CHAPTER 1

Change and the Many Senses of Being in *Physics* I

This chapter examines the first part of Aristotle's argument that change *is*. The first part occurs in *Physics* I.7–9, and the second in *Physics* III.1–2. Chapters 1 and 2 of this book will be devoted to discussing these two parts of the argument, respectively. Parmenides led his Eleatic colleagues in arguing that change cannot be, since in any change something must emerge from or enter into non-being. Aristotle accepts their premises, but rejects their conclusion. He argues, first, that the phenomenon of change establishes that being itself has multiple senses: form, its privation, and what underlies them. Therefore, he shows, change always comes from and enters into *what is* (form and the underlying thing), so that *what is not* (the privation) is incidental to the description of change. What gets Aristotle through the Parmenidean impasse, then, is his argument that both change and being are composite.

Aristotle's accomplishment in this argument is not only to make way for the existence of change. He sets up his analysis of change first of all as the answer to the question of how many being is; the structure of change is the basis for the claim that being is multiple. This reveals Aristotle's own understanding of the argument's importance.

In this chapter I first examine the framework of this argument and the general plan of Aristotle's argument that change, in fact, *is*. Then I take Aristotle's insight into what makes change appear self-contradictory and reconstruct it in reverse order, starting with its outcome: the idea that being is general rather than particular. Aristotle's analysis of change reveals, instead, that the structure of changing beings consists in a *particular* predicated form (or its privation), and a *particular* underlying subject. This means the analysis of change reveals the structure of being (*ousia*) insofar as a unique being is a bearer of predicates: the ontological structure of changing beings just is the structure of categorical being.

This chapter closes by addressing the other most likely explanation for Aristotle's claim that being is multiple, namely, the structure of speech (*logos*). But the case for a linguistic or logical (*logikos*) ground for multiplicity,

I will show, depends on categorical concepts drawn from Aristotle's analysis of change, notably the underlying material, and the particularity or individuality of primary being (*ousia*). Yet the problem of change remains, since it is not possible to define change using these categorical concepts: it can only be defined using the dynamic-energetic sense of being.

The Lines of Argument in *Physics* I

Aristotle's argument for change requires being to be multiple. One of the principal pieces of evidence for this claim is in how Aristotle frames the key questions of *Physics* I.7–9. Specifically, he uses his analysis of the description of change to answer the question of how many being is. By framing the analysis of change in this way, Aristotle indicates its ontological consequences.

Aristotle links the analysis of sources in *Physics* I to the analysis of being. To see why, it will help to start with a broad view. If being has different regions and aspects, there are different disciplines that study them: for example, biology studies beings that live insofar as they are living beings, and physics studies natural beings insofar as they are sources of change and resting, or, more generally, beings that move insofar as they move (*Met.* IV.1 1003a21–31). Each discipline seeks the sources (*archai*), causes (*aitia*), and elements (*stoicheia*) of its subject (*Phys.* I.1 184a15; compare *Met.* I.1 181a24–982a3, VII.17 1041a29). First philosophy is capable of studying all things, because, Aristotle says, it studies beings insofar as they *are*, especially the highest sources or principles (*archai*) of being, for example, god (*Met.* IV.2 1004b1, *Met.* VI.2 1026a18–22, 27–33).

The problem of *Physics* I, Aristotle announces, is figuring out how many sources there are: "There must be either one source or more than one" (*Phys.* I.2 184b15, my trans.).[1] He clarifies: "We are here raising the same question as those who ask how many *beings* there are: they are really inquiring about the primary constituents of things . . . so they too are inquiring into the number of sources and elements" (*Phys.* I.2 184b15–24).[2] The question of ontology is really the question about sources, causes, and elements. To say how many sources or principles there are is to say how many being is. Why is this? To say how many sources there are, we must say *what* beings there are, *what it means for them to be*, and what originates or is responsible for their being. In short, archaeology is ontology. To the extent that any analysis leads to knowledge of the primary sources, causes, and elements, it can contribute to first philosophy.

In this case, Aristotle investigates the puzzle (*aporia*) of *how many* sources or elements there are—the same question as how many beings there are—by analyzing *change*. He begins by working up the debate between his

predecessors.[3] But he introduces his own answer by saying: "This is how I tackle it [the *aporia*] myself. I shall be dealing first with coming to be in general" (*Phys.* I.7 189b30–31).[4] Aristotle sets out to answer the question of how many *being* is by examining *coming-to-be* (*genesis*). This, I argue, is not a mistake.[5] Since all change can be described as the coming-to-be of a property (e.g. this wood gains the property of being a *table*), the structure of *genesis* obtains for all change. The reason why the study of *change* can show us the number of *being* is that change reveals sources (*archai*), causes (*aitia*), and elements (*stoicheia*) that are responsible for the being of changing beings.[6]

Aristotle's analysis of coming-to-be provides him with multiple forms of ontological multiplicity. He distinguishes *three* elements: a form, its privation, and the underlying thing. But he notes that in another way, the pair of form and underlying material are the only things that in fact *are*: "From one angle we must say that the sources are two, and from another that they are three" (*Phys.* I.7 190b29–30, my trans.). In yet another way, these are aspects of a *single* being. A single being does not just have several elements, it also admits of being grasped in several different ways. Being does not just have a single type of multiplicity; it is plural in a plurality of ways.

Upon establishing this complex plurality, Aristotle right away argues that this conception of being is the way to undo the ancient impasse (*aporia*) that "nothing comes to be or passes away, because whatever comes to be must do so either out of something which is, or out of something which is not, and neither is possible" (*Phys.* I.8 191a23–30).[7] But what is at stake is simultaneously the possibility of change and fundamental ontology: Aristotle claims explicitly that the argument against coming to be is what led Parmenides and Melissus to "deny a plurality of things altogether, and say that there is nothing but 'what is itself'" (*Phys.* I.8 191a32–34).[8] The reason why Parmenides and his successors make the ontological claim that *being is simple* is that they misunderstand *genesis* (*Phys.* I.8 191b10, b30–35).[9] Since Parmenides's argument against the existence of change was ontological, Aristotle's argument too must be ontological. This means that his analysis of *genesis* revisits the site of the Eleatic argument for monism. What he discovers there leads him to a different outcome about being and about change. Aristotle's explicit claim, then, is that the number of being is determined through the analysis of coming-to-be, both for the ancients and in his own account. The phenomenon of *genesis* shows whether and how being is plural.

Being and Sources

There are several possible objections to reading *Physics* I this way. The most obvious is the idea that physics and metaphysics study different subjects

altogether. This leads to the specific claim that "source" in this context means "source of changing things" rather than "source of being."

But this approach abstracts from the content of the argument. Aristotle's engagement with Parmenides shows clearly that in this part of the *Physics*, at least, he is doing ontology. He examines different ways that being could be one, whether parts are reducible to wholes or vice versa, and the thesis that being is one in *logos*, before concluding:

> Things [*ta onta*], however, are many, either in account (as the being of pale is different from the being of a musician, though the same thing may be both: so the one is many), or by division, like the parts of a whole. At this point they got stuck, and began to admit that the one was many. (*Phys.* I.2 185b32–186a2)[10]

This passage would be at home among the later chapters of *Metaphysics* VII. In this debate, Aristotle is clearly making significant arguments about what being is, and what it is like. The specific claim, that the concept of "sources" here is irrelevant to ontology, runs up against the fact that the sources in question are the very ones studied in the core books of the *Metaphysics*, namely underlying material, form, and the privation of form.[11] This is why Ross argues that "the bulk of the *Physics* is what we should call metaphysics."[12] Burnyeat even identifies material and form as the *distinctively metaphysical* solution to merely logical problems.[13] If this is right, then as long as Aristotle is concerned with examining these fundamental being-terms, he is doing ontology. He is doing ontology, for example, when he examines sources of change and generation insofar as they *are*, that is, when he is pursuing what sort of being sources have, how they relate to the being of beings, what is responsible for the being of beings, and how different sources structure what is.

This kind of study is to be distinguished, of course, from the examination in the biological works of what particular properties individual beings or kinds of being happen to have. And if physics is not the study of what it is to be a nature, but instead of being in general merely insofar as it *moves*, devoting itself just to distinguishing kinds of change and their properties, then it will not be relevant to ontology. But in *Physics* I–III.3, Aristotle appears to be studying the being of sources in order to understand what nature is, which makes this an ontological inquiry.

Finally, it is significant that when Aristotle is doing an ontology of sources he most often examines *genesis*. This seems to be because *sources of coming-to-be are sources of being*.

The Two Stages of the Demonstration of Change

I contend that *Physics* I.7–9 and III.1–2 make up a two-part argument for the existence of change. To establish this claim, it will help to start by answering an objection, namely, that Aristotle is *not* interested in showing that change exists. This claim centers on Aristotle's assertion that he does not need to prove the existence of change to those who deny it (*Phys.* I.2 185a1–4; compare *Met.* VI.1 1025b7–14).

When read in context, however, this passage does not in fact set aside the need for a demonstration. The passage says that someone who denies the existence of change is working on a different subject matter than nature, and that we do not need to use that subject to persuade them that change exists. Confronted by someone using symbolic logic to reject the existence of change, we do not need to use symbolic logic to demonstrate its existence. A demonstration will draw on different grounds.

But the being of change must be examined because it is fundamental to the study of nature (*Phys.* III.1 200b12–16). This is why Aristotle follows up his comment about deniers by saying that he will engage them anyway: "But even though they do not speak about nature, they incidentally speak of things that are impasses in the study of nature" (*Phys*. I.2 185a19–21).[14] This is why the argument of *Physics* I is organized to confront and solve the impasse of change in *Physics* I.8.

Now I will outline the two stages of Aristotle's demonstration of change: the first stage demonstrates that change *can* exist by showing how to give a noncontradictory description of changes (the Descriptive Argument, *Phys.* I.7–9), while the second defines change and on this basis provides evidence that it *does* exist (the Definition, *Phys.* III.1–2).

The first stage undertakes the necessary task of finding a way through the impasse about the existence of change. Aristotle's solution is to show that it is possible to describe changes in a precise and noncontradictory way, that is, in a way that does not mix being with non-being.[15] This is not an easy task. For, Aristotle notes, the reason change appears not to be is that it seems to be something indefinite *(aoriston ti*) (*Phys.* III.2 201a24–25). To succeed in showing that change is neither otherness, nor inequality, nor non-being, nor any of the other indefinite principles, as other thinkers had supposed, it is necessary to show how it is possible to describe it in definite terms (*Phys.* III.2 201b23). Change can be described in definite, noncontradictory terms when we distinguish it into three structural elements: form (*eidos*), the underlying material or thing (*hupokeimenon* or *hulē*), and the privation (*sterēsis*) of the form. Again, any change can be described as the coming-to-be-the-case of a categorical property; for example, the coming-to-be of black in a surface.

Aristotle distinguishes the elements of change by developing a typology of ways that we describe changes. Doing so is not just an explanatory task, it is an ontological one. This is because, for Aristotle, being different in definition means being different in being, just as a doctor is different than a patient in *what* each is, that is, in their *being*.[16]

This typology anchors Aristotle's account of being in the experience of change. He outlines his method for working with experience at the opening of the *Physics* (*Phys*. I.1 184a10–184b14). Experience is already rich with principles (*archai*), causes, and elements (compare *Pos. An*. II.19). But our predicament, he claims, is that we start inevitably with things that seem jumbled up or poured together (*ta sugkechumena*). When the principles that distinguish things are confused, misunderstood, or overlooked, our experience will be, too. For experience to yield knowledge, these principles must be discerned *within* experience.[17] The way to knowledge is through distinguishing the principles, causes, and elements in the midst of this confusion. This disentanglement involves distinguishing the many principles of being from one another, and we do this through theoretical discussion. In my view, Aristotle disentangles the elements (in *Phys.* I), causes (in *Phys*. II), and principles (in *Phys.* III) of change within the experience of change, thereby making articulate experience of nature possible.

But this first stage of argument, with which I deal in this chapter, requires a second, with which I shall deal in chapter 2. Although Aristotle opened *Physics* I.8 with the claim that "this is the only way of resolving the difficulty felt by thinkers of earlier times" (*Phys.* I.8 191a23–24),[18] after he provides the resolution, he immediately adds: "this, then, is *one way* of handling the matter; *another* is to point out that the same things may be spoken of either as potent or as at-work" (*Phys.* I.8 191b27–28).[19]

He says this because, while it is necessary to answer the Parmenidean impasse, doing so does not establish the existence of generation and change.[20] No matter how inescapable form, privation, and the underlying material are in the description of change, they do not amount to change. By distinguishing the *elements* of change (form, privation, and the underlying material) in such a way that they are not contradictory, or, put otherwise, by showing how change does not essentially refer to non-being, Aristotle has opened the door to the possibility that change exists, but he clearly has not said what change is. A brown form, its not-brown opposite, and the skin underlying them are just the items involved in an instance of change. Adding them together yields neither the definition of nor the reality of change, just as the set of player positions on a football field constitutes neither the definition of the game nor the reality of football games. It is thus wrong to think, as, for

example Graham does, that Aristotle has completely refuted the Eleatics in *Physics* I.[21]

So, since "it belongs to the same act of thinking to make clear both what something is and whether it is" (*Met.* VI.1 1025b18),[22] what is necessary for the demonstration of the existence of change is a definition. The definition of change, and the accompanying demonstration that it can exist, are given in *Physics* III.1, whereupon Aristotle flags his accomplishment, saying that although change is "difficult to see, [it nevertheless] admits of being" (*Phys.* III.2 202a1, my trans.). Aristotle is right to argue that talking about what change is requires a different approach altogether, namely, a different sense of being (*Phys.* III.1 200b28–30, 201a10–12).

The Ancient Impasse

To show something's effect, it is useful first to note how things were beforehand. So we can reconstruct the consequences of change for being by taking the argument against its existence as a baseline, and showing what alterations Aristotle needs to make to ontology to solve the impasse. The argument against change was first formulated by Parmenides, and then refined, notably by Melissus and Zeno, but in *Physics* I, Aristotle does not distinguish them. Instead, he engages the argument in the form in which it had come down to him. It is sufficient for our purposes to take this as the baseline position. Aristotle agrees with what he takes to be the core of the argument against change, and he presents his principal interventions—making non-being specific, distinguishing compatible aspects, and arguing for the existence of underlying material—as corrections to a set of decisions made by his predecessors. Following Aristotle's own approach lets us get precise about the consequences of change by using the ancients' position as a foil.

Aristotle agrees with the ancients, first, in the claim that nothing is a mixture of being and non-being: "there is no violation here of the principle claiming that everything either is or is not" (*Phys.* I.8 191b28).[23] *Change, then, will be neither a synthesis nor a fusion nor a compound of being and non-being*. Second, Aristotle agrees with the claim that what comes to be must come either out of what is or out of what is not (*Phys.* I.8 191b34–35). Third, he agrees that "nothing comes to be simply out of what is not" and that there is no coming-to-be simply out of what is (*Phys.* I.8 191b13, 18–19).[24]

The only remaining path is to qualify the claims that nothing *simply* comes to be directly from nothing at all, or from being considered as a whole. Put otherwise, the strategy is to argue that change is *composite*. By distinguishing between different coinciding elements of changing things, being

and non-being cease to be simple or general, and are broken up into specific aspects. If being is specific in the right ways, it will be agile enough to find its way through the gaps in the impasse.

The Problem of Simplicity

In my argument, a key outcome of Aristotle's analysis is his claim that being is specific or particular. We can see most clearly how Aristotle's response to the impasse works by examining the case he makes for this specificity. This argument ties together his account of being's multiplicity and the being of change. First, though, it is necessary to present the problem.

On a typical formulation of Parmenides's argument, if being is one and simple, then change cannot be. In contrast, Aristotle claims that monism *emerges* from the ancients' view of *genesis*: "[It is by] inflating the consequences of this [argument against change] that they deny a plurality of things altogether, and say that there is nothing but "what is itself." They embraced this opinion for the reasons given" (*Phys.* I.8 191b32–33).[25] The rejection of *genesis*, Aristotle says, *leads* to, rather than presupposes, a rejection of the plurality of being. For this to be the case, denying *genesis* must end up denying that particular things are, and asserting that *genesis* occurs must amount to asserting that being is particular.

In claiming that being is particular, Aristotle means particular in aspect. Since particular beings are all both generated and perishable, it seems plausible that denying that *genesis* occurs will *thereby* deny the existence of these particular, numerically different things. But Parmenides's monism does not lead Aristotle to defend a numerical plurality of beings. Aristotle's response is not to demonstrate the sheer number of things, it is to argue for the plurality of *aspects* of beings, for example, that being a wife is a different aspect of a person than being a doctor (*Phys.* I.8 191a34–b11). Aristotle's claim, then, is that the ancients failed to grasp that non-being and being are both limited in *aspect* (*Phys*. I.7 191b8–13). The ancients were at an impasse about change, Aristotle says, because they failed to think "as" or "insofar as" (*hê*) (*Phys.* I.8 191b10). To describe what he means by aspect, Aristotle draws an analogy: a doctor cures someone insofar as he is a doctor, but builds a house as a builder who only incidentally also happens to be a doctor. A man may even cure himself insofar as he is a doctor, but he does not himself convalesce as a doctor: he convalesces as a patient, a living animal who in this case happens also to be a doctor.

Now we can begin from what Aristotle takes to be the *outcome* of Parmenides's argument, namely, the claim that being and non-being are simple, and work backward to see why determinacy matters to Aristotle's argument.

The simplicity of being is less immediately intuitive when we consider *what is*, since we see, or think we see, many beings around us, which inclines us to think of being as specific. But *what is not* seems to be simple; it is much harder to think of non-being as something specific. So let us start with the concept of non-being.

"What is not" for Parmenides is either "something *ouk anuston*, inchoate, unreachable, and unsettled . . . [or] no more than the indefiniteness of empty, unbounded logical space."[26] The inchoate, indefinite, and unbounded silence of non-being seems to imply that it is simple or universal. A thought experiment can help make this clear: after Mariana's death, she precisely is not. Unlike the way she is here or there in a definite way when she exists, "Mariana not being" seems neither to be here nor there; it seems to be everywhere. The negation of her as an individual is not describable as the existence of a particular "not-being of Mariana." After Mariana's death, it cannot be said *of her* (as something that now is not) that she is brown, or tall, or even that she once was. Being-not does not belong to Mariana, since she is not. She no longer has features; her individuality is dissolved in non-being as a whole. Thus, what simply is not seems as though it can have no individuation, and therefore no properties that individuate it. Thus, it seems plausible to say that non-being is always simple or general, because it is indeterminate, infinite, inchoate. If it were possible to transfer the features of non-being to being, it would follow that being, too, is simple, and the simplicity of being would be secured by its implicit opposition to non-being.[27]

The generality of being and non-being makes it impossible to think or describe change. If coming into being is simple or general, or if being has only one sense, the refutation of change follows necessarily.[28] For nothing can come from being, simply (*haplōs*), since there would be no difference between what comes to be and what is, so nothing would have happened. Meanwhile, if something came from what is not, it would have to come from sheer nothingness.

In short, unless *what is* and *what is not* can be made particular, unless we can distinguish particular kinds of being and non-being, then the thinking of change will remain at an impasse. Thus, the impasse about the being of *genesis*, and therefore change, results in a failure to distinguish between particular beings or among particular modes of being. If there is no such diversity, then being will be simply one, and perfectly universal.[29]

The Claim That Being Is Particular

In response, Aristotle searches for a way to show that both being and non-being are determinate. Beginning on Parmenides's territory with an analysis

of speech, at the end of *Physics* I.3 he rejects the idea that being and non-being are simple. He says, first, that nothing forces us to think there is anything that *simply* (*haplōs*) is not; "what is not" (*mē on*) is not simple or general. Second, he argues, to the extent that non-being has meaning at all, it is only as some definite thing that is not. Therefore, he says: "what is not" means "not some particular thing" (*mē on ti*); *the word "not" requires completion*, and implies some other *thing* that gives it meaning.[30] Third, Aristotle extends this account to being as well, asking "who understands by 'what is itself' anything but 'what is an individual something' [*to hoper on ti*]?" (*Phys.* I.3 187a6).[31] In other words, *contra* Parmenides, Aristotle claims that being and non-being are symmetrical in that they are both *determinate*.[32] The claim, then, is that being and non-being are only ever specific, definite terms: not-being is always the not-being of something in particular (e.g., of green, of a child), and being is always this particular sort of being. The meaning of being and non-being, then, get transformed by being limited to a specific aspect.

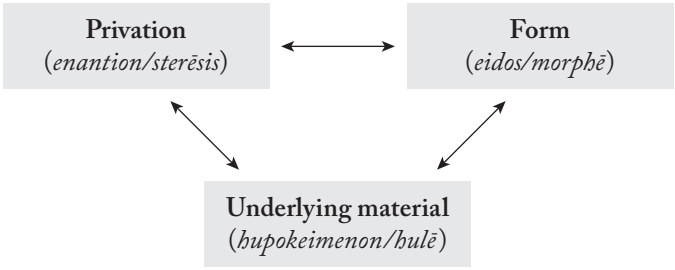
In this sequence of claims, Aristotle has to push the Greek language, working up general formulae (e.g., *to hoper on ti*) to express *individuality in general*. Elsewhere he uses the phrase "some *this*" (*tode ti*) to express the same concrete particularity, an idea that leads to primary being (*ousia*).

Still, the assertion in *Physics* I.3 that being is specific is not an argument, but a declaration of intent. To undo the Parmenidean impasse, Aristotle will have to disentangle the confused phenomena that led Parmenides to this mistake. Otherwise, it is merely Aristotle's word that being is particular against Parmenides's word that it is not. Aristotle must find a way, then, to show that "what is" and "what is not" *do* have meaning, but in composite expressions. For the specificity of being and non-being to get us through the impasse of change, he must establish that being is specific. He does so by using the description of *genesis* to show that being is composite.

Composite Being

Aristotle's argument that being is composite consists of an intricate analysis of coming-to-be (*genesis*) in *Physics* I.7. First he goes painstakingly through the different ways we speak in ordinary speech of events of coming-to-be, for example, "a student came-to-be educated," "the ignorant became educated," and examining what terms or elements get distinguished in each type of expression (*Phys*. I.7 189a30–190b9). Again, *Aristotle is using "genesis" here to cover all kinds of change*, because each change can be understood as the coming-to-be of a new feature *in* something.

Aristotle then shows that these elements divide into three kinds: (1) the "educated," the form (*eidos*) *that comes to be*, (2) the "uneducated," the opposite or lack (*sterēsis*) *out of which* the form comes to be, and (3) the "man," the underlying material or thing (*hupokeimenon*) staying itself through the change, *the coming-to-be thing*, which loses the *sterēsis* and comes to have the form in it (*Phys.* I.7 190b10–191a7).[33] These can be schematized as follows:



By distinguishing each of these from the others, Aristotle makes them specific. These are, of course, not separate items, but positions in a structure of relations. The material always has a form, and the form always has an opposite.[34] Thus, what counts as each will change depending on the case; for example, a woman (underlying) who comes to know geometry (form), the flesh and bone (underlying) that comes to be a person (form), or the water and earth (underlying) that make up her flesh (form).[35]

Changes occur along the continuity between form and privation, *not* between the underlying material and either the form or the privation. The form is the particular feature, property, or being that comes to be in the course of a change. The privation, meanwhile, derives a pseudo-formal character from the form of which it is the negation (*Phys.* II.1193b19–20). It is, therefore, not itself a property (*Met.* V.12 1019b7–11), but is precisely the non-being of a particular property (*Phys.* I.3 187a4–8).

For its part, the underlying thing is material, and active, a "co-cause with the form of the things that come into being, like a mother . . . which inherently yearns for and stretches out toward it [the form] by its own nature" (*Phys.* I.9 192a15–20).[36] It is not the same as or even similar in kind to the privation, as Aristotle makes clear: "For we say that material and privation are different things, and of these the one is a non-being incidentally, namely the material, while the privation is so in its own right, and the one, the material, is almost, and in a certain respect is, an independent thing [*ousia*], which the other is not at all" (*Phys.* I.9 192a2–7, compare I.7 190a16 and I.8 191a2).[37] It is important to emphasize this point, since due to the complexity of the analysis, some

have found it tempting to argue for a special identity between the underlying thing and privation.[38] But as Kelsey showed, Aristotle's innovation is to see the arriving form both as different from, and as an expression of, the positive nature of the underlying thing: since the underlying thing admits of certain forms but not others, the forms it can take on express its character.[39]

It is through this triangular structure that change is liberated from the accusation that it fuses being with non-being. By distinguishing something into these different aspects, we can say that in one way, nothing comes from non-being, since there *was* always something there beforehand, namely, the underlying thing, and that in another way, nothing comes from being either, since the specific thing that came to be was *not* there beforehand (*Phys.* I.8 191b12–19). For example, before a child is born, this exact child did not already exist, but this child does not come out of nothingness, but out of the blood and tissue that were already there beforehand. So if being divides into these aspects, we can say that things come to be out of what incidentally is not, without violating Parmenides's principles (*Phys.* I.8 191a33–b18). For before conception, it is incidental to the blood and tissue that it is not *this* child, even while *this* child precisely *is not*: "to say that something comes to be out of what is not, is to say that it does so out of what is not, *as something which is not*" (*Phys.* I.8 191b8–10).[40]

Distinguishing between these three elements—form, privation, and underlying material or thing—puts us on a path of thought that extricates us from the idea that change cannot be: when we identify a form, we can grasp its opposite, and by doing this we can notice that the form is specific; for example, that the continuum between white and black is different than that between soft and hard. Moreover, in laying out this opposition we notice something else, namely, the underlying thing in which these forms *are*, and we grasp how its being differs from the formal pair.

Distinguishing two senses of being (form and the underlying thing) and showing that non-being is the negation of a specific form (privation) makes being definite. This is how non-being can be incidental both to the change and to being (*Phys.* I.8 191b14–15). The distinction between what is incidental and what is essential is one of Aristotle's four primary senses of being (*Met.* V.7 1017a7–22). The distinction between the underlying thing and the form is the structure of categorical predication, another of these senses of being (*Met.* V.7 1017a22–30). Without making these distinctions, change cannot be at all. The analysis of change leads us to distinguish incidental from essential being, and underlying material from formal predicate.[41]

The purpose of distinguishing these three terms—form, privation, and underlying thing or material—according to Aristotle, is *both* to say how

many being is, and to extricate change from the accusation that it depends on non-being. The terms are not applied from elsewhere, they are discovered and marked out completely within the articulation of change, and they refer essentially to change: (a) the look or form (*eidos*) is the pattern of organization that emerges through the process of coming to be, for example, white; (b) the underlying thing is that which comes to be or have that *eidos*, for example, a rabbit; and (c) the privation is that *from out of which* the form comes to be, for example, not-white.[42] Aristotle does not distinguish these terms by an appeal to a preexisting set of terms, not even between material and form. What each is, is differentiated in the event of *genesis*, that is, in the arrival of something new: the underlying thing is what remains, while the privation is what disappears (*Phys.* I.7 190a16, I.8 191a2). Each term presupposes change. Each is a phenomenal element discovered in the articulate experience of change. This means that to distinguish them does not at all give us the definition or essence of change.

Being is composite and therefore specific, therefore change can be. But what makes such composition possible? Aristotle's argument is that it is the nature of the underlying thing, also called the material.

The Underlying Being

Making non-being definite by opposing form and privation does not on its own get us out of the problem of something coming from nothing: if there were only the form and its opposite, then change and generation would still mix being and non-being. It is the underlying thing, then, that makes change and being composite: "this nature, if they had seen it, would have put them right" (*Phys.* I.8 191b34).[43] By showing what structure makes composite being possible, we can understand how Aristotle gets through the impasse.

Aristotle first needs to argue for the existence of the underlying thing, since his predecessors did not distinguish it. The first argument is that in any change, some property ceases to be, another comes to be, and something remains through the change, namely the underlying thing (*Phys.* I.7 190a18–22). The second argument is that the form which comes to be is always said *of* some being (*ousia*), or, put otherwise, "there must be something which is the coming-to-be thing" (*Phys.* I.7 190a31–36).[44] The third argument is that if form and the opposite lack are the only two principles, then change will be impossible, since opposites cannot change or affect each other, so they must change something else, namely the underlying thing (*Phys.* I.7 190b33). For example, if one puts cold butter into a hot pan, it is not the cold that becomes hot, it is the butter.

For the underlying thing to underlie changes is for it to admit of opposites at different times. To do this, it must have a certain structure: at a given

stage of change, it must be both a form *and* be something itself, a *this*, which is different than the form (*Phys.* I.7 190b26). Since the underlying material is a conceptual position relative to, that is, underlying the other terms in the structure (e.g., educated and uneducated), clearly it will have its own form (e.g., being a woman), which is different from them.[45] The underlying thing must (a) be something other than the form that comes to be, and (b) be something that takes on different forms, from which it is inseparable. Thus, "the underlying thing, though one in number, is two in form" (*Phys.* I.7 190b23–24).[46] This is a structure Aristotle takes from Parmenides, who, he claims, "set down the causes as being not only one [in the Way of Truth] but in some way two [in the Way of Opinion]" (*Met*. I.3 984b3).[47] But among Aristotle's predecessors, those who argued for underlying material, or held that being was many, missed that *the underlying thing is two, not in number, but in aspect*.[48]

It is this formal, aspectual doubleness of the underlying thing that makes change composite. Being part of a composite requires each part to be distinguished from the others in its determinate character. But there is only a composite at all because the underlying thing is both itself and the form it has. Thus, the underlying thing is what makes it possible for change to be compound and definite, rather than simple and indefinite, as the impasse of the ancients held it to be.

This is clear in the relationship between the underlying thing and non-being. Aristotle takes the underlying thing to change the ontological status of "what is not." Only because of the underlying thing can Aristotle say that, in a way, non-being has being: "in this sense even the not-white is said to 'be' because that to which it is incidental *is*" (*Met.* V.7 1017a18).[49] Non-being will be neither determinate nor incidental to anything unless there is a being with a definite character that does not depend on it, and which can in an indirect way be said to "have" the privation or non-being, namely, the underlying thing. The privation is incidental to something because it is *in* or *said of* an underlying thing *whose being does not refer to it* (*Phys.* I.8 191b7). Non-being can be considered a definite, incidental element only if it is *of* a changing composite.

The most significant accomplishment in this argument, therefore, is not, as Ross holds, the discovery of the opposite privation (*sterēsis*), but the discovery that there is an underlying, remaining thing (*hupokeimenon*) (*Phys*. I.7 190a13).[50] What makes coming-to-be understandable is not privation, but the composite character of coming-to-be, and its composite character is due to the underlying thing.

Thus, the key to disentangling the description of coming-to-be from Parmenides's account of non-being is to exhibit the double character of the

underlying being. Doing this makes non-being definite and incidental to change as well. If I am right, Aristotle shows that change is not contradictory by showing that the description of change does not tie being to non-being: instead, change is positive because it, and therefore being, are composite. Its composite character is secured by the existence and nature of the underlying thing. Change establishes the existence of the underlying thing, thereby establishing that being is particular and plural.

Let us turn to the big picture to examine the primary consequences of this view.

The Unruly Number of Being

If my reconstruction of Aristotle's argument is right, then he achieves both of his aims: he extricates change from the contradictions that ensnared it, and he shows how many being is. His final answer to how many aspects of being there are, is this: the sources are in a way one, because the underlying thing is one in number, and the form (*eidos*) is *in* it (*Phys*. I.7 190b23–24); but in another way the sources are two, namely, the underlying material and the form (*Phys.* I.7 190b20), and in still another way, they are three (adding privation, *sterēsis*), "because of the diverse being that belongs to them" (*Phys.* I.7 191a1–2, see 191a16–19).[51]

Being is unstable in number because there are different ways to grasp it. When we seek to grasp beings through their elements, we seem to find three, but in fact there *are* only ever two (the underlying material and some form, either the positive form or its privation, or something in-between), and these are actually only aspects of one thing (the underlying thing) and are distinct only in speech or articulate thought (*logos*). What we grasp changes depending on how we begin to number it.[52]

And yet there is a "best" answer: being is *two*. This is clear from the nature of the terms involved. First, since the opposite privation can be derived by negating the form, it is not an independent term. Second, *since what-is-not is not, it omits itself from the analysis of being*. Third, the privation is an inessential, incidental element of change. Since the non-being of vinegar is by definition something that is *not there* in the wine out of which vinegar comes, the non-being of the vinegar is clearly incidental to what in fact is, and to the changes in the fluid that are really occurring (*Met.* VIII.5 1044b29–1045a6).[53] Therefore, *the description of coming-to-be-something does not have to include non-being in the essence of change at all*. Thus, Aristotle can say that "everything comes to be out of the underlying thing and the form" (*Phys.* I.7 190b20).[54]

If coming-to-be sets out the number of changing being, there will be several consequences for being. First, the fact that form is linked to its opposite and the underlying material means that *form is not simply identified with being*. Second, non-being (*mē on*) has meaning only as a definite not-being, now named privation (*sterēsis*): it is reduced to the not-being *of something*, and tied to that something. By joining it to a particular form, Aristotle cuts non-being into pieces. Third, the underlying material is the cornerstone of this account of being, since it is by differing with the form and privation that change and being can be composite at all. Although the underlying thing is the primary being of which opposite properties can be predicated (*Cat.* 5 4a10–11, 4b3), Aristotle does not directly call it being (*ousia*) most of all (*Phys.* I.7 191a19–20, compare *Met.* VII.3), in part since the underlying thing can, in turn, also be called a form, for example, a human being. Altogether, this establishes that being itself is composite, multiple, plurivocal. Being multiple means that *being is not strictly identical with itself*. Form and material differ from one another without negation being what distinguishes them, since the negation of form is privation. Of course, one can describe the two as not sharing features, but negation is incidental to their differences. Therefore, material and form differ without negation, without the admixture of non-being.

What makes this work is that Aristotle takes being to be multiple in *aspect*. Since the tripartite ontological structure of change articulates one thing, each of its terms will not be a different *thing*, but a different *aspect* of a thing. It is only because being and non-being themselves are specific that it makes sense to claim, as Aristotle does, that whoever argues that being is one must specify in which sense it is one (*Phys.* I.2 185a20–26). This means, in short, that the word "is" only ever articulates a *particular aspect*, which differs necessarily from others: thereby we always grasp being in its *definite* character, and we only grasp some of its aspects. So when Aristotle says he agrees with Parmenides that non-being is not, but that change *is*, what makes his argument consistent is that he has shown that it is possible and necessary to address being *in its particular aspects*. The distinction of a thing into a composite of aspects is underwritten by the underlying thing, the existence of which is secured by change. Thus, it is through the analysis of change that Aristotle establishes the particularity of diverse aspects.

Had he heard it, there is a chance that Parmenides would have been persuaded by this argument, because the hidden premise that makes Parmenides's argument appear to work is that all coming-to-be is coming-to-be-*something particular*, *out of something general* (non-being). Before any change, the something that comes to be *is not*, and afterward, it *is*. The discrepancy between the general and particular made change appear to tie non-being to being.

Some of Parmenides's successors, such as Empedocles, attempted to allow change to exist while denying that what comes to be *is* in fact *something*: if everything changes, but the things that emerge are not in fact *beings* (i.e., *somethings*), then *being* remains fundamentally unchanged (see "Empedocles and the Being of Individuals" in chap. 5). The hope was that in this way they could allow change to be without incurring any contradiction.

By contrast, Aristotle accepts part of Parmenides's understanding of *change*: all coming-to-be is a coming-to-be of *something*; some particular *thing*, a being, genuinely comes to be. But he uses this account of change to deny the generality of being and non-being that Parmenides discovered. It is *not* the same to say "being" in general and "being-something-particular": being in the primary sense is being-something in particular.[55] So Aristotle takes the claim a step further, concluding from this that all change is *out of something particular* as well, namely the underlying thing. Therefore, he claims that *the being from which* the change comes is *not* the same as the being that emerges. They are different *aspects of being*. Thus, because coming-to-be is always particular and composite in aspect, being's structure is that of a particular aspectual composite.

The Basis for Ontological Multiplicity

I have shown that in *Physics* I the analysis of change is Aristotle's method for determining the number of elements or sources of being, and thereby the number of being. Moreover, for change to be at all, being must be multiple in aspect. The first book of Aristotle's *Physics* offers us a compelling reason for being to be multiple.

There might still be a reason to think, however, that something other than change is the real reason why Aristotle claims that being is multiple. Someone might, for example, think that the multiplicity of being is a framework that Aristotle has already worked out elsewhere, and that he is merely drawing on it in *Physics* I to solve a problem. The question arises, then, what other ground there might be for the claim that being is multiple.

The standard view is that being is multiple because of the structure of speech. The claim is that Aristotle takes being to be multiple because he thinks that the way we speak about being is how being is, in other words, that being and speech are homologous. If so, speech would be the body of evidence for the multiplicity of being. One advantage of this account is that it highlights one of the tropes in Aristotle's formula: being is *said* (*legetai*) in many ways.

One way to argue for this position is to say that Aristotle believes that different sorts of words form the basis for ontology. Since there are many words

for being, being is many: each category is made up of words of a certain type, for example, size-words, type-words, position-words. But an acute *disadvantage* of this account is that, of the four primary senses of being (incidental, categorical, energetic, alethic), only categorical being corresponds to different words in this way. What makes something essential or incidental, being-potent or being-active, or being-true and being-false, can be, and usually is, implicit. For example, money-making is incidental to being a doctor, "French speaker" names a person in view *either* of her capacity *or* activity, and "she is an acrobat" is a truth claim, but none of these registers of being is signaled by a distinct word type. But the standard position might still be supported if the basis for ontology was the way words are *used*.

A stronger argument for the position is that Aristotle establishes the form-underlying pair through the analysis of predication in the *Categories* and through the analysis of this categorical structure in *Physics* I.2–3 and *Metaphysics* VII.1–16.[56] These texts have in common that they are analyses of speech and the structure of objects in speech, that is, they are *logikos* arguments.[57]

But these passages also have in common that they appear merely to *presuppose* the distinction between the underlying material and form, and then to work out issues with the different ontological types. For example, when Aristotle claims that being is categorically many in *Physics* I.3, it is merely as a counter-assertion to Parmenides's claim that it is one: "[Parmenides's] false assumption is that things are said to be in only one way, when they are said to be in many" (*Phys.* I.3 186a24–25).[58] Aristotle gives no justification, argument, or reference to support his claim. Form and the underlying thing appear in these passages, but their existence is not justified.

No matter how plausible the arguments from language are, Aristotle does not seem to make them. Moreover, Aristotle's often-repeated caveat, that two things are only separate in speech, along with his argument that the order of words in speech is not the same as the order in being (*Met.* VII.11–12), indicate that there is something other than language involved in our thinking of things.

Furthermore, this argument, that the distinction between the senses of being is derived from language, does not explain why in *Physics* I.7 Aristotle turns to *change* to articulate the number of sources, and thereby the number of being, when he should have proceeded logically (*logikōs*). Besides, if the distinction between the senses of being were derived from an ontology of language, the fact that it happens to solve the impasse about change would be a truly spectacular coincidence, and would fly in the face of that other *logos*-based ontology, namely, the poem of Parmenides.

To more rigorously rebut the claim that language is the basis of ontological multiplicity in Aristotle, I want to argue for a stronger claim, namely, that the very distinction between form and the underlying thing depends on change. I shall try to make this claim plausible by making four points: (i) it is not clear that form and underlying thing can be distinguished on the basis of language alone, because in speech predicate and subject are exchangeable; (ii) change appears to establish the distinction between form and material; (iii) what distinguishes primary being is its singularity, its underlying character, and most of all, its ability to change; and finally, (iv) change establishes the particularity of being which makes a distinction between subject and predicate possible in the first place. I shall take the claims in order.

(i) Based on predication alone, it seems impossible to make a stable distinction between the subject and the predicate. The claim that one of these is prior and the other is secondary is not immediately evident, even from an analysis of the grammar of sentences. For one thing, if we take an inventory of terms, for example, "tree," "green," "moisture," we cannot tell which are subjects and which are predicates by looking at the terms themselves apart from their referents. Moreover, looking at usage does not solve the problem. In many instances of the A is B sentence form, we *just do not say* that B is A; for example, while we *would* say, for instance, that the tree is red, we would not then say that the red is tree. Nevertheless, each term *can* serve as either subject or predicate, for example, we say that this plant is a tree, and also that a tree is a plant. So if in certain contexts we would not switch their roles, nevertheless, in other expressions we do. In sum: the principle that distinguishes subject and predicate is not evident, or at least not straightforwardly evident, either from the terms themselves or from usage itself. This ambiguity of subject and predicate is what enables the formulation of a Platonic "theory of forms," in which the real beings are the predicates rather than the particulars.

(ii) I contend that it is in *Physics* I.7–9 that Aristotle gives his core argument for the distinction between material and form. For one thing, he indicates elsewhere that the *Physics* provides the formal articulation of the concepts of material (*hulē*) and form (*eidos*) (e.g., *GC* I.317b13, II 329a27, *Met*. XIII 1076a8–9).[59] For another, he claims explicitly that material, like place, only appears to be at all because of change: "If [something] is altered, there is something which is now white but [was] black, and is now hard but formerly [was] soft, which is why we say material is something . . ." (*Phys.* IV.4 211b31–33, my trans.). This quotation could be making either an epistemological claim, that we only *notice* that material is something in examining change, or it could be making an ontological claim, that material only exists for changing things. Either way, without material being evident, we will be unable to distinguish

it from form, which means that change is required for us to grasp the fundamental beings; we gain access to hylomorphic ontology through change.

But it is not just our *awareness* of the distinction between material and form that depends on change. Only things that change have material: "Nor is there a matter of everything, but only of such things of which there is coming-to-be and change into each other; but such things as are, or are not, without [such] changing, there is no matter of these" (*Met.* VIII.5 1044b27–29).[60] Fundamentally, to be material is to be what underlies a change.[61] This is what makes material a good candidate for primary being (*ousia*): "it is clear that the material too is primary being [*ousia*], for in all changes between contraries, there is something that underlies the changes" (*Met.* VIII.1 1042a33–35).[62] The distinction between form and underlying material depends, then, on change. Form and material can be distinguished at all because the form is what changes, while the underlying thing is what has it and *also* has its own persisting identity.

(iii) Another feature of categorical predication shows the importance of change, which I can only mention here due to its complexity: the very category of being an underlying thing seems to be distinguished by being the subject of change. Indeed, what distinguishes being (*ousia*) most of all in the *Categories* is that it is the subject of change: "The most distinctive mark of primary being [*ousia*] appears to be that, while remaining numerically one and the same, it is capable of admitting contrary qualities. . . . for it is by itself changing that it does so" (*Cat.* 5 4a10–11, 4b3).[63] Therefore, change is meaningfully involved in being a *this* and in being the thing that underlies properties, two of the criteria for the primary sense of categorical being.[64]

(iv) Finally, all change is necessarily particular. The fact that only particular things can change suggests that the concept of the *this*, which is one of the determinations of primary being, is inseparable from, or at least revealed by, change. I take this to be the force of Aristotle's argument that what changes must *be* (*Met.* IX.3 1047a33–b1). For since change cannot *be* except as something definite, singular, and finite, the subject of change must be a *this* (*tode ti*).[65] This is why it is natural for Aristotle to refer in the *Physics* to "what is at-work and particular" (*ta men energounta kai ta kath' hekaston*) (*Phys.* II.3 195b17–18).[66]

It is not controversial to say that Aristotle explicitly uses change to lead us to ontological concepts in *Physics* I. For change to be, being *must* be multiple. Aristotle claims explicitly that the analysis of change decides how many being is, both for his predecessors and for himself.

I argued that the framework of the argument of *Physics* I is this: Aristotle declared that the question of how many principles (*archai*) there are

is the same as the question of how many beings there are. Answering this question requires an account of what being is, and why, that is, an ontology. The ancients, Aristotle argued, declared that being is one and undifferentiated because they rejected the existence of coming-to-be. He gives his own answer to how many beings there are by examining the phenomenon of coming-to-be (*genesis*). For coming-to-be to exist, being and non-being cannot be mixed. For coming-to-be to exist, then, being must be multiple, positive, and definite in aspect. Specifically, it must be such that form and its opposite, privation, are distinguished both from one another and from an underlying material or thing. The underlying thing must possess the special capacity (*dunamis*) to be each of them, while also being different than they are. The underlying thing thus allows being to be composite, and its composite character means that both being and non-being are specific or definite: to be is to be something in particular, and the same goes for not-being. Thus, for Aristotle, all coming-to-be is coming to be something, and all being in the primary sense is being-something in particular. The basis for the claim that being is many is not language, or not only language, since the distinction between underlying material and form depends on change.

In claiming that change is the basis of the argument for the multiplicity of being in *Physics* I, I do not intend to make a strong claim about the history of Aristotle's thinking on the subject. Given the range and diversity of his work, it seems unlikely that he came to formulate this fundamentally original ontological position by following just one line of thought. It is much more plausible that he arrived at it by having traveled many pathways. For this reason, it seems unlikely that the idea of a plural ontology came to Aristotle solely through the examination of change, and for the same reason, it also seems unlikely that it came to Aristotle on purely logical or metaphysical grounds. But telling such a story was not my aim. What I attempted to establish was, instead, that change offers the strongest available reason for thinking that being is multiple in aspect. *Physics* I.7–9 provides the best and clearest argument for ontological multiplicity that is available in the corpus.

For all of its accomplishments, the argument of *Physics* I only opened the door to the claim that change *is*. The analysis dealt with change, but it neither defined what change is, nor established *that* it exists, because it was made within the constraints of categorical being. To define change, and show that it *is*, it is necessary to establish a different sense of being entirely, in *Physics* III.1–2.