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Chapter

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Parmenides and Melissus were bracketed in antiquity as the two great exponents of the Eleatic world-view which denies change and plurality.<sup>I</sup> In modern times their treatment has been curiously unequal. Too much has been written on Parmenides – albeit the greater thinker of the two – too little on Melissus. Too much has been said about Parmenides' use of the verb "be," while too little has been said about his detailed arguments for the individual characteristics of what-is. However, neither these nor other anomalies should disguise the immense wealth of scholarship that has furthered the reconstruction of their Eleaticism.

#### PARMENIDES

Around 150 lines of Parmenides' hexameter poem, written in the early- to mid-fifth century, have been recovered, most belonging to its first part. His densely metaphorical diction is replete with Homeric echoes, and presents the further difficulty of having to use the very language of change and plurality that it aims ultimately to outlaw. These are among the many aspects to which it will be impossible to do justice in the present chapter.

The poem opens with an allegorical description of Parmenides' journey to the House of Night, mythologically located where the paths of day and night join.<sup>2</sup> This symbolizes Parmenides' intellectual journey of distancing himself from a phenomenal world in which (as the second half of his poem will explain) light and night alternate to produce the illusion of plurality and change.<sup>3</sup>

There a goddess addresses him, promising to expound "the unshaken mind of well-rounded truth," and the unreliable "opinions

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of mortals." These correspond to the two halves of the poem, respectively the "Way of Truth" and the "Way of Seeming." The entire philosophical exposition is delivered by the goddess herself. She may be taken to represent the god's-eye view of being that Parmenides' arguments have enabled him to attain for himself. There is no question of her discourse being mere divine revelation: every step towards the truth is hard won by argument.

# The Way of Truth

"Come now, I will tell you (and see that you attend to the story you hear) which are the only paths of inquiry that can be thought of" (DK 28 B2.1-2). The goddess' argument proceeds as follows.

- (1) She offers a choice between two paths: "Necessarily (it) is" and "Necessarily (it) is not" (B2.3-5).
- (2) She argues against the latter, and hence indirectly in favour of the former.
- (3) She warns Parmenides against a third path (B6.4–9), a "backturning" one representing ordinary human acceptance of a variable world – the path of know-nothing "two-headed" mortals, who somehow manage to conflate being and not-being.

If we are to see what this is all about, some preliminaries must be clarified. First, "(It) is" is conveyed by the single Greek verb *esti*. Greek does not require that the subject always be expressed: hence *esti*, unlike English "is," functions as a grammatically complete sentence. As for why no subject is made explicit, the safest answer is that at this stage we are still investigating the logical behaviour of the verb "to be." Only in the light of that investigation will we be able to answer the question what can stand as the subject of "is." Thus, identifying the proper subject of the verb "to be" is the final goal of the Way of Truth, not to be prejudged at the outset.

Second, what does "is" mean here? It has become traditional to offer a choice between at least the following: an existential or complete sense, "...exists"; a copulative or incomplete sense, "... is ... "; a veridical sense, "... is the case" or perhaps "... really *is*... "; and a fused sense, combining some or all of these. The main argument that lies ahead may seem to rely on the existential sense, but the third path, that of two-headed mortals who conflate being and not-being,

represents acceptance of a variable world, and therefore should include ordinary empirical predications within its scope, for example, that the sky *is* blue and *is not* grey, that this animal *is* alive one day but *is not* alive the next: and these are incomplete uses of the verb.

The following, however, may be a safer way to proceed. It is widely recognized that the fundamental sense of "be" in Greek is incomplete, to be *something*. Often this something is made explicit: Fido is a dog, is the dog over there, is hungry, and so on. On other occasions it is left unspecified: Fido is. Modern readers may wish to call this latter a different sense of "is," equivalent to "exists," but to a Greek ear it is just a nonspecific use of the fundamental sense. To say, existentially, "Fido is" is merely to say that he is something (unspecified).

To read Parmenides' poem, we must cling to this fundamental sense of "be." Ordinary people consider the same things both to be and not to be, because, for example, the sky seems to them to be blue and not to be grey. Why should Parmenides object? Because he is wedded to a principle later expressed as, "The choice about these things lies in the following: (it) is, or (it) is not" (B8.15-16). This amounts to what I shall call Parmenides' Law 1:

Law 1. There are no half-truths. No proposition is both true and false. No question can be coherently answered "Yes and no."

Asked whether the sky *is*, a two-headed mortal is committed to the "Yes and no" answer that it both is (e.g., blue) and is not (e.g., grey). All ordinary human beliefs about change and plurality will on examination turn out to imply the same ambivalence about a thing's being.

As for Parmenides himself, the reason why his own primary use of "be" in the Way of Truth looks existential is simply that, by Law I, he can only contemplate total being or total not-being. To specify what a thing is, as mortals do, is implicitly also to specify what it is not, and thus to fall foul of Law I. It is probably harmless for us to gloss Parmenidean being as existence (and for convenience I shall do so), so long as we do not forget that it arises as a logically sanitized case of ordinary Greek being, namely being something.

It is probably this sanitization that Parmenides means to convey by presenting the first two paths as "Necessarily (it) is" and "Necessarily (it) is not." Human viewpoints attribute being to things contingently and unstably, so that what-is can also not-be. In view of Law I, this human outlook does not even start out as a formal possibility, and hence the goddess does not even initially list it among the conceivable paths, which she limits to propositions about *necessary* being and not-being. She later adds the contingent third path, not because it is even a formal possibility, but because despite its hopeless incoherence it is what ordinary mortals actually believe.

We can now proceed to the goddess' refutation of the path "... is not." Her first argument is: "For you could not *know* that-which-isnot (it can't be done), nor *speak* of it" (B2.7-8). How does this work? We may take it that to reject "... is not" is tantamount to showing that this negated verb could never be supplied with a subject. And how do you supply a verb with a subject? Either (i) by thinking of that subject, or (ii) by naming it. But (i) to think of something, you must, minimally, *know what it is*; whereas anything capable of standing as subject of "... is not" would not be anything at all (given Law 1), in which case, you could hardly know what it is! And (ii) by the same token, since the item in question would be nonexistent, it becomes hard to see how you could succeed in *naming* it: it simply is not there to be referred to.

Her second argument is even more condensed: "(1) What can be spoken and thought of must be. (2) For it is able to be, (3) whereas a nothing is not able to" (B6.1-2). Typically, Parmenides argues backwards: (1) is the immediate ground for his conclusion, the outlawing of "... is not" – if you want to supply "... is not" with a subject, you must either speak of that subject or think of it; however, it is then instantly disqualified as subject of "... is not," because anything you can speak or think of *must be*. The grounds for this last point are then supplied: (2) what can be spoken and thought of at least *can* be (in that it is conceivable?); but (3) a nonexistent thing ("a nothing") *cannot* be (it is inconceivable that there should exist a nonexistent thing); therefore, what can be spoken or thought of cannot be a nonexistent thing, that is, it must exist.

This is a lot of flesh to put on so skeletal an argument. But the goddess now adds "I bid you think that over" (B6.2), acknowledging

that her argument needs *some* fleshing out. She has now established what I shall call Law 2:

Law 2. No proposition is true if it implies that, for any x, "x is not" is, was or will be true.

Laws 1 and 2 will ground all her subsequent arguments.

She proceeds (B6.3-9) to deride the hopelessly confused path of mortals, whose mistake is traced to their reliance on the senses. The alternative approach that she advocates involves abandoning the senses in favour of pure reason (B7).

At this point she launches into her positive account of what-is (B8.1-49). Taken literally, what-is will prove to be an everlasting, undifferentiated, motionless sphere. How is this to be understood? If the sensible world is an illusion, is she describing the reality that actually occupies the place that the sensible world just seems to occupy? Or is she describing a reality as nonspatial and nontemporal as, say, numbers are? To put it another way, how far are we meant to deliteralize the description of what-is? I offer the following reason for retaining an unashamedly spatial reading. This final stretch of the Way of Truth is full of arguments. Most commentators are disappointingly silent on their structure and content. Only if we take them in literally spatial terms, I submit, do they prove to be good arguments.

If I am right, Parmenides' goal is to reject humans' woefully perspectival view of the sphere (bounded by the sky) that constitutes their world, and to redescribe as a perfect undifferentiated unity *that very same sphere*. A familiar objection to so literal a spatial reading has long been that if what-is were a finite sphere it would be surrounded by what-is-not, that is, void, in contravention of Law 2. This objection illegitimately assumes the infinity of space. A century later Archytas still had to argue for the infinity of space,<sup>4</sup> and Aristotle, followed in this by a long later tradition, could deny that there is anything, even void, beyond our world. A doctrine of infinite space may have had Pythagorean support by Parmenides' day, and it certainly acquired considerable currency in the philosophy of the Ionian east, but in the west a philosopher as indebted to Parmenidean thinking as Empedocles could postulate a finite world with (apparently) no void beyond. The very idea of space as an entity that exists altogether independently of the occupying body was slow to emerge in Greek thought,<sup>5</sup> and without it the expectation that space should continue even beyond the limits of its own occupant would not present itself as irresistible. Provided that Parmenides' sphere is imagined from inside, like the sphere of our phenomenal world, and not from outside like a football, the need for empty space beyond need not be forced upon him.

The goddess' description of what-is starts with a list of its predicates (B8.2-4): it is (a) ungenerated and unperishing, (b) a single whole, (c), unmoving, (d) perfect (*teleion*) or bounded (*teleston*) or balanced (*atalanton*).<sup>6</sup> In what follows, these four appear to be proved in sequence. But first a remark about time is added, which it may be easiest to take as parenthetical, since, although supported in what follows, it receives no separate proof: "Nor *was* it, nor *will* it be, since it is now all together, one, continuous" (B8.5-6). This is perhaps to justify her exclusive use of the present tense in describing what it "is": there is nothing to be said about what it was or will be, because once we see that it is a changeless unity we will appreciate that no past or future can be distinguished from its present. Whether this makes being altogether timeless, or simply abolishes the *passage* of time, is controversial,<sup>7</sup> but her retention of "now" may favour the latter.

The proof of the double predicate (a), "ungenerated and unperishing," starts with the former. The two arguments against the wholesale generation of what-is are: (i) that would mean that "It is not" was previously true, contrary to Law 2 (B8.6-9); and (ii) coming from nothing, there could have been no reason for it to spring into being when it did, rather than earlier or later (9-10) – a celebrated application of the Principle of Sufficient Reason. There follows a separate argument against its *piecemeal* generation: (iii) "In the same way it must be totally or not at all,<sup>8</sup> and the strength of belief will never allow anything to come into being in addition to it, out of what-isnot" (11-13). That is, the generation even of a part would still defy Law 2 as effectively as wholesale generation does.

"Therefore Justice does not loosen it in her fetters and permit it either to come to be or to perish, but holds it firm" (13-15). This is the first mention of perishing in the argument, and "Justice" may represent parity of reasoning: the same arguments that eliminate generation are effective against perishing too. Strictly, however, argument (ii) cannot be reapplied to perishing: in what-is there could well be, for all we know at this stage, ample reason for its eventual destruction, for example, a terminal illness. However, arguments (i) and (iii) are easily adapted to perishing, which, whether wholesale or piecemeal, would entail "... is not" coming to be true.

The goddess now moves on to predicate (b), "a single whole." What-is is shown to be "not divided" or perhaps "not divisible" (22-25). It is perfectly continuous, with no distinct parts. Since there are no degrees of being – even limited not-being would contravene both Law I and Law 2 – there is nothing true of it at one point that is not equally true elsewhere. That is, it is "all alike," so that no gaps or distinctions can be found within it.

Predicate (c), "motionless," now follows (26–33). What-is is motionless in that it is "unstarting and unstopping" (i.e., presumably, it neither starts off nor comes to a halt), "since generation and perishing have been banished" (starting and stopping being, respectively, the generation and the perishing of motion). And it stays exactly where it is because "mighty necessity holds it in the bonds of a limit, which imprisons it on all sides" – that is, filling all available space up to its boundary, it has no room to move. The ground for attributing this boundary to it is then added: "For it is not proper for what-is to be unfinished: if it were, it would lack everything." Absence of a boundary would be a form of incompleteness, and hence a lack; and since, by Law I, it cannot be both lacking and not lacking, it would be totally lacking, and therefore nonexistent.

"Motionless" here has often been interpreted as "changeless," and the limit as symbolizing "invariancy." The danger that such deliteratization faces is that of diluting the argument into the trivial "It does not change because it does not change." On the spatial reading that his language more naturally invites, Parmenides has a substantial argument. If he does also have an argument against change in general, it is the one against piecemeal generation (II-I3), which could well include generation of new properties.

Particularly puzzling are lines 34-41 of B8. They seem to halt the flow, by separating the proof of predicate (c) from that of predicate (d), which follows at 42-49. Some have taken them to be somehow part of that final proof, others to be displaced from their correct position, others to be a summary of the results so far, and yet others a digression against empiricism. My own preference is for viewing this as the place where Parmenides corroborates monism, the thesis which later tradition most strongly associated with him. Before embarking on her final proof, that of the shape of what-is, the goddess must pause to demonstrate its *singularity*. She has already shown that it is not divided. But there remain three additional claimants to a share of being: (1) thought, (2) time, and (3) the plurality of ordinary empirical objects. Each is addressed in turn.

(I) "Thinking is identical to that with which thought is concerned": thought is identical to its own object, what-is. "For in what has been said" - that is, in the goddess' arguments so far - "you will not find thinking separate from being" (34-36). There has been much resistance among English-speaking scholars to attributing to Parmenides any such identification of thinking with being. Yet it is the only natural reading of B3 (of uncertain location), "For it is the same to think and to be."9 Besides, the price of not identifying thinking with being is to undermine his monism, by separating the thinking subject from the object of thought, that-which-is. Parmenides does not deny that thinking happens, but since being is all that there is, he must deny that thinking is separate from being. So we must take him to hold that what thinks is, and that what is thinks. That may be why in the proem (B1.29) the goddess promised to teach Parmenides the "unshaken mind of well-rounded truth."<sup>10</sup> The conflation is not altogether surprising in a context of early Greek philosophy. Anaximander, Anaximenes, and Heraclitus had all treated their primary existent, the stuff of the universe, as divine. And Parmenides' follower Melissus, as we will see, likewise speaks about his own One as if it is a living being.

(2) "Nor is there, or will there be, time<sup>II</sup> over and above what-is, since Fate has bound it down to be whole and unmoved" (37-8). I suggest that its being whole (= "the whole?"), and hence spatially all-inclusive, means that there can be no external change to provide the measure of time, while its being unmoved likewise eliminates any internal measure of time.

(3) "Therefore it [i.e., what-is]<sup>12</sup> has been named all the things which mortals have posited, believing them to be real – to cometo-be and to perish, to be and not to be, to change place, and to alter bright color" (38-41). Parmenides here shows why he need not be embarrassed by his earlier premise that whatever can be spoken and thought of must exist (B6.1). That may seem to populate his

world with a vast plurality of items – kettles, pigs, rainbows, even hobgoblins. But it now turns out that all of these names reflect inept human attempts to talk about just one thing, namely what-is, since there is nothing else to talk about.

Monism, then, is preserved. We are now ready for the final description, predicate (d): what-is is spherical. "But since there is an outermost limit, it is complete on all sides, like the mass of a wellrounded ball – equally balanced from the centre on all sides" (42-44). This certainly *sounds* like a literal geometrical description of its shape. Grammatically, "equally balanced from the centre" is said of what-is itself, not of the ball to which it is compared. Hence, the resort often adopted of taking this to be a comparison to a sphere merely in terms of perfection or uniformity looks unpromising. And it becomes even less promising if we examine the actual argument which follows (44-49):

For it must not be any larger or smaller here than there. For (1) neither is there what-is-not, which might prevent it reaching the same distance; (2) nor is there any way that what-is could be more than what-is here and less there, since it is all immune to plundering: for equal to itself on all sides, it has equal being within its limits.

Unless someone can find a plausible metaphorical interpretation of "larger" and "smaller,"<sup>13</sup> one that leaves Parmenides with a real argument here, we have little choice but to take them in their literal spatial sense. What-is cannot be larger in one direction than another, that is, be asymmetrical, because nothing could make one radius shorter than another: (1) there is no not-being to foreshorten the radius; (2) there can be no thinning out to create imbalance, since, given its equal being right up to its limits, nothing is missing from it. In short, there could be no explanation for asymmetry, that is, for any shape other than the sphere.

So ends the Way of Truth. But can what-is really be geometrically spherical, without sacrificing its partlessness? Surely a sphere has distinct parts – segments, hemispheres, and so on? The answer, I think, is not that divisions *cannot* be imposed (witness the way mortals fragment reality), but that we misconstrue reality if we do impose them. In which case, the importance of its sphericity is that the sphere is the one shape which you *can* conceive as a single whole without distinction of parts: any asymmetrical shape

can be grasped only by distinguishing corners, faces, ends, and the like. And our instructions from the goddess (B4, of uncertain location, but presumably soon after the proem) have been that we should not attempt to impose any spatial distinctions:

Gaze in thought equally<sup>14</sup> upon absent things as firmly present. For thought will not split off that-which-is from clinging to that-which-is, whether scattered everywhere in every way through the world or gathered together.

Before leaving the Way of Truth, we should consider its argumentative structure. Once the choice of paths was complete, the goddess took us through a series of largely independent proofs demonstrating each of the predicates of what-is. Only once did the conclusion of one proof serve as the premise for another, and that was (B8.27-28) when (a) the rejection of generation and perishing was invoked among the grounds for (c) the denial of motion. Otherwise each proof was selfcontained, its premises either presented as self-evident or relying on one or both Laws. This will provide a key contrast with Melissus' methodology.

However, in a puzzling fragment the goddess remarks: "It is all the same to me where I start from; for I shall come back there again" (B5). Coming back to where you started should be the hallmark of the "back-turning" path followed by mortals, and it is hard to see how the arguments of the Way of Truth could be thought to have such a structure. In particular, she could hardly have started other than with the disproof of "... is not," and that certainly is not where she ends up again. Some have even thought, for this reason, that the fragment belongs to the Way of Seeming, but its source, Proclus, clearly implies otherwise. A better guess is perhaps that in context "there" referred, not to the arbitrarily chosen starting point, but to what-is. She would then mean, that all arguments, wherever they may start from, will bring you back to being, because ultimately that is the only possible subject of rational discourse.<sup>15</sup>

My account is not fully in tune with recent appreciations of Parmenides.<sup>16</sup> While English-speaking scholars like Burnet and Cornford made him very much the radical cosmologist I have claimed him to be, a Germanic tradition, fuelled in the twentieth century especially by Heidegger, has recreated him as a pure metaphysician, and G.E.L. Owen, in his seminal "Eleatic questions" (1960), felt

obliged to absolve him of the title "cosmologist" in order to boost his credentials as a philosopher. The present chapter, while heavily indebted to these studies, eschews so absolute a choice. Parmenides' Way of Truth is, to be sure, not a treatise on physics. Nevertheless, it can remain a contribution to the traditional cosmological debate, despite the fact that its methodology pioneers the newly emerging philosophical disciplines of metaphysics and logic. Even its most outlandish metaphysical thesis, the identification of thinking with being, finds, I have argued, a respectable place within the ancient cosmological tradition.

### The Way of Seeming

We may now turn to "the opinions of mortals." The goddess sets out, unargued, an analysis of the phenomenal world in terms of two opposite "forms" or elements, called "light" and "night," the former bright, rare, and fiery, the latter dark, dense, and cold. What followed (now largely lost) set out a cosmology that included a creative goddess, a detailed description of the heavens as a set of concentric bands, an embryology, and a physiology of human cognition.

But why teach Parmenides all this? From the outset she has declared it untrustworthy (B1.30), and now in embarking on it she describes it as "deceitful," if "plausible" (B8.52, 60). Yet Parmenides must learn it "in order that no opinion of mortals may outstrip you" (51). On the face of it, she can only mean by this last remark that the cosmology will be the best of its kind, a successful competitor for the cosmological theories currently on offer. Indeed, what followed certainly was competitive: it even contained two major astronomical discoveries - that the Morning Star and Evening Star are identical, and that the moon is illuminated by the sun. But if the Way of Truth is true, cosmology must be false. So why join in the game?

The answer has something to do with arithmetic. Parmenides' major predecessors had been material monists, reducing reality to manifestations of one stuff. Parmenides' own cosmology is equally clearly dualist. So it is scarcely an accident that he moves from one entity in the Way of Truth to two in the Way of Seeming (B8.53-4):

For they [mortals] have made up their minds to name two forms, of which they should not name one, and that is where they have gone wrong.

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Despite a long-standing controversy about the meaning of this, it seems likeliest to be saying that two, although the minimum for rescuing cosmology, is one too many. Aristotle plausibly suspected that the two elements somehow corresponded to what in the Way of Truth were called what-is and what-is-not. Elemental dualism, that is, is the physical counterpart of mortals' combination of being with not-being.

Can we say whether the illicit second element, corresponding to what-is-not, is light or night? Aristotle and Theophrastus took it to be night. But their supposition may be conditioned by the too familiar symbolism whereby light represents truth and reality. Modern scholarship<sup>17</sup> has shown that this is not Parmenides' use of light imagery; indeed, in the proem his allegorical journey is *from* the light into the House of Night. This lends additional credibility to Karl Popper's proposal that light – the element that, *par excellence*, informs the senses – is the intruder.<sup>18</sup> Parmenides knew, and was perhaps the first to know, that the moon is in reality a solid sphere, its apparent changes of shape an illusion generated by the play of light. This, Popper suggests, may have inspired an analogous account of how the universe, in reality an undifferentiated sphere, is endowed with apparent variability over time and space by the intrusion of a lightlike second element.

How, then, does the cosmology complement the Way of Truth? Above all by showing how to bridge the gap between truth and cosmic appearance. The entire range of cosmic phenomena can be generated by allowing the intrusion of just one additional item – by starting out with two instead of one. This makes immediate sense of the frequently noticed fact that the detailed descriptions of the cosmos mimic the language of the Way of Truth. For example, in B10 the "encircling heaven" is "bound down by Necessity to hold the limits of the stars," immediately recalling the description of what-is as held motionless by Necessity in the bonds of a limit (B8.30-31). This tends to confirm that the very same sphere is being first correctly described, then, in the cosmology, incorrectly redescribed.

On such an interpretation the Way of Seeming does not vindicate phenomena, but it does address the most glaring problem facing anyone ready to entertain Parmenides' conclusions: how can human experience have got things so catastrophically wrong? Actually, the goddess is telling us, the step from appearance to reality is surprisingly small, a numerical mistake of one.

This admittedly does not even broach the problem of accounting for human error. According to Parmenides, there are no separate thinking subjects. All thinking is what-is thinking itself. How could it find room to misconceive itself? That is a guestion on which Parmenides left his interpreters to puzzle.<sup>19</sup>

#### MELISSUS

Melissus can be dated loosely to the mid- or late-fifth century B.C. In outline, his treatise argued that what exists is (i) omnitemporal; (ii) infinite in extent; (iii) one; (iv) homogeneous; (v) changeless, that is, without (a) reordering, (b) pain, (c) grief, or (d) motion; (vi) indivisible; and (vii) bodiless.

This methodical defence of a version of Eleatic monism was written in unadorned Ionian prose, worlds away from Parmenides' highflown poetic obscurities. Thanks to its relative simplicity, its formulations were to be more widely reflected in ancient formulations of Eleaticism than those of Parmenides himself. The conclusions are by and large Parmenidean, but the arguments are not. There is little sign of Parmenides' most fundamental premise, the rejection of "... is not." Furthermore, whereas Parmenides, as we saw, in the main inferred each predicate of what-is by an independent argument, nearly all Melissus' arguments form a single chain, with each predicate inferred directly from the previous one.

Melissus is not interested in Parmenides' highly refined mode of investigation through the logic of being and negation. He writes, I suggest, as an Ionian physicist addressing a like-minded audience, and expounds the Eleatic One with arguments appropriate to Ionian cosmology. The title of his treatise (probably authentic, despite some scholars' hesitation), Peri physeôs è peri tou ontos (On nature or on what-is), in effect labels his account as an Eleatic physics. His departures from Parmenides, in permitting himself ordinary temporal language and in postulating a spatially infinite being, are more symptomatic of this project than of intellectual independence.

For the book's first two arguments, we have a probably complete

text. However, I believe that scholars have failed to locate correctly

the division between argument (i), about temporal infinity, and argument (ii), about spatial infinity.<sup>20</sup>

## (i) "Omnitemporal"

(DK 30 B1) It always was what it was, and always will be. For if it came to be, it is necessary that before it came to be there [or "it"] was nothing. Well if there [or "it"] was nothing, nothing could ever come to be out of nothing. (B2, beginning) Since, then, it did not come to be, it both is and always was and always will be.

Where Parmenides had started from a highly paradoxical premise, the rejection of "... is not," Melissus' starting premise, the causal thesis that "Nothing could come to be out of nothing," would hardly cause a stir in his audience. Some such principle or assumption had lain at the root of the ubiquitous early Greek postulation of an everlasting primeval stuff of the universe. The principle, rarely if ever challenged in antiquity, was generally regarded as indubitable. (Comparably to Parmenides, Melissus leaves us to supply the converse principle, "Nothing could perish into nothing" as grounds for future indestructibility.)

Also unsurprising, especially in an east Greek context,<sup>21</sup> is Melissus' expression of this permanence in terms of omnitemporality, where Parmenides had chosen to collapse past and future into the present. This need not be a significant philosophical disagreement. Melissus may simply see himself as presenting Parmenidean thought in the philosophical idiom which his audience understands.

## (ii) "Infinite in extent"

(continuing B2) And it has no [spatial] beginning or end, but is infinite. For if it had come to be it would have a [spatial] beginning (for it would have begun the process of coming-to-be at some time) and end (for it would have ended the process of coming-to-be at some time). But since it neither began nor ended [the process], and always was and always will be, it has no [spatial] beginning or end.

Critics since Aristotle have detected here the fallacious inference: "If p, q: but not-p; therefore not-q." But this is probably unfair. Where Parmenides' arguments had evidently addressed an audience used to the concept of a finite universe, Melissus assumes the opposite, as we might too – that the universe will be infinite unless it can be shown to be otherwise. This again reflects his audience's background in Ionian physics, where the infinity of the universe, prefigured as early as Anaximander, was by Melissus' day a feature of Anaxagoras' cosmology and on its way to becoming a cardinal doctrine of atomism.

Melissus' question is: what could have set bounds on that-whichis? If nothing, then it is infinite. The one thing that could have made it finite is a process of generation, which, being temporally bounded, could only have produced a spatially finite being. You cannot *create* an infinitely large entity, any more than you can build an infinitely long road, given only that any such process must start at some time (and hence somewhere) and stop at some time (and hence somewhere). Since, therefore, argument (i) has already demonstrated that it never came to be, there is nothing to limit it spatially, and it becomes infinite by default.

Melissus adds, somewhat obscurely, how the spatial infinity of argument (ii) is both inferentially dependent on and parallel to the temporal infinity of argument (i). B2-4 may be continuous, as follows:

(end of B2) For what is not *all* would not be able to be *always*. (B3) But just as it is always, so too it must also always be infinite in magnitude. (B4) Nothing is either omnitemporal or infinite if it has a beginning and end.<sup>22</sup>

Melissus' next move is from (ii) spatial infinity to (iii) unity: "For if there were two, they would not be able to be infinite, but would have boundaries in relation to each other" (B6). This predicate gives Melissus' entity its name, "the One." And from (iii) unity, he infers (iv) homogeneity (it is "alike everywhere"), on the ground that anything heterogeneous would thereby be a plurality (*MXG* 974a12-14).<sup>23</sup>

The surface meaning of these two successive inferences is largely unambiguous – a far cry from Parmenides. What remains open to debate is the quality of argument. The Peripatetic Eudemus was perhaps unfair to object that the move from (ii) to (iii) works only for things infinite in all directions, since Melissus clearly does have that kind of infinity in mind in (ii). On the other hand, the only kind of unity that the inference can plausibly yield is uniqueness, and mere uniqueness is not incompatible with being a heterogeneous plurality (most of us, for example, believe the universe to have both properties).

After a brief summary of the results so far (B7.1), there follows a generic argument for the next predicate,

### (v) "changeless"

And it could neither lose anything nor become larger nor be rearranged, nor does it suffer pain or grief. For if any of these happened to it, it would no longer be one. For if it changes, it is necessary that what-is is not alike, but that what previously was perishes while what-is-not comes to be. So if it were to become changed by a single hair in ten thousand years, it would all perish in the whole of time.

Formally, given the chain structure of the reasoning, this is meant to be a new inference from (iv) homogeneity, although the inferential connexion is weak at best. Would the supposition of change really prevent its being "alike," and hence "one," in the senses in which these predicates were used in arguments (iv) and (iii) respectively? Much more interesting is the additional ground for changelessness, which derives from predicate (i), "omnitemporal": any change involves some measure of perishing, and if a thing's parts are perishable the whole too will perish, given infinite time. If a thing's parts are severally perishable, it is *possible* for them all to perish together, and (an implicit anticipation of the Principle of Plenitude?) whatever is possible cannot remain unactualized for ever.

There follow four arguments against four specific kinds of change (B7.3-10). The first three, against (a) reordering, (b) pain, and (c) grief, are largely a reapplication of the generic argument that change would negate the established predicates (i) "omnitemporal" and (iv) "homogeneous." But under (b) Melissus adds the consideration that for the One to feel pain would be a diminution of its "power." This remark falls outside the inferential chain but conveys the important clue that the One is being assimilated to a deity.<sup>24</sup> The equation of the primary existent to god is, once again, sufficiently familiar to an audience attuned to the work of Anaximander, Anaximenes, and Heraclitus to be assumed without argument. But it also constitutes a link to Parmenides, whom we found to be conforming to that same tradition when he identified thinking with being.

The most important argument against a specific form of change is that against motion (B7.7-10), which can be divided up as follows:<sup>25</sup>

## (v)(d) Motionless

- 1. Nor is there anything void. For void is nothing. Well, what is nothing could not very well exist.
- 2. Nor does it move. For it cannot give way at any point, but is full. For if there were void, it would give way into the void; but since there is no void, it has nowhere to give way. (There could not be dense and rare. For what is rare cannot be as full as what is dense, but what is rare already thereby becomes emptier than what is dense. And that is the criterion for distinguishing between what is full and what is not full. Hence if something gives way or absorbs, it is not full, but if it neither gives way nor absorbs, it is full.)
- 3. [summary] Hence (1) it must be full, if there is no such thing as void; and hence (2) if it is full, it does not move.

This is the first recorded argument that explicitly makes motion dependent on void (even if the absence of void may already be implicit in Parmenides' refutation of motion). And Melissus' rejection of void, as being nothing and therefore nonexistent, is the nearest he comes to the Parmenidean mode of argument through the logic of being and negation. He is not denying an *external* void into which the One might move. This is hardly necessary, given that the One is infinite in all directions. He is denying any *admixture* of void that would make it less than totally dense and thus permit motion by compression or redistribution: that is the point of the parenthetical statement in (2).

There remains the inference from (v)(d) "motionless" to (vi) "indivisible" (B10): division is taken to be a process that involves the motion of the parts being separated. Finally, we come to an inference (B9) that is hard to fit into the continuous chain, being in fact a further derivation from predicate (iii):

## (vii) Bodiless

Being one, it must not have (a?) body. If it had bulk, it would have parts and no longer be one.

It is puzzling that the One, having been shown to be totally dense and therefore immobile, should now prove to be incorporeal. In principle it seems likelier that he is denying here that it has *a* body, with organic parts, and is thereby rejecting an anthropomorphic conception

of divinity. Admittedly, however, the reference to "bulk" suggests that corporeality as such should be the target.

Just as Parmenides had criticized reliance on the senses (B6), so too Melissus, apparently in a separate section of his treatise, turned his ontological conclusions against the senses (B8):

That then is the strongest evidence that there is just one thing, but the following are further pieces of evidence.

If there were many things, they must be such as I say the One is. For if there are earth, water, air, fire, iron, gold, living creature and dead, black and white, and the other things people say to be real – if there are these things, and we see and hear correctly, each of them ought to be just as it first seemed to us to be, and not to be changing or becoming different: each of them ought to stay just as it is.

Yet as it is, we claim that we do see, hear and understand correctly. And it appears to us that the hot becomes cold and the cold hot, the hard soft and the soft hard; that the living creature dies and comes to be out of what is not alive; and that all these things undergo alteration and that what they were and what they are now are not at all alike; that iron, although hard, is worn away by contact with the finger, and so too gold, stone and everything else that is thought to be hard; and that earth and stone come to be out of water.

Well, these things are inconsistent. We said that there are many everlasting things which have forms and strength, yet it seems to us that everything undergoes alteration and changes from the state we see it in each time. Hence it is clear that we do not see correctly, and that the appearance that this plurality of things exists is incorrect. For they would not be changing if they were real, but each would *be* such as it appeared. For nothing is more powerful than what is real, whereas if it changes what-is has perished and what-is-not has come to be.

In this way, then, if there were many things, they would have to be such as the One is.

What exists must be changeless (predicate (v)). If sense objects existed, they would have to be changeless. But the senses themselves report them as changing. Therefore sense objects are illusory.

#### Retrospect

Earlier traditions in cosmology had investigated the composition of the universe by primarily empirical means, seeking to identify a privileged stuff in the cycle of elemental transformation, and to account

for the regularities of its behaviour by assimilation to familiar biological, mechanical, or political models of order. Neither Parmenides nor Melissus attempts to step altogether outside the discipline of cosmology. Staying within it, they question its use of empirical criteria, which had come up with too many competing answers to inspire confidence. Both therefore recommend a new start, an appeal to a priori principles to see how far these may narrow down the possible answers to the cosmologists' questions. The outcome is shocking: in virtue of its perfect homogeneity over time and space, the universe can possess none of the differentiating features that cosmologists had hitherto made their *explananda*.

So far, there is no difference between Parmenides and Melissus, apart from the stylistic differences that typically separate prose from verse. They further share - a natural corollary to their a priori approach - an intense interest in inferential method, although here Melissus goes further in imposing a clearer overall architectonic on his argument. Even the kind of a priori premises to which they appeal may overlap to some extent - for example, considerations of how available space may constrain motion. Yet, it is here that their greatest differences can be located too. Parmenides' starting points themselves fall outside the physical tradition: the principles of reference and negation, the conditions of thought, and the logical behaviour of the verb "to be." Melissus' are the kind of a priori principles - the impossibility of generation ex nihilo, the infinity of space and time with which his cosmologically attuned audience would already feel comfortable. Melissus can thus be compared to Zeno. Each in his own way undertook to defend Parmenides' world view to a disbelieving audience by promoting it in that audience's own terms. Zeno had done so by dialectical appeal to their commonplace assumptions about space and time. Melissus approached the same task by a physicist's appeal to the principles of current scientific thinking.

#### NOTES

- 1 Most of the interpretations proposed in this chapter can also be found in my two articles, "Melissus" and "Parmenides," in Craig [145].
- 2 On the opening of Parmenides' poem, see Most in this volume, p. 354.
- 3 For further treatment of the poem's introduction, see Lesher in this volume, p. 236.
- 4 Archytas DK 47 A24.

- 5 Note that whereas Parmenides (see B8.36-38) explicitly rejects time as a self-subsistent entity, he apparently feels no such need in the case of space. In Sedley [409] I argue that even early atomism had no developed conception of self-subsistent space, its void being a space-occupier.
- 6 Depending on the emendation adopted for the impossible *ateleston*, "unbounded": I shall myself favour "balanced."
- 7 See, among other discussions, Owen [313]; Sorabji [129] ch. 8.
- 8 I place a comma at the end of line 11, not the usual period.
- 9 Those who resist the thinking-being identity are forced to translate this as, for example, "For the same thing is there for thinking (i.e., as the object of thought) and for being (i.e., as the subject of 'be')" a most tortuous piece of syntax. For a detailed defence of the thinking-being identity, see Long [305].
- 10 I thank Tony Long for this observation.
- 11 This reading, oude chronos estin ê estai, in 36 is well defended by Coxon [270] on the basis of Simplicius' report of the text.
- 12 To supply what is as the subject of *onomastai* is the proposal of M. Burnyeat, "Idealism and Greek philosophy," *PR* 91 (1982), 19 n.22, adopted by KRS, 252.
- 13 Meizon and baioteron (44-45) mean "larger" and "smaller," not "more" and "less" as suggested in some modern translations of Parmenides.
- 14 Reading  $\delta\mu\hat{\omega}\varsigma$  rather than  $\delta\mu\omega\varsigma$  in line 1.
- 15 For much the same interpretation, see Bodnár [282].
- 16 For divergent accounts of Parmenides in this volume, see Graham, p. 165, Lesher, p. 240, and McKirahan, p. 157 n. 15.
- 17 Furley [293].
- 18 Popper [316].
- 19 For further discussion of Parmenides' handling of human error and cognition, see Lesher and Laks in this volume, pp. 239 and 255.
- 20 Argument (i): (B1) ἀεὶ ἦν ὅ τι ἦν καὶ ἀεὶ ἔσται. εἰ γὰρ ἐγένετο, ἀναγκαίόν ἐστι πρὶν γενέσθαι εἰναι μηδέν· εἰ τοίνυν μηδὲν ἦν, οὐδαμὰ ἂν γένοιτο οὐδὲν ἐκ μηδενός. (B2, beginning) ὅτε τοίνυν οὐκ ἐγένετο, ἔστι τε καὶ ἀεὶ ἔσται. Argument (ii): (remainder of B2) καὶ ἀρχὴν οὐκ ἔχει οὐδὲ τελευτήν, ἀλλ΄ ἄπειρόν ἐστιν. εἰ μὲν γὰρ ἐγένετο, ἀρχὴν αὐν εἶχεν (ἤρξατο γὰρ ἄν ποτε γινόμενον) καὶ τελευτήν (ἐτελεύτησε γὰρ ἄν ποτε γινόμενον) καὶ τελευτήν (ἐτελεύτησε γὰρ ἄν ποτε γινόμενον). ὅτε δὲ μήτε ἤρξατο μήτε ἐτελεύτησεν, ἀεί τε ἦν καὶ ἀεὶ ἔσται, οὐκ ἔχει ἀρχὴν οὐδὲ τελευτήν. In fr. 2 there is no need to add (καὶ) before οὐκ ἔχει ἀρχὴν, with Diels-Kranz and others: it is sufficient to take the preceding τε as "and" instead of "both". That argument (ii) addresses spatial infinity (see especially Reale [277]) has not been generally appreciated in the English-language literature on Melissus, but see KRS, 393-95 for an honourable exception.
- 21 Cf. Heraclitus DK 22B30.

- 22 (end of B2) οὐ γὰρ ἀεὶ εἶναι ἀνυστόν, ὅτι μὴ πῶν ἔστι. (B3) ἀλλ' ὥσπερ ἔστιν ἀεί, οὕτω καὶ τὸ μέγεθος ἄπειρον ἀεὶ χρὴ εἶναι. (B4) ἀρχήν τε καὶ τέλος ἔχον οὐδὲν οὕτε ἀίδιον οὕτε ἄπειρόν ἐστιν.
- 23 The citation is of the paraphrase of Melissus in the pseudo-Aristotelian De Melisso, Xenophane, Gorgia.
- 24 For reports that Melissus identified the One with god, see DK 30 A13.
- 25 Analysis based on Sedley [409] 178–79.