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H. D. P. Lee

Excerpt

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INTRODUCTION

The object of this study is not so much to expound the philosophy of Zeno as, by means of a collection of the relevant information, to present as a whole what there is to be expounded. Zeno is most widely known as the author of the four famous arguments on motion; and anyone who has read any part of what has been written about him cannot fail to notice that by far the greater part of it is concerned with these four arguments. They are no doubt the most intriguing and the most important part of his philosophy; but none the less too great a concentration on them cannot fail to give a one-sided view. And, though in histories¹ of Greek thought less one-sided accounts are to be found, yet it seemed worth while to put together a text containing the relevant information and so get a view of what we know of Zeno's philosophy as a whole. For, though it is now realised that Zeno is a figure of first importance not only in the history of Greek philosophy, but in the history of philosophy in general, the collections of the texts giving his arguments that have been made up to the present time² are far from exhaustive.

With the exposition or solution of the logico-mathematical difficulties involved in Zeno's arguments I am not concerned; I have not, in any case, the requisite knowledge or skill. I have merely attempted to give as complete a text of Zeno as possible, and to explain in a brief commentary what exactly the arguments were as Zeno expounded them. If it is objected that my knowledge of mathematics is inadequate, I can only reply that Zeno

¹ As e.g. in Burnet, *E.G.P.*³; Tannery, *Science Hellène*; Milhaud, *Philosophes-Géomètres*; Zeller, *Pre-Socratic Philosophy*.

² Diels, *Vorsokratiker*, of course gives the most complete.

Cambridge University Press

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H. D. P. Lee

Excerpt

[More information](#)

2

INTRODUCTION

was as ignorant of modern mathematics as I am; and I think it arguable that one whose mind is not prejudiced by modern mathematical ideas is the more likely to attain historical accuracy.¹

AUTHORITIES

We may divide the information about Zeno of Elea which has come down to us into two kinds. There are, firstly, paraphrases or actual quotations of his arguments, or what are alleged to be his arguments: and there is, secondly, information about his life and his writings and their general nature and purpose. The object of my collection of passages is to give a conspectus of the relevant information of the first kind. For the second kind I shall assume that the collection

¹ Bibliographical note. A great deal of the literature about Zeno which I have consulted is devoted to the solution of the logical difficulties raised by his arguments, and I am therefore not concerned with it. From a more historical point of view the following are relevant:

Brochard, V., *Études de Philosophie Ancienne et Moderne* (first two articles = *Séances et Travaux de l'Acad. des Sc. Mor. et Pol.* N.S. xxix. 1888, 1. pp. 555–68; *Rev. Mét. et Mor.* 1. 1893, pp. 209–15).

Burnet, *Early Greek Philosophy* (ed. 3), pp. 310 ff.

Gaye, J. *Phil.* xxxi. 1908, pp. 94–116 (on the “stadium”).

Hamelin, *Année Philos.* xvii. 1906, pp. 39 ff. (on the “arrow”).

Lachelier, *Rev. Mét. et Mor.* xviii. 1910, pp. 345 ff. (on the “arrow” and the “stadium”).

Milhaud, *Les Philosophes-Géomètres de la Grèce, Platon et ses prédécesseurs* (Paris, 1908), pp. 130 ff.; *Rev. Mét. et Mor.* 1. 1893, pp. 150–6, 400–6.

Tannery, *Pour l'histoire de la Science Hellène* (2me éd. Paris, 1930), pp. 255–70; *Rev. Phil.* xx. 1885, pp. 385–97.

Wicksteed and Cornford, *Aristotle, Physics*, vol. II (Loeb ed.).

Zeller, *Phil. der Griechen*, 1. 1, ed. 6, pp. 755–65; Eng. trans. *Pre-Socratic Philosophy*, by S. F. Alleyne, 1881, vol. 1. pp. 608 ff.

Reference may also be made to Prof. A. E. Taylor's essay “Parmenides, Zeno and Socrates” (*Philosophical Studies*, II), and to his *The Parmenides of Plato*, Appendix A.

My thanks are due to Prof. Cornford for lending me the proofs of the Loeb *Physics*, vol. II, and to Dr Ross for the loan of an unpublished paper of his on Zeno's arguments on motion.

Cambridge University Press

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H. D. P. Lee

Excerpt

[More information](#)

INTRODUCTION

3

given by Diels in his *Vorsokratiker*¹ is adequate, and shall merely give a brief summary.²

For the first kind Aristotle and the three commentators Themistius, Simplicius and Philoponus are our chief sources. I have been able to find hardly any relevant information elsewhere, as e.g. in the doxographers.³ My quotations from Aristotle and the commentators I have tried to make exhaustive, though certain passages which clearly add nothing to our knowledge I have omitted.

Of the three commentators Themistius, though the earliest in date, is admittedly little more than paraphrase, and Philoponus is latest in date and very uninspired. Simplicius is by far the best of the three, and definitely claims (*Physics*, 140. 27) to have had access to an original work of Zeno. Whether this work was genuine or not,⁴ it at any rate represents a source of information independent of Aristotle. But Simplicius actually quotes only from the arguments on plurality, and makes no reference to Zeno's work in his exposition of the four arguments on motion; and had his original contained them this

¹ Referred to simply as Diels, and quoted by section (e.g. 19. A. 1). My references are to his 4th ed. The 5th ed., now in course of publication, reprints the text of the 4th ed. without alteration. The only change is that, whereas in the 4th ed. the chapter of passages from Zeno is numbered 19, in the 5th ed. it is numbered 29.

² See under "Life and Writings" below.

³ Proclus's commentary on the first part of the *Parmenides* does not seem to me to throw any fresh light on Zeno. Certainly I can find nothing quotable as giving Zeno's authentic doctrine. And the fragments of Melissos, Arist. *M.X.G.*, and Gorgias in Sextus, *adv. Math.* seem similarly devoid of any direct reference to Zeno. They would of course be relevant to a consideration of the influence of Zeno on Greek thought (cf. Conclusion, pp. 109 ff.): but they do not seem to me to have any value for establishing directly what Zeno actually said.

⁴ Tannery, *Rev. Phil.* xx. 1885, p. 391, thinks Simplicius "ne possédait qu'un résumé". Zeller (English ed. 1891), p. 611 note, thinks Simplicius "had probably something more than extracts", though not a complete text.

Cambridge University Press

978-1-107-48027-8 - Zeno of Elea: A Text, with Translation and Notes

H. D. P. Lee

Excerpt

[More information](#)

4

INTRODUCTION

omission is remarkable in view of their admitted difficulty. Nor do I think his exposition implies any knowledge of the arguments apart from what he knew from Aristotle, and, possibly, commentaries on him. In other words, the first-hand information he claims covers only the arguments on plurality, not those on motion. Themistius and Philoponus show no signs of having had first-hand knowledge.

In my collection I have quoted first Simplicius, as his commentary is the best and most informative, next the other commentator, Philoponus, and finally Themistius' paraphrase.

TEXT

For the commentators I have followed the text of the Berlin edition;¹ for the two fragments from the doxographers (17 and 18) that of Diels' *Doxographi Graeci*. In the remaining passages, those quoted from Aristotle, I have, except in two instances, printed Bekker's text. The exceptions are Nos. 29 and 35, which deal with the last two arguments on motion, the "arrow" and the "stadium". Here the text presents considerable difficulties; and I have attempted to explain in my notes to the two passages the readings which I think should be adopted.

LIFE & WRITINGS

(a) LIFE

Zeno's *floruit* is round about the middle of the fifth century. Apollodorus gives it as Ol. LXXIX (464–460 B.C.). On the other hand in the *Parmenides* he is supposed to be "about 40" (127 *b* ἐγγὺς τῶν τετταράκοντα); and the dramatic date of that

¹ To which I refer by page and line, e.g. 140. 21 means page 140, line 21.

Cambridge University Press

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H. D. P. Lee

Excerpt

[More information](#)

INTRODUCTION

5

dialogue is 451–449 B.C. (cf. *E.G.P.*³ p. 169), which gives us a *floruit* about ten years later than that given by Apollodorus. This later date is probably to be accepted. For Plato is very circumstantial and detailed in his account of the relative ages of the chief characters of the *Parmenides*. Parmenides is sixty-five, Zeno is forty, and Socrates a “very young man” (σφόδρα νέον 127 b). And it seems unlikely that Plato would have been so precise entirely without reason. Besides, this is the kind of factual detail in which the dialogues are generally admitted to be trustworthy: it is in the opinions he attributes to his characters rather than in detailed matters of fact that Plato is generally supposed not to be strictly historical. The full discussion of the point would necessitate a consideration of the historicity of the Platonic dialogues in general; it is enough here merely to have indicated the reasons in favour of the acceptance of Plato’s dating.

We may therefore suppose that Zeno was forty years of age about the year 450 B.C. But apart from this we have practically no information about the detailed events of his life. Tradition is unanimous that he was a disciple and follower of Parmenides (Diels, 19. A. *passim*).¹ It is to be presumed that he spent a large part of his life in his native Elea. At any rate Diogenes says of him that he was ὑπεροπτικός τῶν μειζόνων and preferred Elea to Athens, οὐκ ἐπιδημήσας πώμαλα πρὸς αὐτοὺς (sc. τοὺς Ἀθηναίους). On the other hand we have no reason to suppose that he did not visit Athens at some period during his life, as Diogenes implies and Plato states in the *Parmenides*. He is said to have been paid good fees at Athens for his instruction ([Plato], *Alcib.* I. 119 a), and we are told that Pericles himself “heard” him (Plut. *Pericl.* 4, 3; Diels, 19. A. 4). But

¹ Diogenes even says his adopted son; but this may well be a misunderstanding of a phrase in Plato’s *Sophist*, 241 d; *E.G.P.*³ p. 311. Zeno’s father’s name was Teleutagoras, Diels, 19. A. 1.

Cambridge University Press

978-1-107-48027-8 - Zeno of Elea: A Text, with Translation and Notes

H. D. P. Lee

Excerpt

[More information](#)

6

INTRODUCTION

how long or how frequent Zeno's visits were we cannot say with certainty.¹

Like other early philosophers he was neither a studious recluse nor a man of purely academic interests, but took an active part in the politics of his native city (cf. Diels, 19. A. 1; 18. A. 12). He is traditionally supposed to have been put to death for conspiring against a tyrant, and variant versions of his heroism under torture are given (Diels, 19. A. 1, 2, 6, 8, 9). When his death took place we cannot say: but it is a not unlikely inference from the stories of his execution that he did not live to any very great age. Perhaps 430 B.C. may be suggested as a *terminus ante quem*.

(b) WRITINGS

By far the most important evidence about the nature and purpose of Zeno's writings is that of Plato, *Parmenides*, 127–8.

According to this Zeno had, when he was comparatively young (at the time of the dialogue he was, as we have seen, “nearly forty”), written a book, which was published without his consent. His object in it was to support the view of Parmenides, that what is, is one, by taking the opposite view, that what is, is a many, and showing that it leads to conclusions that are equally absurd. And Plato seems to go out of his way to contradict the opinion that Zeno wrote merely in a spirit of

¹ Prof. Taylor (“Parmenides, Zeno and Socrates”, in his *Philosophical Studies*) thinks that Zeno “must have settled in Athens and practised his calling there for some considerable time” (*op. cit.* p. 37). He bases his statement largely on the passage from the *First Alcibiades* to which I have just referred, and in which we are told that Pythodorus son of Isolochus and Callias son of Calliades, “two well-known public men of the fifth century” (*ibid.*), paid him 100 minae each for his instruction. Prof. Taylor also cites Plutarch's story that Pericles “heard” Zeno. In the *First Alcibiades* we certainly have fourth-century testimony; and, if this testimony is to be relied on, it makes it seem quite likely that Zeno spent some years teaching at Athens.

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H. D. P. Lee

Excerpt

[More information](#)

INTRODUCTION

7

wanton paradox, and to state emphatically that his book was a perfectly serious philosophical work written in defence of Parmenides and against those who “made fun of him” (*κωμωδεῖν* *Parm.* 129 *a*).

This general view of Zeno’s writings is repeated in the commentators (cf. *Simp. Phys.* 134. 4, 102. 30; *Diels*, 19. A. 23; *Philop. Phys.* 42. 9, 80. 23; *Diels*, 19. A. 21). And though the recurrence of the word *κωμωδεῖν* in both Simplicius and Philoponus makes it seem almost certain that Plato was their source, yet at any rate it shows that they knew of no other tradition of the general tenor of Zeno’s work; and there seems to be no reason whatever for not accepting theirs and Plato’s opinion.

In form Zeno’s work seems to have consisted of more than one *λόγος* (*Parm.* 127*d*; according to Proclus there were forty: *Diels*, 19. A. 15); “and these discourses were subdivided into sections dealing with some one presupposition of his adversaries” (*E.G.P.*³ pp. 312–13). In other words Zeno’s method was to start from some premiss or principle admitted by his opponents and to deduce from it absurd or contradictory conclusions. And so we can understand why Aristotle called Zeno the founder of dialectic (*Diels*, 19. A. 1; *Suidas* repeats the statement, *Diels*, 19. A. 2). For part of the definition of dialectic according to Aristotle is that it consists in arguing from premisses whose truth is more or less widely assumed, from *ἐνδοξα* (*Top.* A. 1),¹ and it was *ἐνδοξα* on the subject of motion and plurality in particular that Zeno was concerned to discredit by taking them as premisses and showing that the conclusions which they involved are absurd. And if we take, as the definition of dialectic, the drawing of conclusions from

¹ Cf. *E.G.P.*³ p. 314, “dialectic is the art of arguing not from true premisses, but from premisses admitted by the other side”.

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H. D. P. Lee

Excerpt

[More information](#)

8

INTRODUCTION

more or less widely¹ accepted truths, it fits Zeno's procedure very well. Only it must be added that Zeno was concerned to draw conclusions that were self-contradictory.

Suidas gives the titles of four books by Zeno (Diels, 19. A. 2): Ἐριδες, Ἐξήγησις τῶν Ἐμπεδοκλέους, Πρὸς τοὺς Φιλοσόφους, Περὶ Φύσεως. But it is impossible to regard this information with very much confidence. We cannot identify any of the four as the book mentioned by Plato—the Ἐριδες seems the most likely of the four, that is all one can say. The Ἐξήγησις, if genuine, may have been not a commentary on Empedocles but a polemic against him (*E.G.P.*³ p. 312, note 1). The title Περὶ Φύσεως is quite uninformative: and in any case it is not certain whether it should not be taken with the previous words, and the whole title read Πρὸς τοὺς Φιλοσόφους περὶ Φύσεως.

On the other hand Πρὸς τοὺς Φιλοσόφους seems to ring truer—and if genuine contains definite information. For in the fifth century the word φιλόσοφος had not yet its generalised meaning of “philosopher”, but meant Pythagorean. And it seems unlikely that after the fifth century, when the word had so much more generalised a meaning, there could have been any sense in giving a philosophical work this title, which could only have been intelligible as long as the term φιλόσοφος kept its specialised meaning. If this argument is valid, we have in this title evidence that Zeno wrote attacking the Pythagoreans.

(c) CONCLUSIONS

(1) We have every reason to suppose that in his general views Zeno was an orthodox Eleatic.

(2) But he developed a particular type of argument whose object was to show that hypotheses other than the Parmenidean

¹ “more or less widely”: cf. Aristotle's definition of ἐνδοξα, 100b 21 ἐνδοξα δὲ τὰ δοκοῦντα πᾶσιν ἢ τοῖς πλείστοις ἢ τοῖς σοφοῖς.

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H. D. P. Lee

Excerpt

[More information](#)

INTRODUCTION

9

“what is, is one” lead to self-contradictory results. His object was to discredit the pluralists. We should not therefore, for instance, expect to find that he held any particular views about the nature of motion, but simply that he tried, as an orthodox Eleatic, to show that the whole idea of motion is self-contradictory and absurd.

(3) There is some reason to suppose that the Pythagoreans in particular were the object of his attacks—as indeed they had been of Parmenides’ before him.

TEXT, TRANSLATION, & NOTES

I now go on to give my collection and translation of the paraphrases and quotations of Zeno’s arguments, and to elucidate in a brief commentary some of the more important points in them. The fragments fall into four obvious classes—those on plurality, those on motion, the arguments about place or space (τόπος), and the dilemma of the falling millet-seed which Simplicius gives in the form of a dialogue between Zeno and Protagoras. I have accordingly divided the fragments into these four sections, putting first those dealing with plurality, second the argument about place, thirdly the arguments on motion, and lastly the millet-seed puzzle. This main division is obvious and not likely to be questioned. The more detailed arrangement of the fragments is bound to be to some extent arbitrary. The fragments on motion naturally fall into four sections each concerned with one of the four famous arguments; but apart from this I have simply followed what seemed to me a reasonably intelligible order, and in places have explained my reasons for the particular order adopted.

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[More information](#)
