

## CHAPTER I

*Preliminary Puzzles*

## 1.1 The Eleatic Challenge

In the *Phaedo* (Plato's) Socrates develops an argument for the immortality of the soul that draws on what has come to be known as the Law of Opposites (70d6–72a7):

- P1 Everything that comes to be necessarily comes to be from its opposite.  
 P2 Between every pair of opposites, there are two processes: from  $F$  to  $G$  and from  $G$  to  $F$  (e.g. growing is a process from small to large, shrinking from large to small).  
 P3 Life and death are opposites.  
 C Therefore, the dead must come to be from the living by dying and the living must come to be from the dead by being reborn.

This argument is meant to provide sufficient (*hikanon*) proof that the souls of the dead continue to exist somewhere whence they come back again (72a6–7). Whether or not Aristotle himself accepts that (some part of) the human soul is immortal (*DA* III 5), he does accept the model of change that underwrites this argument. Aristotle holds that every change involves a subject  $S$  that undergoes the change and a pair of opposites  $F$  and  $G$  that represent the two poles of the change (*Ph.* I 5–7). Since the contraries of generation and destruction are being and non-being (*GA* 741b22–4, *Metaph.* 994a27–8, *Ph.* 224b8–10, 225a15–16), if anything comes to be in the strict sense, it must come into being from non-being. It was this fact that led the Eleatic philosophers to reject the very idea of generation and destruction. For it seems to imply that something can come into being from, and pass away into, absolutely nothing.

The challenge to generation posed by the Eleatics originated in the philosophy of Parmenides. And the starting point of that challenge was the denial of the very possibility of non-being:

But come now, I will tell you – and you, when you have heard the story, bring it safely away – which are the only routes of inquiry that are for

thinking the one, that it is and that it is not possible for it not to be, is the path of Persuasion (for it attends upon Truth), the other, that it is not and that it is right that it not be, this indeed I declare to you to be a path entirely unable to be investigated: For neither can you know what is not (for it is not to be accomplished) nor can you declare it. (Fr. 2, Curd translation)

Plato diagnoses the problem raised by Parmenides as, in part, a problem of reference: ‘To what should the name, “that which is not” (*to mē on*), refer? . . . What would he [the speaker] indicate by it to someone else who wanted to find out about it?’ (*Sophist* 237b10–c4).<sup>1</sup> When we try to say anything about non-being, either we refer to something, in which case what we are referring to is not nothing (237c8), or we refer to nothing, in which case we are not saying anything at all: ‘It is absolutely necessary, it seems, that someone who does not say something says nothing at all . . . Therefore, don’t we have to refuse to admit that a person like that speaks but says nothing? Don’t we have to deny that anyone who tries to utter “what is not” is even speaking?’ (*Sophist* 237e1–6).<sup>2</sup> Furthermore, Plato argues that even if one could somehow refer to non-being, it could not function as a proper subject of predication, and so we could not form any meaningful sentences about it (238a1–c10).<sup>3</sup>

Plato responds to Parmenides by abandoning the sense of non-being that means *what does not exist* (the existential sense) and replacing it with the concept of *difference*:

ELEATIC STRANGER: It seems that when we say ‘that which is not’ we don’t say something contrary (*enantion*) to ‘that which is’ (*tou ontos*) but only something different from it.

THEAETETUS: Why?

ES: It’s like this. When we speak of something as not large, does it seem to you that we indicate the small rather than the equal?

THT: Of course not.

ES: So we won’t agree with someone who says that negation signifies a contrary. We’ll only admit this much: when ‘not’ and ‘non-’ are prefixed to names that follow them they indicate something *other* than the names, or rather, something *other* than the things to which the names following the negation are applied.

(*Sophist* 257b3–c3, White translation)

<sup>1</sup> For discussion of Plato on non-being in the *Sophist* see Ferejohn (1989), Brown (1986 [1999], 1994), Owen (1999), Notomi (1999, 173–9).

<sup>2</sup> Plato puts this same argument in the mouth of the sophists, Dionysodorus and Euthydemus, at *Euthydemus* 283c–e, which may tell us something about his attitude towards that puzzle there.

<sup>3</sup> Compare *Theaetetus* 188e–189b.

By the contrary of being, the Stranger means absolute non-existence (what Aristotle calls ‘unqualified non-being’, *to mê on haplôs*, ‘what completely does not exist’, *to mê on holôs*, or ‘the universal negation of everything’, *apophasis estai katholou pantôn*: *GC* 317b7–13). He agrees with Parmenides that there is no such thing as *to mê on* in that sense; he grants Parmenides at least this much when he says ‘good-bye’ to the contrary of being:

Nobody can say that that which is not, which we’ve made to appear and now dare to say exists, is the contrary of that which is. We’ve said good-bye long ago to any contrary to being, and to whether it is or not, and also to whether or not an account can be given of it. (258e7–259a1)

Rather than treat non-being as nothing (as no existing thing), the Stranger instead proposes they take it to refer to the class of existing things that are merely *different* from, or *other* than (*heteron*), the thing that is negated by the expression (257e2–258c4). In other words, the phrase “what is not” is now taken to mean “what is not-*F*”, where this refers to all of those things that are not the *F* in question.<sup>4</sup> For example, the not-beautiful (*to mê kalon*) refers to any existing thing that is different from beauty and the not-large (*to mê mega*) to any existing thing that is different from largeness (257e7–258a9). I shall argue that this same strategy lies behind Aristotle’s own response to Parmenides in *Physics* I 8 (see Section 1.2).

One of the main consequences of Parmenides’ repudiation of the concept of non-being was the denial that anything comes to be or passes away. Aristotle reconstructs the basic Eleatic argument as a two-horned dilemma (*Ph.* I 8, 191a23–31).<sup>5</sup> If what is came to be, then it must have come to be (1) either from what is or (2) from what is not (since these are contradictory opposites: 191b26–9). (1) It could not have come to be from what is, since it was already there. (2) Nor could it have come to be from what is not, because something must pre-exist the change.<sup>6</sup> Call this the Eleatic

<sup>4</sup> This is the so-called Oxford interpretation of Plato on negative predication. For a more restrictive reading of the scope of the *F* in “what is not-*F*” see Ferejohn (1989).

<sup>5</sup> While the first horn of the dilemma is explicit in Parmenides’ Fr. 8, the second horn is not. But Aristotle does not present the dilemma as a faithful reconstruction of Parmenides’ own reasoning. Instead, I agree with Anagnostopoulos (2013 n. 1) that he thinks he is simply expressing the broader Eleatic position.

<sup>6</sup> The formulation of the puzzle in *GCI* 3 makes it clear that *hupokeisthai* at 191a31 refers to the need for a *pre-existing* subject (cf. *GC* 317b15–18: *prouparchein*; 317b29–31: *prouparchontos*) not the need for something to persist as an ‘underlier’ (Charles 2018, also Anagnostopoulos 2013, 262). Loux objects to reading *hupokeisthai* here as ‘pre-existing’ on the grounds that it would not provide a separate reason for endorsing the claim that nothing comes to be from what is not but ‘merely reformulates the claim or restates it in other words’ (1992, 285). I disagree. So understood, Aristotle is saying (a) that there

Challenge. Before we can investigate the nature of generation, we first need to show that generation is possible. And that means resolving this dilemma. At *Physics* I 8, 191b27–9 Aristotle identifies two ways of resolving it. *Physics* I 8 itself presents one way of solving the puzzle, which (I shall argue) has its roots in the account from Plato's *Sophist*. The other way is generally thought to come in *GC* I 3, which makes use of the distinction between potentiality and actuality. I shall take up these two accounts in turn. While most scholars treat these two ways of resolving the dilemma as two versions of the same solution presented from two different perspectives (e.g. Algra 2004), I shall argue that they are independent solutions. Yet, it is not obvious that these two solutions are entirely compatible.<sup>7</sup>

The analysis that follows is difficult and at times quite abstract, since it deals with complex metaphysical issues surrounding the concepts of being and non-being. Those unfamiliar with the relevant debates may quickly find themselves 'laid low like seasick passengers', as Socrates says in the *Theaetetus* (191a4–8). Yet, it is necessary that we work our way through the puzzles in order to clear the way for Aristotle's positive account of substantial generation in the rest of this book. For Aristotle admits that Parmenides' challenge makes it 'extraordinarily difficult to see how something could come to be without qualification' so that one might 'raise a puzzle' (*aporêseie*) about whether substances come into being at all (*GC* I 3, 317b23–33). While I try my best to make this dense material accessible, those who start to feel queasy may wish to skip ahead to Chapter 2.<sup>8</sup>

must have been something there before the emergence of being and (b) that this could not have been absolute non-being since that kind of non-being necessarily does not exist. These are clearly not the same claim.

<sup>7</sup> Compare Kelsey (2006, 339), who takes the two solutions to be independent but consistent accounts. I fall somewhere closer to him on this issue.

<sup>8</sup> While this chapter is aimed at those who are not familiar with the relevant debates, for those who do skip ahead there are two main takeaways from this chapter that contribute to our understanding of substantial generation going forward. First, the account of non-being in *GC* I 3 (Section 1.3) tells us something about what matter must be like in order to serve as a subject of generation, namely, it must be a substance 'in potentiality' (*dunamai*) but not a substance 'in a state of completion' (*entelecheia*). I take this to mean that generation proceeds from a pre-existing subject that 'is not' in the sense that it is not actually *the substance at the end of the change* (e.g. not a human or a horse), though it 'is' that kind of substance in potentiality. Second, Aristotle tells us that this subject must be a determinate individual (a 'this something', *tode ti*) that is capable of separate existence (cf. *GC* 317b7–11, b23–34). I argue that this further requirement rules out the possibility that Aristotle has anything like the traditional concept of prime matter in mind as the underlying subject of generation. Instead, the subject from which substantial generation proceeds must be some sort of proximate matter (e.g. fertilised menstrual blood).

### 1.2 Aristotle's First Response: *Physics* I 8

Aristotle first introduces the Eleatic Challenge at the outset of *Physics* I 8, which he formulates as a two-horned dilemma:

The first of those who studied philosophy were misled in their search for truth and the nature of things by their inexperience, which, as it were, thrust them into another path. So, they say that none of the things that are either comes to be or passes out of existence, because what comes to be must do so either from what is or from what is not, both of which are impossible. For (1) neither can what is come to be <from what is> since it already exists, (2) nor can it come to be from what is not since something must exist beforehand. (191a23–31, Hardie and Gaye translation with modifications)

As noted, Aristotle presents the Eleatic Challenge as a two-horned dilemma:

- (1) What is could not have come to be from what is, because it was already there.
- (2) What is could not have come to be from what is not, because something must pre-exist the change.

When it comes to interpretations of *Physics* I 8 the main axis of division revolves around Aristotle's use of the verb "to be". By "what is" and "what is not" does Aristotle mean "what exists" and "what does not exist" or "what is-*F*" and "what is not-*F*"?<sup>9</sup> Of course there is no reason to suppose that Aristotle's use of the verb must be uniform throughout the chapter. In what follows I defend a hybrid reading. On this reading, Aristotle presents the dilemma in terms of what exists/what does not exist but his solution to it appeals to what is *F*/what is not-*F*.<sup>10</sup> Let me begin with the first part of this.

<sup>9</sup> See Introduction (note 11). For convenience I shall assume that the complete/existential and incomplete/predicative uses of 'is' are both dichotomous and exhaustive. While this is not universally agreed (for a summary of the issues see Brown 1994), the nuances of that debate are not relevant to this chapter.

<sup>10</sup> This is how I read the *Sophist*. The *Physics* account admits of a slightly more nuanced version of this hybrid reading, since Aristotle's solution to the second horn of the dilemma (191b13–16) can itself be broken down into two claims (cf. Anagnostopoulos 2013, 261–2): (i) it is not possible for something to come to be from what is not in the unqualified sense (b13–14); (ii) it is possible for it to come to be from what is not in the accidental sense (b14–15). A purely existentialist reading would take "what is not" in both (i) and (ii) to mean what does not *exist*, while a purely predicative reading would take them both to mean what is *not-F*. On the more nuanced hybrid reading, "what is not" means what does not exist in (i) and what is not-*F* in (ii). While I favour this more nuanced reading of Aristotle's solution, my interpretation is compatible with the purely predicative reading. I agree with Anagnostopoulos (2013, 261) that a purely existentialist reading of *Physics* I 8 does not make sense.

I follow the orthodox view that by “what is” and “what is not” Parmenides meant what *exists* and what *does not exist*.<sup>11</sup> If this is right, then it is reasonable to suppose that Aristotle too understood the original Eleatic puzzle in those same terms. This is almost certainly how Plato understood Parmenides (see above). In that case we can take the second horn of the dilemma to be a straightforward rejection of generation *ex nihilo* (something cannot come into being from absolutely nothing, cf. *GC* 317b29–31). Consider the Big Bang, which is when the known universe first began. What existed before the Big Bang? We share Parmenides’ intuition that *something* must have pre-existed the Big Bang; the universe could not have just popped into existence from absolutely nothing. The first horn of the dilemma is trickier. However, the argument makes good sense if we again take “what is” to mean what exists generally (cf. *GC* 317b7: ‘what is universal and includes everything’).<sup>12</sup> What exists could not have come into existence from some pre-existing thing, since the whole idea that being *came to be* presupposes that it did not already exist. If something existed prior to the Big Bang, then it does not make sense to describe that event as the moment when being came into existence; for it was already there beforehand.<sup>13</sup> In the remainder of this chapter I will focus exclusively on the second horn of the dilemma that what is cannot come to be from what is not, since that appears to be the horn that most exercised Greek philosophers after Parmenides. Aristotle tells us in *GC* I 3 that the possibility that coming-to-be might proceed ‘from no pre-existing thing’ (*to ek mêdenos gignesthai prouparchontos*) was the one consequence of the Eleatic position that ‘more than any other preoccupied and alarmed the earliest philosophers’ (*GC* 317b29–31).

According to the second horn of the dilemma, what is cannot come to be from what does not exist since there must be some pre-existing subject from which the change proceeds (as Aristotle has argued in *Physics* I 7).<sup>14</sup> The heart of Aristotle’s reply to this horn comes at 191b13–16:

<sup>11</sup> Brown (1994, 216–20).

<sup>12</sup> Cf. Williams (1982, 82): “‘What is universal and includes everything’ is “being” in the most general sense: whatever can in any sense be said to be, “is” in this sense.’

<sup>13</sup> Aristotle is not especially concerned with the “Big Bang” problem, since his universe is eternal. According to his cosmology, everything that exists has always existed and will continue to exist in the future, and so there was never a time for which we would have to ask what preceded being. However, *Physics* I 8 shows that Aristotle still thinks we need to address the Eleatic Challenge. As we shall see, his own solution(s) does not depend on his view that being is eternal.

<sup>14</sup> Parmenides may have held this on the grounds that something must have generated what exists. But *Physics* I 7–8 does not rely on that assumption. Instead the emphasis is on the need for a pre-existing subject (*to hupokeimenon*). By “subject” here Aristotle simply means that *from which* the change originally proceeds non-accidentally (e.g. a seed). See Chapter 2.

We ourselves say that nothing comes to be from what is not in the unqualified sense, though it is surely possible to come to be from what is not in a way, namely, in an accidental sense. For it comes to be from the privation which in itself is not, this not surviving as a constituent in the thing that comes to be.

Aristotle's solution here turns on the technical distinction he drew back at 191a35–b9 between two ways in which one thing comes to be “from” another, namely, in virtue of itself (Greek *kath' hautō*; Latin *per se*) versus incidentally/accidentally (Greek *kata sumbebēkos*, Latin *per accidens*).<sup>15</sup> Suppose Hippocrates (a doctor) is also trained as an architect so that the art of building and the art of medicine just happen to coincide in one and the same individual. When Hippocrates builds a house, there is a sense in which a house comes to be from a doctor, not in virtue of being a doctor, but incidentally insofar as the doctor also happens to be a house-builder. Building houses is incidental to the function of a doctor (*Metaphysics* VI 2, 1027a1–4). Put formally, we say that A comes to be from C incidentally if A comes to be from B in virtue of itself but B also happens to be C (where being C is incidental to B). Now consider the case in which healthy-Socrates comes to be from unhealthy-Socrates, which is a combination of a subject and a privation. Since *Physics* I 8 treats the privation as a kind of non-being (e.g. illness is non-health), and since this privation is incidental to Socrates, it follows that *in a way* what is comes to be from what is not, not in virtue of itself, but only accidentally. For Aristotle holds that a thing comes to be *per se* from the subject but only *per accidens* from the privation insofar as the privation is an accident of the subject (cf. *Ph.* I 5, 188a32–b2). It is this part of the doctrine of *Physics* I 7 that Aristotle means to draw on in I 8 in order to resolve the Eleatics' puzzle (cf. 191a24–5):

Clearly, then, if there are causes and principles of naturally existing things from which (*ex hōn*) they primarily are and have come to be (I mean what each is said to be according to its essence and not incidentally), then everything comes to be from both the subject and the form . . . Now the subject is one in number but two in form. For there is the man, the gold, and in general the countable matter; for it [the subject] is more of the nature of an individual “this”, and what comes to be does not come to be from it incidentally, while the privation and the contrariety merely coincide (*sumbebēkos*) with it. (190b16–27)

<sup>15</sup> With the following see *Metaphysics* V 7 and VI 2. The distinction is well-rehearsed in the literature (e.g. Loux 1992, Meyer 1992).

On my interpretation, *Physics* I 8 can be understood as employing the same general strategy that Plato adopts in the *Sophist* (see above). Both concede to Parmenides that nothing comes to be from what is not without qualification. But both hold that things can come to be from what is not in some qualified way insofar as they come to be from what is not-*F* (e.g. what is not-healthy or not-beautiful). In this way both accounts seek to avoid the Eleatic Challenge by replacing the complete and existential use of “is (not)” contained in its original formulation with its incomplete and predicative use.<sup>16</sup> Aristotle’s contribution to this debate lies in applying his own intrinsic/accidental distinction to that analysis in order to differentiate the ways in which a thing can and cannot come to be “from” what is not. In Section 1.3 I will show how this the strategy is quite different from the one adopted in *GC* I 3, where Aristotle appears to concede much less ground to the Eleatics.

### 1.3 Aristotle’s Second Response: *Generation and Corruption* I 3

At the end of *Physics* I 8 Aristotle identifies ‘another way’ (*allos d’*) of resolving the dilemma that turns on the distinction between potentiality and actuality (191b27–9). Most commentators assume the reference is to *GC* I 3. The main focus of *GC* I 1–4 is the question of whether there is such a thing as substantial generation or whether all such cases can be reduced to a form of qualified change.<sup>17</sup> It is in the context of answering this question that Aristotle again raises the puzzle about non-being in *GC* I 3:

[A] Having distinguished these things, we must first consider whether there is anything that comes to be and passes away in the unqualified sense or whether nothing comes to be in the strict sense (*kuriôs*) but everything always comes to be something from being something (e.g. comes to be healthy from being sick and sick from being healthy or comes to be small from being big and big from being small, and so on in every other instance). [B] For if there is coming-to-be without qualification, then something must come to be from what is not without qualification so that it would be true to say that not-being belongs to some things. [C] For coming-to-be in the qualified sense proceeds from what is not in the qualified sense (*mê ontos tinos*), e.g. from what is not white or not beautiful, while coming-to-be in the unqualified sense proceeds from what is not in the unqualified sense (*haplôs mê ontos*). (*GC* I 3, 317a32–b5)

<sup>16</sup> One difference is that (at least on the so-called Oxford interpretation) in the *Sophist* Plato takes “what is not-*F*” to be satisfied by any existing thing that is different from *F* (e.g. largeness counts as “what is not-beautiful”) whereas Aristotle restricts it to the specific privation of *F* (e.g. ugliness). Compare *Physics* I 5–6.

<sup>17</sup> See Chapter 3.

1.3 *Aristotle's Second Response: Generation and Corruption I 3* 29

Aristotle is explicit here that if anything comes to be in the strict and unqualified sense, then it must come to be from unqualified non-being: 'for coming-to-be in the qualified sense proceeds from what is not in the qualified sense, e.g. from what is not white or not beautiful, while coming-to-be in the unqualified sense proceeds from what is not in the unqualified sense.' Aristotle's examples of qualified non-being here make it clear that he has in mind the privation. If this is right, then *GC I 3* means to contrast cases where a thing comes to be from the privation (qualified becoming) with those cases where it comes to be from unqualified non-being (coming-to-be in the strict sense, i.e. substantial generation).<sup>18</sup>

We can already see how *GC I 3* departs from *Physics I 8*. In *Physics I 8* Aristotle denies that anything comes to be from what is not in the unqualified sense. But he does allow that things can come into being from what is not in some qualified and accidental way insofar as they come to be from the privation (191b13–16). While Aristotle continues to associate the privation with a kind of qualified non-being in *GC I 3*, he now restricts that to cases where a thing comes to be in the qualified sense (*genesis tis*). Substantial generation is then marked off from this as a distinct form of change that proceeds from unqualified non-being – something that Aristotle explicitly denied was possible in *Physics I 8*. *GC I 3* thus faces the second horn of the Eleatic Challenge head on by showing that some things do come to be from what is not in the unqualified sense, namely, substances. The way Aristotle does that, I will argue, is by attempting to rescue the concept of unqualified non-being from the Eleatics in a way that avoids their worries about generation *ex nihilo*.

Let me start again with *GCI 3*, 317a32–b5. The main point of that passage is that, if there is such a thing as unqualified generation – and Aristotle clearly thinks there is – then it must proceed from unqualified non-being (317a30–b5). But what does “unqualified non-being” (or “what is not without qualification”) refer to in this context? Aristotle goes on to say that “unqualified” may be taken

<sup>18</sup> One might object here that in *Physics I* the concept of a privation is meant to cover both kinds of non-being in [C]. In that case Aristotle continues to hold that in every case of coming-to-be a thing comes to be from the privation, as the *Physics I 8* solution suggests: qualified coming-to-be proceeds from the privation of some non-substantial property (e.g. the lack of health), which counts as qualified non-being; unqualified coming-to-be proceeds from a privation of the substantial form, which counts as unqualified non-being. However, in *Physics I 7* Aristotle characterises the privation as an *accident* of the subject (190b26–7). And so it is unlikely that he means to include under that concept the privation of a substantial form; for that type of lack is not an accident of the subject.

to signify either: (i) ‘what is primary among [in?] each category of being’;<sup>19</sup> or (ii) ‘what is universal and includes everything’ (317b5–7). Taken in the first way it refers to what is not a *substance* (the primary category of being), which at this stage in the argument is meant to signify something in the non-substantial categories (e.g. a quality or quantity). Aristotle argues that substantial generation cannot proceed from what is not in this sense since that would entail that non-substantial items could exist in their own right in separation from substance (317b7–11).<sup>20</sup> Suppose the first thing to come into being was a red apple. Aristotle’s point is that the apple (the substance) could not have come to be from the redness (a non-substance) – in the language of *Physics* I 7, the redness cannot serve as the pre-existing subject from which the change proceeds – because a quality cannot exist in its own right in separation from a substance; likewise for all non-substantial items. On the second reading ‘unqualified non-being’ refers to what completely does not exist or the universal negation of all being, i.e. absolute non-existence (317b11–13).<sup>21</sup> This option is also ruled out as the *terminus a quo* of generation on the grounds that it would imply that something could come into being from absolutely nothing at all. And Aristotle agrees with the Eleatics that there is no such thing as generation *ex nihilo*. Thus, Aristotle argues that if we take unqualified non-being (the subject of unqualified generation) in either of these two ways, then it is difficult to see how substances could come into being at all (cf. 317b21–2). For he says that *if anything* comes to be without qualification, then *it must* come to be from what is not without qualification.

The upshot of this (admittedly difficult) analysis is that substantial generation must proceed from something that is itself a substance (since non-substantial items cannot serve as pre-existing subjects of change), but one that lacks being in some yet-to-be-determined sense (since substantial generation proceeds from unqualified non-being), yet does not lack it in a sense that would render it completely non-existent (since something cannot come into being from nothing).

To resolve the puzzle Aristotle proposes that we think of substantial generation as proceeding in one way from what is not though in another way from what is, so that the subject of generation can be spoken of both as a being and as a non-being. It is at this point that he appeals to the

<sup>19</sup> For two different interpretations of *to prōton kath’ hekastēn katēgorian tou ontos* see Williams (1982, 82). My reading is compatible with both of those.

<sup>20</sup> It is standard Aristotelian doctrine that only (primary) substances are capable of separate existence (existing in their own right) (*Categories* 5, cf. *APo.* I 4).

<sup>21</sup> See Philoponus, in *GC* 46,30–47,3.