

Causal priority in *Metaphysics* Θ .8

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Abstract

Aristotle's *Metaphysics* Θ .8 argument for the priority of actuality to potentiality poses an immediate interpretive problem: the argument uses two distinct tests for priority, one of which threatens to reverse the results of the other. This paper argues that the standard approach to this passage, according to which one thing is prior to another when it satisfies the ontological independence test from *Metaphysics* Δ .11, fails to secure the argumentative unity of the passage. It introduces a new, causal account of priority which explains both Aristotle's claims about priority and the way he argues for them.

1 Introduction

One of the central results of *Metaphysics* Θ is the priority in being of actuality to potentiality.¹ The significance of this result goes well beyond *Metaphysics* Θ : for example, it supports Aristotle's claim that the first principles of being are in actuality rather than in potentiality. But Aristotle's argument for the priority of actuality poses an immediate interpretive problem. The argument comes in two sharply distinguished parts, which use two different tests to argue for the priority of different entities. These two tests, however, are not equivalent – and in fact are in *prima facie* tension with one another. Aristotle argues in the first half of the passage that actuality is prior to potentiality within the perishable world: so, for example, a mature organism like Perry the donkey is prior to the foal from which he developed. Aristotle's argument for this claim is teleological: it is because Perry the donkey is the final cause of Perry the foal that he is prior in being. In the second half of the passage, however, Aristotle argues for a different claim – the priority of eternal substances to perishable ones – on different grounds, namely that eternal substances can be without perishable ones while the reverse is not the case. And this test seems to get the priority facts wrong in the perishable world. Perry the foal can (sadly) exist without ever growing up – but Perry the donkey cannot exist without having first been a foal. This problem generalizes to all actualities that come to be out of corresponding potentialities, i.e. to all actualities within the

¹This passage also argues that actuality is prior to potentiality in account and, in a way, in time. This paper focuses on priority in being. From now on, 'priority' will refer to priority in being unless otherwise noted.

perishable world. And Aristotle himself recognizes this problem: at *Metaphysics* $\Lambda.6$ 1071b22-24 he worries that potentiality will count as prior to actuality according to the independence test precisely because not all potentialities are actualized while all actualizations must come to be from a corresponding potentiality.²

This leaves us with our puzzle. Aristotle argues for the priority of actuality to potentiality using two different tests – tests so different, in fact, that the second threatens to overturn the result of the first. But Aristotle does not act as though his claim that actuality is prior to potentiality is homonymous. Our question, thus, is this: what could Aristotle mean by ‘priority in being’ in this passage such that these two tests are both good tests for it?

The standard approach to this passage takes the independence test from the second half of the passage to represent Aristotle’s official account of priority in being, and aims to understand Aristotle’s teleological test in light of this.³ My paper reverses this strategy: I take my interpretive cue from Aristotle’s teleological test, and argue that both halves of the passage are concerned with causal priority. I argue that this causal approach is more successful than an ontological independence approach at achieving two key desiderata. First, it is more successful at capturing all of the cases that Aristotle argues for in this passage. And, second, it is more successful at explaining how both of Aristotle’s tests are good tests for priority in being.

What kind of causes is Aristotle concerned with in this passage? I will argue that both eternal substances and final causes in nature are what I call ‘independent causes of being’ for their respective posterior items. For a cause to be dependent, as I use the term, is for another cause to determine how it tends to operate as a cause. Aristotle, for example, argues that the efficient cause tends to act as it does only because it aims at the final cause: so, for example, a housebuilder lays bricks as he does because he is building a house, and would not lay those bricks in the same way if he were building a structure designed to fall down in the wind. In this way, while the efficient cause is a genuine cause, the way it tends to operate is determined by the final cause, and it is what I call a dependent cause. I will not offer a full analysis of the notion of a ‘cause of

²Judson (2016) and Beere (2009) also raise this problem, though their solutions to it differ from mine. On the essentialist interpretation of the verb ‘to be’ in the independence test defended by Peramatzis (2011), this problem does not arise. I argue against Peramatzis’s interpretation in section 2.2. The $\Lambda.6$ passage cited in the main text also provides evidence against Peramatzis’s interpretation of this test: Aristotle in $\Lambda.6$ does treat the independence test as providing *prima facie* support for the claim that potentiality is prior to actuality, something that is hard to explain on Peramatzis’s interpretation.

³This strategy is adopted in different ways by Witt (1994) and (2003), Makin (2003) and (2006), and Peramatzis (2011). One important difference among these scholars lies in the kind of asymmetrical ontological independence relation they take to be at issue: Witt and Makin argue that Aristotle thinks actuality is asymmetrically existentially independent from potentiality, while Peramatzis argues that it is asymmetrically essentially independent from potentiality. Beere (2008) and (2009) also treats priority in being as a matter of ontological independence and dependence, though he takes the kind of ontological independence relation in question to differ from case to case: he suggests that eternal things are existentially independent from perishable things but that actualities within the perishable world are essentially independent from their corresponding potentialities within the perishable world.

being' in this paper, but I will argue in section 2.5 that Aristotle uses the phrase 'cause of being' both to describe cases that we might analyze in terms of one thing's causing another's existence and to describe cases that we might analyze in terms of one thing's causing another to be what it is. This causal account, I will argue, provides the right kind of explanation of the unity of the argument of *Metaphysics* $\Theta.8$: it identifies a feature that the prior items in the passage share, but is consistent with the significant differences in the arguments we see in the two halves of the passage. It is, moreover, an account of priority that Aristotle has reason to care about in the *Metaphysics*: the central task of the *Metaphysics* is to identify the first causes and principles of being, and the independent causes of being look like the best candidates to be the first causes and principles of being.

The plan for the paper is as follows. In section 2 I motivate the search for a new account of *Metaphysics* $\Theta.8$ by showing the difficulties ontological independence views face in satisfying the two desiderata I outlined above. Section 3 contains the main argument for my causal account of *Metaphysics* $\Theta.8$. Here I draw on a passage from the *Generation of Animals* whose concerns directly parallel those of the first half of *Metaphysics* $\Theta.8$, but which has been underexplored in the literature on *Metaphysics* $\Theta.8$. I argue that this passage gives us a new explanation for why final causes are relevant to priority: final causes are independent causes of being for the entities that are for their sake. Section 4 argues that this causal account of priority provides a better reading of the second half of *Metaphysics* $\Theta.8$ than the independence accounts can provide of the first, teleological half of $\Theta.8$. I close by briefly discussing some of the larger upshots of the interpretive shift from ontological independence to causation that I am proposing: this shift gives us a new account of why teleology is relevant to priority in being, a new account of priority in being with the promise to generalize beyond *Metaphysics* $\Theta.8$, and a new explanation for why priority in being is central to the *Metaphysics*.

2 Motivation

I'll begin by motivating the kind of view I'll go on to defend by showing the difficulties faced by the existing views in solving the puzzle of *Metaphysics* $\Theta.8$.

2.1 The puzzle of $\Theta.8$

Aristotle's argument for the priority of actuality to potentiality can be divided into two halves, 1050a4-b6 and 1050b6-28. 1050a4-b6 argues for the priority of actuality to potentiality within the perishable world, including the priority of mature to immature organisms and the priority of form to matter, while 1050b6-28 argues for the priority of eternal substances to perishable ones. These two halves, moreover, use substantially different arguments. Here is how the passage begins:

But indeed actuality is prior in being too, first because (1) things posterior in coming to be are prior in form and being (for example, adult to boy and man to seed; for the one already has the form, the other does not) and because (2) everything that comes to be proceeds to an origin (*ἀρχήν*) and an end (for that for the sake of which is an origin (*ἀρχή*), and the coming to be is for the sake of the end), and the actuality is an end, and the potentiality is acquired for the sake of this.

(*Metaphysics* Θ.8 1050a4-10⁴)

Aristotle's argument here is teleological. He begins with the claim that "things posterior in coming to be are prior in form and being".⁵ Aristotle does not mean that anything that is posterior in time is prior in being. The process of coming-to-be is completed by the generation of the actual *F* thing that the process of generation aims at bringing about.⁶ The entity that is ultimately posterior in generation according to this test is thus the actual horse, donkey, or oak tree that is coming to be.⁷ Aristotle then goes on to explain that "everything that comes to be proceeds to an origin and an end... and the actuality is an end, and the potentiality is acquired for the sake of this". This second statement, I take it, gives the reason why things that are posterior in coming to be are prior in form and being: they are prior because they are the ends for the sake of which that which is prior in generation is and comes to be.⁸ The teleological character of Aristotle's argument is confirmed by what comes next: the burden of the next stretch of text is to show that

⁴Translations are my own unless otherwise noted.

⁵Aristotle also makes use of this principle at *Metaphysics* A8 989a15-18, *Metaphysics* M2 1077a18-20, *Physics* VIII.7 261a13-14, *Parts of Animals* II.1 646a24-b2, *Generation of Animals* II.6 724a19-22, and *Rhetoric* II.19 1392a19-22. (This list is due to Beere (2009, 301); Beere takes the *Metaphysics* A and M passages to suggest rather than require Aristotle's commitment to the principle.) The fact that Aristotle employs this principle repeatedly should make us take it seriously as a principle about priority in its own right; the fact that my interpretation does so, rather than assimilating it to the independence test, is an advantage of my interpretation.

⁶This draws on Aristotle's claim from Θ.8 1049b27-29 that the process of generation always proceeds from something to something, and in particular from something that has the capacity to become *F* to something that is actually *F*. See also Z7 1032a12-14.

⁷Beere (2009, 305-6) plausibly proposes that priority in time and priority in generation can come apart in another way too: on his view, priority in generation is determined by for-the-sake-of relations, which means that any priority in time that is not determined by for-the-sake-of relations will not be a case of priority in generation. To take Beere's example, because nothing about the goal of making a chocolate and almond marble cake dictates whether the baker ought to mix the chocolate or the almond dough first, neither the chocolate nor the almond dough is prior in generation to the other one, even if the baker happens to mix one before the other in time. I am sympathetic to Beere's proposal: the idea that priority in generation is determined by for-the-sake-of relations fits well with Aristotle's discussion of the teleological test in *Generation of Animals* II.6, where he explains the order in which the parts of an animal are generated by reference to the final cause. Aristotle does not explicitly discuss cases like Beere's marbled dough case in this passage, and he may, of course, deny that any cases in nature are like Beere's marbled bread case; but if Beere is right, this would be because Aristotle thinks that the order of natural generation is in fact entirely fixed by the final cause, and not because Aristotle analyzes priority in generation in terms of priority in time.

⁸I take (1) and (2) above to be two different statements of the same test, where (2) gives us more insight into the reason this is a good test than (1) does. This is attractive because (1) and (2) are extensionally equivalent. I take the "first" in line 1050a4 to be picked up by the *κυριωτέρως* in line 1050b6 which begins the second half of the argument. Aristotle's claim is thus as follows: actuality is prior in being, first because actuality within the perishable world is prior in form and being, and second because eternal actuality is prior in being *κυριωτέρως*.

actuality really is an end and potentiality really is for its sake, which confirms that Aristotle takes teleological considerations to be relevant to priority in being.⁹

After completing his argument that actuality within the perishable world is prior in being, Aristotle turns his attention to a different case: the priority of the eternal to the perishable. Aristotle introduces this case by claiming that actuality is prior in a more authoritative way (*κυριωτέρως*), and uses a different test for priority in being from the one he used in 1050a4-b6¹⁰:

But indeed actuality is prior in a more authoritative way (*κυριωτέρως*) too: for eternal things are prior in being to perishable ones, and nothing eternal is in potentiality. ... And indeed these [eternal things] are first: for if they were not, nothing would be.

(*Metaphysics* Θ.8 1050b6-19)

The fact that Aristotle is using two quite different tests for priority in being is already puzzling. The two tests are plainly not equivalent; worse, they are in *prima facie* tension with one another. We can see that the tests are not equivalent simply from the fact that the teleological test doesn't apply to the eternal-perishable case. The teleological test is formally restricted: it only applies to entities that are related by coming-to-be, like a child and an adult human. But eternal things were not generated out of perishable things, nor can perishable things develop into eternal things; thus the teleological test fails to even apply to that case.¹¹ And, as I argued above, the fact that the independence test threatens to show that potentiality is prior to actuality within the perishable world – potentialities can, after all, go unactualized, while actualities cannot be except as the actualizations of a potentiality – establishes that the two tests are in *prima facie* tension.¹²

Our challenge as interpreters is to understand what Aristotle could mean by 'priority in being' such that all the cases he argues for in this passage are genuinely cases of priority in being, and both of the two major arguments he uses in this passage are good arguments for priority in being. In the next section, I'll argue that no version of the standard approach to unifying this passage has satisfied these two desiderata.

⁹Further evidence for the teleological nature of Aristotle's argument here will emerge when we consider a parallel passage in *Generation of Animals* II.6 in section 3.

¹⁰The fact that Aristotle introduces this claim by saying that actuality is prior in a 'more authoritative way' might make us think that he is introducing a new kind of priority. I will discuss this suggestion, which has recently been defended by Lindsay Judson, in more detail in section 2.4. For now, note that Aristotle supports the claim that actuality is prior in a more authoritative way by pointing out that eternal things are prior in being to perishable ones, making it unlikely that this more authoritative way of being prior is distinct from priority in being.

¹¹Beere (2009, 301) also makes this point.

¹²This argument for the priority of potentiality only works for the actuality-potentiality pairs Aristotle considers in 1050a4-b6; it does not threaten to undermine the priority of eternal actuality. This is because eternal substances are – on the standard account – the kinds of actualities that are not the exercise of potentialities. This way of conceiving of eternal actuality has recently been questioned, in different ways, by Frey (2015) and Judson (2016). Because neither Frey nor Judson denies that eternal actualities are necessary, however, neither view threatens the priority of eternal actuality according to the independence test.

2.2 *Ontological independence views*

The most prominent approach to interpreting *Metaphysics* $\Theta.8$ takes the independence test from 1050b6-28 to give Aristotle's account of priority in being. In what follows, I'll call views of this kind 'ontological independence views'.

The strongest motivation for ontological independence views comes from Aristotle's claim in *Metaphysics* $\Delta.11$ that "some things [are said to be prior] in nature and being, as many as admit of being without others, while those others cannot be without them: a division which Plato used." (1019a1-4) Many scholars have taken this passage to contain Aristotle's definitive account of priority in being.¹³ Witt (1994, 216), for example, says that $\Delta.11$ contains a "definition" of priority in being; Makin (2003, 210) treats $\Delta.11$ as the best candidate for an "account" of priority in being; and Peramatzis (2011, 204) says that this passage "explicates" the notion. If we think that $\Delta.11$ contains Aristotle's definition of priority in being, our interpretive aim should be to find a reading of the independence test that fits all of Aristotle's cases and makes sense of all the arguments Aristotle makes for those cases. This is the interpretive project that defenders of the ontological independence interpretation have pursued.

Ontological independence views have, however, struggled to make sense of all of the claims Aristotle makes about priority in being. Two main versions of the ontological independence view have been proposed, corresponding to different readings of the verb 'to be' in Aristotle's $\Delta.11$ formula. On one view (defended by Charlotte Witt and Stephen Makin), we understand 'to be' existentially, and take Aristotelian priority to be a matter of asymmetrical existential independence. On this view, one thing is prior in being to another if it can exist independently of the other. On the other view (introduced more recently by Michail Peramatzis), we read 'to be' essentially, and take Aristotelian priority to be a matter of asymmetrical essential independence. On this view, one thing is prior in being to another if it can be what it is independently of the other.¹⁴

Each of these interpretations, however, faces serious difficulties in capturing some of the central cases of priority in being Aristotle endorses. While existential independence views easily capture the priority of eternal things to perishable things, they have trouble capturing the priority

¹³This is a reasonable interpretive strategy given that the lists we find in Δ are often illuminating when we want to understand the use of metaphysical terms elsewhere in the corpus. The fact that Aristotle says this in Δ is not decisive, however: Aristotle gives a different list of the ways in which things are said to be prior in *Categories* 12, which includes both an independence test and a causal test. I will discuss how this passage bears on the status of the independence test in more detail in sections 2.3 and 4.2.

¹⁴Peramatzis (2011) represents the most developed version of this approach. As Peramatzis notes, his view bears some similarities to the account of separation developed in Spellman (1995), as well as to the suggestion in Beere (2008) and (2009) that Aristotle's teleological cases be understood in terms of essential dependence. Because Beere thinks that different cases exhibit different types of ontological independence, his account does not correspond to a single reading of Plato's Test and thus cannot be motivated by taking $\Delta.11$ to state the definition of priority in being. I discuss Beere's proposal in more detail in section 5.

of mature organisms to immature organisms and the priority of substantial form to matter; and while essential independence views can capture the priority of substantial form to matter, they have trouble capturing the priority of eternal to perishable things.

The first problem for the existential interpretation of the independence test comes from Aristotle's claim that mature organisms are prior to immature organisms. Aristotle is here defending the priority of the individual oak tree that develops out of an individual acorn to that very acorn from which it developed.¹⁵ In what sense of "can exist without" is it true that the oak tree can exist without the acorn, but false that the acorn can exist without the oak tree? It's true, of course, that the oak tree can exist without the acorn in the sense that there is a time when the oak tree exists and the acorn does not (any longer); but it's equally true that there is a time when the acorn exists and the oak tree does not (yet). The defender of the existential independence account, then, has the burden of giving an account of existential independence on which there is a clear asymmetry – and one according to which it is the mature organism that can be without the immature one.¹⁶

The problem about substantial form is no less serious. Substantial form isn't even the kind of

¹⁵See Panayides (1999, 338-9) for convincing arguments. In particular, Panayides notes that Aristotle describes what is prior in being as "posterior in generation"; this is most naturally understood as referring to the actual entity that comes to be as a result of a process of generation. Aristotle also describes the prior entity as "having the form"; this too is more naturally understood if the prior entity is the token mature organism that comes to be. Witt (1994) treats this as the most natural reading of the text but moves away from it in response to difficulties squaring it with the existential independence account; on my view, we should drop the existential independence account rather than understand Aristotle's examples differently.

¹⁶Both Makin (2003) and Witt (1994) develop accounts that are designed to deal with this problem. Witt's solution takes what is prior to be the species 'human' rather than the individual human who comes to be; however, as Panayides (1999) points out, the species 'human' is not posterior in generation to immature humans, nor is it an actuality for Aristotle. Makin, rather than reinterpreting the relata of the priority relation, aims to understand in what sense of possibility it could be true that a mature organism could be without an immature one while the reverse is not the case. Makin's key idea is that Aristotle thinks that possibility-claims are true only relative to processes – e.g., that a mature donkey can be without an immature one in respect of the process of generation, because the process of generation yields a mature donkey without an immature one – and that Aristotle thinks certain processes have a privileged claim to determine the kind of possibility that is relevant to priority. In particular, Makin argues that if two processes – F and G – yield different priority claims, but process G is an interruption of process F while the reverse is not the case, Aristotle will endorse the priority claim that is supported by the possibility claims underwritten by process F. In the cases of interest to us, Makin argues that Aristotle endorses the priority claims that are underwritten by the process of generation rather than by the process of destruction because destruction is an interruption of generation while the reverse is not the case. It is not clear to me that this is correct: the destruction of an elderly organism does not seem like an interruption of generation, while the recovery of a still-growing organism from a disease that could have been fatal might be analyzed as the interruption of destruction by generation. Makin claims more generally that we can explain why Aristotle thinks teleology is relevant to priority by the fact that teleological processes are interruptible while non-teleological processes are not; but there are processes – like destruction – that tend towards a result, and are thus interruptible, without being teleological in Aristotle's sense. Even if these problems could be solved, however, we would still need an explanation for why Aristotle would treat processes that were interruptible differently than processes that were not interruptible when assessing priority claims. If what Aristotle wanted to identify were the entities that were asymmetrically ontologically independent of others, why would it matter whether the processes that determined those ontological independence claims were interruptible by other processes or not? Makin's approach, in my view, at best helps us see how Aristotle could coherently accept both an ontological independence account of priority and his teleological cases of priority; it does not help us see why the teleological cases are well-motivated on an

thing that could exist independently of matter, on Aristotle's view. Substantial form is the essence of a hylomorphic composite consisting of matter and form; on Aristotle's view, it only exists as a part of such a composite, and hence cannot exist independently of matter (see e.g. *Metaphysics* H1 1042a25-32). How then could Aristotle claim that substantial form is prior in being to matter if priority in being is a matter of asymmetrical existential independence?

The essential independence view is largely motivated by an attempt to avoid these concerns. Here, I'll focus on Peramatzis's recent defense of this view. Peramatzis argues that the central mistake previous interpreters have made was to interpret the verb "to be" in our $\Delta.11$ formula existentially. Instead, Peramatzis proposes that we interpret it essentially: on his view, "to be" in this formula means "to be what something essentially is". Aristotle's claim is then that one thing is prior in being to another when the former can be what it is independently of the latter being what it is, while the reverse is not the case.¹⁷

This move allows Peramatzis to give a good treatment of cases that have puzzled previous interpreters, like the priority of form to matter. On Peramatzis's view, one entity is prior to another when it makes the latter what it is: it is because the prior entity makes the posterior one what it is that the prior entity can be what it is without the posterior entity being what it is, while the reverse is not the case. On this picture, we can give a plausible account of the case of form and matter: form makes matter what it is, while matter does not make form what it is. Similarly, an oak tree makes an acorn what it is, while the reverse is not the case.

Peramatzis's account faces two important challenges, however. The first concerns Peramatzis's reading of the independence test. Aristotle never explicitly isolates a use of the verb "to be" that means "be what something essentially is". This is especially significant given that Aristotle does draw a number of different distinctions between metaphysically significant uses of the verb "to be" – and even draws on some of these (different) distinctions in order to interpret the $\Delta.11$ formula in the very next lines. If Aristotle intended us to understand "to be" in this formula in this highly specific way, it is surprising that he does not take any steps to make that clear – especially given that he does draw on different distinctions between ways in which "being" is said to further interpret the formula.¹⁸ Moreover, as we have already seen, Aristotle himself seems to take the independence test to at least *prima facie* support the priority of potentiality to actuality at *Metaphysics* $\Lambda.6$ 1071b22-24, something that is very surprising on Peramatzis's reading of this test.

ontological independence account of priority. For additional discussion of Witt, see Panayides (1999) and Makin (2003); for further discussion of both Witt and Makin, see Peramatzis (2011).

¹⁷Peramatzis's proposal takes explicit inspiration from Kit Fine's work on ontological dependence, e.g. in Fine (1995).

¹⁸This problem is deepened by questions about whether Aristotle draws the distinction between existence and essence as sharply as Peramatzis requires. Witt (2012) raises this concern for Peramatzis's view, contrasting Aristotle's silence on this point with Aquinas's clear distinction in *De Ente et Essentia*.

A further challenge for Peramatzis's reading is the difficulty of accounting for the priority of eternal to perishable things on his essentialist interpretation. It's *prima facie* implausible that Aristotle thinks that what it is to be the Prime Mover (or any other eternal thing) determines what it is to be Perry the donkey and all other perishable things. To see this, consider the corresponding claim on the level of definitions. On Peramatzis's account of priority in being, it is the ontological correlate of definitional priority¹⁹; Peramatzis's view, then, predicts that we must mention the unmoved mover (and other eternal substances) in the definitions of 'human being', 'oak tree', and 'donkey'. Although Aristotle exhibits a deep interest in definition in the *Metaphysics* and elsewhere, he never indicates that we should expect definitions of perishable substances to ultimately refer to imperishable substances. And, in fact, the forms of definition that he discusses and considers – genus-differentia definitions like 'rational featherless biped', or definitions like 'a certain type of soul in a certain type of matter' – do not mention eternal substances. Rather, Aristotle's treatment of these definitions suggests that what it is to be a perishable thing is independent from what it is to be an eternal thing.²⁰ And while Aristotle does discuss priority in account earlier in *Metaphysics* Θ.8 (1049b12-17), he does not give the priority of the eternal to the perishable as an example there; worse, the argument he gives for the priority in account of actuality to potentiality – that what is capable of being *F* is capable of being *F* because it can be actually *F* – does not generalize to that case, as it is not the case that perishable things are potentially what eternal things are actually. Peramatzis thus faces the interpretive burden of showing that Aristotle in fact accepted these kinds of claims and helping us to see why Aristotle would have found them plausible.²¹ By contrast, we can give very easy sense to the priority of eternal to perishable things if we admit that "to be" does have existential implications in Aristotle's Δ.11 formula: any given eternal thing can in fact exist without any given perishable thing, while the reverse is not the case.

Both versions of the ontological independence view struggle to make sense of one of Aristotle's central cases. These views also struggle to make sense of the very fact that Aristotle draws

¹⁹This is Peramatzis's stated view: for him, priority in being "is the ontological correlate of definitional priority", where one thing A is definitionally prior to another thing B if A is correctly defined without mentioning B but B is not correctly defined without mentioning A (Peramatzis (2011, 14). This is also the natural way to understand the relationship between priority in being and priority in definition given what Peramatzis thinks priority in being is.

²⁰These are species-definitions rather than definitions of individuals. An additional problem, pointed out to me by Willie Costello, is that even if this part of the account succeeded, Peramatzis would still need to explain the priority of eternal substances to individual humans, oak trees and donkeys.

²¹Peramatzis acknowledges that the priority of the eternal to the perishable is the most difficult claim about priority for his view to accommodate. He does not offer positive textual evidence for the characterization of the relationship between the eternal and the perishable that his view implies. He does suggest that we could use Aristotle's claim that "(e.g.) sublunary basic material elements imitate imperishable beings" to see how it could be that what it is to be an eternal thing determines what it is to be something perishable (298). However, as Peramatzis acknowledges, this would require giving an interpretation of imitation in Aristotle, which Peramatzis takes to be out of the scope of his book. Without such an interpretation, however, I remain unpersuaded of Peramatzis's account.

on such different considerations in the two halves of the passage. On this approach, Aristotle gives a teleological characterization of the relationship between actuality and potentiality only in order to draw our attention to something else: the asymmetrical ontological independence relationship that actuality bears to potentiality. But why would Aristotle do this, rather than make explicit the ontological independence considerations that he (on this view) thinks drive these cases? This is an especially serious problem given that, on this reading, Aristotle appeals explicitly to ontological independence considerations a mere Bekker page later. If he thought these very same considerations were relevant to the cases in the first half of the passage, why didn't he make this explicit there as well?

2.3 *Undermining the motivation for ontological independence views*

Ontological independence views are motivated by taking *Metaphysics* Δ.11 to state the definition of priority in being. Δ.11 is a significant text for our understanding of priority in Aristotle because it devotes itself to offering a taxonomy of ways in which 'prior' is said. It is not the only such text, however: *Categories* 12 is also exclusively concerned to offer such a taxonomy, and a number of other passages draw distinctions among ways in which priority is said in the course of making an argument about priority. *Metaphysics* Θ.8 one such passage, and, as I have argued, it is difficult to read on the assumption that the independence test states the definition of priority; in what follows, I will argue that *Categories* 12 and *Physics* VIII.7 also contain evidence against the claim that the independence test represents the definition of priority in being.²² Finally, I'll argue that the fact that Aristotle uses the teleological test regularly itself counts against taking the independence test as Plato's definition. This, I'll argue, should make us willing to give up the assumption that the independence test states the definition of priority.

Aristotle's *Categories* 12 list of ways in which 'prior' is used offers what looks like the independence test as one test for priority, saying that "what does not reciprocate as to implication of being" is prior. But Aristotle then tells us that there are some cases of priority that are not accounted for by the independence test: when two entities reciprocally imply one another's being, one can still be prior to the other if the former is "in some way the cause of the other's being".²³ *Categories* 12 thus does not treat the independence test as Aristotle's definition of priority in being: instead, it is explicit that not all cases of priority in being can be analyzed in terms of

²²Panayides (1999) also treats *Physics* VIII.7 and *Categories* 12 as a reason to doubt that Δ.11 contains Aristotle's definition of priority in being; Makin (2003, 210) acknowledges that these two passages mean that the textual evidence that Δ.11 contains Aristotle's definitive account of priority in being is not decisive, but still thinks such an interpretation is on balance worth pursuing.

²³See *Categories* 14a29-35 for the independence test, and *Categories* 14b9-22 for the causal test.

ontological independence.²⁴

Aristotle offers another taxonomy of ways in which ‘prior’ is used in the course of his argument for the primacy of locomotion in *Physics* VIII.7, and here too Aristotle’s discussion reveals that he does not take the independence test to be the definition of priority in being. Aristotle begins this discussion by reminding us that ‘prior’ is said in many ways. He then lists three ways in which priority is said – the first of which corresponds to the independence test, and the third of which he calls priority in being (260b16-19). Aristotle thus explicitly contrasts priority in being with the kind of priority that results from passing the independence test in this passage. Worse, when Aristotle argues that locomotion is prior in being, he employs the teleological test for priority from Θ .8, saying that “what is posterior in generation is prior in nature” (261a14).²⁵ Aristotle, that is, here distinguishes the priority relation that results from passing the independence test from priority in being and counts passing the teleological test as evidence for the priority in being of locomotion. This is evidence that this passage does not define priority in being in terms of the independence test.²⁶

These two texts combine to significantly undermine the motivation for ontological independence views. They show that Aristotle does not always present the independence test as though it is the definition of priority in being. That is, even if we think that Aristotle does present the independence test as a definition of priority in being in Δ .11, the evidence from *Categories* 12 and *Physics* VIII.7 should make us wary of the claim that Aristotle always treats the independence test as a definition of priority in being. This should make us willing to give up the assumption that the independence test states the definition of priority in being when we find that it does not yield a natural reading of the text. Thus, when we find a text – like *Metaphysics* Θ .8 – that is difficult to read on the assumption that the independence test is there treated as a definition of priority

²⁴Aristotle here does not name the kind of priority established by non-reciprocal implication of being, and calls the fifth kind (that involving the causes of being) “priority in nature”. I take it that Aristotle has what I have been calling priority in being in mind in both cases, however. The non-reciprocal implication of being condition just seems to be the same condition as the independence test given in *Metaphysics* Δ .11; and I take “priority in nature” and “priority in being” to be mere terminological variants on one another, as is supported by the fact that Aristotle talks of “priority in nature and being” in Δ .11.

²⁵Here, again, I take it that priority in being and priority in nature are terminological variants. This is supported by the structure of the passage. Aristotle identifies three forms of priority at 260b16, calling the third “priority in being”, and then proceeds to show that locomotion is primary in each one; Aristotle first argues that it is prior according to the independence test, then that it is prior in time, and then that it is prior “in nature”. Aristotle thus seems to be proceeding in order, and if this is right, “priority in being” and “priority in nature” come to the same thing in this passage.

²⁶I have here argued for a negative claim: that this passage provides evidence that Aristotle does not always treat the independence test as a definition of priority. I must confess to finding the passage puzzling, however: Aristotle here draws a sharper distinction between the kind of priority that results from passing the independence test and priority in being than I would expect him to given that he elsewhere connects the independence test with priority in being.

in being, we ought to give up the assumption that Aristotle there takes it as a definition.²⁷

One final consideration. Aristotle's use of the teleological test in *Metaphysics* Θ.8 is not isolated: Aristotle uses the teleological test at least seven times in the corpus.²⁸ This, too, should make us suspicious of the claim that the independence test is meant to be Aristotle's definition of priority: if it were, why would Aristotle regularly use a principle about priority that was formulated in such different terms? A strength of my interpretation, I will argue, is its ability to make sense of the fact that Aristotle treats the teleological test as a principle about priority in its own right. But before moving on to develop my own interpretation, let me consider a worry about whether we should even want to give a unified account of *Metaphysics* Θ.8.

2.4 Why unity?

We might be tempted to conclude from the differences between Aristotle's arguments that he is discussing quite different kinds of priority in the two halves of the passage. Judson (2016) has recently made this argument.²⁹ He first argues, as I do, that the independence test gives the wrong result in Aristotle's teleological cases. He then argues that the fact that Aristotle introduces 1050b6-28 by saying that eternal things are prior *κυριωτέρως* leads to a puzzle if we take both halves of the passage to concern the same kind of priority. If *κυριωτέρως* means 'in a stricter sense', then the test Aristotle uses in 1050b6-28 – the independence test – should be a stricter test for priority than the one he uses in 1050a4-b6, the teleological test.³⁰ But if the stricter test reverses the results of the less strict test, how can Aristotle continue to maintain that actuality is prior to potentiality within the perishable world? Judson concludes that Aristotle must take *κυριωτέρως* to indicate not a stricter sense of priority in being, but a new kind of priority.³¹

Judson's proposal, however, faces textual difficulties. Aristotle justifies his claim that eternal

²⁷I have not, in this section, made any claims about the status of the independence test in Δ.11. If what I have said here is right, we have two options: we can either retain the assumption that Aristotle treats the independence test as a definition in Δ.11 and treat him as having changed his mind between that and other texts, or we can develop a reading of Δ.11 according to which even it does not present the independence test as a definition. While the claims of this paper do not require this, I am tempted by the second strategy, and say a bit more about this in footnote 68.

²⁸Footnote 5 gives a list, thanks to Beere (2009, 301): *Metaphysics* A8 989a15-18, *Metaphysics* M2 1077a18-20, *Physics* VIII.7 261a13-14, *Parts of Animals* II.1 646a24-b2, *Generation of Animals* II.6 724a19-22, and *Rhetoric* II.19 1392a19-22.

²⁹Panayides (1999) also emphasizes the differences between the two halves of the passage, concluding that "Aristotle makes very loose use of the expression 'priority in substance'" (342). Dancy (1981) also exhibits doubt about whether the two halves of the passage can be unified. Neither Panayides nor Dancy are as clearly committed to the claim that the passage simply contains two different kinds of priority as Judson is, however, so I will consider Judson's views in what follows.

³⁰Judson's own proposed translation for '*κυριωτέρως*' is 'in a more proper way'; he seems to take 'in a stricter sense' to be the best reading of '*κυριωτέρως*' available to those who think that Aristotle is discussing priority in being in both halves of the passage.

³¹Judson also takes this to be the more natural reading of the passage on linguistic grounds: he claims that Aristotle's '*ἀλλὰ μὴν καὶ κυριωτέρως*' is most naturally understood to introduce a new way of being prior, not to indicate that eternal things are prior in being *κυριωτέρως*.

things are prior *κυριωτέρως* by saying ‘for eternal things are prior in being to perishable ones, and nothing eternal is in potentiality’. This is strong reason to think that what Aristotle calls priority *κυριωτέρως* is a kind of priority in being. Second, Aristotle’s argument for the priority of eternal things – ‘if they were not, nothing would be’ – looks like an instance of the test Aristotle offers for what he there calls priority in nature and being in *Metaphysics* Δ.11. Aristotle thus offers a test that he elsewhere tells us is a test for priority in being to argue for what he here calls a claim about priority in being; this is strong evidence that he takes himself to be making an argument about priority in being in this passage.³² Finally, Aristotle begins the passage by telling us that he will argue for the priority of actuality to potentiality in time, in account, and in being; Judson’s proposal requires him to introduce a fourth kind of priority without comment. This would be especially odd given how well-marked the text of Θ.8 is: Aristotle introduces his discussions of all three kinds of priority he tells us he’ll discuss by naming the kind of priority in question.³³ These textual costs are significant enough that it is worth seeking an interpretation that allows us to explain how it could be that the whole passage is concerned with the same relation.³⁴ This is not to say that the relationship between the prior and posterior items in the two halves of the passage must be exactly the same: as we’ve seen, for example, it’s plausible to take them to exhibit different relations of ontological independence to one another. But it is to say that we want an explanation for why Aristotle would have thought that the cases in both halves of the passage were both instances of the single relation of priority in being.

2.5 Looking forward

I have argued that ontological independence views fail to account for the unity of our Θ.8 passage: none of the extant ontological independence views captures all of Aristotle’s cases or explains why he uses two distinct tests for priority in being. I have further argued that we have textual evidence that Aristotle does not uniformly treat the independence test as a definition of priority in being. The rest of the paper will articulate and defend an alternative account according to which the priority claims Aristotle endorses in *Metaphysics* Θ.8 are unified in the following way: prior items are independent causes of being for posterior items. This, I will argue, can explain the cases Aristotle endorses here. Eternal substances are important parts of the causal explanation for why there are perishable substances at all, and the way eternal substances serve as causes for perishable things is not directed by those perishable substances themselves. And final causes in

³²Judson (2016, 145) acknowledges both of these considerations but takes the case that priority *κυριωτέρως* is priority in a different sense to be on balance better.

³³See Beere (2008) and Beere (2009, chapter 13) for a discussion which emphasizes the careful way in which Aristotle marks the structure of this passage.

³⁴Such an interpretation, to be fully satisfying, should also have something to say about Judson’s puzzle. I will return to this issue in section 4.4, where I will deny that the independence test is a stricter test for priority in being than the teleological test.

nature are distinguished from the other causes precisely in point of their causal independence. Final causes explain the being and coming-to-be of those entities which are for their sake, but the way they tend to operate as causes is not determined by those entities; by contrast, the way in which the other causes tend to operate as causes is determined by the final cause. My causal view thus identifies a philosophically important feature that eternal substances and final causes in nature have in common. This feature, moreover, it is one that Aristotle has good reason to care about in the *Metaphysics*, given that the independent causes of being will be the best candidates to be the first causes and principles of being that Aristotle is seeking in the *Metaphysics*. And it is a good fit for the kind of unity we see in our $\Theta.8$ passage: I will argue in section 5 that it is compatible with and actually explains the fact that different prior entities exhibit different kinds of ontological independence from their respective posterior entities. Before moving on to defend the account in more detail, let me briefly unpack the analysis I will offer by saying something about each of its three main terms.

Let me begin with a quick note on ‘cause’. I intend ‘cause’ here to refer to Aristotle’s term ‘*aition*’. This notion is tightly connected to explanation; for example, Aristotle motivates his discussion of the four *aitia* in *Physics* II.3 by telling us that the purpose of our investigation is to answer the question ‘why?’ The fact that Aristotelian *aitia* appear to be entities that both make a difference in the world and provide answers to why-questions poses problems of translation; I have opted for “cause” in the official statement of my view, but will go back and forth between the language of “cause” and “explanation” in my discussion of the issues depending on what is more natural in English.³⁵

The next notion to clarify is that of a cause of being. Not all causes will be causes of being. When we give the causes of the behavior of some entity *x*, for example, we will not in general be offering causes of being for *x*; so, for instance, we might offer a cause for why Perry trotted over to the fence (he wanted someone to pet him) without thereby offering a cause of being for Perry. For the purposes of the present investigation, we can also set aside the causes of something’s being in accordance with one of the non-substance categories: e.g., to explain why Perry is a particular shade of nutty brown does not explain *Perry’s* being.³⁶ What makes something a cause of being for a substance, according to Aristotle? While I cannot here give a complete theory of the causes of being of substances, it will be important for my treatment of Aristotle’s cases that Aristotle is willing to treat both what we would most naturally classify as the causes of a thing’s being

³⁵See Stein (2011) for a recent discussion of the question of how to translate ‘*aition*’, including references to additional literature on this question.

³⁶We can set these cases aside for present purposes because Aristotle’s claims in *Metaphysics* $\Theta.8$ all concern the priority of certain substances to other substances or candidates for substance. It might be that a certain kind of investigation of Perry’s being brown could yield an understanding of the causes of being of non-substance qualities like brownness.

what it is, and the causes of its existence, as causes of its being.³⁷ So let me now provide some evidence that Aristotle is willing to use the terms “being” and “cause of being” in both of these ways. We see Aristotle using “cause of being” to pick out the cause of something’s being what it is in, for example, *Metaphysics* Δ.8 and *Metaphysics* Z17. In *Metaphysics* Δ.8 Aristotle tells us that one way of using the term “substance” picks out those entities which, being present in a subject, are causes of its being, as soul is the cause of being of an animal (1017b14-16); and in *Metaphysics* Z17 Aristotle treats form as a cause of being for a substance insofar as that form causes it to be what it is, e.g., insofar as it causes it to be flesh or a syllable (1041b25-28). But Aristotle also uses the bare “to be” verb in ways that are most naturally understood as making a claim about the existence of a thing, not about its being what it is. In *Posterior Analytics* II.1, for example, Aristotle distinguishes between asking whether a centaur or a god is or not from asking whether it is white or not; the former question is most naturally understood to be a question about the existence of the centaur or god. Aristotle also uses the phrase “cause of being” to describe cases in which the cause of some x is plausibly a cause of the existence of x but is not plausibly a cause of x ’s being what it is. At *De Caelo* 283b3-4, for example, Aristotle tells us that matter is the cause of a thing’s being or not being; and while matter *is* plausibly one cause of a thing’s existence, Aristotle insists that it is form rather than matter that is the cause of a thing’s being what it is.³⁸ In what follows, then, I will assume that both causing a thing to be what it is and causing it to exist are ways of being causes of being for substances.

The next ingredient in my account is the notion of an ‘independent’ cause of being. Its role in the account is to capture the asymmetry of the priority relation and to explain why Aristotle singles out final causes in nature as prior in being to those entities which are for their sake rather than also arguing that other causes in nature are prior in being to the things of which they are causes. The simplest way to capture this asymmetry would be to hold that x is prior in being to y iff x is a cause of being for y but y is not a cause of being for x . However, this only allows

³⁷In drawing this distinction, I do not mean to suggest that the causes of a thing’s being what it is do not also serve as causes of its existence. In fact, if its existence requires that it be what it is, the causes of its being what it is will also be among the causes of its existence. The animal, for example, will cease to exist when the soul is absent, and in general a substance will cease to exist once the form that makes it what it is is no longer present in it. I also do not mean to suggest that Aristotle would have seen these ways of being a cause of being as sharply distinct or unrelated.

³⁸Aristotle also describes some of his predecessors’ attempts at identifying the causes of being in ways that make it clear that these predecessors were aiming to identify the causes of something’s existing. In *aporia* 10 of *Metaphysics* B, for example, he describes Hesiod as attempting to make nectar and ambrosia the causes of being for the gods, and criticizes this view by saying that if nectar and ambrosia are the causes of their *being*, the gods won’t be eternal in their own right, while if the gods simply eat nectar and ambrosia for pleasure, they won’t be the causes of their being. The criticism here makes most sense if we take Aristotle to be criticizing an attempt according to which nectar and ambrosia are responsible for the gods’ continued existence. Later in that same *aporia* he describes Empedocles as attempting to make love and strife the causes of being for perishable things, where love and strife seem to serve as causes of being by bringing elements together or separating them out; this, again, is best understood if the causes of being are meant to explain the existence of these perishable things.

us to explain why Aristotle argues that form is prior to matter and the mature organism to the immature organism if matter is not a cause of being for form and if the immature organism is not a cause of being for the mature organism. Rather than ruling out matter and immature organisms as causes of being, I propose that we appeal to the notion of what I call an ‘independent’ cause of being to ensure the asymmetry of the priority in being relation, yielding the following account:

x is prior in being to y just in case x is a cause of being for y and x is causally independent from y (i.e., y does not determine how x tends to operate as a cause)

This way of spelling out the relevant kind of independence is motivated by Aristotle’s discussion of the teleological test in the next passage we will consider, *Generation of Animals* II.6. There Aristotle argues that final causes are prior to the causes that are for their sake by arguing that these other causes are not independent: their causal operation is guided by the final cause. This explains why Aristotle singles out the final cause as prior; and if we assume that out of any two causes, at most one can direct the causal operation of the other, it will also secure the asymmetry of the priority in being relation in general.

The next two sections set out the argument for my causal view. The main argument for this view comes in section 3: here I use evidence from *Generation of Animals* II.6 and *Metaphysics* A3-7 to show that this causal view provides the best explanation for Aristotle’s use of the teleological test. Section 4 then argues that we can make better sense of Aristotle’s argument in the second half of the passage on a causal account than we can make of the first half of Aristotle’s argument on an independence account, completing the argument that my causal view is more successful than an ontological independence view at unifying the argument of *Metaphysics* Θ.8.

3 A teleological reading of *Metaphysics* Θ.8 1050a4-b6

Ontological independence views took the independence test to represent Aristotle’s official account of priority and interpreted the teleological test as a test for ontological independence. My strategy is different: I will ask why Aristotle accepted the teleological test, and use the answer to that question to explain Aristotle’s use of the independence test. This strategy is not committed to the claim that the teleological test represents Aristotle’s definition of priority in being; in fact, I do not accept this claim.³⁹ I focus on the teleological test because, as I will argue, we have textual evidence that can help us explain why Aristotle endorsed this test.⁴⁰ In particular, we find Aristotle defending this test against a set of natural-philosophical predecessors who believed that

³⁹The teleological test, recall, does not even apply to Aristotle’s eternal-perishable case: eternal substances are not posterior in generation to perishable ones.

⁴⁰That is, I take it that Aristotle does not think it is a primitive fact that the *telos* is prior to that which is for its sake; there is a further explanation for the priority of the *telos*.

what was prior in generation was also prior in being in *Generation of Animals* II.6. Understanding Aristotle's criticism of their views will give us insight into his conception of priority.

On the view I will defend, the disagreement about priority between Aristotle and his predecessors is driven by a disagreement about what is causally fundamental. Aristotle's predecessors take the causes that stand at the beginning of the process of generation, the material and efficient causes, to be causally fundamental: we can appeal to them on their own to explain what comes to be from them. But Aristotle has a deep criticism to offer of these views: we would not be able to explain the characteristic causal behavior of these causes without seeing that they aim at the final cause. My language of 'independent' and 'dependent' causes aims to capture this criticism: we must make reference to the final cause to give a principled account of why the material and efficient causes tend to operate as they do, but we do not need to appeal to any other cause to explain why the final cause tends to operate as it does.

The claim that the final cause has a privileged role to play in explaining the structure of generation is one of the key claims in Aristotle's natural philosophy. This comes out particularly clearly in his criticism of Empedocles's attempt to explain features of mature organisms (e.g., the curvature of their spines) by reference to the process by which they came to be (e.g., their twisting and turning in utero). Aristotle insists that we must instead explain the process of coming-to-be by reference to what is coming-to-be:

[E]ven with house-building, it is rather that these things happen because the form of the house is such as it is, than that the house is such as it is because it comes to be in this way. For generation is for the sake of substantial being, rather than substantial being for the sake of generation. This is precisely why Empedocles misspoke when he said that many things are present in animals because of how things happen in generation – for example, that the backbone is such as it is because it happened to get broken through being twisted. ...

Hence it would be best to say that, since this is what it is to be a human being, on account of this it has these things; for it cannot be without these parts. ... And since it is such, its generation necessarily happens in this way and is such as it is. (This is why this part comes to be first, then that one.) And in like manner one should speak precisely in this way about all of the things constituted by nature.

(*Parts of Animals* 640a14-640b4, Lennox (2001) translation)

When we build a house, we explain both the nature of the materials we use and the way in which we use those materials in terms of the goal of a house. The bricks with which we build are as they are because of the role they play in assuring the stability of the eventual house; and we begin by laying the foundation, and only then begin to build the walls, because what we are building is a structure that can shelter us and our goods against the elements (rather than, say, a structure designed to fall down quickly in the wind). Aristotle's claim in this passage is that the same is true with natural processes. We must explain why an animal has the parts it does in terms of

what it is to be that kind of animal⁴¹; and even if Empedocles is right that it is a certain twisting and turning in utero that produces a backbone with a certain shape, Aristotle's claim will be that we must ultimately explain the twisting and turning itself by the fact that it is an organism with a curved backbone that is coming to be.⁴²

In what follows, I will argue that it is the causal and explanatory priority of the final cause over the causes that stand at the beginning of the process of generation that explains why Aristotle thinks that the final cause is prior in being to what stands at the beginning of the process of generation.⁴³ My argument will begin with Aristotle's discussion of his naturalist predecessors in *Generation of Animals* II.6. These philosophers think that what is prior in generation is also prior in nature and being; and, I will argue, Aristotle thinks they are mistaken precisely because the causes that stand at the beginning of the process of generation – the material and efficient causes – are dependent causes, not independent causes.

3.1 *Why teleology?* *Generation of Animals* II.6 742a16-22

The first half of Aristotle's argument in *Metaphysics* Θ.8, as we have seen, used a teleological test: Aristotle told us there that "things posterior in coming to be are prior in form and being", and justified this test by saying that "everything that comes to be proceeds to an origin and end... and the actuality is an end, and the potentiality is acquired for the sake of this." (*Metaphysics* Θ.8 1050a4-10) This is a principle Aristotle uses in a number of places⁴⁴ and that thus deserves its own analysis. Here I will focus on Aristotle's use of the principle in *Generation of Animals* II.6: this passage, I will argue, can give us insight into Aristotle's reasons for accepting the principle. But it is worth keeping in mind that this interpretation, if successful, illuminates a principle about priority that Aristotle uses multiple times, not just in *Metaphysics* Θ.8.

Aristotle draws the same contrast between priority in generation and priority in being in *Generation of Animals* II.6 as he does in *Metaphysics* Θ.8, and offers the same justification for the claim that what is posterior in generation is prior in being: what is posterior in generation is the end, and what is prior in generation is for its sake. Aristotle tells us that:

⁴¹Aristotle sometimes describes the parts of an animal as its matter, e.g. at *Metaphysics* Z11 1036b4-6; at other times he describes the organic body as its matter, e.g. at *Metaphysics* Z11 1037a6. In either case, explaining the nature of the parts will allow us to explain the nature of the matter.

⁴²See Code (1997) for further discussion; he argues that the analogies Aristotle draws with skilled craft production earlier in the *Parts of Animals* support the claim that "the priority of the final cause over the efficient cause...consists in the fact that the efficient cause is the way it is because the goal is the way that it is" (136).

⁴³Pace Witt (1998), I take it that it is these claims about the teleological structure of generation that Aristotle has in mind when he stresses, in the statement of the teleological test in *Metaphysics* Θ.8, that what is prior in generation to the *telos* is for the sake of the *telos*, that "everything which comes to be proceeds to an origin and an end", and that the end is the origin while the coming to be is for its sake. An appealing feature of my view is its ability to explain why Aristotle takes this fact to be relevant to priority in being.

⁴⁴See footnote 5 for a list.

Certain among the original natural-philosophers attempted to say which of the parts came to be after which, not having very much experience of what happens. For among the parts, just as in other cases, one is naturally prior to another.

But 'prior' is in many ways at once: for that for the sake of which and that which is for its sake are different, and of these one is prior in generation while the other is prior in being.

(*Generation of Animals* II.6 742a16-22)

Aristotle here offers this teleological test for priority in the context of a disagreement with what he calls the "original natural-philosophers". Understanding what drives their disagreement will help us understand Aristotle's own reasons for accepting the teleological test.

Aristotle here offers two criticisms of these "original natural-philosophers". First, they did not succeed at answering the question they had posed about the order in which the parts come to be in embryological development.⁴⁵ And, second, they had the wrong views about priority: they did not recognize that what is prior in being comes to be later in the process of generation. The passage, moreover, suggests that these criticisms are related. Immediately after claiming that the final cause is prior in being, Aristotle goes on to show how we can use the final cause to answer the question his predecessors were unable to answer about the order in which the parts come to be in embryological development. Aristotle thus seems to think that the fact that the final cause can explain the order in which the parts come to be, while what is prior in generation cannot, supports the claim that the final cause is prior in being. Explaining why this is so will explain why Aristotle accepts the views about priority he endorses here.

Let's begin with Aristotle's first criticism of these predecessors. Aristotle's own explanation of the order in which the parts come to be relies explicitly on the teleological structure of generation. Immediately after the lines quoted above, Aristotle draws a distinction between two ways in which parts may be for the sake of the end: some parts generate the end, while other parts are instruments which the end uses. This tripartite distinction between the end, the parts that generate the end, and the instrumental parts then allows us to explain the order in which the parts come to be: first the parts that generate the end come to be, then the parts that constitute the end, and finally those parts that the end uses.⁴⁶ And Aristotle argues that it is only when we draw on these teleological distinctions that we can explain the order in which the parts come to be: no other method will allow us to answer this question (742b10-12). This means that the causes

⁴⁵This is a task Aristotle had set for himself in the *Parts of Animals* passage quoted above, 640a14-b4; he there told us we should explain the order in which the parts come to be by reference to the final cause. See Gotthelf (2012) for a discussion of this connection.

⁴⁶It should be clear why the parts that generate the end must come first: they are required for the end to come into being. But why must the parts the end uses come to be later? Aristotle tells us that it is because it would be in vain for them to come to be before the end, given that nothing would be using them. We can infer that he must think it would not be in vain for the end to come to be before them. Perhaps his idea is that those parts which are in the end are valuable in their own right, even if the parts they use never come to be, while those which are used by the end must be used to be valuable at all.

that stand at the beginning of the process of generation – the material and the efficient causes – cannot explain in what order the parts come to be, if these are the only causes we appeal to. We cannot say what effects they tend to produce – in this case, in what order they tend to produce the parts of an organism – if we do not see them as aiming at the final cause.⁴⁷

Aristotle also offers an implicit criticism of these predecessors' views about priority. Aristotle tells us that these predecessors were interested in the question about the order in which the parts come to be because they were interested in what is “naturally prior” to what. He then immediately introduces a distinction between priority in generation and priority in being, saying that it is what is posterior in generation that is prior in being. This distinction has a point if Aristotle takes his predecessors to have assumed that what was prior in generation was also prior in being, or to have simply failed to distinguish these two priority orderings.⁴⁸ Aristotle is, on this account, offering his predecessors not just an answer to their question about the order in which the parts come to be, but a correction to the views about priority that led them to ask this question in the first place: it is not what is prior in generation, but the final cause, that is prior in being.

Why should Aristotle's predecessors accept this correction to their views about priority? Immediately after offering this correction, Aristotle shows how we can use the final cause to explain the order in which the parts of an organism come to be – and claims that his predecessors not only did not, but could not, explain this given that they did not recognize the final cause. This is evidence that Aristotle takes the explanatory priority of the final cause to show that it is prior in being. Moreover, the fact that Aristotle tells us that his predecessors not only did not, but could not, answer this question suggests that the problem for their view is that the entities they took to be prior – the material and efficient causes – are what I have called ‘dependent causes’: we cannot explain how they tend to operate without an account of the cause that governs them. In the next section, I'll argue that we see Aristotle target this same group of predecessors for the same mistake – failing to see that we have no principled account of the way the material and efficient causes tend to act without the final cause – in his *Metaphysics* A3-7 account of the development of the four causes. This will make it even more plausible that this criticism of their views about causation is in the background of the *Generation of Animals* II.6 discussion.

⁴⁷Aristotle, I take it, has this in mind when he says that “that which produces and generates, as such, is and comes to be with reference to that which is made” (*Generation of Animals* 742a30-31).

⁴⁸This reading requires taking “natural priority” to be a notational variant on “priority in being”. This gives us the best reading of this passage, because it allows us to see Aristotle's claim about priority in being as a response to his predecessors' interest in natural priority. It's also consistent with a more general variety in Aristotle's terminology; e.g., he calls what he's talking about in *Metaphysics* Δ.11 priority “in nature and being”. See footnotes 24 and 25 for discussion of other examples.

3.2 Why teleology? *Metaphysics A3-7*

Metaphysics A3-7 discusses Aristotle's predecessors' views about causation in the context of Aristotle's own attempt to identify the "primary cause" of each thing (983a25). Aristotle begins with a group of "original philosophers" – material monists, who treat things like water or air as the only causes. These philosophers, Aristotle thinks, came close to identifying the material cause; the inadequacies of the material cause alone then led to the recognition of something like an efficient cause. Aristotle then refers to these two groups together as the "natural philosophers" (989b30-31). The philosophers in these two groups are plausibly Aristotle's targets in the *Generation of Animals*. Aristotle calls his *Generation of Animals* targets the "original natural-philosophers" and takes them to have appealed to what was prior in generation to explain what was posterior in generation. On Aristotle's account of natural generation, both the material and efficient causes must be present at the beginning of the generative process: the material cause is that from which something comes to be, and the efficient cause is the source of motion. Both Aristotle's language in referring to these philosophers, and the content of their views, makes it plausible to identify Aristotle's targets in the *Generation of Animals* with the proponents of the proto-material and proto-efficient cause in *Metaphysics A*.⁴⁹

Aristotle makes the same criticism of this group of philosophers in *Metaphysics A* as he did in *Generation of Animals* II.6: that they cannot use just the causes they endorse to explain what comes from these causes. Let's begin with the proto-material cause. This proto-material cause, Aristotle argues, would have radical deficiencies as a cause if it were the only cause: we would not be able to use it alone to explain why change comes about, because matter does not change itself. A table, for example, does not come to be because the wood changes itself; it rather comes to be when something else acts on the wood. Insofar as all the early materialists have done is identify the wood as a cause, they have not identified a cause that is sufficient to explain change. They cannot explain why this proto-material cause tends to change when and as it actually does, showing that matter cannot be an independent cause.

These and other problems with the material cause, Aristotle tells us, motivate the introduction of the efficient cause, i.e. the cause from which change begins. Aristotle, however, claims that these early versions of the efficient cause are also inadequate, and tells us that these philosophers grasped the efficient cause only dimly (985a13-14). His central criticism is that these philosophers use their candidate efficient causes as causes in unprincipled ways. They do not give an explanation of why it is that these causes act when and as they do; this is what explains why they

⁴⁹I call these the 'proto-material' and 'proto-efficient' causes because, as we'll see, Aristotle takes it that his predecessors grasped these causes only dimly. I'll argue that their dim grasp on these causes is due to the fact that they have identified these causes in isolation from the others, and in particular in isolation from the final cause.

grasp the cause only dimly.⁵⁰ Again, this shows that the efficient cause is not an independent cause: we lack a principled account of its causal operation if it is the only cause we recognize.

Aristotle offers a summary criticism of his predecessors' views on causes in A10: all of them have grasped the causes only dimly, and thus there is a way in which none of the causes have been identified before Aristotle himself (993a11-15). Why does only Aristotle count as having a firm grip on the causes? Aristotle is not explicit about this here, but I take it that the reason is that only Aristotle is clear both about the way in which the final cause operates and about the way in which the causal operation of the other causes is governed by the final cause. Aristotle claims at *Metaphysics* A7 that only he has identified the way in which the good is a cause: it is a cause insofar as other things are, or come to be, for its sake (*Metaphysics* 988b6-15). The role of the final cause, then, is to explain that which is or comes to be for its sake, which will include the material and the efficient cause.⁵¹ Finally, if Aristotle takes the final cause to have this kind of explanatory priority over the other causes, we will be able to see how the discussion in *Metaphysics* A3-7 achieves its stated aim of identifying the "primary cause" of each thing: while all four causes are required for the full explanation of a natural organism, the final cause is the controlling cause.⁵²

Aristotle's discussion of causation in *Metaphysics* A3-7 serves as an illuminating background to the passage from *Generation of Animals* II.6 with which we began. It helps explain why Aristotle's predecessors would have thought that what was prior in generation was an independent cause of being for what was posterior in generation: the early proponents of either the material or the efficient cause would have thought that what was prior in generation was sufficient to explain what comes next. Aristotle's argument in *Metaphysics* A also allows us to see why Aristotle would have been so confident that the only way to answer the question about the order in which the parts came to be relies on the teleological structure of generation: anyone who lacked the final cause would be unable to give a principled account of how their causes tended to operate, and would thus be unable to explain how the causes they recognized gave rise to what came next. This account of Aristotle's criticism of his predecessors, moreover, allows us to explain the most puzzling feature of *Generation of Animals* II.6 – the fact that Aristotle thinks it counts against his

⁵⁰In *Metaphysics* A, Aristotle criticizes Anaxagoras for bringing reason in as a cause only when he cannot find another explanation; Aristotle's point, I take it, is that Anaxagoras has not given an account of what kind of cause reason is that we can use to explain why reason acts as it does. Aristotle's criticism of Empedocles here is that Love and Strife sometimes bring things together and sometimes dissolve them; he Aristotle emphasizes this criticism again in *aporia* 10 in *Metaphysics* B, and there adds that without explanations for the changes between cosmic cycles, Empedocles has not really explained why his causes operate as causes of coming-to-be and perishing.

⁵¹And this is, I take it, what we see Aristotle charging us to take account of in our theorizing in passages like *Parts of Animals* 640a14-b4.

⁵²See Betegh (2012) for an illuminating discussion of Aristotle's criticisms of the early proponents of the material and efficient causes; he argues that Aristotle thinks that his materialist predecessors had to smuggle in aspects of the efficient cause, and that the early proponents of the efficient cause had to smuggle in aspects of the formal and final causes, in order to have an account of those causes that was even *prima facie* successful. This shows that "the theory of the four causes... turns out to be an all or nothing affair" (107).

predecessors' account of priority that their prior entities cannot explain the order in which the parts of an organism come to be, and counts in favor of his own account of priority that his prior entities can. I have argued here that this is relevant to priority because it shows that Aristotle's preferred prior entities are independent causes of being, while his predecessors' candidates for priority are not. Being an independent cause of being is, as I suggested in section 2.5, a feature that Aristotle has reason to care about in the *Metaphysics*, which is a search for the first causes and principles of being. This proposal thus shows us why explaining these facts about embryological development says anything of interest for first philosophy.⁵³

I have argued here for a new account of why final causes are relevant to priority in being, one which can illuminate both Aristotle's argument in *Metaphysics* Θ.8 and his principle that what is posterior in generation is prior in being. They are not prior in being because they are asymmetrically ontologically independent from what is for their sake; rather, they are prior in being because they are independent causes of being for that which is for their sake, while the reverse is not the case. This account explains why Aristotle singles out final causes in nature, and thus why he offers a teleological test for priority but does not offer, say, a material-causal test for priority.⁵⁴ It also lets us give a good explanation of Aristotle's Θ.8 claims that form is prior to matter and that mature organisms are prior to immature organisms. Form, as a final cause of matter, serves as a cause of being for matter: the matter is as it is so that it can acquire form.⁵⁵

Similarly, the mature organism serves as a cause of being for the immature organism: the

⁵³This account also allows us to make sense of the fact that Aristotle in *Metaphysics* Θ.8 tells us that "everything which comes to be proceeds to an origin and an end" in the course of defending his own teleological account of priority. Aristotle here seems to be reminding us of his view that the final cause has a privileged role to play in explaining the process of coming-to-be; my account can explain why Aristotle would think this was relevant to claims about priority.

⁵⁴I have discussed Aristotle's reasons for thinking material and efficient causes are not independent of the final cause, but what of the formal cause? Aristotle regularly claims that the formal and the final causes coincide (e.g. at *Physics* 2.7, 198a24-7, where he says that "the what-it-is and the for-the-sake-of-which are one"), and, I take it, his use of the teleological test to argue for the priority of form shows that form is prior to matter in its role as final cause. This allows us to explain why he would not have needed a formal test in addition to a teleological test for priority in being. See Rosen (2014) for critical discussion of the sameness claim. See Koslicki (2015) for independent argument that the form is a cause of being for the composite in its role as final cause.

⁵⁵Mary Louise Gill has pointed out to me that *Meteorology* IV.1-11 suggest that matter can be independent of the final cause: Gill (2014) argues that in these chapters Aristotle provides purely material explanations of why material compounds are malleable, breakable, combustible, and so on. Most strikingly, Aristotle suggests in *Meteorology* IV.12 that uniform parts like flesh, bone, hair and sinew can come to be through material necessity alone. Aristotle does acknowledge that the non-uniform parts like head, hand and foot cannot come to be through material necessity alone; but his suggestion that uniform material parts can come to be through material necessity alone does still pose a *prima facie* challenge to my claim that Aristotle conceives of matter as a dependent cause. A suitably qualified version of my account can, however, accommodate this claim. Even if some of the causal contributions matter makes to the compound are driven by pure material necessity, this doesn't show that matter is causally independent of form in a way that threatens the application of my criterion for priority. This is because it does not show that matter governs the causal operation of form. This response does, however, require that when I speak of one cause 'governing' the causal operation of the other, this does not require that e.g. form govern *all* aspects of the causal operation of matter.

mature organism, as a final cause, determines the nature of the immature organism, and thus explains why it has the features that constitute its being a child or a foal. This account can also explain the more expansive claim of *Generation of Animals* II.6 that the final cause is prior in being to what is for its sake, which there appears to include the efficient cause. This is because the final cause determines how it is in the nature of the efficient cause to act, and thus plausibly serves as a cause of being for it as well as for the material cause.⁵⁶ Having given my interpretation of the justification for Aristotle's teleological test, let me now turn to argue that this interpretation of the teleological test does a better job of explaining the arguments Aristotle makes in *Metaphysics* Θ .8 1050b6-28 than ontological independence views did of explaining the arguments Aristotle makes in 1050a4-b6.⁵⁷

4 A causal reading of *Metaphysics* Θ .8 1050b6-28

The central claim of this paper is that a causal account of priority in being can succeed in unifying Aristotle's Θ .8 argument where an ontological independence account could not. The primary motivation for attributing a causal account to Aristotle comes from section 3, where I argue that it best explains why Aristotle endorses the teleological test. A causal account is less immediately suggested by the text of 1050b6-28, which uses the independence test to show that eternal things are prior in being to perishable things. The role of this section is to make the case that a causal

⁵⁶My aim in this paper is to make sense of Aristotle's claims in Θ .8, which does not require interpreting the final cause as a cause of being of the efficient cause. But I do take this to be the most natural reading of the *Generation of Animals* II.6 claim that that which is for the sake of the final cause is posterior in being to it; and I take it that Aristotle offers us a way to make sense of this when he says later in the passage that "that which produces and generates, as such, is and comes to be with reference to that which is made" (742a30-31).

⁵⁷Before moving on, let me consider a worry Jonathan Beere has raised about the proposal I've developed. On my proposal, both what is prior in being and what is prior in generation are determined by teleological relations. The fact that the actual donkey is the *telos* explains why it is prior in being; and the fact that (e.g.) the heart is for the sake of the *telos* explains why it is prior in generation. I've argued that this provides us with a justification for Aristotle's principle that what is posterior in generation is prior in being: the *telos* is both posterior in generation and prior in being, on my view. But we might worry that the justification is too powerful, and in fact turns the principle into a tautology: the *telos* is the *telos*. If so, Beere worries, it seems that we ought not be able to doubt the principle; but Aristotle clearly thinks the principle can be doubted (as his engagement with his predecessors in *Generation of Animals* II.6 shows). I don't think this line of thought shows that the principle turns out to be a tautology, and I think the observation that Aristotle thinks we can doubt the principle is key to showing where this line of thought goes wrong. As I understand the structure of Aristotle's view, there is a conceptual connection between priority in being and being an independent cause of being. But we need more than this to justify the principle that what is posterior in generation is prior in being: we need the claim that the *telos* structures the process of generation in the way I've described in the main text. This is a substantive claim that Aristotle thinks requires argument. Once we grant it, we know that the *telos* must be posterior in generation (because what is productive of the *telos* must come first) and that the *telos* must be prior in being (because the *telos* structures the process of generation by governing the causes that come first in the process of generation, thus showing us that the *telos* is an independent cause of being for that which comes earlier in the process of generation while the reverse is not the case). So while it may be a conceptual claim that what is prior in being is an independent cause of being, Aristotle requires the substantive claims that the *telos* is posterior in generation and that it is an independent cause of being to justify the principle that what is posterior in generation is prior in being.

account is more successful at explaining the two halves of the passage together than ontological independence accounts have been at explaining these two halves together.⁵⁸

Let me begin by clarifying what kind of causal account I am defending in this section. The fact that Aristotle gives a teleological test in 1050a4-b6 suggests one way to unify the passage: to argue that eternal substances are final causes for perishable substances and that this explains their priority as well. But, as I argued in section 3, Aristotle does not think it is a primitive fact that final causes are relevant to priority: he rather thinks that final causation is relevant to priority in being because the final cause is what I there called an ‘independent cause of being’. It is thus being an independent cause of being, rather than being a final cause as such, that I take to matter for priority in being. In the rest of this section, I will argue that a view on which prior items are independent causes of being allows us to unify our Θ .8 passage.⁵⁹

I articulated two desiderata for an account of Θ .8: first, such an account needs to capture all of Aristotle’s cases, and second, such an account needs to explain why Aristotle argues for his cases in the way that he does. In what follows, I argue that a causal account of 1050b6-28 can satisfy these desiderata. I first argue that a causal account can capture the cases: eternal substances are independent causes of being for perishable substances. I then argue that a causal account can explain why Aristotle uses the independence test to argue for the priority of eternal substances. This argument comes in two parts. In section 4.2, I argue that Aristotle uses the independence test when he does not because he thinks it gives the reason why entities that satisfy it are prior, but because he thinks it correctly identifies them as prior. What is Aristotle’s standard for correctness? Here I argue that the independence test correctly identifies prior items when it identifies entities that are causes as prior. Section 4.3 then takes on the most challenging question for my causal account: why does Aristotle use the independence test rather than a more explicitly causal test? I argue that Aristotle has good reasons to avoid giving a detailed account of the way in which eternal substances are causes of perishable substances in this passage, and that this explains his use of the independence test – a traditional test for priority that he thinks gets this case right – in this passage.

4.1 *A causal reading can capture the eternal-perishable case*

My causal view will capture the priority of eternal substances to perishable ones just in case eternal substances are independent causes of being for perishable ones. Aristotle tells us at the very beginning of the *Metaphysics* that we should expect the highest eternal thing, at least, to be

⁵⁸This argument is aimed primarily at a reader who is convinced that we should seek a unified account of the passage. Readers who are unpersuaded that we should seek a unified account may still take interest in my account of what justifies Aristotle’s teleological test.

⁵⁹This view is neutral about what kind of cause eternal things are of perishable things. Even if they are final causes of perishable things, I take it that the reason why they are prior is still that they are independent causes of being.

among the causes studied by the science of being, “for god is thought to be among the causes of all things and to be a first principle” (*Metaphysics* A2 983a5-9). And in the two texts in which he is most deeply concerned with the relationship between the eternal and the perishable world, *Metaphysics* Λ and *Physics* VIII, Aristotle maintains this commitment to treating god as a cause of perishable substances: *Metaphysics* Λ.7 tells us that “the heavens and nature” depend on the Prime Mover (Λ.7 1072b14), and *Physics* VIII.6 describes the Prime Mover as a “cause of the fact that some things are and others are not” (αἴτιον τοῦ τὰ μὲν εἶναι τὰ δὲ μὴ) (259a4-5). These passages emphasize the special role of the Prime Mover as a first cause; but Aristotle makes the more general point that without eternal non-sensible substances there will be no generation at Λ.10 1075b24-5, and singles out the sun as among the causes of any given perishable thing at Λ.5 1071a15. These eternal substances, moreover, are plausibly understood as causes of being for perishable substances: *Physics* VIII and Λ argue that eternal substances are required if there are to be perishable substances at all, making eternal substances among the causes of existence of perishable substances. Moreover, because perishable substances do not determine the way eternal substances operate as causes, eternal substances are independent causes relative to perishable substances. They thus plausibly satisfy the account of priority in being I gave in section 2.5: they are causes of being for perishable things, and their operation as causes is independent of those perishable things.

4.2 *The independence test as a test for causes*

The more difficult task for my account is to explain why Aristotle uses the independence test if he thinks priority is a causal relation. My causal view is committed to denying that the independence test states the reason why eternal substances are prior to perishable ones.⁶⁰ I’ll argue, in this section, that we have good reason to deny that the independence test states the reason why items that it certifies as prior are prior: Aristotle thinks that sometimes the independence test gets the facts about priority wrong. But, I’ll also argue, Aristotle offers a diagnosis of these cases: the independence test gets the facts about priority wrong when it identifies something as prior that is not a cause, or when it fails to identify as prior something that is a cause. This gives us information about Aristotle’s own attitudes towards the independence test: it suggests that he

⁶⁰I think the same thing is true, though in a less marked way, of the teleological test. When Aristotle tells us that what is posterior in generation is prior in being, he does not state the reason that this entity is prior in being; he simply gives us a test that we can use to reliably identify what is prior in being. When Aristotle tells us that the *telos* is prior in being, he comes closer to stating the reason. But on my view there is a further explanation for why the *telos* is prior in being: it is because the *telos* is an independent cause of being. It is, however, easier to see the reason why the teleological test is a good test from looking at Aristotle’s statement of the test than it is to do so in the case of the independence test. On my view this is because the independence test is a traditional test for priority that Aristotle has adopted from his predecessors, while the teleological test is new with Aristotle. I will discuss this further in section 4.3.

thinks it will be a useful test for priority only when it gets the causal facts right.

Aristotle's most explicit acknowledgement that the independence test will sometimes get the cases wrong comes in *Categories* 12. There Aristotle tells us that when we find two entities that "reciprocate as to implication of being", one will still be prior to the other if it "is in some way the cause of the other's being" (*Categories* 14b11-13). The fact that Aristotle is willing to admit that the independence test sometimes gets the cases wrong is an indication that the independence test does not tell us what it is to be prior: if it did, it would not admit of exceptions. We thus need an alternative explanation for why Aristotle uses the independence test when he does, and this passage suggests one: if the independence test gets things wrong when it fails to identify the causes of being, we might think it gets things right when it successfully identifies the causes of being. This supports my proposal that Aristotle uses the independence test when he thinks it does identify the causes of being, and not otherwise.

We find support for this suggestion in the *Metaphysics* as well. In *Metaphysics* Λ.6 Aristotle considers an objection to the claim that actuality is prior to potentiality:

Yet there is a difficulty; for it is thought that everything that acts is able to act, but that not everything that is able to act acts, so that the potentiality is prior. But if this is so, nothing at all will be; for it is possible for things to be capable of being but not yet to be. Yet if we follow the mythologists who generate the world from night, or the natural philosophers who say that all things were together, the same impossible result ensues. For how will there be movement, if there is no actual cause? Matter will surely not move itself – the carpenter's art must act on it; nor will the menstrual fluids nor the earth set themselves in motion, but the seeds and the semen must act on them.

(Λ.6 1071b23-32, modified Ross translation)

Here, again, Aristotle suggests that the independence test gets an important case wrong: it looks like it tells us that potentiality is prior to actuality.⁶¹ Why would that be the wrong result? If potentiality were prior, Aristotle tells us, nothing at all would be; and the reason nothing at all would be is that we need an actual cause as the first cause of the ordered cosmos around us. Once again, we see Aristotle diagnosing a failure of the independence test by pointing out that the independence test fails to correctly identify the causes of being.⁶² This gives us further support

⁶¹On Peramatzis's proposed reading of the independence test, it will not tend to show that potentiality is prior to actuality. Nor will Aristotle's claim that potentialities can go unactualized count as evidence that potentiality is prior to actuality, on Peramatzis's account of priority: this claim is not evidence that what it is to be an actuality depends on what it is to be a potentiality. This counts against Peramatzis's interpretation of the independence test, and in favor of an interpretation of it on which 'being' has existential implications.

⁶²Aristotle's response to this puzzle in the case of eternal actuality – on the standard account of the nature of eternal actuality – is to say that eternal actualities are not the actualizations of any corresponding potentialities. However, this still leaves the puzzle standing in the case of perishable actuality-potentiality pairs. Aristotle nowhere indicates that he thinks the independence test does not have the result that potentiality is prior in the case of these pairs. My conclusion is that he thinks the independence test gets that case wrong – and uses the teleological test for it instead.

for the claim that Aristotle uses the independence test as a test only when he thinks it correctly identifies the causes of being.

If Aristotle thinks the independence test sometimes gets the cases wrong, however, why does he ever use it? I'll take this question on in the next section, where I explain why he uses the test in *Metaphysics* Θ.8 1050b6-28.

4.3 *Why doesn't Aristotle explicitly appeal to causes?*

The most difficult question for my causal interpretation remains: if Aristotle thinks that eternal causes are prior to perishable things because they are among their causes of being, why doesn't he say so more explicitly in Θ.8? Why does he use the independence test instead?

I grant that the fact that Aristotle does not explicitly appeal to causation in his argument for the priority of eternal to perishable things is a *prima facie* cost of my causal interpretation. But I think Aristotle has good reason not to argue on the basis of the causal role of eternal things here. If this is right, my causal interpretation is in a better position to explain why Aristotle does not appeal to causation in 1050b6-28 than the ontological independence interpretation is in to explain why Aristotle does not appeal to ontological independence in 1050a4-b6. A causal interpretation is thus more successful at unifying the passage than its ontological independence interpretation rivals.

What is Aristotle's reason for not arguing on the basis of the causal role of eternal things? Aristotle thinks that it is obvious that if there are eternal substances they will serve as causes for perishable substances, i.e., that whatever eternal substances there are are causally connected to rather than causally disconnected from the perishable world⁶³; Aristotle, moreover, takes this view to be widely shared in his own philosophical context.⁶⁴ Aristotle may even think the independence test obviously points to this causal role: the reason perishable things cannot be without

⁶³We see this, for example, from Aristotle's criticisms of Speusippus for making the cosmos episodic at *Metaphysics* Λ.10 1075b37-1076a4 and N.2 1090b13-20. Aristotle himself would face the charge of an episodic cosmos if he countenanced eternal substances that were not causes of perishable ones.

⁶⁴One valuable source for Aristotle's understanding of the views of his predecessors on this question is *aporia* 10 from *Metaphysics* B (1000a5-1001a3). There Aristotle raises the question of whether the causes and principles of eternal and perishable things are the same or different. Notably, although Aristotle thinks that there is some philosophical pressure to identify different principles for perishable things, he does not think any of his predecessors have held that view (1000b32-1001a1); instead, he takes all of them to have held that "the principles of all things are the same". The only named philosopher Aristotle engages with in this *aporia* is Empedocles, who held that eternal principles like Love and Strife account for the coming-to-be and passing-away of perishable things; Madigan (1999) points out that Aristotle could equally well have discussed Plato, Democritus and Leucippus as examples of philosophers who attempt to use eternal substances as causes and principles of perishable ones, and that he does in fact discuss all three sets of views together at, e.g., *De Caelo* III.1-2, 7-8 and *Generation and Corruption* I.1-2, 8.

eternal things is that they causally depend on them.⁶⁵ But Aristotle thinks it is extremely difficult to spell out in any detail how it is that eternal substances are causes of perishable ones, and stresses in Λ how different the sketch of an account he develops there is from that of his predecessors. To provide an argument in 1050b6-28 that is as detailed about the causal connection between prior and posterior items as his argument in 1050a4-b6 would thus require serious philosophical work – work that Aristotle would reasonably have thought was better put off to a treatise concerned specifically with the relationship between the eternal and the perishable. This, I suggest, allows us to explain why Aristotle reaches for the independence test in this argument. The independence test is a traditional test for priority – Aristotle attributes it to Plato in $\Delta.11$ – that Aristotle thinks in fact gets the eternal-perishable case right. It thus provides Aristotle with an effective way to argue for an uncontroversial claim that it would be challenging to argue for in more detail.⁶⁶

This kind of explanation is, however, unavailable to the defenders of the ontological independence interpretation. The teleological test is not a traditional criterion, nor is the claim that actuality is prior within the perishable world uncontroversial within Aristotle’s philosophical context.⁶⁷ In fact, given how controversial Aristotle’s teleological priority claims are, it would be surprising for Aristotle not to use the independence test to argue for them if he thought it got those cases right.⁶⁸ The fact that the independence test is a traditional criterion for priority thus allows us to explain why Aristotle makes use of it in 1050b6-28 even if he thinks it does not articulate the reason eternal things are prior to perishable things, while no similar explanation is available to the defender of the ontological independence interpretation. This provides another

⁶⁵Judson (2016), in fact, takes this to be an immediately plausible reading of Aristotle’s test in 1050b6-28. He argues that this half of the passage is concerned with causal priority, and, in particular, with the efficient-causal dependence of perishable things on eternal things. He does not introduce a new reading of the independence test; rather, he says “The point is not that the sentence ‘if these things were not, nothing would be’ means something different, but that what determines the sort of priority at issue is what explains its being true.” (Judson (2016, 150)) I am not committed to spelling out this causal dependence in efficient-causal terms; if anything, the references to imitation in $\Theta.8$ 1050b28ff suggest that final causation is more on Aristotle’s mind in this passage. However, I share Judson’s view that a causal interpretation of Aristotle’s argument in this passage is quite natural, and am sympathetic to his suggestion that it is the reason the independence test applies to the case of eternal things, and not the formula Aristotle uses to make the argument, that determines what kind of priority Aristotle has in mind here.

⁶⁶Many commentators have noted that Aristotle’s argument for the priority of eternal to perishable things in 1050b6-28 is extremely brief; his main aim in this stretch of text is to show that eternal substances are in actuality. My explanation for Aristotle’s use of the independence test also helps explain this feature of the text: if Aristotle thinks a detailed explanation of the way that eternal substances are causes of perishable ones is better taken up in a context like *Metaphysics* Λ , this helps us see why he spends so little time on the priority claim in this passage.

⁶⁷As we saw in *Generation of Animals* II.6, for example, Aristotle takes his natural-scientific predecessors to have thought that what was prior in generation was prior in being. Aristotle also frequently criticizes Plato for making eternal things the only causes of perishable things, e.g. in *Metaphysics* A9; Aristotle thus seems to have thought that Plato failed to recognize any priority relations within the perishable world.

⁶⁸This would be particularly surprising given that Aristotle attributes the independence test to Plato but thinks Plato did not endorse the results of the teleological test.

reason to think the causal interpretation is more successful than the ontological independence interpretation at identifying the unity of Aristotle's *Metaphysics* Θ.8 argument.⁶⁹

4.4 Priority *κυριωτέρως*

Before closing, I want to briefly return to Aristotle's claim that eternal substances are prior *κυριωτέρως*. I am moved by Judson's argument that Aristotle cannot mean by this that eternal substances satisfy a stricter test for the same kind of priority than his teleological cases do: if this were true, Aristotle ought to reject his own teleological cases. What to do with this puzzle? Judson proposes that Aristotle has in mind a different kind of priority in 1050b6-28; I suggest instead that Aristotle does not think that the independence test is a stricter test for priority than the teleological test. As we have seen, Aristotle is willing to reject the results of the independence test when it gets the causal facts wrong; and my view, according to which both the independence test and the teleological test are good tests for priority insofar as they identify independent causes of being, explains this. The independence test thus does not, on my view, represent a stricter standard for priority than the teleological test does.

My view still owes us an explanation for what Aristotle means when he says that eternal substances are prior *κυριωτέρως*. This is a difficult problem for any account of *Metaphysics* Θ.8, and I do not have a full answer. But my causal view does offer us at least a direction in which to seek a solution. On my view, it is the independent causes of being that are prior in being. This brings with it a natural explanation for why Aristotle cares about priority. Aristotle's investigation in the *Metaphysics* is an investigation into the first causes and principles of being. Aristotle, on my view, thinks that the priority relation matters because it helps us identify these first causes and

⁶⁹Here I have focused on the question of why Aristotle doesn't appeal to causal considerations in Θ.8, but appeals to the independence test instead. But my interpretation also raises a larger question: if Aristotle thinks the independence test is successful when and only when it identifies causes, why does he not characterize the independence test in causal terms in passages like *Metaphysics* Δ.11 or *Categories* 12? I can't settle this question here, but I am inclined to think that Aristotle introduces the independence test in these passages in order to show that it does not offer a fully adequate account of priority on its own. In the case of the *Categories*, this is made plausible by the fact that Aristotle explicitly offers the fifth, causal sense of priority to account for cases that the independence test gets wrong; Judson (2018, 147) too suggests that "Aristotle's curious way of proceeding – 'there are these four forms of priority, but there is also another one' – suggests that he may actually be *correcting* a Platonic or Academic account of ontological priority as a matter of satisfying Plato's criterion". And *Metaphysics* Δ.11 can also be read as offering a criticism of the independence test: immediately after attributing the test to Plato, Aristotle points out that because being is said in many ways, the test will have different results depending on what way of being we have in mind, and in particular that one thing may count as prior-in-actuality to another while that other counts as prior-in-capacity to it. Aristotle may here be making the point that once we distinguish the ways of being – as Plato did not – we see that Plato's Test does not give us decisive answers about the priority relation. To defend this reading of Δ.11 would be the work of another paper, but if Aristotle's main aim in introducing the independence test in *Categories* 12 and *Metaphysics* Δ.11 is to point out that the independence test cannot be the *sole* test for priority, then it is less puzzling that Aristotle does not use causal language to characterize the independence test there, for the point of those passages is to critique the test's traditional centrality rather than to show how and why it can be used.

principles: it is the independent causes of being that will be the best candidates for these first causes and principles.⁷⁰ Aristotle's conception of first philosophy, however, is subject to notorious interpretive puzzles. Aristotle gives two quite different descriptions of the project of first philosophy in *Metaphysics* E1, one according to which it studies everything that is just insofar as it is a being, and another according to which it studies the primary being, the Prime Mover. Aristotle thinks these two descriptions are compatible and tells us that the fact that the Prime Mover is primary explains why its study is universal. This claim is extremely difficult to understand and its interpretation remains highly controversial. But, I suggest, any solution to it would also explain why Aristotle says eternal things are prior *κυριωτέρως*. If we could explain why Aristotle thinks first philosophy is concerned with the causes of being in general, but specially concerned with the first cause – the Prime Mover – we could also explain why the priority of eternal things is *κυριωτέρως* by saying that first philosophy is specially concerned with the causal role played by eternal things.⁷¹ This is, of course, a promissory note, but my hope is that it is an illuminating one: it suggests that we should expect there to be an answer to this question on my view, and shows us where we must look to find that answer.

5 Causation and ontological independence

I've argued that a causal reading can make better sense of how the two halves of *Metaphysics* Θ.8 are unified than an ontological independence reading can. In particular, I've argued that a causal reading is more successful both at capturing all of Aristotle's cases and at accounting for the arguments Aristotle makes. It is nevertheless plausible to take many of Aristotle's cases of priority to involve ontological dependence relations. I want to close with three observations about the relationship between causal and ontological independence interpretations.

I first want to suggest that a causal view can explain the philosophical variation that Aristotle's cases exhibit: different causal relationships between prior and posterior items bring with

⁷⁰On my own view, Aristotle does acknowledge that there are distinctive causes and principles of perishable beings that are themselves within the perishable world, and that these will be among the first principles and causes of being that must be studied in first philosophy. I take it that this is Aristotle's solution to *aporia* 10, which asks whether the causes and principles of eternal and perishable things are the same or different; Madigan (1999) agrees that this is Aristotle's solution, while Wildberg (2009) expresses reservations. On this view, *Metaphysics* Θ.8 1050a4-b6 argue for the priority of the causes and principles that are distinctive to the perishable world. Nothing I have said in this paper depends on this picture, however.

⁷¹Judson suggests that the kind of priority eternal things exhibit counts as priority *κυριωτέρως* because "it is a key structural feature of the whole natural world" (Judson (2016, 151)). He does not say more about what makes this a more proper kind of priority relative to the kind of priority Aristotle discusses in the first half of the passage, or why Aristotle thinks the comparison between these two kinds of priority is apt. I take it that my view, according to which both halves of Θ.8 are concerned with causal priority, does a better job of explaining why the comparison between the two priority claims Aristotle makes here has a point. On my view, both halves are concerned with the kind of causal priority that is distinctively studied by first philosophy; the second is more proper or more authoritative because its study is more central to first philosophy.

them different relations of ontological independence and dependence.⁷² Final causes within the perishable world are essentially independent from those entities which are for their sake: one of the main roles of these final causes for Aristotle is to explain the process of coming to be and, thus, to explain the nature of the developing entity. These final causes are, however, causes by being aimed at and ideally – but not always – achieved. The fact that (for example) not every developing entity successfully matures means that mature organisms are not existentially independent of immature ones, and, in general, that final causes within the perishable world are not existentially independent from those entities which are for their sake. The nature of the causal relationship between final causes and the entities which are for their sake explains why final causes exhibit essential, but not existential, independence relations.

Eternal substances bear the opposite ontological independence relations to perishable things, and we can also explain this in terms of the causal role Aristotle thinks they play. Eternal substances must be eternal in order to establish the eternal order of the cosmos, ensuring that it is possible for any given perishable thing to come to be at all. This entails that they are asymmetrically existentially independent from perishable things. Nothing in their role, however, requires that they be asymmetrically essentially independent of perishable things, and in fact Aristotle seems to take it that the natures of perishable kinds are independent of the natures of eternal things. The nature of the causal relationship between eternal substances and perishable substances thus demands that eternal substances be existentially independent from perishable ones, but does not demand that perishable substances depend for their essences on eternal substances.

These observations let us see that my claim that Aristotle thought priority in being is a causal relation does not preclude us from thinking that prior items are always ontologically independent from posterior items. Nor is it incompatible with attributing to Aristotle the claim that what it is to be, say, a foal depends on what it is to be a donkey, or that the way a donkey serves as a cause of being to a foal is to be cashed out in terms of the foal's dependence on the donkey for its being what it is. My claim is, instead, that Aristotle's reason for thinking that the donkey is prior in being to the foal is not the fact that the donkey is asymmetrically essentially independent from the foal: it is that the donkey is a cause of being for the foal. I have argued that this provides a better account of the way Aristotle articulates his views about priority in being in the text. Moreover, on my view, the different ways in which different prior items serve as causes of being drive the different kinds of ontological independence that prior items exhibit. We can thus see why it is philosophically attractive to understand each of Aristotle's claims about priority in terms of some ontological independence relation, but challenging to identify a single ontological independence

⁷²This also explains why ontological independence interpretations look plausible to the extent that they do: it's true that the cases in each half of $\Theta.8$ are naturally understood in terms of ontological independence, but false that there is a single relation of ontological independence that captures all the cases.

relation that fits both sets of cases.

This brings me to my second point. Aristotle's cases plainly exhibit philosophical differences from one another. Any attempt to bring unity to Aristotle's cases will have to explain why precisely this range of cases, with precisely these philosophical differences, count as cases of priority in being for Aristotle. I now want to argue that a causal account is better-placed than an ontological independence account to do this. In particular, I want to suggest that the notion of an independent cause of being gives Aristotle a principled reason to accept precisely this range of cases – and that it would be difficult for an ontological independence account to identify a similarly principled reason for Aristotle to accept precisely these cases.

We can see this most easily by considering a hypothetical objection from a defender of the independence account. I've acknowledged that different prior items make different causal contributions to different posterior items, and used that fact to explain why different prior items have different relations of ontological independence to different posterior items. Why couldn't a defender of an ontological independence account respond by endorsing a disjunctive account, one on which eternal substances are existentially independent of perishable substances and final causes within the perishable world are essentially independent from the things that are for their sake?

Such an account is suggested by Beere (2009). He takes the independence test (which he calls 'Plato's Criterion') to require existential independence, and eternal things to be existentially independent from perishable things.⁷³ And he takes it that the teleological cases fail this test because actuality within the perishable world is not existentially independent from potentiality within the perishable world. However, Beere notes of that case that "there is a non-reciprocal dependence among their essences (*ousiai*)", e.g. what it is to be a boy depends on what it is to be a man but not vice versa. According to Beere, "This does not quite fulfill PLATO'S CRITERION, but it is sufficiently similar in spirit that one can see why it, too, should count as priority in being." (Beere (2009, 302)) Beere's suggestion is thus in effect that the eternal-perishable case is a case of existential independence, the perishable-perishable case is a case of essential independence, and it is because the two are "similar in spirit" that both count as ways of being prior in being.

The main advantage my causal account has over a disjunctive ontological independence account lies in its ability to explain why Aristotle picks out precisely those causes that he does. As I have argued, both eternal substances and final causes within the perishable world are independent causes: nothing else determines how it is that they act as causes. This is in contrast to material and efficient causes within the perishable world, whose operation as causes is determined by the final cause. This allows us to see what justifies Aristotle in selecting both eternal

⁷³Beere does not take the independence test to reduce to a test for existential independence; see footnote 15 in Beere (2009, 294).

substances and final causes within the perishable world as the kinds of causes that matter for priority, even though they have other significant differences which drive, for example, the different patterns of ontological independence that each kind of cause exhibits. Beere offers a much weaker explanation for why the two kinds of ontological independence he singles out are unified, simply saying that they are “similar in spirit”. Absent an equally compelling explanation for why Aristotle selects just these two kinds of ontological independence, then, a causal account will be preferable to a disjunctive ontological independence account.⁷⁴

The fact that my view allows us to interpret the independence test as having existential implications is, as I have stressed, an advantage of the view: it allows us to easily capture the cases Aristotle uses this formula to argue for, and relies on a natural interpretation of the “to be” verb in the formula. We might worry, however, that these advantages come at a cost. Peramatzis has argued that the kind of counterexamples to modal-existential interpretations of ontological dependence raised by Kit Fine in his 1995 also pose problems for modal-existential interpretations of the independence test. In particular, Peramatzis argues, these interpretations have the consequence that anything that exists necessarily will be prior to any perishable thing, and that there can be no relations of priority between two entities that exist necessarily. But Aristotle does not accept that the number two (which, Peramatzis suggests, may be a necessary existent for Aristotle) is prior to Socrates; and we should at least remain open to an interpretation according to which the Prime Mover is prior to the other Unmoved Movers.⁷⁵ Peramatzis concludes that the modal-existential interpretation of the independence test cannot be Aristotle’s definition of priority, and draws the further conclusion that we should look for a different and non-existential interpretation of the independence test. I follow Peramatzis in concluding that Aristotle would not endorse the modal-existential account as a definition of priority, but reject the further inference that we must seek a non-existential interpretation of the independence test. On my account, the independence test is not intended as a definition of priority but rather as a test for priority

⁷⁴A defender of a disjunctive ontological independence account might respond to this point by saying that existential and essential independence relations are the most important or metaphysically interesting kinds of ontological independence relations, and that this explains why Aristotle picks them out over others he could have focused on. I think we have reason to be suspicious of this line of response. My concerns are similar to those I raised about Peramatzis’s proposal that priority in being is a matter of essential independence relations. Aristotle never clearly distinguishes essential from existential independence, nor does he explain the kind of priority he is concerned with in 1050a4-b6 in this way. On the response under consideration, we might hope that when Aristotle distinguishes different things one might mean by Plato’s Criterion in *Metaphysics* Δ.11 he would articulate a difference between existential and essential independence and tell us that both counted as ways of being prior in being. What Aristotle in fact does, however, is fill in different meanings of the verb ‘to be’ that he has distinguished elsewhere. This leads Aristotle to distinguish between independence in being-in-actuality and independence in being-in-capacity, but not between existential and essential independence. This makes me suspicious of a strategy that takes Aristotle himself to have seen existential and essential independence relations to be the two most important kinds of ontological independence.

⁷⁵See Peramatzis (2011) sections 11.2 and 13.6 for these arguments.

that is appropriate in certain circumstances, i.e., when the prior items really are causes of being for the posterior items. On this view, Aristotle has a principled way of ruling out the counterexamples: they may satisfy the modal-existential formula for priority, but because they do not exhibit the right kind of causal relations, they are not cases of priority in being. A causal view thus allows us to accommodate the intuitive strengths of the modal-existential view – namely, that it captures the cases Aristotle uses the independence test to argue for – without facing the kinds of counterexamples Peramatzis (following Fine) raises for the view.⁷⁶ The third advantage of a causal framework over an ontological independence framework for understanding priority is, thus, its ability to allow us to maintain the natural, existential reading of the independence test while having a principled response to Fine-style counterexamples to the modal-existential view.

6 Conclusion

I've argued that a causal interpretation gives us the best reading of Aristotle's argument for the priority of actuality to potentiality in *Metaphysics* Θ.8. In particular, I've argued that such an interpretation is more successful than an ontological independence interpretation at capturing all of Aristotle's cases and at explaining why Aristotle makes the arguments that he does in this passage. Aristotle takes it that both eternal substances and final causes within the perishable world are independent causes of being for their respective posterior entities: nothing else directs the causal operation of these entities with respect to their posterior entities. No other causes are plausible candidates for being independent causes of being, however: while the material and efficient causes are genuine causes, neither is causally independent from the final cause. We thus get an explanation for why Aristotle singles out the entities he does as prior. This reading also gives us a natural interpretation of the arguments Aristotle makes in *Metaphysics* Θ.8. It can give an interpretation of 1050a4-b6 that explains why Aristotle invokes teleology there: Aristotle uses teleological arguments there because he thinks only final causes are independent causes of being within the perishable world. And it can identify good reasons for Aristotle to give an indirect argument in 1050b6-28: Aristotle thinks that it is extremely difficult to explain in detail the way in which eternal substances are causes of being for perishable ones, and turns to a traditional test for priority in being to make the case here. By contrast, ontological independence interpretations struggle to capture all of Aristotle's cases and to explain why Aristotle uses a teleological argument in 1050a4-b6 if what he cares about is ontological independence. Thus, I take it that my causal interpretation provides the best overall reading of this passage.

I want to close by indicating three bigger consequences of my proposed interpretive reorientation from ontological independence to causation. First, we get a new explanation for why

⁷⁶I am grateful to Jonathan Beere for suggesting that I make this point here.

Aristotle thinks teleology is relevant to priority in being. The connection between teleology and priority has been widely noted, but previous scholars have generally taken teleology to be relevant to priority only insofar as final causes bear some relation of ontological independence to the entities which are for their sake. My causal view gives us a new way of seeing why teleology is relevant to priority: it is because final causes are independent causes of being, while the entities that are for their sake depend on final causes for their own causal operation. This is especially significant given that the teleological test is a principle about priority that Aristotle invokes a number of times⁷⁷: explaining the connection between teleology and priority thus illuminates this principle, not just Aristotle's argument in $\Theta.8$.

Second, while I have focused here on Aristotle's claims in *Metaphysics* $\Theta.8$, this interpretation provides a framework that may help address interpretive puzzles for other claims Aristotle makes about priority in being. In particular, Aristotle's claim that substances are prior in being to non-substances is notoriously difficult to read as a claim about ontological independence and dependence. Corkum (2008) and (2013), for example, argues that the fact that individual substances cannot exist without their essential properties or universal kinds makes trouble for the existential independence interpretation; similarly, the fact that individual substances seem to depend on universal kinds for their essences rather than the other way around makes trouble for the essential independence interpretation.⁷⁸ A common problem for ontological independence accounts of the priority of substance to non-substance is that a given kind of ontological independence might characterize the relationship between (say) substance and accident but not the relationship between substance and proprium. My causal account leaves it open that substances may bear different causal relationships to different kinds of non-substance and thus seems to be an especially promising framework for these cases.⁷⁹

Finally, my causal interpretation offers us a new account of why priority in being matters to Aristotle. The main project of the *Metaphysics* is to identify the first causes and principles of being, and it is clear how identifying independent causes of being helps us pursue this project: independent causes of being look like the best candidates to be the first causes and principles of being.⁸⁰ We can thus see why Aristotle cares so much about priority in being in a text – the

⁷⁷See footnote 5 for a list.

⁷⁸See Corkum (2008) and (2013) for a thorough and persuasive account of the difficulties here.

⁷⁹Here I am in sympathy with a suggestion made by Corkum (2008, 82) that Aristotle may recognize different ways for a non-substance to depend on a substance, and that his distinction between being said of and being in may mark some of those different ways.

⁸⁰This link between priority and the first causes and principles of being also helps explain why Aristotle will sometimes appear to answer a puzzle he raised about the causes and principles of being using the language of priority. Our $\Theta.8$ argument for the priority of actuality to potentiality, for example, appears to answer Aristotle's question from *aporia* 14 about whether the first causes and principles were in actuality or in potentiality. This connection has been noted before, e.g. by Dancy (1981); my account gives us a good explanation for it.

Metaphysics – that is set up as an investigation into the first causes and principles of being.⁸¹

⁸¹It is my pleasure to thank the following people for fruitful conversations about this project: Christopher Bobonich, Willie Costello, Huw Duffy, Sukaina Hirji, Robert Howton, Dhananjay Jagannathan, Marko Malink, Ryan Putzer, Evan Rodriguez, Gabriel Shapiro, Jacob Stump, and Katja Vogt. I would also like to thank participants at the Virginia Tech Workshop on For the Sake of Relations, and especially John Proios, my commentator at that workshop. I am especially grateful to Alan Code for years of conversations about these issues, and to Jonathan Beere and Mary Louise Gill for extremely helpful comments on a late version of this paper.

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