

*Empedokles Physika I. Eine Rekonstruktion des zentralen Gedankengangs.* By Oliver Primavesi. Berlin: De Gruyter, 2008. Pp. viii + 84; 3 color plates. \$56.00 (hardback). ISBN 978-3-11-020925-9.

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*In memory of Bob Sharples*

Oliver Primavesi has made an enormous contribution to the study of Empedocles, since he co-edited the *editio princeps* of the Strasbourg papyrus that contains substantial fragments of the *Physica* (Martin and Primavesi 1999). In the present slim volume he courageously revisits some of his central ideas about it in the light of subsequent research, including the discovery of new information on the duration of Empedocles' cycles (Rashed 2001). He includes new details about the history of the papyrus, which came from a funerary pectoral attached to its mummy by a collar rather than from a crown (5-9), an analysis of the philosopher's overall argument in book 1, a discussion of central problems, notably his use of first persons plural (47-57), and a revised text and translation with many new supplements and changes (64-79).

To understand the significance of this book, the philosophical reader will need to grasp some no doubt tedious details of papyrological reconstruction. These are, however, vital to assessing the reliability of any particular theory about this text. The papyrus consisted of 52 fragments, which its editors skilfully assembled into six larger pieces or 'ensembles' (denoted by letters in bold face), leaving only five small scraps. However, they did not succeed in linking these separate ensembles. The beginning of the first and largest, **a**, corresponds to DK B17 as quoted by Simplicius, and contains the sign  $\Gamma$  marking line 300. This part of the text contains a general description of Empedocles' four elements, two forces (Love and Strife), and cosmic cycle. Another ensemble, **d**, appeared to describe the terrible fate of the soul of a person who eats meat. The editors assigned it to a later book of the *Physica*, even though its script and format are identical to those of the other pieces. They did so for two reasons: first, because its content seemed so disparate, and second because they believed that a series of fragments that Simplicius quotes in sequence (DK B17, 21, 23, 26), the first of which corresponds to ensemble **a**, must have come in between the two.

To this reader of the *editio princeps* it seemed an uneconomical and therefore an unlikely hypothesis that fragments of two different rolls in the same hand and format were incorporated into the pectoral from which all the pieces derive; nor did it appear a necessary assumption that they were widely separated within the same roll. Hence I tested the reverse hypothesis, i.e., that all the pieces derive from the same portion of a single roll, by positing that they all came from the smallest possible length within it. The paper model that I made, combined with observations of the papyrus' physical state when I examined it in Strasbourg together with its editors, enabled me to show that (i) ensemble **c** (= B20, which

Simplicius quotes elsewhere) follows immediately upon ensemble **a**, resulting in a new ensemble **a+c**, and (ii) ensemble **d** joins with ensemble **f**: the new ensemble **d+f** reveals that Empedocles is describing not the fate of the soul after death but the creation of birds and animals. I also deduced on these grounds that (iii) ensemble **b** is from the lower part of the same column as **d+f**, (iv) ensemble **d+f+b** constituted the column after ensemble **a+c**, and (v) ensemble **e** is from the next column after **d+f**. If this reconstruction is correct, the papyrus comprises six continuous columns within *Physica* I; when the verses of B17 preserved by Simplicius are supplied at the beginning, we have the text of lines 233-364. A preliminary version of these results, with a discussion of whether Empedocles wrote one book or two, appeared in Janko 2005, and the final version in Janko 2004. It is the latter article that occasioned the writing of the book under review.

It is most gratifying to find that Primavesi accepts my results (i) and (ii). However, he does not accept (iii) or (iv) and does not discuss (v). Instead, he appends ensemble **b** to ensemble **a+c**, intercalating B21 from Simplicius and adding B23, 26 and 35 after it, while he keeps ensemble **d+f** separate from the rest, although he does now assign them to book 1. How was this very different result obtained?

Martin and Primavesi relied heavily on the evidence from Simplicius, who had a complete copy of at least book 1, and Primavesi still bases his argument almost entirely on the Neoplatonist's wording and on a reconstruction involving the sequence of fragments that he transmits. After citing B17 (= ensemble **a**), Simplicius indicates that he omits *πλείονα ἄλλα*, i.e., 'a number of other things', before he quotes B21, 23 and 26 (Simplicius, *Commentary on Aristotle's Physics* 157,25-160,21 Diels, at 159,3), indicating that they are given in the correct sequence. Primavesi puts into this lacuna ensemble **a(i)6-(ii)30** and ensemble **c**, amounting to 62 verses. However, Martin and Primavesi usefully compared Simplicius' use of the expression *ὀλίγον δὲ προελθόν*, 'going a little further on', when he quotes Aristotle, whose text we still have (1999, 105n3, cited in Primavesi 2008, 10n28). In the five cases where Simplicius uses this phrase he omits between 1 and 336 long lines of Aristotle's prose (in Bekker's lineation); by my calculation the *average* omission is 140 lines. By analogy, the more emphatic expression *πλείονα ἄλλα* should refer to a very large omission; thus B21, 23, and 26 can only have fallen between ensembles **a+c** and **d+f** if the two ensembles were several hundred lines apart. Conceivably fragment **i**, consisting only of the letters ]μα[, is from *μεμάθηκε* in B26.8, but there is no certain trace of these fragments among the remains of the papyrus (Janko 2004, 6n31).

Primavesi refers to papyrological evidence only in his unconvincing argument that the papyrus consisted of cartonnage and had therefore been cut up before it was made into the pectoral (5-9). He is at first careful to infer only that the various pieces *may* have been widely separated in origin, not that they *must* have been (8, 24), but eventually concludes that this was the case. Unfortunately he does not discuss the crucial observations of the papyrus that led me to suggest that the extant fragments were very close together. The key to my reconstruction was the large red stain, most conspicuous in the top margin of ensembles **d** and **e**;

this is visible in Primavesi 2008, Tafel II, and in Janko 2004, 26 (where **b** is mislabelled 'c'), though in neither plate does the red color appear as bright as it is in reality. This stain was caused by a spillage of liquid, conceivably wine, which must have happened when the papyrus was still valued for its text rather than as raw material; for one can still see the trough that was carefully formed to pour it off, where the liquid washed away much of the ink. There are no spots of this liquid on the verso of the papyrus, which there surely would have been if the papyrus had been splashed when it was being turned into cartonnage or into the pectoral. Spots, in sizes that in my reconstruction get smaller according to their distance from the site of the spillage, are visible on all the fragments except ensemble **c** (Janko 2004, 5-6). Alain Martin pointed out to me a tiny red spot even on ensemble **a** col. ii (Janko 2004, 6n30), which confirms that the right edge of ensemble **a** was fairly close to **d+f**; in my reconstruction, the ensembles are one column apart. In addition, Primavesi does not refer to the vertical crack after the second letter of the line in ensembles **d** and **b**, which confirms that they belong to the same column, or to the loss of the pith from the papyrus in ensembles **d** and **e**, which corroborates the evidence from matching fibres that these two pieces were adjacent (Janko 2004, 5).

The reader may well wonder which type of evidence is more reliable, the papyrological or the philosophical. Methodologically it seems preferable to reconstruct the physical object first and then to consider what it says (even if a first interpretation is unlikely to succeed completely), rather than to decide, on the basis of a doubtful inference from a phrase in Simplicius, that the papyrus must have continued with a certain set of fragments and then to reconstruct it on that basis: the latter method risks circularity. Hence Primavesi's present reconstruction does not convince. There are, however, valuable contributions among the points of detail that follow:

p. 16: the past tense in the supplement  $\delta\acute{\iota}\epsilon\phi\nu$  in v. 268 surely needs to be matched by restoring  $\sigma\upsilon\nu\eta\rho\chi\acute{o}\mu\epsilon\theta'$  in v. 267.

pp. 19-20: the text of vv. 283-287 is much improved by Primavesi, save that his supplement  $\tau\iota\ \acute{\epsilon}\sigma\epsilon\rho\chi\acute{o}\mu\epsilon\theta'$  is metrically awkward.

pp. 25-27: the repetition between vv. 288-290 and B35.1-5 does not prove that B35 closes an excursus begun at vv. 288-290, since a high level of repetition is typical of Empedocles' style as we now know it from the papyrus. Hence there is no necessity that B35 concludes any of the discussion that began in vv. 232-300.

pp. 28-29: Primavesi is correct that vv. 294-300 exemplify union and separation in our world, but it need not follow that examples of the four elements must have ensued.

pp. 31-33: Primavesi offers a different restoration of v. 301, taking  $\delta\acute{\iota}\acute{\alpha}\kappa\tau\omicron\rho\alpha$  as 'different' rather than 'separative'. We do not yet know with certainty how Empedocles understood this obscure epithet.

pp. 40-42: Primavesi offers an ingenious argument to make B21 at once follow ensemble **c**, but other reconstructions are surely possible.

pp. 42-45: in Primavesi's reconstruction B21 does not easily precede ensemble

**b**, since B21 says that all things result from a mixture, whereas ensemble **b** shows that we can detect the element earth in living beings. Only one verse is available for Empedocles to make the two points that (a) we can detect the elements in living beings, and (b) earth is an example. The fullness of his style would scarcely permit him to do this in one line.

p. 44: Simplicius' corruption of ΓΕΝΕΘΛΗC to ΓΕΝΕCΘΑΙ ΑΙΗC in v. 300 can be explained by the mechanics of palaeography in Greek capitals; there is no need or likelihood to posit that it was prompted by a reference to 'earth' (ΑΙΑ) in the sequel.

pp. 47-57: Primavesi's conversion to the view that Empedocles' 'we' affirms the identity of the fallen daimon to the elements is welcome; he should make reference to Osborne 1987.

pp. 59-60: Primavesi prefers to interpret ensemble **d**,1-4 as a description of O'Brien's phase IVa of the rule of Strife rather than as a continuation of the discussion of death and dissolution in our own world that began in vv. 300-308; this in my reconstruction fell at the top of the previous column (**d**,1 = v. 331). His evidence for this preference is the claim that it is 'offenbar' (60). However, Empedocles speaks of 'limbs' because he holds that, even in our world, our bodies consist of limbs that have grown together; my alternative has the support of Occam's razor. Hence I do not understand why my placing of ensemble **d+f** immediately after **a+c** is said to founder on this point (61n159). Primavesi reconstructs **d+f** as a description of the start of the cosmic cycle following the dissolution of the sphere; this entails positing an uneconomical repetition of **d**,10-14, as one can see from his text, pp. 76-78. I regard it as an account of how different elements come to predominate within different animals and can still be observed in their physical constitutions, e.g., air in the feathers of birds and earth in the shells of oysters and tortoises; Empedocles is still laying the foundations of his theory by proving that the elements are visible in the creatures of our world. The reference to fire reaching the limits of the universe and initiating mixture (**d**,11-12 = my vv. 341-342) will then be a proleptic hint of what is to come rather than part of a full description of this stage of the cycle, which would have followed later; this accords with Empedocles' methods of gradual revelation and careful, step-by-step argument (one can see the same methods in Lucretius).

p. 60: Primavesi's supplement ὅποτ[ε δ' αἰθέρι συμμιχθ]εῖς in **d**,15=f(ii)1, my v. 345, is worth considering.

p. 62: to confirm his reconstruction, Primavesi adduces (without quoting it all or properly specifying its source) an unnoticed fragment of Empedocles. This is in a scholium in MS Laur. gr. 72,15, folio 22, a 13th-century codex of Aristotle's *Categories*. The scholium quotes Porphyry, who cites Alexander of Aphrodisias' argument that Empedocles implies the same order of categories as Aristotle (the fragment was discovered and published by Ebbesen 1987, 309-311). The relevant lines should probably run: ὁ δὲ Ἀλέξανδρος... τὸν Ἐμπεδοκλέα παριστῶν δοξάζοντα πρώτως μὲν στοιχεῖα δ', ἐν οἷς εὐθύς τὸ ποσόν· ετα συνερχόμενα καὶ εἰρηνεύοντα (Ἐρωτι) (supplevi), ἐν ᾧ ἡ σχέσις ἐν ἧ τὰ πρός τι, τὸν νοητὸν

ἀνελεῖν διάκοσμον· Νεῖκος δὲ πάλιν σχόντα, ὅπερ κατὰ τὰς ποιότητάς ἐστιν ἐν ἧ̄ (Sharples per litt.: ᾠ̄ cod.) τὸ ποιόν, τὰ ὑπὸ τὴν αἴσθησιν ἐμφαίνεσθαι. This apparently means: ‘Alexander...presenting Empedocles as positing, first, four elements, in which there is of course quantity; then, by coming together peaceably <in Love>, in which there is relation in <the category?> of relation, they eliminate the intelligible world-order; but by having Strife again, which in terms of qualities exists in the category (?) of quality, they make apparent those things that are subject to sensation’. (I thank Bob Sharples for help with this passage.) Primavesi takes this to be a summary of the structure of Empedocles’ poem, where he deduces that the cycle began with the dissolution of the sphere. This is probable, but there is no proof that the summary refers to that part of *Physica* I that the Strasbourg papyrus preserves. Since the whole poem amounted to between 2,000 and 5,000 verses in length (for a discussion of the evidence see Janko 2005, 94-104), there is plenty of room for a developed account later on, as well as for the series of fragments quoted by Simplicius (B21, 23, 26).

In short, although this further attempt to reconstruct the argument of the papyrus does attest considerable progress, it does not take account of all the available evidence, which seems to require even more drastic changes to the *editio princeps*. There are no indexes.

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