disparate parts, where one concerns perceptible substance ( $\Lambda$ .2–5) and the other unchangeable substance ( $\Lambda$ .6–10). Rather, both parts are unified by a common goal, namely, to state the principles of perceptible substances. Thereby, Aristotle also substantiates a proposal as to the unity of the principles of all perceptible things alluded to in  $\Lambda$ .4 (1070b34–5). They all have the numerically same first moving cause: the prime mover. Thus,  $\Lambda$ .6–10 complements  $\Lambda$ .2–5 by completing the account of the external moving cause of perceptible substances *and* the account of the sameness of principles of all perceptible things.

This view has significant advantages over rival accounts of the unity of  $\Lambda$ . First, we need not say only that Aristotle runs through a list of substances (Oehler 1984, 33–4; Lang 1993)

but can also explain *why* he does so: he moves from perceptible to unchangeable substance to complete the account of perceptible substance. Second, unlike subordination readings that treat  $\Lambda.2-5$  as a steppingstone towards the discussion of unchangeable substances in  $\Lambda.6-10$  (see, e.g., Ross 1924 II, 347; Jaeger 1955, 229–30; Patzig 1960; Frede 1987; Burnyeat 2001, 132; Menn, manuscript Ia5), we can give due weight to both parts:  $\Lambda.2-5$  states the immanent causes of perceptible substances and  $\Lambda.6-10$  their (first) external moving cause.

Moreover, I think that the present interpretation offers a better account of the unity of  $\Lambda$  than a recent proposal by Lindsay Judson. Judson (2018, 255–65; 2019, 15–21) argues that  $\Lambda$  aims at the principles of all substances and takes  $\Lambda.6-10$  to contribute to this task by establishing that pure actuality is prior to potentiality. But  $\Lambda.6-10$  concerns specific issues, such as the motion of the heavenly bodies, not general metaphysical principles, such as the priority of pure actuality over potentiality. There is only one passage in  $\Lambda.6-10$  where Aristotle explicitly argues for the priority of actuality over potentiality, namely, the passage wedged in between the skeletal and full-bodied arguments in  $\Lambda.6$  (1071b22–72a7). Here, Aristotle answers an objection to the skeletal argument, namely that capacity is prior to activity. But the skeletal and full-bodied arguments themselves *presuppose* that activity is prior. In particular, the full-bodied argument begins with this premise (‘since activity is prior to capacity’, 1072a9), and then proceeds to argue that the unmoved mover explains the motion of the first heaven. Hence, Judson’s proposal seems to get the argumentative strategy backwards: Aristotle does not offer an explanation of the motion of the first heaven to establish the priority of activity. He relies on the priority of activity to establish the cause of the motion of the first heaven.

I responded to textual objections to the view that Aristotle seeks the principles specifically of perceptible substances. But there is a more general worry. As I mentioned, there are 55 unmoved movers in addition to the prime mover ( $\Lambda.8$ , 1074a10–14). Should we not expect Aristotle to establish the principles of these substances, too, not only of perceptible ones? If this is our expectation, then *regarding the external moving cause*, we are bound to be

disappointed. For Aristotle does not discuss the relation between the prime mover and the other unmoved movers. One could speculate on the issue,<sup>43</sup> but the more interesting question is why Aristotle does not address the topic. Our interpretation gives us an answer. In  $\Lambda$ .6–10, Aristotle pursues the chain of external moving causes of perceptible substances begun in  $\Lambda$ .2–5. Hence, there are two reasons why we should not expect him to comment on their causal relation to the prime mover. First, they are not perceptible. Second, they cannot have an external moving cause because they are unmoved.<sup>44</sup>

This does not imply that the unmoved movers do not have *any* principles (Frede 2000a, 6). Indeed, I have admitted that, in the skeletal and full-bodied arguments, a principle of all unmoved movers (including the prime mover) emerges, namely, ἐνέργεια (cf. Judson 2019, 15). But when the principles of perceptible things (matter, form, privation, and moving cause) are subsumed under ἐνέργεια in  $\Lambda$ .5 (1071a3–17), Aristotle distinguishes the subsumption of the immanent causes (matter, form, privation) from the subsumption of the external moving cause. The former occurs in cases where the same thing is sometimes in ἐνέργεια and sometimes in δύναμις (1071a6–11), whereas the latter occurs in cases where two things that differ in matter (and perhaps in form) are related as ἐνέργεια and δύναμις (1071a11–17). If we transfer this analysis to unchangeable substances, ἐνέργεια must be their principle as an immanent cause. For in the skeletal argument, Aristotle says that the *essence* of unchangeable substances is ἐνέργεια (and indeed, that unchangeable substance just is ἐνέργεια). Hence, the

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<sup>43</sup> For instance, Frede (2000b, 75) says that the content of the thought of the unmoved movers must be partially determined by the prime mover because they think about the prime mover (cf. Bordt 2006, 129). But Aristotle does not say that the other unmoved movers think about the prime mover.

<sup>44</sup> Aristotle says that ‘the principle and the first of all things that are is unmoved both by itself and accidentally’ (ἡ μὲν γὰρ ἀρχὴ καὶ τὸ πρῶτον τῶν ὄντων ἀκίνητον καὶ καθ’ αὐτὸ καὶ κατὰ συμβεβηκός) (1073a23–5), whereas he says about the other unmoved movers only that they are ‘unmoved by themselves’ (ἀκινήτους καθ’ αὐτάς) (1073a37). Perhaps, then, Aristotle allows that, unlike the prime mover, the other unmoved movers are moved accidentally (see Lloyd 2000, 253 and Judson 2019, 252 for a (sceptical) discussion). But even if this is right, it would not yield an account of the prime mover as a moving cause of the other unmoved movers in the sense relevant for  $\Lambda$  since the first moving cause pursued in  $\Lambda$  is not an accidental one.

result that ἐνέργεια is a principle of unchangeable substance does not concern its external moving cause and is thus not part of the main line of investigation in Λ.6–10.

Further, as I argued above, the identification of this immanent principle of unchangeable substance is only an intermediate step in the investigation that serves the completion of Aristotle's account of perceptible substances. Hence, my answers to (S) and (P) stand. For it remains the case that Λ seeks the principles of perceptible substances even if, along the way, an immanent cause of unchangeable substance emerges, and it also remains the case that the purpose of seeking these principles is to explain facts about perceptible substances.

There is, however, another objection that targets not my general thesis that, in Λ.6–10, Aristotle aims to explain facts about perceptible substances but rather my claim that these are facts about the generation of perishable substances and the motion of eternal perceptible substances. This explanatory scope might seem unduly narrow. First, not all facts that require explanation in terms of a moving cause are included. For instance, no explanation is given in Λ of episodes or patterns of animal behaviour. Second, I claimed that in Λ.2–5 Aristotle states the immanent causes of perceptible substances that explain what they are (section 1). By contrast, in my view, Λ.6–10 concerns facts about the generation or motion of perceptible substances, without directly addressing the question as to what these substances are. Why does Aristotle restrict his enquiry in Λ.6–10 in these ways?

My answer is that the enquiry is restricted to explananda that need unchangeable substance as an explanans. Aristotle does not seem to think that the explanation of, for instance, animal behaviour requires unchangeable substance (the prime mover) as an explanans. Rather, the various activities of animals are explained by their soul capacities (along with a physiological process).<sup>45</sup> Thus, animal behaviour is explained by the immanent moving cause of animals,

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<sup>45</sup> See especially *DA* III.10; *De motu animalium* 6–11.

that is, their soul. What is explained by the sun and first heaven (and ultimately, the prime mover) is only the cycle of generation of species of living beings.<sup>46</sup>

Similarly, as far as  $\Lambda$  goes, there is no evidence that the prime mover is required to explain what something is. For example, to explain why some substance is a horse, no appeal to the prime mover is made. Nor does Aristotle invoke the prime mover to explain why some entity is a substance. Rather, such questions appear to be answered in terms of the essences or forms of substances, and hence in terms of their souls. These controversial issues depend on a reading of the central books of the *Metaphysics* (ZH $\Theta$ ) that I cannot offer here.<sup>47</sup> But even scholars who prefer a theory that treats the prime mover as the cause of being that explains what substances are, do not claim that such a theory is developed in  $\Lambda$ , *as we have it*.<sup>48</sup> By contrast, by the lights of  $\Lambda$ , the cycle of generation of perishable substances and the motion of heavenly bodies must be explained by appeal to unchangeable substance. Hence, in  $\Lambda$ .6–10, Aristotle restricts his investigation to these explananda.

But now another worry might arise: if the enquiry in  $\Lambda$  is restricted to explananda involving perceptible substances, does theology not collapse into physics?

## 6. Nature-Bound Theology

The answer I wish to give is that even if theology is nature-bound, it differs from physics in two ways. First, theology appeals to unchangeable substance as an explanans and hence can explain facts about perceptible substances that cannot be explained by physics. Second,

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<sup>46</sup> Cf. Falcon (2005, 9–12) who argues that it the explanandum is the continuity of generation of living being of a certain species and the eternity of the species. Similarly, Gill (2006, 368–9) says that the prime mover ensures the continuity of the cycle of generation (as well as of the rotation of heavenly bodies).

<sup>47</sup> I defend such a reading in Meister 2023.

<sup>48</sup> Frede's (1987) strategy, for instance, is to extend the focal analysis of being in such a way that unchangeable substance is at its core. But this move is not made anywhere in  $\Lambda$ . Owens (1951/78, ch. 19) even reconstructs a better  $\Lambda^*$  that goes beyond the account of the prime mover as a first moving cause as we find it in  $\Lambda$ .



insofar as theology tells us that ἐνέργεια is a principle of unchangeable substance, it also treats unchangeable substance as an explanandum, albeit only an intermediate one that ultimately serves the explanation of facts about perceptible substances. Let me defend this answer by responding to three objections. The first attacks my claim about unchangeable substance as the characteristic explanans of theology, whereas the others target my treatment of unchangeable substance as an explanandum of theology.

The first objection, then, is that in *Physics* VIII, too, Aristotle appeals to unchangeable substance as a first moving cause. Hence, it does not seem unique to theology to appeal to unchangeable substance as an explanans. But this objection rests on a view about the role of Aristotle's description of unchangeable substance in  $\Lambda$  that cannot stand if the picture I have defended is right. For it assumes that he describes unchangeable substance for its own sake. But I have argued that the description of unchangeable makes the explanans precise to give a full explanation of facts about perceptible substances. Hence, a different interpretation of the relation between *Physics* VIII and *Metaphysics*  $\Lambda$  emerges.

It is true that unchangeable substance features as a first moving cause in *Physics* VIII, and moreover that it explains facts about the motion of heavenly bodies, just like in  $\Lambda$ . But it is only in  $\Lambda$  that the complete explanation of these facts is provided because it is only in  $\Lambda$  that the explanatory profile of the first moving cause is spelled out fully. In particular, it is only in  $\Lambda$ .6–7 that we receive a full explanation of the motion of the first heaven in terms of a moving cause that is pure ἐνέργεια. Thus, insofar as *Physics* VIII appeals to unchangeable substance as an explanans, it is already taking first theological steps. But Aristotle's fully developed theology is offered only in *Metaphysics*  $\Lambda$ .

A second objection draws on the characterization of first philosophy, and hence theology, in as concerned with 'separate' (χωριστά) and 'unmovable' or 'unchangeable' (ἀκίνητα) objects (*Meta.* E.1, 1026a15–16). Given this characterization, it might seem that theology cannot be nature-bound. For if it is characteristic of theology that it concerns unchangeable things, it is

not sufficient to say that it reaches results about this kind of substance as an intermediate step towards an account of perceptible substances.<sup>49</sup>

However, this reading goes beyond what Aristotle tells us. Right before he says that first philosophy concerns separate and unchangeable things, he says:

εἰ δέ τί ἐστιν αἰδῖον καὶ ἀκίνητον καὶ χωριστόν, φανερόν ὅτι θεωρητικῆς τὸ γνῶναι, οὐ μέντοι φυσικῆς γε (περὶ κινήτων γὰρ τινῶν ἢ φυσικῆ) οὐδὲ μαθηματικῆς, ἀλλὰ προτέρας ἀμφοῖν.

If there is something eternal and unchangeable and separate, it is clear that it is the task of theoretical science to grasp it, not, however, of physics (for physics is about certain movable things) nor of mathematics but of a science prior to both. (1026a10–12)

Aristotle, then, assigns the study of unchangeable things to a science in order to declare it ‘first philosophy’ – and this science turns out to be theology (1026a19). But this does not require that first philosophy or theology concerns *only or ultimately* unchangeable things as explananda. As long as they are among its explananda, theology is distinguished from physics and mathematics as first philosophy.

A third objection builds on the second. Some passages in the *Metaphysics* suggest that perceptible substances are studied for the sake of the study of unchangeable substances. For instance, in Z.11, 1037a13–14, Aristotle says that ‘we are trying to make determinations also about perceptible substances for the sake of this’ (τούτου γὰρ χάριν καὶ περὶ τῶν αἰσθητῶν οὐσιῶν πειρώμεθα διορίζειν), namely, issues about non-perceptible substance (1037a10–13). Similarly, in Z.17, 1041a7–9, he says that ‘perhaps there will be clarity from these [namely, the questions what substance is and of what sort] also about that substance which is separated from the perceptible substances’ (ἴσως γὰρ ἐκ τούτων ἔσται δῆλον καὶ περὶ ἐκείνης τῆς οὐσίας

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<sup>49</sup> The problem is avoided if, as Berti (2015, 102–3, 109–10; 2017, 266) argues, theology concerns unchangeable entities as explanantia rather than explananda (cf. Baghdassarian 2019, 38–9). But the parallel with the objects of physics and mathematics (1026a13–16) suggests that unchangeable substances are (also) explananda of theology.

ἥτις ἐστὶ κεχωρισμένη τῶν αἰσθητῶν οὐσιῶν). Minimally, these passages suggest that the study of perceptible substance contributes to an understanding of unchangeable substance (cf. Judson 2023, 287–90). How can this be the case if Aristotle’s theology is nature-bound?

Let us begin with Z.17. Above, I said that ἐνέργεια emerges as a principle of unchangeable substance. If the study of perceptible substance yields form as its principle and, as in Λ.5, form is subsumed under ἐνέργεια, the study of perceptible substance contributes to grasping a principle of unchangeable substance. For the result that form is a principle of perceptible substance is a first step towards understanding that ἐνέργεια, under which form is subsumed, is a principle of unchangeable substance.<sup>50</sup> But this is compatible with taking the claim that ἐνέργεια is a principle of unchangeable substance in turn to be an intermediate step towards explaining the motion of heavenly bodies, as in the skeletal argument.

The passage in Z.11 is harder. For it might seem to suggest that that the whole study of perceptible substance serves the study of unchangeable substance, as subordination readings have it. But it is noteworthy that Aristotle does not make any such general claim. Picking up on *aporia* 5 (*Meta.* B.2, 997a34–5), he says something more specific: we study perceptible substance to determine whether matter other than perceptible matter and a substance other than perceptible substance exists (1037a10–13). But this need not imply that the only or chief reason why perceptible substance is studied is to settle this particular *aporia*. If one has other grounds for adopting a subordination reading, one can read the passage this way, but similarly, if we have reasons to reject subordination readings, we may read the passage differently.<sup>51</sup> On a weaker reading, then, the study of perceptible substance helps show that unchangeable substance exists because certain facts about perceptible substance must be explained by

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<sup>50</sup> In response to Judson (2023, 288 n. 53), I here go beyond my account in Meister 2023, 104 where I note only a negative contribution to the study of unchangeable substance, namely that one cannot reach it by pursuing the ‘ontological’ cause of being (i.e., the essence) of perceptible substance. I still think that this is true and important but especially in Λ the positive contribution stated above is the relevant one.

<sup>51</sup> Cf. Judson (2023, 289–90) who makes a similar point.

appeal to unchangeable substance – which implies its existence. But establishing the existence of unchangeable substance is not thereby the chief purpose of explaining these facts.

We are now also in a position to understand a famous claim in  $\Lambda.1$  about, respectively, perceptible substances and unchangeable substance: ‘the former belong to natural science since they are with change, and this [substance] to another science, if there is no common principle to them’ (ἐκεῖναι μὲν δὴ φυσικῆς (μετὰ κινήσεως γάρ), αὕτη δὲ ἑτέρας, εἰ μηδεμία αὐτοῖς ἀρχὴ κοινή) (1069a36–b2). First, we should ask whether the antecedent is true: do perceptible and unchangeable substances have a common principle? In light of my earlier remarks, a qualified response is needed. They do not have a common external moving cause, but they do have at least one common immanent principle, namely, ἐνέργεια. One may be surprised that the antecedent turns out to be false because of a common immanent principle, given that the focus of  $\Lambda$  is on the external moving cause. Nonetheless, the antecedent is false.

If the antecedent is false, we may expect the consequent to be false, too. But what exactly is the consequent? There are two options (Frede 2000b, 77; he attributes the second suggestion to Crubellier): either the consequent is only ‘and this [substance belongs] to another science’ or the consequent is the full claim ‘the former belong to natural science since they are with change, and this [substance] to another science’. On the first option, if the consequent is false, Aristotle seems to claim that unchangeable substances are in the domain of physics (Berti 2016, 81–3). But I prefer the second option: there is no division of labour between physics and theology where one explains facts about perceptible substances and the other explains (only) facts about unchangeable substances. Instead, both sciences ultimately aim at an explanation of facts about perceptible substances. But they differ in the sorts of facts about perceptible substances that they explain. For theology can explain facts that physics cannot because they require unchangeable substance as a first explanans.<sup>52</sup>

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