

More on Zeno's *Forty Logoi*

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In *Illinois Classical Studies* 11 (1986) 35–41, John Dillon presents material from Proclus' *Commentary on the Parmenides* in which he makes it clear that Proclus knew of a work purporting to be by Zeno, which contained forty *logoi*; this work was allegedly the one which "Zeno" had just read at the opening of the main narrative of Plato's *Parmenides* (127c), and which Socrates subsequently challenges (127d–30a). Dillon presents the same material in his introduction to Proclus' *In Parmenidem*.¹ Its relevance is no longer confined to the Neoplatonists, since Dillon believes that it is possible that the *Forty Logoi* "at least contained genuine material, though perhaps worked over at a later date."² It threatens to have implications both for Eleatic Studies and for the interpretation of the *Parmenides* itself.

I believe that the issue must be tackled again, not merely because of Dillon's judiciously aporetic conclusion, but because I fear that there are important points which have not yet been tackled. Firstly, from a passage which is not included in Dillon's survey, but which seems to me to be relevant, it appears that the allegedly Zenonian work was known to much earlier, pre-Plotinian interpreters; and that they considered it important for the interpretation of the hypotheses of the second part of the *Parmenides*, at least down to 155e and possibly beyond. This increases the potential importance of the work, as well as marginally increasing its claim to be genuine; at least it was not a *Neoplatonic* forgery.

Secondly, in spite of Proclus' apparent familiarity with it, it does not seem to clarify for him Plato's rather puzzling reference to the "first hypothesis of the first *logos*" at 127d7; one would have expected that consultation of the relevant text of Zeno would have done so, and this might be thought an obstacle to the belief that the work is what it purported to be.

Thirdly, there is a significant question of Proclus' independence: there are some disturbing features about the historical material in this commentary which are absent from his *Timaeus*-commentary, for instance. Most relevant here is the rather scrappy way in which Parmenides himself

¹ *Proclus' Commentary on Plato's Parmenides*, trans. G. R. Morrow and J. M. Dillon (Princeton 1987) xxxviii–xliii.

² *ICS* 11 (1986) 41 = *Proclus' Commentary* (previous note) xliii.

has been quoted. On p. 665 the three short quotations from B8 are out of order; on p. 708 two of the same snippets of B8 have B5 (whose genuineness is less than certain)³ in between them; at p. 1152 we meet seven tiny quotations, the five from B8 this time being in the correct order, but with an impossible version of B3 between B8. 30 and B8. 35–36; B4. 1 then follows.⁴ The total number of lines quoted in whole or part (excluding uncertain allusions) amounts to only 21 (9 of these from B8. 25–36), but some lines appear three or more times (B8. 4, 25, 29, 44). It is clear that Proclus had remembered certain favourite phrases, and one doubts whether he was referring to any text, except possibly at p. 1134, where a passage of four lines (!) is quoted; even here either Proclus or the scribes have failed us in the last line. Likewise there is no need to suppose that he is referring at any point to the alleged work of Zeno. Certainly he knows something about it, and he may well have had access to it, and read it in the past. But I do not find anything in the text which requires that he should be consulting the work as he writes. Furthermore, if we bear in mind that earlier interpreters had made use of the *Forty Logoi*, much of Proclus' material on the work could plausibly be attributed to borrowings from earlier commentaries. One which he had certainly used is that of Plutarch of Athens, whose work on earlier interpreters Proclus evidently admired (p. 1061. 18–20).⁵ We should not allow any admiration for Proclus as a philosopher, or even for the doxographic material in other commentaries, to lead us to suppose that his reports will be *either original or reliable* in this commentary.

³ See G. Jameson, "'Well-Rounded Truth' and Circular Thought in Parmenides," *Phronesis* 3 (1958) 15–30; cf. Tarrant, *Apeiron* 17 (1983) 82 n. 21.

⁴ There is a reasonable chance, however, that B4 is placed correctly after B8, since P. J. Bicknell, "Parmenides B4," *Apeiron* 13 (1979) 115, argues that it comes at the end of the poem; I have defended this view in *Apeiron* 17 (1983) 73–84, though I do not anticipate widespread acceptance of it. As for B3, or what *seems* in Proclus to be B3, its position between B8. 30 and B8. 35 is intriguing, given that B8. 34 signifies the identity of thinking and thinking "it is" while B3 signifies the identity (for the Neoplatonist at least) of thinking and being. This may suggest that B3 originally arose from an inaccurate paraphrase of B8. 34; or that B8. 34, which either Proclus or the source has before his eyes, brought to mind B3. In that case B3 would have been some way away from B8 in the text, otherwise the commentator would have referred to the correct version and made sure that he had the correct text, for it could scarcely have escaped him that what he gave did not scan.

⁵ Here one must note that interpreters prior to Plutarch of Athens are not named in this commentary. This namelessness is not Proclus' policy, since Plutarch and Syrianus are clearly identified, Plutarch by name (1058) and Syrianus by the phrase "our master." Moreover Proclus has no qualms about identifying earlier commentators in other works. Thus one might assume that the policy of anonymity had in fact been that of an important source of Proclus' information on early commentators; if this were Plutarch of Athens, then it would explain why he is the first to be named by Proclus. I cannot agree with Dillon (above, note 1) that Plutarch did not produce a written commentary; how else could Proclus have written p. 1061. 13–22?

Old Interpreters and Zeno's Arguments

Proclus believed that the *Forty Logoi* were useful for explaining a number of *loci* at *Parm.* 127d–31b. Some, however, had gone a great deal further, and they had argued that a work of Zeno, identified by Proclus at least with the *Forty Logoi*, was crucial to the understanding of the *Parmenides* as a whole. These persons, who seem to have been the earliest group of the four whose interpretations are discussed at p. 630. 37 ff.,⁶ believed that Plato pursued his rivalry with other schools in three ways: by polished imitation (as in the *Menexenus*), by direct opposition (as in the *Parmenides*), or by a combination (as in the *Phaedrus*).

The theory behind their interpretation of the *Parmenides* as anti-Zenonian polemic is as follows:

For whereas he [Zeno] had attempted to catch out those who posit many beings in many ways, so that his refutation extends to *forty arguments which bring opposite attributes into contention*, he [Plato] himself composed his wide-ranging display of arguments with a view to the One, contending against him who had exercised against the plurality of beings, and showing *in the same fashion as him* the opposite attributes accruing to the same subject; and as he criticised the many by showing that the same things were similar and dissimilar, same and different, and equal and unequal, it is *along the same lines*, they say, that Plato too shows the One similar/dissimilar and not-similar/not-dissimilar, same/different and not-same/not-different, and so on in every case: both asserting and denying the conflicting attributes, and not merely asserting them as Zeno had done. By these means he showed his richness of argument to be far greater than that which in Zeno's hands had so stunned the others that the sillographer [Timon] called him "double-tongued," and, in delight at the man's powers, spoke of Zeno's "great strength, not easily exhausted." So what utterance would he have let fly concerning the man who had multiplied the methods of his discoveries, when he called Zeno double-tongued?

(pp. 631. 36–32. 23)

⁶ I tend to disagree with Dillon (above, note 1) on the identity of the first two groups of early commentators. Identifying "Alcinous" with Albinus, Dillon feels that Albinus made positive logical use of *Parm.* at *Didasc.* 6, and hence that he is typical of group 2. But group 2 see Idea-theory as critical (p. 633. 16–18), and Galen had given the work an Idea-related purpose (Damascius, *V. Isid.* fr. 244), while still including it among logical works (see the four compendia coupled with that of *Parm.*, P. Kraus and R. Walzer (eds.), Galen, *Compendium Timaei Platonis* [London 1951] 1). Moreover, logical examples in *Didasc.* 6 do not mean that the work's purpose was necessarily regarded as "logical," and *Parm.* may be behind a little negative theology in *Didasc.* 10. As for Albinus, by explicitly placing the logical dialogues in the "zetetic" class rather than the hyphegetic group (called by Proclus, *In Parm.* 631. 4, "aporetic" and "hegetic" respectively), he seems thus far to be allied with Proclus' first group of commentators, whose views we are discussing (see Albinus, *Prolog.* 6, p. 151. 6 Hermann). There is nothing, however, to suggest that he would have been their principal spokesman. *In Parm.* p. 862. 35–39 appears to refer to the same group, who see Plato and Parmenides as less than happy with Zeno's work; less clear is whether they or group 2 are in mind at pp. 1051. 40–52. 3.

Proclus has included much unnecessary material about the views of these interpreters, not merely the talk of Timon but also details of their interpretations of the *Menexenus* (631. 21–34) and *Phaedrus* (632. 23–33. 12); it is scarcely possible that he is not following them, or some reliable source for them, in some detail; this is confirmed by the fact that the whole passage, apart from the final rhetorical question, is expressed by means of the accusative and infinitive, thus ruling out the possibility that any substantial portion of the text expresses Proclus' own view.

The claim is made that Plato, presumably in hypotheses 1 and 2 of the final part of the *Parmenides*, imitates Zeno, arguing for the application of the same opposite attributes to the One that Zeno had applied to the many; the claim is made that Plato is even more thorough than Zeno in that, besides arguing for Fx and Gx , where G is F 's opposite, he argues also for $(-F)x$ and $(-G)x$. It is a fact that in many cases hypothesis 1 (137c4 ff.) dissociates the One from both opposites of a pair (138b7–41a4), while hypothesis 2 (142b1 ff.) predicates both opposites of the One (145e7 ff.). The question is whether Plato is consciously trying to outdo Zeno's arguments, constantly dealing with the same predicates, and constantly using Eleatic techniques against the Eleatics.

The fact that such an interpretation could be argued in antiquity means that the book attributed to Zeno must have been compatible with this thesis; the fact that the interpretation eventually fell from grace meant that the book did not establish every detail of the interpretation. Initial opposition was based on the claim that Platonism regards Eleatic monism as an ally, and that Plato's respect for Parmenides extended also to his pupil Zeno (pp. 633. 14–34. 5). It could deny that the hypotheses were evidence of anti-Eleatic polemic; it may not have denied that they imitated and surpassed Zeno's own arguments. The passage quoted might indeed suggest that Proclus was happy with such a claim; for whether or not the rhetorical question is his own, he need not have included it, and by doing so he appears to sanction this aspect of the interpretation.

The extract seems to tell us three things about Zeno's book: (i) that it contained 40 *logoi*; (ii) that the *logoi* were arguing for opposite conclusions concerning the hypothetical many; and (iii) that three pairs of opposites attached to the many were similar/dissimilar, same/different, and equal/unequal: probably in that order. This agrees with what Proclus tells us elsewhere: on p. 694. 23 ff. the arguments are said to be 40, and we hear of similar/dissimilar (the first pair in the testimony of Plato, 127de), one/many, rest/motion, equal/unequal (619. 30 ff., 769. 22 ff.), if not of same/different. The early pages of the *Parmenides* would have suggested similar/dissimilar, one/many, and rest/motion (see 129d8–e1), but not same/different or equal/unequal. What seems uncertain is whether the *Forty Logoi* was made up of arguments for 2×20 predicates or 2×40 predicates. The text at *Parm.* 127d7 would actually suggest something more

complicated than either possibility: it talks of the first "hypothesis" of the first "logos," and one might readily identify this "hypothesis" with the argument that if there are many, they must be both similar and dissimilar, and since this is impossible there are not many. Could there have been a number of hypotheses for each *logos*, each of them constituting a separate argument, and thus bringing the total of arguments (as opposed to *logoi*) to well in excess of 40, and the predicates perhaps to well over 80?

Proclus seems to be somewhat confused by what he finds in Plato, and it is likely that he was himself puzzled by Plato's expression, "the first argument's first hypothesis." At 694. 25 he remarks that Socrates has taken separately *one of the first logoi*. Why such imprecision? He goes on to set out the *logos* in roughly the same fashion as "Socrates" had done at e1-4: "if there are many beings, what is the same thing will be similar and dissimilar; yet this is impossible, that the same thing should be similar and dissimilar; thus there are not many beings." This he refers to as the whole *logos*, and he states that it is composed of *three* hypotheses, apparently using the term *hypothesis* as the equivalent of "premiss"; there are said to be two conditional premisses and a minor premiss, followed by a conclusion (695. 5-14):

- H(C1): If there are many beings, that which is the same thing is similar and dissimilar.
- H(C2): If the same thing is not similar and dissimilar, there are not many beings.
- H(MP): The same thing is not similar and dissimilar.
- C (unstated): There are not many beings.

It is odd that Proclus finds it necessary to regard H(C2) as a separate premiss, since it is merely an inversion of H(C1). Is he merely trying to divide up the argument into as many premisses as possible? Is he doing so with reference to the actual book of Zeno? Or with reference to the work of some predecessor who had the book ascribed to Zeno available? I believe that what we are offered is neither a complete guess nor a competent appraisal of the Eleatic text and its relationship to the lemma. The structure of this kind of Zenonian argument can be observed in the fragments in Simplicius (B1-3). It should immediately be obvious that Zeno would regard H(C1) as something which two arguments will have to show, and that these arguments will be what requires Zeno's ingenuity. Once they have been completed he only needs to reiterate these findings in the fashion of either H(C1) or H(C2), appeal to H(MP), and state C. Prior to the argument we should expect a statement of what it is intended to prove, and while this might plausibly take the form of the outline given by Socrates at 127e1-4, what we meet in Zeno B3 is simply, "If there are many, the same things will be both limited and unlimited"; or in B2, "If there are many,

they are both great and small; so great as to be infinite, so small as to be sizeless." I suggest that such claims could indeed be called "the first hypothesis" of the argument, but not so much in the sense of "premiss" as in the sense of "proposition to be demonstrated"; each argument would have its own particular proposition to be demonstrated (that if there are many, the same thing would have to be both F and G, where F and G are opposite predicates), and this proposition would then supply the major premiss for the second part of the argument, where the proposition to be demonstrated is common to all (that there are not many).

One cannot improve upon such an interpretation of the term hypothesis here by comparing its use with other occurrences in the *Parmenides*. At 128d5 the hypothesis of Zeno's opponents is simply "if/that there are many"; at 137b3 Parmenides' hypothesis is "if/that there is One." At 136a5 it is clearly in the conditional form, "if there are many," as also at 136b1-2. A variety of translations such as "premiss," "assumption," "proposal," "starting-point" or even "thesis" suggest themselves in some or all of these cases, but none can be applied without difficulty at 127d7: particularly if one asks oneself how the arguments can have had a plurality of "hypotheses" rather than the one "hypothesis"—"if/that there are many." One might be tempted to question the received text, since some modern translations do not render the "first . . . of the first . . ." in full: thus Jowett gives "the first thesis of the treatise," while R. E. Allen gives "the hypothesis of the first argument."⁷ There is, however, not the slightest doubt that Proclus had our text here.

If I have been correct to take the use of "hypothesis" at 127d7 as meaning "proposition to be demonstrated," then is it likely that Proclus was familiar with the *Forty Logoi*? We ought, I think, to assume that even if the *Logoi* were a forgery they would have followed the pattern associated with Zeno. Proclus is perhaps taken aback by a use of the term different from its established uses in logic and from other uses in the *Parmenides*. Yet he is able to realise that Socrates gives more than the initial hypothesis at 127e1-4, and to identify "the first hypothesis" with the correct element, if for the wrong reasons. The worrying feature is that it is to Plato's text, as p. 696 shows, that he has turned for help, and it is Plato's text which has led him to seek further "hypotheses" in further premisses, whereas he would have turned to the supposedly Eleatic text if he had actually been writing with it at his side. He may have read the work in the past, but he is no more anxious to check it now than he is to check the text of Parmenides himself.

⁷ R. E. Allen, *Plato's Parmenides* (Oxford 1983) 4. On p. 69 Allen claims that the arguments of the treatise "Contained 'hypotheses,' . . . of which this paradox is one (127d)," implying, I suspect, acceptance that there were a number of arguments, called "hypotheses," for each *logos*.

Forty Logoi and Hypotheses 1-2

Plato's text, interpreted in any sensible fashion, gives some support for the idea that each *logos* is a unit incorporating two contrary arguments, and trying to show that their conclusions are irreconcilable. If there were forty *logoi* of this kind, then there were forty antinomies, each apparently attaching two opposite predicates to the proposed many. Indeed, to postulate any more pairs of opposites than this would tend to conflict with the passage which we have quoted from Proclus, where it is claimed that Plato's response (at 137c-55e) was far more thorough and detailed than the Zenonian original. There is no proof, however, that the work known to Plato could not have consisted of just twenty antinomies, for *logos* need not necessarily have been used in the same sense by Plato as by Proclus' predecessors. In my view the extract quoted suggests that Plato had tried to attach to the One no fewer groups of predicates than "Zeno" had done. Any attempt to outdo Zeno in the way envisaged by them would have failed if Plato was unable to apply to the One nearly all pairs of predicates which Zeno had applied to the many. How many pairs, then, are to be found in Plato's examination of the One?

The question is not entirely straightforward, because Plato's arguments are not presented in pairs. One must usually search in hypothesis 2 for the material which might be held contrary to material in hypothesis 1. The predicates attached to the One in hypothesis 1 are as follows:

1. not many (137c), not one (141e)
2. not being whole, not having parts (137cd)
3. having neither beginning nor middle nor end (137d)
4. unlimited (spatially) (137d)
5. neither curved nor straight (137de)
6. not in space, neither in self nor in another (138ab)
7. neither moves nor rests (138b-39b)
8. neither same as self or another, nor different from self or another (139b-3)
9. neither similar to, nor dissimilar from, itself or another (139e-40b)
10. neither equal nor unequal to itself or another (140b-d)
11. neither older nor younger than itself or another, nor of the same age (140e-41a)
12. not in time (141a-d)
13. was not, is not, will not be, becomes not, will not become, did not become (141de)
14. has no being (141e)
15. has no name (142a)
- (16?). has no *logos* (142a)
- (17?). has no way of being known (142a)
- (18?). has no way of being perceived (142a)
- (19?). has no way of being opined (142a)

It is obviously possible to count in a slightly different fashion. The final five predicates appear in just one sentence, and could be counted as one; one might divide up no. 13 into being and becoming, though the text suggests that the division into past, present, and future would be preferable. Many of the predicates appear in groups of two or more negations, which could not simultaneously be applied to one normal entity. Thus there is internal paradox. Predicates 2–4, 12 and 14–19, however, are not paradoxical in themselves, but conflict with predicates applied to the One by hypothesis 2, generating what we may call a second-level paradox. Each of the 19 (or 15) topics has contrasting material in hypothesis 2, and one fresh topic is there added to produce an additional internal paradox. The number in brackets in what follows indicates the order of the topics' reappearances in hypothesis 2:

1. is unlimited, many, and one (143a–45a) (3)
2. is a whole with parts (142c–e, 144b–45a) (2)
3. has beginning, middle, end (145ab) (5)
4. spatially limited (though numerically not, 144e–45a) (4)
5. has shape, curved, straight or mixed (145b) (6)
6. both in itself and in another (145b–e) (7)
7. both moves and rests (145e–46a) (8)
8. both same as itself and others, and different from itself and others (146a–47b) (9)
9. both similar to, and dissimilar from, itself and others (147c–48d) (10)
- . . . touches itself and others, and does not touch itself or others (148d–49d) (11)
10. equal to, more than, and less than itself and others (149d–51e) (12)
11. older than, younger than, and same age as itself and others (151e–55e) (14)
12. partakes of time (151e–52a) (13)
13. was, is, will be, became, becomes, will become (155d) (15)
14. partakes of being (142b) (1)
15. has name (155d) (19)
- (16?). has *logos* (155d) (20)
- (17?). is known (155d) (16)
- (18?). is perceived by senses (155d) (18)
- (19?). is opined (155d) (17)

It will be seen that, while there are many similarities of order between the treatment of the nineteen topics in hypothesis 1 and that in hypothesis 2, some adjustments have been made by Plato, in order to achieve more effective presentation of the material: not so much in respect of the internal order of topics 11–12 and 15–19 which may be treated together in any case, but rather in respect of topics 1–4. The new topic added by hypothesis 2 is complete in itself, and it is difficult to imagine how any further contrast could have been achieved by adding further material to hypothesis 1. There

is internal paradox once again in the case of topics 6–11 and 1, but other predicates only contribute to a paradox in conjunction with corresponding material in hypothesis 1.

It could plausibly be argued that Plato has used twenty topics for the development of paradoxes (though some yield both internal and second-level paradoxes, as our commentators had noticed). The topics include all those known to have been employed by “Zeno’s *Forty Logoi*” (9, 8, 10, 1, 7), and others which might be held to be reminiscent of Zeno himself (compare 4 with B3, 6 with A24, and perhaps 18 with the millet-seed paradox of A29).

The fact that one can identify twenty topics in hypotheses 1–2 while forty *logoi* were present in the work of Zeno known to Proclus may be an accident; but it may not be. It is quite likely that the interpreters referred to at pp. 631–32 did believe that Plato had tackled the same topics as Zeno but in greater detail; certainly they believed in a very considerable overlap of topics. With such a belief they might perhaps have tried to *reconstruct* the work of Zeno which they supposed Plato to have used, and this may be the work which Proclus knew. Such a reconstruction of the supposed Zenonian original should perhaps have argued, in some order, that the many were:

1. one and many (see *In Parm.* pp. 620, 760, 769, 862)
2. wholes and parts
3. with/without beginning/middle/end
4. unlimited/limited spatially
5. with/without shape (curved/straight)
6. contained/not-contained in some space (cf. A24)
7. in motion and at rest (see *In Parm.* p. 769; cf. A13)
8. similar and dissimilar (see *In Parm.* pp. 620, 725, 760, 769)
9. same and different (see *In Parm.* p. 632)
10. touching/not-touching
11. equal and unequal (see *In Parm.* p. 620)
12. older and younger
13. in time and not in time
14. generated and ungenerated
15. existing and not-existing
16. with/without a name
17. with/without a *logos*
18. known and unknown
19. perceived and unperceived by senses
20. opined and not opined

It need not have required outstanding ingenuity to devise a passable pseudo-Eleatic work arguing that these groups of predicates must be applied to the many, and there is little doubt that those who saw the *Parmenides* as an attempt to outdo Zeno *either* had access to some such work *or* devised one. If we adhere rigidly to these topics, then it will be much more difficult to allow that the work was genuine, for it is difficult to see how B1–2 and B3 could have belonged to it; and few scholars will be prepared to doubt

what Simplicius has offered us rather than what Proclus gives evidence of. There is a difference between our requirement 4 and the subject of B3, since this latter is talking of limited and unlimited *number*, not size; and though an argument for unity and (unlimited) plurality is our first requirement, Proclus has produced a different "Zenonian" unity/plurality argument at 760. 25 ff., and suggests later (p. 862) that Zeno, in such a context, somehow talked of whiteness (and blackness?) being present both to us and to the Antipodeans, just like night and day.⁸ So B3, I fear, would have to have been a separate element in the *Forty Logoi*. B2, which talks of the many being great (even infinite) and small (even sizeless), can likewise not be identified with any of our required arguments. It is true that greater and smaller do feature in the discussion of equality and inequality at 149d ff. in hypothesis 2, as also at 140c in hypothesis 1, but here they are subordinate to equal and unequal. They also feature in a less subordinate role in hypotheses 5 (160a5), 6 (161de), 7 (164d), and 8 (164e-65a), so that there would have been some incentive to claim that great and small had featured in the work of Zeno.

The assumption that the *Forty Logoi* build twenty antinomies along the same lines as antinomies detectable in hypotheses 1 and 2 thus seems to lead to the conclusion that the *Forty Logoi* was incompatible with our knowledge from elsewhere of Zeno's arguments against plurality. Either it must have been a forgery, or, much less likely, it must have been a different genuine work from that used by Simplicius.

A Case for Authenticity?

Perhaps, however, we are applying the idea of Plato's having used Zeno's topics far too rigorously. Is it likely that Zeno would have argued separately on the topics of knowledge, sensation, opinion, name and definition of the many? Certainly there is a tendency for Plato to mention carefully all five topics, even in hypothesis 7 (164b1-2), but it is in the course of a single argument; if all had been tackled by Zeno (or "Zeno"), they could have been tackled there too as one argument. That would leave space for four more Zenonian arguments which did not find any exact counterpart in Plato, or not at least in hypotheses 1 and 2: unlimited number finds its way into hypotheses 4 (158b) and 8 (164d), though limited number, as distinct from unity and definite plurality, does not. And great and small feature in hypotheses 5-8, if not in the uncompromising fashion of Zeno's B2. Plato might easily have tried to fuse certain Zenonian topics if he thought them closely interrelated; perhaps he thought it undesirable to have too much material on size, number and finity. Thus there is still a chance that the *Forty Logoi*, even if they consisted of just twenty

⁸ See below on this passage; I in fact relate it to an argument for sameness and difference. For a different view see Dillon's earlier article on this fragment, *AGPh* 56 (1974) 127-31.

antinomies with a close relation to the topics of hypotheses 1 and 2, could have stemmed from Zeno himself or have epitomized Zeno's work.

There may also be a point in favour of the work's having been genuine, assuming only a rough correspondence between the latter part of the *Parmenides* and the forty arguments. Early interpreters of the dialogue seem to have known of a work of forty arguments purporting to be by Zeno; Proclus gives evidence of having seen such a work; Elias *In Categ.* p. 109. 6 (Busse) also speaks of forty attempted proofs in support of the non-existence of the many, and five proofs elsewhere in support of the non-existence of motion, and he would appear to have been an independent witness. Is it then likely that Simplicius, at the end of a chain of commentators who knew the *Forty Logoi* as Zeno's, would have drawn his Zenonian proofs against plurality from any other source than this? Had the genuine work come to light? Or had Simplicius found these arguments in a much earlier source? It might be easier to assume that he found them in precisely the same book of anti-pluralistic arguments as other Neoplatonists knew.

As soon as one allowed that the fragments preserved by Simplicius could have been part of the *Forty Logoi*, one would be forced to grant that work a greater respect. The fragments are surely more complex than a forger need have made them, and in particular the argument of which B1 and B2 are parts seems surprisingly intricate. Moreover one could discount the desire to create a work which conformed with a particular view of the hypotheses 1 and 2 as a motive for forgery. If a reconstruction did not have such a motive, then how was it that its content was related so closely to the content of hypotheses 1 and 2, as well as to what we heard earlier in the *Parmenides* about Zeno's book and to the report of it at *Phaedrus* 261d?

Furthermore, upon close examination, it may prove that the very passage which seems most obviously to challenge the theory of Zenonian authorship actually suggests authenticity. I am referring now to *In Parm.* 862. 26–63. 25, of which Dillon only makes much use of the first few lines in his discussion. Firstly, I wish to note that once again Proclus is not the first to have noticed a connexion between part of the *Parmenides* (Socrates' analogy of the day at 131b) and an aspect of Zeno's book (here an alleged use of the analogy of whiteness, somehow connected with day and night). He disapproves of the position taken by certain persons (anti-Zenonians again), that Plato has Parmenides refute Socrates' day-analogy to avoid the embarrassment of refuting a similar example used by his own pupil (p. 862. 35–39). Secondly, I wish to draw attention to pp. 862. 39–63. 2, where it says that Parmenides could have challenged Zeno over the analogy before he had read his discourse; this means that the analogy was assumed to be part of the work supposedly ready by Zeno at 127c, i. e. the *Forty Logoi*.

I quote the Morrow–Dillon translation at 862. 26–34:

... for Zeno, in his endeavour to show that the many participate in some one, and are not devoid of one, even though greatly separated from each other, has said in his discourse that whiteness is present both to us and to the antipodes, just as night and day are.

And again at 863. 23–25:

... in the way of the whiteness that is both in us and in the antipodes, and the latter is obviously what Zeno had likened to day and night.

Now there are four points against seeing this analogy (however it worked) as Zeno's own:

- (i) the seemingly Platonic participation–language;
- (ii) the vivid imagery in what otherwise might have seemed a very abstract writing;
- (iii) doubts as to whether the concept of Antipodeans would have been in circulation at around 450 B.C.;
- (iv) the apparent incompetence of the analogy, bearing in mind that Antipodeans are precisely the people who cannot be experiencing day or night at the same time as we are.

Proclus' ability to Platonize pre-Platonic writings when he chooses, and to understand their purpose in relation to the supposed truths of Neoplatonic philosophy, should not be doubted. As we have seen, one must not expect Proclus to have the Zenonian work at his side for consultation. His defence of Zeno's analogy at 863. 2–21 relies upon its having been Zeno's intention to demonstrate the unity of immanent form, as opposed to transcendent: as unlikely a purpose for a pseudo-Eleatic forgery as for Zeno himself. What the terminology of participation conceals, I think, is that Zeno was trying to demonstrate not the unity but the sameness of the whiteness in us and whiteness in Antipodeans.

The vivid imagery would be more of a problem if we did not possess the paradoxes on motion, which R. E. Allen seeks to exclude from the work against plurality precisely because of their vividness.⁹ Zeno could be vivid, and we have nowhere near enough information on the work against plurality to doubt that he could have been there. Furthermore, my reconstruction of the argument will not make it quite as vivid as one might be expecting from Proclus' account.

The notion of somebody standing *antipous*, i. e. at the very opposite side of a spherical earth, appears in Plato's *Timaeus* (63a) and in a related

⁹ See Allen (above, note 7) 69; in the end I cannot accept this argument for the separateness of the motion-paradoxes. Note that, if early commentators were right to view hypotheses 1–2 as a response to the anti-pluralistic works, hypothesis 3 (or the corollary to hypotheses 1–2 if it is so viewed, 155e–57b) which deals principally with problems of motion and change, coming to be and passing away, might be some kind of response to the motion paradoxes; this might make the view that they were a corollary to the anti-pluralistic arguments attractive.

passage of the Aristotelian *De Caelo* (4. 308a20). Much of the material in Timaeus' account of the workings of the physical universe is drawn from the Presocratics, and the antipodes do occur in the account of Pythagorean doctrine given by Alexander Polyhistor at D. L. 8. 26. The Ionian opponents of the western-Greek spherical earth would surely have noticed the satirical potential of the notion of people who walk the opposite way up to the Greeks, and the notion of a spherical earth was found in Parmenides' cosmology (A1, A44). Any attempt by Zeno to show the Antipodeans to be the same as us might therefore have had the additional purpose of removing the sting from an Ionian weapon against western cosmology.

The incompetence of the analogy can only be proven if we know how the analogy was used. Certainly Socrates uses the example of a single "day" which embraces (people in) many places. It is a fact that the same "day" (where "day" is opposed to "night") cannot embrace both us and those who are antipodean to us. There is little chance that this would have escaped the notice of those who understood about the moon's reflected light. "Day," "night," and "white-appearance" too will be different for us and for the Antipodeans in so far as they occur at different times. One horn of a dilemma will be readily available, and the challenge of finding a counter argument will appeal to an Eleatic Palamedes.

What was the counter-argument which he produced? Proclus preserves what appears to be part of the hypothesis of the argument:

- (H₁) "The many participate in some one, even if they stand at the greatest distance from each other." (862. 29–30, my translation)

Removing the participation-language, we are left with:

- (H₂) (If there are many), they are the same, even if they are maximally diverse.

This might be opposed to:

- (HB) (If there are many), they are different, even if they are as close as possible.

One then concludes the argument:

thus if there are many they are both the same and not the same;
but this is impossible; therefore there are not many.

The ambiguity in *κᾶν εἰ διειστήκει πορρωτάτω ἀπ' ἀλλήλων* can be made use of by Zeno. The Antipodeans are the furthest people from ourselves, but they might also be thought to be most different, completely inverted human beings in an inverted cosmic situation. But of course Zeno cannot just say "even if they are most different" while maintaining that the *same* things cannot be *different*. Thus an expression indicating maximal distance but with implications of considerable unlikeness is just what he wants.

Having chosen two peoples most diverse, he takes something which cannot be present to them simultaneously: whiteness. The exact meaning of this term here is doubtful, but it would be more appropriate for it to mean "lightness" or even "daylight" than to be restricted to the colour white, for only then does the connexion with day and night become apparent.

Now lightness for the Antipodeans is that which is present only during the day;

but lightness for us is that which is present only during the day;

thus lightness is the same for us as it is for the Antipodeans, even though their lightness and ours are at the greatest possible remove.

Now it is obviously not true that Zeno is making our sharing the same whiteness with the Antipodeans dependent upon our sharing the same day (in the sense of being simultaneously embraced by a single day-lit sky); but if one starts with the conviction that Zeno was using a good philosophic argument rather than a sophism, as Proclus did, then one might indeed conclude that he wanted us to share the same lightness with Antipodeans *in the same way* as we shared the same day with them. And 131b might have reinforced his impression that this was so.

There can be no conviction that my argument for the sameness of whiteness (lightness) for us and whiteness for the Antipodeans is exactly that of the *Forty Logoi*. But (i) it seems such as might have produced the reaction that we find in Proclus at *In Parm.* pp. 862–63, particularly if Proclus was not actually consulting the text of "Zeno"; and (ii) it would agree reasonably well with the pattern of Zenonian arguments reported by Simplicius. Moreover (iii) it does not involve any incompetence whatsoever in the choice of the illustration, nor does it make the illustration particularly vivid. What it does do is to produce an argument which would have been reasonably at home in the philosophic milieu of the mid-fifth century B.C., and which is unlikely to have been reproduced by an ill-informed imitator at a much later date. It could not have been prompted by the reading of *Parm.* 131b, though Plato could plausibly have thought of the example of daylight there after meeting a similar example in Zeno's text. That Zeno should have used examples involving light and dark is also highly appropriate, given that these were the principles of Parmenides' cosmology, and that they also feature prominently in his prologue.¹⁰

These considerations lead me to conclude, with some reluctance, that Dillon is correct in supposing that Proclus *may* have genuine Zenonian material in mind, even if it had been reworked or epitomized. The use of the *Forty Logoi* by commentators clearly had a long history, and it had been

¹⁰ B8. 53 ff., B9, B12. 1–2; B1. 9–11—whether the prologue depicts a journey from day into night or vice-versa need not concern us here.

seen as important for the understanding of the early pages of the *Parmenides* and of a large part of its later inquiry into the One.

A Case Against Authenticity

The case for full authenticity has presumed that Simplicius himself is using the *Forty Logoi* for his own reporting of Zeno's arguments, but that assumption entailed the rejection of a close correspondence between the *Forty Logoi* and the twenty antinomies detected in the *Parmenides*. It may be preferable to assume that Simplicius, rather than using a late compilation of supposedly Zenonian arguments, had resorted to ancient reports of these arguments from a good source such as Theophrastus. Such a theory might be attractive for those who would not wish to see the content of the *Parmenides* as being determined as much by a work of Zeno's as by Plato's independent didactic purposes. In this case one would attribute to the author of the *Forty Logoi* a wish to reconstruct Zeno's book, employing (i) the assumption that the *Parmenides* is a rigidly anti-Zenonian work; (ii) any evidence of its content which could be extracted from Plato; and (iii) any further evidence which could be obtained. Such a reconstruction could have been presented as an epitome such as one finds in the Pseudo-Aristotelian *MXG*, introduced by "Zeno says . . ." or some such words. Its serious scholarly purpose might mean that it preserved valuable details in parts (as on the antipodes argument?) alongside much which stemmed from the unproven conviction that Zeno's work contained twenty antinomies directly related to hypotheses 1 and 2: for arguments leading to the application of 40 predicates had to be found, and those which were not reported in the sources would simply have had to be invented.

A Non-Conclusion

While the case against authenticity impresses me more than any in favour of complete authenticity, I must ultimately suggest that Proclus' testimony should be studied by those interested in Zeno, and perhaps even by those seeking an explanation of the *Parmenides*. The evidence against the *Forty Logoi* is not yet compelling, and its probable purpose had more to do with informing us than with deceiving us. It may indeed have contained valuable information from outside Plato, now obscured by Proclus' rather inadequate reporting.¹¹

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¹¹ It has been useful to discuss this material with David Sedley, Myles Burnyeat, Malcolm Schofield, and John Dillon himself.

