

CHAPTER I

*Contradiction and Aporia
in Early Greek Philosophy**John Palmer*

An *aporia* is, essentially, a point of impasse where there is puzzlement or perplexity about how to proceed. Aporetic reasoning is reasoning that leads to this sort of impasse, and an *aporia*-based method would be one that centrally employs such reasoning. One might describe *aporia*, more basically, as a point where one does not know how to respond to what is said. In the Platonic dialogues dubbed ‘aporetic’, for instance, Socrates brings his interlocutors to the point where they no longer know what to say. Now, it should be obvious that there was a good deal of aporetic reasoning prior to Socrates. It should also be obvious that the form of such reasoning is immaterial so long as it leads to *aporia*. In particular, the reasoning that leads to an *aporia* need not take the form of a dilemma. Instances of reasoning generating genuine dilemmas – with two equally unpalatable alternatives presented as exhausting the possibilities – are actually rather rare in early Greek philosophy. Moreover, there need not in fact be any reasoning or argumentation as such to lead an auditor to a point where it is unclear how to proceed or what to say. Logical paradoxes such as Eubulides’ liar do not rely on argumentation at all but on the exploitation of certain logical problems to generate an *aporia*. All that is required in this instance is the simple question: ‘Is what a man says true or false when he says he is lying?’ It is hard to know how to answer this question because any simple response snares one in contradiction. Likewise, among the remains of Heraclitus’ book are a number of provocative statements that induce a certain puzzlement without any argument as such. Consider, for example, ‘The path up and down is one and the same’ (Heracl. 22B60 DK). One does not know quite what to say about this, for the description appears to harbour a contradiction: there is a path up and a path down, yet there is also a single path. The apparent contradiction between the multiplicity and unity of the same object calls for some explanation and resolution.

What is perhaps most important to the generation of *aporia* is the production of at least the appearance of contradiction, by one means or another. The appearance of contradiction is intolerable because contradiction is itself impossible: the same thing cannot be at once *F* and not-*F* in the same respect. When led to accept contradictories even though one knows they cannot both be true, there are two main ways to respond. One can, appreciating the difficulty of the issue, say nothing, or one can, appreciating the difficulty of the issue, try to say something. These possibilities correspond to the two broad purposes the fabricator of the apparent contradiction may have: he may want the auditor to realise that the question is so fraught with difficulty that it is best to say nothing, or he may want the auditor to persist in trying to say something useful even while appreciating the difficulty of the question. That one can respond to an *aporia*, and that someone may intend for one to respond, in these distinct ways reflects a basic division in the uses and purposes of aporetic reasoning. In its broadly negative uses, the aim of aporetic reasoning is *aporia*. In its broadly positive uses, the aim of aporetic reasoning is escape from *aporia*. There will be further variations within each category. For instance, the negative ends for which aporetic reasoning may be employed include simple confutation and, more positively, the promotion of a sceptical attitude. Also, significantly, when the appearance of contradiction leaves one puzzled about how to proceed and uncertain as to what to say, one need not respond as the fabricator of the *aporia* intended. In particular, one can be stimulated to make positive progress by a piece of aporetic reasoning developed for basically negative purposes.

I want to focus on the uses of contradiction to generate *aporia* in Heraclitus, the Eleatics Zeno and Melissus, and the sophists Protagoras and Gorgias. Heraclitus merits attention here because he is unique among the early Greek philosophers in inducing *aporia* with the positive aim of provoking his audience to a deeper understanding of the world's workings. Both Zeno and Melissus, by contrast, reason in ways designed to contradict common sense and ordinary experience. Their essentially negative aporetic reasoning sets the trend for the uses of contradiction among the sophists, though with Protagoras and Gorgias contradiction and aporetic reasoning are employed in novel and sophisticated ways.

Heraclitus

Timon of Phlius called Heraclitus *ainiktēs* or 'riddler' (D.L. 9.6), and the epithet *skoteinos* or *obscurus* commonly attaches to him in the later

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tradition. Heraclitus appears intent on provoking his audience to understanding by making deliberately puzzling or paradoxical statements. Although he describes himself as ‘distinguishing each thing according to its nature and telling how it is’, at the same time he says people generally fail to understand the *logos*, this being both his own discourse and the principle of the natural order it describes (22B1 DK, cf. 22B19, 22B34). So there is some justification for the tradition’s view that Heraclitus was obscure, though he would have said the apparent obscurity of his writings simply mirrors the evident obscurity of things. ‘Nature likes to hide’ (22B123 DK), he says. His attitude towards the general level of human understanding is like Socrates’ without the irony: ‘The multitude do not understand the sort of things they encounter, nor do they know by learning, though they seem to themselves to do so’, he says (22B17 DK, cf. 22B28a, 22B40, 22B57, 22B104). Although Heraclitus differs from Socrates in professing to know the kinds of things most people only think they know (cf. 22B41 DK, 22B50 etc.), they both in a general way seek to dispel their auditors’ false conceit of wisdom. Socrates exposes latent contradictions among his interlocutors’ beliefs so that they might abandon their misplaced confidence regarding their understanding of ethical matters. Heraclitus provokes his audience to deeper understanding of the world’s workings with declarations that induce puzzlement in a variety of ways.

Sometimes, as with the river fragment (22B12 DK), he employs a striking image to serve as one term in an unspecified analogy that leaves one puzzling over what the image is supposed to convey. The road fragment (22B60 DK) bears witness to Heraclitus’ penchant for inducing puzzlement with a statement that appears to harbour a contradiction. Other fragments show this to be one of his preferred devices: ‘They do not understand how drawn apart it is brought together with itself: a backstretched harmony like a bow’s and a lyre’s’ (22B51 DK).¹ ‘Combinations, wholes and not wholes, brought together drawn apart, concordant discordant, and from all things one and from one thing all’ (22B10 DK). ‘Sea, water most pure and most polluted: for fish, drinkable and sustaining, but for humans, undrinkable and destructive’ (22B61 DK). ‘God, day night, winter summer, war peace, hunger satiety – he undergoes alteration just as fire, when mixed with spices, is called by each one’s aroma’ (22B204 DK). ‘Invisible harmony is stronger than visible’ (22B207). Heraclitus employs

¹ See the textual note at Kirk, Raven and Schofield 1983: 192, for a defence of the readings *xumpheretai* and *palintonos*.

prima facie contradictions, along with other devices, as a way of provoking his audience to question their understanding of the world's workings. His enigmatic utterances are designed not merely to lead his audience into impasse. He offers an understanding of the ultimate principles governing the world's workings to those who relinquish the false conceit of their own wisdom. Not all *aporiai* are meant to be final. Many if not most of the ancient philosophers who employed aporetic arguments did so as a way of framing problems. When contradictions are employed to generate *aporiai* in this way, the contradictions are supposed to be only apparent – their fabricators intend for them to be resolved. Such seems to be the case with the contradictions employed by Heraclitus. Sometimes he actually indicates himself how the contradiction he has introduced is to be resolved. When he says in 22B88 DK that the same thing is present living and dead, waking and sleeping, young and old, he then explains how so: 'for (*gar*) these once changed are those and those once changed are these'. The puzzlement does not necessarily cease with Heraclitus' explanation. Nevertheless, it should be clear that he means for the contradictions his discourse makes manifest to be resolved by the deeper understanding he also aims to provide.²

Zeno and Melissus

Zeno of Elea deployed his own arsenal of contradictions to provoke his audience to question their understanding of how the world works. The most famous of his ingenious paradoxes purport to show that motion is impossible by showing that common-sense assumptions regarding its occurrence lead to problems. For instance, if a tortoise starts ahead of Achilles in a race, in the time it takes Achilles to get to where the tortoise started, the tortoise will have moved some distance ahead. And in the time it takes Achilles to get *there*, the tortoise will again have moved some distance ahead. And the tortoise will always have moved some distance ahead during the period of time it takes Achilles to get to where it was at the beginning of that period, so that the tortoise will always be ahead and will never be overtaken by Achilles. One of the remarkable

² Aristotle's association of Heraclitus with violation of the Law of Non-Contradiction on the grounds that some people thought that he simultaneously supposed the same thing to be and not to be (Arist. *Metaph.* 4.3.1005^b17–25) has prompted some modern interpreters to worry about Heraclitus' toleration for contradiction, but it is clear enough from fragments such as 22B61 and 22B88 that the contradictions he points up are meant to be merely apparent and ultimately explicable. See further Barnes 1982a: 69–75, Barnes 1983, Mackenzie 1988a, and Granger 2004.

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features of this argument is the simplicity of its conceptual apparatus, reflected in this reconstruction and evident in Aristotle's testimony: 'Second is the [argument] called "Achilles": this is that the slowest runner never will be overtaken by the fastest; for it is necessary for the one chasing to come first to where the one fleeing started from, so that it is necessary for the slower runner always to be ahead some' (*Ph.* 6.9.239^b14–18). The argument employs the common-sense assumption that a first runner and a lagging runner both cover some distance while the lagging runner gets to where the first runner started in order to generate a conclusion that flatly contradicts common sense. The result is an impasse or *aporia*, where one does not know what to say in reply. The *aporia* is generated by the contradiction between the conclusion of Zeno's reasoning and the belief grounded in one's experience of races and moving objects. One wants to say that *of course* Achilles can overtake the tortoise. There is a striking depiction of this response to Zeno in the interior of a red-figure drinking cup discovered in the Etrurian city of Falerii and dated to the mid-fifth century BC, where we see a heroic figure racing nimbly ahead of a large tortoise.³ The painter's response is amusing though not particularly satisfying, for until one identifies where Zeno's reasoning goes wrong, the contradiction he has generated persists.

Zeno likewise argued in various ways that the common-sense assumption that there are many things leads to contradiction. The arguments against plurality that we know of are more elaborate than the arguments against motion reported by Aristotle. Consider the antinomy of limited and unlimited. We are better informed about this argument than about any other argument by Zeno thanks to Simplicius' quotation in his commentary on Aristotle's *Physics* of what must be the greater portion of the original. Simplicius means to rebut Porphyry's opinion that the argument from dichotomy Aristotle mentions as motivating the early atomists belongs to Parmenides:

And why speak at length when in fact the argument is given in Zeno's very treatise? For in showing that if there are many things they are limited and unlimited, Zeno writes word for word as follows: 'If there are many things, it is necessary that they be just so many as they are and neither greater than themselves nor fewer. But if they are just as many as they are, they will be limited. If there are many things, the things that are are unlimited; for there are always others between these entities, and again others between those. And thus the things that are are unlimited.' And in this way he demonstrated their

³ Rome, Museum Villa Giulia National Museum, inv. 3591. See Hoffman 2004 and the accompanying plate.

numerical infinity by means of the dichotomy. (Zeno 29B3 DK *ap. Simp. in Ph.* 140.27–34 Diels)

All that appears to be lacking is the conclusion that there are not many things because they cannot be both limited and unlimited. This could have come before or after the text quoted by Simplicius, or some more general statement to the effect that saying there are many things commits one to asserting contradictories could have prefaced a series of arguments. This possibility is suggested by the way Simplicius introduces his account of Zeno's antimony of large and small with the general remark that each of the arguments in his treatise was designed to show that one who says there are many things winds up saying opposites (*Simp. in Ph.* 139.5–7 Diels).

The following reconstruction aims to adhere closely to Zeno's words while making their reasoning a bit clearer. The general goal is to show both that if there are many things, then there must be finitely many things, and if there are many things, then there must be infinitely many things. The assumption that there are many things is thus supposed to have been shown to lead to the contradiction that things are both finitely many and infinitely many. The particular argument for the first arm of the antinomy seems to be simply: If there are many things, they must be just so many as they are. If the many things are just so many as they are, they must be finitely many. Therefore, if there are many things, there must be finitely many things. Simplicius somewhat loosely describes the antinomy's second arm as demonstrating numerical infinity through dichotomy. In fact, the argument depends on a postulate specifying a necessary condition upon two things being distinct, rather than on division *per se*, and it may be reconstructed as follows: If there are many things, they must be distinct, that is, separate from one another. Postulate: Any two things will be distinct or separate from one another only if there is some other thing between them. Two representative things, x_1 and x_2 , will be distinct only if there is some other thing, x_3 , between them. In turn, x_1 and x_3 will be distinct only if there is some other thing, x_4 , between them. Since the postulate can be repeatedly applied in this manner unlimited times, between any two distinct things there will be limitlessly many other things. Therefore, if there are many things, then there must be limitlessly many things.

Gregory Vlastos describes this argument as 'beautiful in its simplicity'. Jonathan Barnes regards it as 'merely *simpliste*'.⁴ Whatever judgement one

⁴ Barnes 1982a: 252, cf. Vlastos 1967: 371.

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passes on its substance, one has to acknowledge that the form of Zeno's reasoning is audaciously original. There are some intricately structured arguments in Parmenides 28B8 DK, of course, but nothing quite like the pattern of reasoning whereby Zeno argues against his targeted claim by showing how it leads to contradiction. Zeno may therefore fairly be credited with inventing the technique of *reductio ad absurdum*. His achievement is only augmented by the way he recurs to the same pattern in other arguments for which we still have evidence to the effect that if there are many things, they must be both like and unlike, which is impossible (Pl. *Prm.* 127e1–4), and that if there are many things, they must be both so large as to be unlimited in magnitude and so small as to have no magnitude at all (Zeno 29B1 and 29B2 DK *ap. Simp. in Ph.* 139.7–15 and 140.34–1.8). This latter argument is actually a super *reductio*, in that it purports to show not only that the assumption that there are many things leads to contradiction but also purports to reduce each of the incompatible consequences to absurdity. It is the one true dilemma among Zeno's arguments. The antinomy of limited and unlimited does not present two equally unpalatable alternatives. What is unacceptable is the contradiction that things, if many, are both finitely and infinitely many. The repetition of the basic pattern of argumentation suggests that Zeno had some grasp of the argument's form and appreciated its general power. The only qualification necessary if we are to credit him with the invention of the *reductio* technique is that it is not clear that Zeno meant to establish positively that there are not many things by showing that the claim that there are many things leads to contradiction. The technique of Zenonian *reductio* is not the technique of indirect proof. It appears, instead, to be a technique for inducing *aporia*.

It may or may not be a mere coincidence that Zeno's arguments against plurality all take the form of antinomies while none of his arguments against motion do so. In any case, these arguments generate contradiction and *aporia* in distinct ways. The arguments against plurality present two lines of argument to generate *explicit* contradiction: if there are many things, they are both limited and unlimited, both infinitely large and vanishingly small, and both like and unlike. These contradictions are supposed to call into question the assumption that there are many things. The paradoxes of motion, by contrast, generate an *implicit* contradiction between the ordinary experience of motion's occurrence and the rational considerations Zeno deploys against it. Of course, there is a similarly implicit contradiction in the arguments against plurality, in that the rational considerations not only

lead to contradictory conclusions but taken together contradict the ordinary experience of there being many things. Both his opposition of *logos* to *logos* in the antinomies and the broader opposition he generates between *logos* and perceptual experience would have a long history. Furthermore, unlike Heraclitus, Zeno at no point suggests how the contradictions he presents might be resolved. Although later philosophers and mathematicians, from antiquity to our own era, have developed responses in the course of their own enquiries into space, time, motion, and infinity, it seems unlikely that Zeno meant his paradoxes to stimulate enquiry by framing a set of problems. Zeno's purposes appear to have been generally negative rather than positive, and in this respect he set the trend in the use of contradiction in the rest of early Greek philosophy.

It has often been supposed that Zeno's arguments against plurality and motion were meant to maintain in a different form the position of Parmenides. Socrates says as much in Plato's *Parmenides* when he accuses Zeno of trying to conceal the fact that, in saying that things are not many, he is really just saying the same thing as Parmenides, who said that things are one (Pl. *Prm.* 128a6–b6). But Plato has Zeno correct Socrates on this point: Zeno says that his book was instead meant to provide indirect support for Parmenides' teaching against those who supposed its consequences were ridiculous by arguing that their own presumption that there are many things leads to even more absurd results (*Prm.* 128c6–d6). Plato's Zeno does not countenance Socrates' view that his arguments against plurality reached the same conclusion as Parmenides by different means. Likewise, the historical Zeno should not be regarded as a defender of a view – namely, that only one thing exists – that should not be ascribed to the historical Parmenides. So Jonathan Barnes states:

Zeno was not a systematic Eleatic solemnly defending Parmenides against philosophical attack by a profound and interconnected set of reductive argumentations. Many men had mocked Parmenides: Zeno mocked the mockers. His *logoi* were designed to reveal the inanities and ineptitudes inherent in the ordinary belief in a plural world; he wanted to startle, to amaze, to disconcert. He did not have the serious metaphysical purpose of supporting an Eleatic monism.⁵

I would add that Parmenides himself does not belong to the early history of aporetic reasoning because his arguments are not designed to leave us in *aporia*. He aims instead to show that it is possible to achieve an understanding

⁵ Barnes 1982a: 236. See further Palmer 2009: 189–205, for the view of Zeno presented here.

that does not wander in the way human understanding typically does when focused on the mutable entities apprehended via the senses. A more stable form of understanding is possible when we try to focus our minds on what is and cannot not be and consider what such an entity must be like just in virtue of its necessary mode of being.⁶

Melissus of Samos, by contrast, certainly does belong to the early history of aporetic reasoning. Like Zeno, he developed arguments contradicting the common-sense presumption of plurality and change rooted in perceptual experience. Unlike Zeno, however, Melissus' arguments exploit difficulties in the logic of being in a manner not unusual in the wake of Parmenides. Melissus' treatise contains two major arguments: one in 30B1–7 DK for the thesis that 'one thing only is', an argument which he calls his 'greatest proof', and a second in 30B8 DK against the view that many things are. In the first, he argues that whatever is, is ungenerated, sempiternal, spatially unlimited, unique, homogeneous; it is subject to neither alteration nor rearrangement, it suffers neither pain nor anguish, and it is full, unmoving, neither dense nor rare, and nowhere divided. He begins his argument as follows: 'Whatever was always was and always will be. For if it came to be, it is necessary that prior to its coming to be there is nothing; if then nothing there was, in no way could anything come to be from nothing' (30B1 DK). The first sentence of 30B2 DK, which may have followed directly upon these words, completes the argument: 'Since then it did not come to be, it is and always was and always will be'. Melissus appears to be referring here to the totality of what was, is, and will be rather than to each individual entity in the set of all entities. In this way he can rely on the principle that there is no *genesis ex nihilo* to generate the conclusion that whatever is always was and will be. (If he meant only each entity in the set of entities, the principle would not secure the conclusion.) By the end of his argument, he has effectively ruled the individual entities belonging to the set of all entities out of existence, for he has argued that there is only a single, limitless, unchanging, and completely undifferentiated entity. He also moves to restrict use of 'being' to entities that are not subject to change: if whatever is always was and always will be, then whatever has not always been and will not always be – that is, whatever is subject to change – cannot be something that 'is'. The restriction of use of 'being' to what is always is crucial for Melissus' arguments in 30B7 that what is cannot suffer diminution, growth,

⁶ Palmer 2009: chs. 2–4, develops this view in detail.

rearrangement, pain, or distress. He stresses that all these varieties of change involve some sort of becoming or perishing of what is.

The notion that whatever is cannot be subject to becoming and whatever becomes cannot properly be said to ‘be’ becomes central to Melissus’ second argument against the common-sense view that many things are. He says:

If many things *were*, these would have to *be* just as I say the One *is*. For if earth *is* and water and air and fire and iron and gold, and the living and the dead, and black and white and other things such as people say are real, if indeed these things *are*, and we see and hear correctly, each must be just such as it first seemed to us, and it must not change or become different, but each thing must always be just as it is. (30B8.2)

People are prone to say that all manner of things ‘are’, but since this verb, according to Melissus, properly applies only to things that are (what they are) always and invariably, if we are right to say that the various objects of our experience ‘are’, then they must perpetually be just as we encounter them, and they cannot be subject to change or alteration. The passage is not concerned with the mere existence of earth, water, air, and the rest, but with the question of whether any of these things can properly be said to ‘be’, that is, whether any of these things *really* are, where this is taken by Melissus to amount to their *only*, or ever and immutably, being (what they are). In short, Melissus denies that entities subject to change can properly or strictly be said to ‘be’. This is not immediately equivalent, however, to denying that entities subject to change do not exist. He proceeds to draw out the contradiction between our experience of the mutability of things and what would be entailed by saying that such things ‘are’: ‘while we say that many things “are” and so eternal and having their own characters and strength, it seems to us that all things become different and change from how they appear on any particular occasion’ (30B8.4). On the one hand, if the things people speak of as being real are in fact so, then each of them must always be just as it is (\approx 30B8.2), and yet experience shows that even those things that seem strong and permanent do not continue being what they once appeared to be (\approx 30B8.3). Melissus then resolves the contradiction by rejecting the hypothesis that numerous things ‘are’, a hypothesis based on the impressions of stability that lead people to speak of various things as ‘being’ or ‘being real’. ‘Therefore it is clear’, he says, ‘that we have not seen correctly and that those many things do not correctly seem to *be*: for