

LUCRETIUS AND THE
TRANSFORMATION OF
GREEK WISDOM

DAVID SEDLEY



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CHAPTER I

The Empedoclean opening

I. CICERO'S LETTER

Lucreti poemata ut scribis ita sunt, multis luminibus ingeni, multae tamen artis. sed cum veneris, virum te putabo si Sallusti Empedoclea legeris, hominem non putabo.

Writing to his brother in 54 BC, Cicero supplies two unique testimonies (*Ad Q. fr.* II 9.4). In the first sentence he echoes Quintus' admiration for Lucretius' poem, thus providing the sole allusion to the *De rerum natura* likely to be more or less contemporary with its publication. In the second, he attests the publication of an *Empedoclea* by a certain Sallustius, presumably a Latin translation or imitation of Empedocles (compare Cicero's own near-contemporary use of the title *Aratea* for his translation of Aratus).

But even more striking than the two individual testimonies is their juxtaposition. Modern editors have taken to printing a full stop after *sed cum veneris*, understanding 'But when you come . . . (*sc.* we will discuss it).' This suppresses any overt link between the two literary judgements: the first breaks off abruptly with an aposiopesis, and the second, juxtaposed, is to all appearances a quite independent observation. On the equally natural and more fluent reading that can be obtained simply by reverting to the older punctuation,¹ as printed above, with a comma instead of the full stop, the letter is an explicit comparison between the *DRN* and the *Empedoclea*:

Lucretius' poetry shows, as you say in your letter, many flashes of genius, yet also much craftsmanship. On the other hand, when you come, I shall consider you a man if you have read Sallustius' *Empedoclea*, though I won't consider you human.

¹ This was the standard punctuation until the late nineteenth century. The repunctuation, with its aposiopesis *sed cum veneris* . . . (unique, but cf. partial parallels at *Ad Att.* XII 5a and XIV 20.3), appears to have been introduced by R. Y. Tyrrell in 1886, in his revised text of Cicero's Letters (Tyrrell (1885–1901)), but without offering any evidence or argument – since when it has been repeated, without comment, by all editors.

If this is right, the two works were being directly compared at the time of their publication, and Cicero, at least, judged the Lucretian poem vastly superior.

Why did this particular comparison suggest itself? It is well recognised that Empedocles is, along with Homer, Ennius, and others,² an important literary influence on Lucretius, and it has even been claimed that he was a philosophical influence.³ But I do not believe that the depth and significance of the poem's Empedoclean character have yet been properly understood. If what I shall argue in this chapter is right, Cicero's comparison of the *DRN* with the *Empedoclea* will turn out to be an entirely natural one, which Lucretius would have welcomed and indeed invited. My case will be centred on the relation of Lucretius' proem to the proem of Empedocles' *On nature*.

2 EMPEDOCLES' TWO POEMS

There is plentiful evidence that it was principally if not exclusively in the hexameter poem usually known in antiquity as the *On nature* (Περὶ φύσεως) or the *Physics* (Τὰ φυσικά) – I shall discuss its actual title in §7 – that Empedocles expounded his world system. The central features of the cosmic cycle it described are well known: four enduring elements – earth, air (called 'aether'),⁴ fire, and water – are periodically united into a homogeneous sphere by a constructive force called Love, then again separated out into the familiar stratified world by the polar force, Strife.⁵ But there is a longstanding scholarly tradition, deriving primarily from Diels' editions published in 1901 and 1903, of attributing all the fragments concerning Empedocles' theories on the pollution and transmigration of the individual spirit, or 'daimon', to a second hexameter poem, the *Katharmoi*, or *Purifications*.

The original ground for this segregation was the belief that the physical doctrine of the cosmic cycle and the 'religious' doctrine of transmigration belonged to radically distinct and probably incompatible areas of Empedocles' thought. But Empedoclean studies have now reached a curious stage. On the one hand, the old dogma has been subjected to searching criticism, and is regarded by many as an anachron-

² The range of literary influences on Lucretius was considerably enlarged by the findings of Kenney (1970). ³ Furley (1970), discussed below; also Bollack (1959).

⁴ For 'aether', rather than 'air', as Empedocles' chosen designation of this element, see Kingsley (1995), ch. 2.

⁵ The traditional belief that zoogony took place in both halves of this cycle, for which see especially O'Brien (1969), has been powerfully challenged by Bollack (1965–9), Hölscher (1965), Solmsen (1965), and Long (1974), and ably defended by Graham (1988).

istic imposition on fifth-century thought.⁶ On the other hand, the conventional apportionment of fragments between the two poems, which was founded on that dogma, remains largely unchallenged, as if it had some independent authority. I believe that it has none.

One radical challenge to this picture, however, has been developed recently. Catherine Osborne⁷ proposes that there were never two poems: rather, both titles name one and the same work. Although this proposal has found some favour,⁸ and has certainly inspired some important reassessment of the doctrinal relation between the two sides of Empedocles' thought, I do not think that it can be right. Diogenes Laertius is unambiguously speaking of two separate poems when he tells us that 'On nature and the *Katharmoi* (VIII 77, τὰ μὲν οὖν Περὶ φύσεως καὶ οἱ Καθαρμοί . . .) run to 5,000 lines.'⁹ Moreover, a number of the surviving fragments of Empedocles are reported with explicit assignations to one or the other poem, yet not a single one with attributions to both the physical poem and the *Katharmoi*. Finally, as Jaap Mansfeld has brought to light, Giovanni Aurispa is known to have had a manuscript entitled (in Greek) 'Empedocles' *Katharmoi*' (now tragically lost) in his library at Venice in 1424.¹⁰ Even if this evidence were thought insufficient, I hope that the matter will be put beyond doubt by my next section, where it will turn out that one major fragment cannot be placed in the *Katharmoi* without glaring inconsistency: Empedocles must have written at least two poems.

If we simply stick to the hard and the relatively hard evidence for what was in the *Katharmoi*, a different picture will emerge. We do at least have its opening lines.¹¹

⁶ E.g. Kahn (1960), Barnes (1979) II 93, Wright (1981), Osborne (1987), Inwood (1992), Kingsley (1995); reservations in Long (1966). ⁷ Osborne (1987).

⁸ Cf. its further development in Inwood (1992), pp. 8–19. The reply to Osborne and Inwood in O'Brien (1995) is unfortunately timed: it contains news of the recent papyrus find (see pp. 10 and 28 below), but not the specific information that this now virtually proves at least one 'Katharmic' fragment to belong to *On nature*.

⁹ See Osborne (1987), pp. 28–9 on the unreliability of the figure 5,000. But as for the separation of the two titles, there is no compelling reason to doubt Diogenes' reliability, especially when no ancient source contradicts him on the point.

¹⁰ Mansfeld (1994b), which should also be consulted for its further arguments for the existence of two separate poems. Of course his evidence is not strictly incompatible with the thesis that there was one poem, whose proponents may reply that this *was* that one poem. But it is uncomfortable for them, since it means that, if they are right, *Katharmoi* was the official title, contrary to the great bulk of the ancient citations.

¹¹ Empedocles B112. The square-bracketed words represent Greek words apparently corrupt or missing in the quotation as preserved. Here and elsewhere, I use the Diels/Kranz (1951–2) numbering of Empedocles' fragments, although a significantly better text is now available in the valuable edition of Wright (1981). Since the many available numerations are, as I shall argue, all equally misleading as regards the apportionment of fragments between the two poems, it is better for now simply to stick to the standard one.

Friends, who in the great town of the yellow Acragas dwell on the city's heights, caring about good deeds, I greet you. You see me going about as a divine god, no longer a mortal, honoured amongst all, it seems, and wreathed in ribbons and verdant garlands. [Whenever] I arrive in prosperous towns I am revered by men and women. They follow me in their thousands, asking me where lies their road to advantage, some requesting oracles, while others have asked to hear a healing utterance for ailments of all kinds, long pierced by troublesome [pains].

Thus Empedocles addresses the citizens of his native Acragas, telling how they revere him as a living god, 'no longer a mortal'. Men and women flock to follow him, pressing him with enquiries, requesting oracles and cures.

Why should we not suppose that the poem was nothing more nor less than a response to these requests, a set of purificatory oracles and 'healing utterances'?¹²

There is immediate support for this conjecture in the pseudo-Pythagorean *Carmen aureum*: 'But abstain from the foods that I spoke of in my *Katharmoi* and *Absolution of the soul*.'¹³ This citation, or pseudo-citation, of the author's own *Katharmoi* invokes it for just the kind of self-purificatory advice that the title itself suggests. And that the allusion is inspired by Empedocles' work of the same name is confirmed just three lines later, where the poem closes with the words 'You will be an immortal, divine god, no longer a mortal' (ἔσσεαι ἀθάνατος θεὸς ἄμβροτος, οὐκέτι θνητός), pointedly recalling the famous opening of Empedocles' *Katharmoi*, 'You see me going about as a divine god, no longer a mortal' (ΒΙΙ2.4–5, ἐγὼ δ' ὑμῖν θεὸς ἄμβροτος, οὐκέτι θνητός, | πωλεῦμαι). Whatever the date of this forgery may be, its author clearly knows Empedocles' *Katharmoi*, and associates it with advice to abstain from certain kinds of food.

That a work with this title should be one dedicated to purificatory advice is unsurprising, since the very word *katharmoi* means ritual acts of purification. To adherents of the traditional interpretation, it is easy to assume that the poem was one about the wandering spirit's *processes* of purification, but I know no evidence that the word can mean that:¹⁴ such processes would normally be called *katharseis*.

¹² For the scope and content of the relevant notions of pollution and purification, see Parker (1983). I have no particular suggestion to make about the function of the 'oracles'. The evidence of a purificatory role for oracles is meagre (Parker (1983), p. 86), and I would guess that it is Empedocles' assumed divinity that makes this an appropriate designation for his pronouncements.

¹³ *Carmen aureum* 67–8, in Young (1971), 103–4: ἄλλ' εἴργου βρωτῶν ζῶν εἵπομεν ἔν τε Καθαρμοῖς | ἔν τε Λύσει ψυχῆς.

¹⁴ The use of *καθαρμοί* is usefully surveyed by Guthrie (1969), pp. 244–5.

Better still, the hypothesis also fits the other two items of evidence known to me for *Katharmoi* as a literary genre. These two references also resemble the *Carmen aureum* in fathering the works in question on archaic figures of semi-legendary status. First, Epimenides the Cretan is said to have written *Katharmoi*, in verse and perhaps also prose,¹⁵ and, although their content is not reported, it can hardly be a coincidence that Epimenides was celebrated above all for his ritual purifications, an expertise that led the Athenians to send for him to purify their city of plague.¹⁶ Second, the remark at Aristophanes, *Frogs* 1033 that Musaeus taught 'healing and oracles' is glossed by a scholiast with the comment that Musaeus 'composed absolutions [?], initiations, and *katharmoi*'.¹⁷ Healing and oracles are precisely the two services mentioned by Empedocles at the opening of his *Katharmoi*. Then why look further for the content of the poem?

Certainly no fragment explicitly attributed to the *Katharmoi* forces us to look further. Apart from the proem, there are just two such cases. One is B153a: according to Theon of Smyrna (104.1–3), Empedocles 'hints' (ἀνιτίπτει) in the *Katharmoi* that the foetus achieves full human form in seven times seven days. Aetius¹⁸ confirms the report – though not the attribution to the *Katharmoi* – with the further information that the differentiation of limbs starts at thirty-six days. That Empedocles should only have 'hinted' this in the *Katharmoi* suggests that we are not dealing with an expository account of embryology. We learn from Censorinus¹⁹ (third century AD) that in Greece the pregnant woman does not go out to a shrine before the fortieth day of her pregnancy. This is thought to be linked to the widespread belief that miscarriages are likeliest to occur in the first forty days.²⁰ There is a strong possibility that Empedocles' original remark occurred in the context of ritual advice to pregnant women, perhaps to avoid shrines for the first 'seven times seven' days. Here it is important to remember the opening of the *Katharmoi*, where it is made explicit that the demands for healing and oracles to which Empedocles is responding come from women as well as men.

The other explicit attribution to the *Katharmoi* – in fact to book II of the poem – occurs in a fragment first published in 1967, fr. 152 Wright:²¹

¹⁵ 3A2–3 DK. ¹⁶ 3A1, 2, 4, 8 DK.

¹⁷ 2A6 DK. There is a close parallel at Plato, *Rep.* II 364e–365a: Adimantus, as evidence of the belief that the gods can be bought off, cites the books of Musaeus and Orpheus, on the basis of which rituals are performed to bring about the λύσεις τε καὶ καθαρμοί of wrongs done by both the living and the dead. ¹⁸ Aetius V 21.1 = Empedocles A83.

¹⁹ Censorinus, *De die natali* 11.7. ²⁰ See Parker (1983), p. 48.

²¹ Wright (1981), pp. 151 and 298; not, of course, to be found in Diels/Kranz (1951–2).

‘For those of them which grow with their roots denser below but their branches more thinly spread . . .’ Trees, or more generally plants, of this kind were singled out for a reason which cannot now be recovered.²² The context may well have been one concerning the avoidance of certain leaves. According to Plutarch, in a probable but unprovable citation of the *Katharmoi*, Empedocles urged that all trees should be ‘spared’, but especially the laurel:²³ ‘Keep completely away from the laurel’s leaves’ (B140). This has every chance of tying in with Empedocles’ views on transmigration – he holds, for example, that the laurel is the best tree to transmigrate into (B127)! But it is significant that here once again, if the link with the injunction about laurel leaves is accepted, the actual fragment may well contain moral or purificatory advice rather than the doctrinal exposition characteristic of the physical poem. To repeat, ritual advice is just what we should expect in a work entitled *Katharmoi*.

The expectation finds further strong support in the story surrounding fragment B111. We learn that the biographer Satyrus quoted this fragment as confirming the suspicion that Empedocles dabbled in magic.²⁴ Since, according to Apuleius,²⁵ it was Empedocles’ *Katharmoi* that brought upon him just such a suspicion, there is a strong likelihood that B111 is from this poem.²⁶ Significantly, the fragment is once again not a doctrinal exposition but ritual advice: how to influence the weather and to summon up the dead.

B111 uses the second person singular: ‘You [singular] will learn . . .’ Because the *On nature* was addressed to an individual, Pausanias, whereas the opening lines of the *Katharmoi* address the citizens of Acragas in the plural, it has often been thought that any fragments containing the second person singular must be assigned to the former poem. This is a very dubious criterion, since changes of address within a single didactic poem are quite normal. Hesiod’s *Works and days* switches in its first three hundred lines between addresses to the Muses, to Perses, and to the ‘bribe-swallowing princes’.²⁷ That the *Katharmoi* should, after its opening, move into the second person singular may merely reflect the fact that Empedocles is by now answering the individual requests from his audience of which the proem spoke.

²² According to Theophrastus, *HP* 1 6.4, all plants have their roots more densely packed than their parts above ground, but some, e.g. the olive tree, have a particularly dense mass of slender roots.

²³ Plut. *Quaest. conv.* 646D, see preamble to B140 DK. ²⁴ DL viii 59. ²⁵ Apuleius, *Apol.* 27.

²⁶ This attribution is supported, as Inwood (1992), p. 16 has shown, by the fact that Clement (*Strom.* vi 30.1–3) directly associates B111 with the opening lines of the *Katharmoi*.

²⁷ See further, Osborne (1987), pp. 31–2, who appositely compares Lucretius’ own switches of address.

There are no further unambiguously attested fragments of the *Katharmoi*. But we may, with caution,²⁸ consider as potential fragments of it any citations of Empedocles whose sources explicitly call them *katharmoi*. The clearest case of this is in Hippolytus,²⁹ who describes prohibitions on marriage and on certain foods as tantamount to teaching the *katharmoi* of Empedocles. Given this remark, along with the association of the *Katharmoi* with food prohibitions in the *Carmen aureum*, it seems safe to assume that the poem carried Empedocles' advice to abstain from slaughter, meat-eating, and perhaps even beans.³⁰ And it seems that abstention from marriage was a further injunction to be found in the same work.³¹

Another plausible such candidate is a fragment preserved by Theon of Smyrna.³² Comparing philosophy as a whole to a religious ritual, Theon calls Plato's five propaedeutic mathematical studies in *Republic* VII a *katharmos*, which he immediately proceeds to link with Empedocles' injunction to cleanse oneself by 'cutting from five springs (in a bowl of) indestructible bronze' (B143).³³ We are here firmly in the territory of ritual self-purification. Theophrastus' godfearing character, for example, refuses to set out on his daily rounds until he has washed his hands at three springs.³⁴

Deciding just which other verbatim fragments should be assigned to the *Katharmoi* is a problem to pursue on another occasion. The argument to which I shall now turn relies on a primarily negative conclusion: there

²⁸ B139, which in Sedley (1989a) I incautiously left in the *Katharmoi*, can now be shown to belong to the physical poem: see p. 30 below.

²⁹ Hippolytus, *Ref.* VII 30.3–4; see preamble to B110 in Diels/Kranz.

³⁰ Empedocles B141, carrying the Pythagorean advice to abstain from beans, is condemned as inauthentic by Wright (1981), p. 289, perhaps rightly.

³¹ Hippolytus *loc. cit.* presents the advice not to marry as itself Empedoclean: 'You are dissolving marriages made by God, following the doctrines of Empedocles, in order to preserve the work of Love as one and undivided. For according to Empedocles, marriage divides the one and makes many.' This is a curious view to take of marriage, although it could well apply to the *family*.

³² Theon of Smyrna 14–15.

³³ I here translate the Diels/Kranz text, based on Theon, κρηνάων ἄπο πέντε ταμώντ' <ἐν> ἄτειρέι χαλκῶ. Aristotle, *Poet.* 1457b13 quotes (without attribution) the words τεμών ἀτειρέι (A, τανακεί B) χαλκῶ, explaining that 'cutting' here is used to mean 'drawing'. This leads van der Ben (1975), 203–8, and Wright (1981), 289–90, to follow the lead of Maas and conflate the two quotations in the form κρηνάων ἄπο πέντε τεμών (or ταμών) τανακήκει χαλκῶ, with the further inevitable conclusion that the reference is to drawing blood with a knife – which of course Empedocles would be condemning. This seems to me too high a price to pay, since it totally contradicts Theon's report that Empedocles with these words is advising us to cleanse ourselves.

³⁴ Theophrastus, *Char.* 16.2. See Parker (1983), pp. 226–7. Cf. Apollonius Rhodius III 860, where Medea, before preparing an ointment which confers invulnerability, bathes herself in seven streams.

is no reason to attribute to this poem any fragments of Empedocles beyond those offering ritual advice.³⁵

3. THE PROVENANCE OF EMPEDOCLES B115

There is a decree of necessity, an ancient resolution of the gods, sworn by broad oaths, that when one of the daimons which have a share of long life defiles . . . its own limbs, or does wrong and swears a false oath, for thirty thousand years it must wander, away from the blessed ones, being born during that time as every form of mortal creature, exchanging for each other the arduous paths of life. The might of the aether drives it to the sea, the sea spits it out onto the threshold of land, the earth sends it into the rays of the gleaming sun, and the sun hurls it into the whirling aether. One receives it from another, and all hate it. I too am now one of these, a fugitive from the gods and a wanderer, who trust in raving Strife.

These lines (B115),³⁶ which are crucial for explaining the daimon's migrations, have been assigned to the *Katharmoi* by every editor of Empedocles since Diels.³⁷ The attribution has been questioned by N. van der Ben, and subsequently defended by D. O'Brien.³⁸ But this renewed debate has so far focused excessively on the contexts in which the lines are quoted by our sources, as if one could settle the question of their provenance by counting the allusions in those contexts to *katharsis* and cognate terms and likewise those to the cosmic cycle. Given the improbability that any ancient reader of Empedocles might have expected the physical poem and the *Katharmoi* to conflict doctrinally, the provenance of the lines will have mattered less to those who cited them than their value as evidence for Empedocles' views on the *katharsis* of the soul – a topic on which Platonism had conferred an absolutely pivotal importance.

Plutarch reports that Empedocles used these lines 'as a preface at the beginning of his philosophy'.³⁹ Is this too vague to be helpful? 'Philosophy' certainly might describe the content of the physical poem.⁴⁰ It might also be appropriate to the *Katharmoi*, on the tradi-

³⁵ I agree with Kingsley (1996), p. 109 that the *Katharmoi* must have contained some indication of how it is the facts of transmigration that make meat-eating a sin. But Empedocles' declared celebrity at the time of writing this poem hardly suggests that he would need to do very much explaining of his doctrine. I certainly see no necessity on this ground to attribute any specific known fragment (e.g. B137, as Kingsley suggests) to it, beyond those I have listed.

³⁶ I have avoided engaging with the textual difficulties of this passage, which are well discussed by Wright (1981). They do not affect any of the issues I am addressing here.

³⁷ This of course applies to Inwood (1992) only in so far as he identifies the *Katharmoi* with the whole of Empedocles' poetic *œuvre*.³⁸ Van der Ben (1975), pp. 16ff.; O'Brien (1981).

³⁹ Plut., *De exilio* 607c: ἐν ἀρχῇ τῆς φιλοσοφίας προαποφωνήσας.

⁴⁰ Kingsley (1996) argues, in reply to Sedley (1989a), that 'philosophy' to Plutarch would normally

tional view of that poem's content as expository and doctrinal. But it is very much less appropriate if, as I have argued, the *Katharmoi* was not a doctrinal work but a set of purificatory pronouncements. Indeed, if that suggestion is correct, Plutarch's expression 'at the beginning of his philosophy' would immediately gain a much clearer sense. If Empedocles wrote two doctrinal poems, the words 'his philosophy' are a desperately vague way of referring to either one of them. But if he wrote just one, they become an entirely natural way of referring to that one.⁴¹

Plutarch's description in no way indicates that these were the very opening lines of the poem to which they belonged, just that they preceded the philosophy proper. Hence there is little value in the argument⁴² that since we have the opening of the *Katharmoi* and it differs from these lines, they must have opened the physical poem instead. Much more mileage can be got out of the content of the disputed lines. First, it is hardly insignificant that they name five of the six cosmic entities on which Empedocles' physical system is based: the daimon's wanderings are graphically described in terms of its being tossed into and out of each of the four elements in turn; and Strife is named as the cause of its downfall. This at least supports the *coherence* of the passage with the physical poem.

But far more important, and strangely absent from the debate about its provenance, is the following consideration. In these disputed lines, Empedocles is himself a fallen daimon: 'I too am now one of these, a fugitive from the gods and a wanderer, who trust in raving Strife.' Is it credible that these words came in the introductory passage of a poem in whose opening lines Empedocles had moments earlier described himself

mean the kind of moral precepts, tinged with myth and religion, that are associated with the *Katharmoi*. This may not seem much of a challenge to my position, since I argue that there was a good deal of this kind of material in *On nature*. But Kingsley's claim is that 'philosophy' is precisely the word Plutarch would use to distinguish the 'philosophical' *Katharmoi* from the other, merely 'physical' poem. However, his evidence crumbles on examination. At *De gen. Socr.* 580c Plutarch's speaker Galaxidorus does (on a plausible restoration of the text) say that Pythagoras' philosophy, already full of 'visions and myths and religious dread', became positively 'Bacchic' in the hands of Empedocles. But in no way does this, as Kingsley seems to think, delimit what Plutarch would mean by the expression 'Empedocles' philosophy', and thus exclude physics from it. Plutarch's other speakers often make it abundantly clear that, like anybody else, they regard 'philosophy' as including physics (*De def. or.* 420B, *De facie* 942B) and logic (*De Is. et Os.* 387A), as well as contemplation of first principles (*ib.* 382D–E). And although, as Kingsley notes, at *De poet. aud.* 14E and 15F, Plutarch recommends the couching of philosophy in versified myth as a didactic device, that tells us nothing about what he means by the word 'philosophy', especially when at least one of his speakers, Theon (*De Pyth. or.* 406E), takes an almost diametrically opposed view of philosophy.

⁴¹ Cf. Osborne (1987), pp. 29ff.

⁴² Van der Ben (1975), p. 16.

as ‘a divine god, no longer a mortal’?⁴³ Without the straitjacket of the old prejudice that science and religion do not mix, it is hard to believe that anyone would ever have thought of assigning the former text to the *Katharmoi*. The most natural interpretation is that B115 comes from a poem in which Empedocles classed himself as a fallen daimon still working through its long cycle of transmigrations, whereas in the *Katharmoi*, opening as it does with his confident self-proclamation as a god, ‘no longer a mortal’, he presented himself as having now completed the cycle and recovered his divinity. I therefore feel a reasonable degree of confidence in placing Empedocles’ major fragment on the wanderings of the daimon somewhere in the proem to the *On Nature*.

Since I first developed this argument several years ago,⁴⁴ it has received welcome confirmation in the discovery of papyrus fragments from book I of Empedocles’ *On nature*.⁴⁵ They include lines denouncing animal slaughter⁴⁶ – lines which editors have always hitherto assigned to the *Katharmoi*. The taboo on slaughter is, famously, one which Empedocles based on his doctrine of transmigration. Hence the transfer of these lines to the opening book of the *On nature* should do much to obviate any remaining resistance to the conclusion that B115, on the migrations of the daimon, belongs to the proem of that same book.

This conclusion will prove important at a later stage in my argument. Earmarking it for future use, we can now at last turn to Lucretius.

4. LUCRETIUS AND EMPEDOCLES

Numerous echoes of Empedoclean passages have been recognised in Lucretius’ poem, with varying degrees of certainty.⁴⁷ It is no part of my purpose to catalogue these. But two observations seem in order. First, the 500 or so extant lines of Empedocles⁴⁸ represent around one-tenth of his

⁴³ B112.4, reinforced by B113.2 (‘if I am superior to frequently-perishing mortal human beings’), if, as Sextus’ juxtaposition of B113 with B112 suggests, it is also from the *Katharmoi*. In Empedocles’ world, even the generated gods perish eventually, i.e. at the end of each cosmic cycle: hence they are not immortal but ‘long-lived’ (B21.12, B23.8; cf. B115.5 on the daimons). By contrast, mortals are ‘frequently-perishing’, πολυφθερέων, see Wright (1981), p. 269. ⁴⁴ In Sedley (1989a).

⁴⁵ The exciting new Strasbourg papyrus of Empedocles has its *editio princeps* in Martín/Primavesi (1998). Although, at the time of completing the present book, I had not seen this edition, Oliver Primavesi was kind enough to send me a copy of his *habilitationsschrift* (the basis of Primavesi (forthcoming)), and both he and Alain Martin have been extremely generous in keeping me informed about their work. ⁴⁶ B139, see n. 107 below.

⁴⁷ Esp. Furley (1970); also Kranz (1944), Castner (1987), Gale (1994a), pp. 59–75. I have not seen Jobst (1907), but I understand from Don Fowler that he anticipated Kranz’s most important findings. For other studies, see Tatum (1984), p. 178 n. 5.

⁴⁸ This figure tries to take some account of the new papyrus find. I understand from the editors,

poetic output, if we are to trust Diogenes Laertius' figure of 5,000 lines in total,⁴⁹ and even on the most conservative estimates of Empedocles' total output,⁵⁰ not more than one-fifth. Or supposing (as I am inclined to suppose) that Lucretius' interest was exclusively in the *On nature*, what is extant of that is still likely to be less than a quarter – roughly 450 lines out of 2,000.⁵¹ This raises the probability that if we had Empedocles' poems intact a great deal more Empedoclean influence would come to light, and our understanding of the *DRN* be immensely enriched.

Second, I would suggest that Lucretius is likely to owe rather more to Empedocles in terms of poetic technique than is generally recognised. For example, at 1 271–97 Lucretius argues for the corporeality of air by means of an intricate analogy between the destructive power of wind and that of water. David West has observed that the number of distinct points of correspondence between the description of the wind and the description of the water greatly exceeds that normally found in the similes of Homer and Apollonius.⁵² Lucretius is thus, in West's terminology, a practitioner of the 'multiple-correspondence simile', a legacy that he was to pass on to Virgil. What I would myself add is that, although Homer and Apollonius may offer no adequate model for the technique, Empedocles does. In his description of the eye's structure and function as analogous to those of a lantern,⁵³ Empedocles reinforces the idea with a set of carefully engineered correspondences between the two halves of the simile.⁵⁴ As in Lucretius, so already in Empedocles, the multiplicity of correspondences has an argumentative motive, and not merely a descriptive one: the more correspondences there are, the more persuasive the analogy becomes. Here then is a technique, singularly at home in philosophical poetry, which has almost certainly passed from Empedocles, through Lucretius, into the Latin poetic tradition.

Lucretius' reverence for Empedocles is evident in the paean of praise with which he prefaces his criticism of Empedocles' four-element theory at 1 716–41:

Alain Martin and Oliver Primavesi, that they have detected in them some new examples of locutions imitated by Lucretius. ⁴⁹ DL VIII 77; for discussion see Osborne (1987), pp. 28–9.

⁵⁰ Wright (1981), p. 21.

⁵¹ 2,000 lines seems to be the figure for the length of the physical poem given by the *Suda*, s.v. 'Empedocles' (= Empedocles A2 DK), despite the slightly odd grammar.

⁵² West (1970).

⁵³ Empedocles B84. For discussion see Wright (1981), pp. 240–3, Sedley (1992b).

⁵⁴ These are contained principally in the close linguistic parallelism of lines 4–5 with the final two lines. For comparable prose uses of complex analogy in Hippocratic authors, cf. Lloyd (1966), pp. 345–8.

quorum Acragantinus cum primis Empedocles est
 insula quem triquetris terrarum gessit in oris,
 quam fluitans circum magnis anfractibus aequor
 Ionium glaucis aspargit virus ab undis,
 angustoque fretu rapidum mare dividit undis 720
 Aeoliae terrarum oras a finibus eius.
 hic est vasta Charybdis et hic Aetnaea minantur
 murmura flammaram rursus se colligere iras,
 faucibus eruptos iterum vis ut vomat ignis
 ad caelumque ferat flammai fulgura rursus. 725
 quae cum magna modis multis miranda videtur
 gentibus humanis regio visendaque fertur,
 rebus opima bonis, multa munita virum vi,
 nil tamen hoc habuisse viro praeclarius in se
 nec sanctum magis et mirum carumque videtur. 730
 carmina quin etiam divini pectoris eius
 vociferantur et exponunt praeclara reperta,
 ut vix humana videatur stirpe creatus.
 hic tamen et supra quos diximus inferiores
 partibus egregie multis multoque minores, 735
 quamquam multa bene ac divinitus invenientes
 ex adyto tamquam cordis responsa dedere
 sanctius et multo certa ratione magis quam
 Pythia quae tripodi a Phoebi lauroque profatur,
 principiis tamen in rerum fecere ruinas 740
 et graviter magni magno cecidere ibi casu.

Of these [*sc.* the four-element theorists] the foremost is Empedocles of Acragas, born within the three-cornered terrestrial coasts of the island [Sicily] around which the Ionian Sea, flowing with its great windings, sprays the brine from its green waves, and from whose boundaries the rushing sea with its narrow strait divides the coasts of the Aeolian land with its waves. Here is destructive Charybdis, and here the rumblings of Etna give warning that they are once more gathering the wrath of their flames so that her violence may again spew out the fire flung from her jaws and hurl once more to the sky the lightning flashes of flame. Although this great region seems in many ways worthy of admiration by the human races, and is said to deserve visiting for its wealth of good things and the great stock of men that fortify it, yet it appears to have had in it nothing more illustrious than this man, nor more holy, admirable, and precious. What is more, the poems sprung from his godlike mind call out and expound his illustrious discoveries, so that he scarcely seems to be born of mortal stock.

But this man and the greatly inferior and far lesser ones whom

I mentioned above, although in making their many excellent and godlike discoveries they gave responses, as from the shrine of the mind, in a holier and much more certain way than the Pythia who makes her pronouncements from Apollo's tripod and laurel, nevertheless came crashing down when they dealt with the elementary principles of things. Great as they were, their fall here was a great and heavy one.

This is remarkable praise⁵⁵ to lavish on a philosopher who did, after all, radically misconceive the underlying nature of the world. Where does the emphasis lie? Lucretius speaks highly both of Empedocles' 'illustrious discoveries' (*praeclara reperta*, 732), and of his poetry, which is so sublime as almost to prove his divinity – an honour that in the end Lucretius will reserve for Epicurus alone.⁵⁶ With regard to Empedocles' 'discoveries', I am inclined to agree with those who hold that Lucretius is implicitly commending, among other things, the clarity of their exposition, especially by contrast with the obscurities of Heraclitus denounced in the preceding passage.⁵⁷ This, I would further suggest, is supported by the closing remarks in the passage quoted above, where Lucretius expresses his approval both of Empedocles and of his 'lesser' colleagues in the pluralist tradition⁵⁸ for revealing their findings 'in a holier and much more certain way than the Pythia who makes her pronouncements from Apollo's tripod and laurel' (738–9). This has standardly been understood as crediting those philosophers with an authority comparable to that of an oracle. It would be safer, however, to say that it relies on a contrast – between religious oracles, which Lucretius like any good Epicurean deplures, and the philosopher's rational alternative, delivered 'as from the shrine of the mind' (737).⁵⁹ That

⁵⁵ Contrast Edwards (1989), who takes this passage and others in Lucretius as treating Empedocles with a certain disdain.

⁵⁶ First at III 15. It is unwise to be too confident that Lucretius is alluding to Empedocles' own profession of divinity at the beginning of the *Katharmoi*, if, as I would maintain, his interest is otherwise focused entirely on Empedocles' *On nature*. But the legend of Empedocles' plunge into Etna in a bid to establish his own divinity was probably well enough known by this date to give the remark extra point (cf. Wright (1981), pp. 15–16 and Hor. *Ars poet.* 463–6).

⁵⁷ I 635–44, cf. Kollmann (1971), and especially Tatum (1984).

⁵⁸ The reference is vague, but perhaps picks up the proponents of two elements in I 712–13 as well as the four-element theorists of 714–15. On the Epicurean background to their belittling description, see pp. 142–3 below.

⁵⁹ On this reading, Lucretius' words distance him from approval of (literal) oracles as effectively as the way in which, for example, those who praise the 'university of life' distance themselves from approval of (literal) universities. Thus Lucretius' application of oracular language to his own pronouncements, here and at V 111–12 (*fundere fata*), is ironic: cf. Obbink (1996), pp. 568–9, commenting on the irony in Philodemus, *Piet.* 20.44–5 (ἐχρησμεω[1]δῆσσεμεν) and in Epicurus *SV* 29, with a comprehensive set of Epicurean parallel uses of oracular language. The evidence listed

would amount to a contrast between, on the one hand, the clear, rational and unambiguous assertions of the pluralists, and, on the other, the Delphic ambiguities so characteristic of Heraclitus.⁶⁰ If so, we must be wary of exaggerating the extent to which this eulogy of Empedocles expresses special admiration for his teaching as such. It is largely as an eloquent and straight-talking expositor of his teaching that he is canonised. Empedocles' language may be densely metaphorical (as is Lucretius' own), but at least, as Lucretius sees it, it lacks the multi-layered evasiveness and trickery of Heraclitean prose. About Lucretius' very reserved evaluation of Empedocles' actual teachings I shall say more below.

What purpose is served in this passage by the fulsome praise of Sicily? One object, no doubt, is to compare Empedocles favourably with that other wonder of Sicily, Etna.⁶¹ But it also has the job of illustrating why Sicily was the birthplace of the four-element theory.⁶² The four elements are intricately worked into the travelogue. Empedocles was born within Sicily's 'terrestrial coasts' (*terrarum* . . . *in oris*, 717: literally 'coasts of lands') – and here *terrarum* is no 'otiose addition' (Bailey), but Lucretius' way of identifying the land of Sicily with the element earth. The elements water and fire are abundantly in evidence in the descriptions of the surrounding sea, of the whirlpool Charybdis, and of the flames of Etna (718–25). Finally (725), those flames are borne 'to the sky' (*caelum*). Now the sky, as the abode both of air and of the heavenly bodies, might in principle symbolise either of the elements air and fire. What surely clinches its identification with air, and thus completes the catalogue of four ele-

by Smith (1975), pp. 60–1, note b, does not militate against this picture: in Epicurus *SV* 29, χρῆσιμῶδῆϊν is associated with unintelligibility; Cic. *Fin.* II 20, 102 and *ND* I 66 do use *oracula* of philosophical pronouncements (some of them Epicurean), but only in the mouths of Epicurus' critics; the epigram of Athenaeus (ap. DL x 12) speaks of Epicurus not as himself oracular but as *inspired* either by the Muses or by the Delphic oracle. Cf. Smith (1996), p. 130 n. 75 for further comment.

⁶⁰ For *certus* = 'unambiguous' see *OLD s.v.*, 9. The same sense fits perfectly into v 111–12, where these lines recur: Lucretius is saying that his quasi-oracular prediction that the world will one day perish (see Chapter 6) is a firm and unambiguous one, unlike those associated with the Delphic oracle. For Heraclitus' 'Delphic' ambiguity, cf. his B93 DK. As for *sanctius*, in a comparison with an oracle this must primarily imply 'holier', but the basic meaning of *sanctus* (from *sancire*) is 'ratified' or 'confirmed', and it also has connotations of 'above board' or 'honourable' (*OLD s.v.*, 4).

⁶¹ If the thesis developed below about Lucretius' literary debt to Empedocles is right, it may not be too fanciful to see in the imminent new eruption of Etna (722ff.) a hint at the scheduled rebirth of Empedoclean poetry. And is it really just a coincidence that at 730 Lucretius praises Empedocles as 'carus', his own cognomen (for the point, see Fowler (1996), p. 888)? The adjective is not part of his regular vocabulary, this being one of only two occurrences in his poem.

⁶² This was well spotted by MacKay (1955) and Snyder (1972).

ments, is the fact that Empedocles himself uses 'sky' (οὐρανός) as a name for his element air (B22.2).⁶³

And the Empedoclean influence goes deeper still. The very idea of using individual phenomena like sea, rain, wind and sun to symbolise the four elemental stuffs is thoroughly Empedoclean. So too is the poetic device of interweaving the four elements into the language of a descriptive passage: we have already seen Empedocles do the same at B115, when he described the tossing of the fallen daimon from aether (= air) to sea, to land, to the sun's rays, and then back once more into the eddies of the aether.

At the very least, then, Lucretius' description of Sicily reveals his intimate knowledge and exploitation of Empedoclean poetry. And it would be unwise to rule out a further possibility: that it is itself a direct imitation of a lost passage of Empedocles.

5. THE ENIGMA OF LUCRETIUS' PROEM

We are now ready to turn to the most hotly and inconclusively debated passage in Lucretius, the proem to book 1.⁶⁴ It is structured as follows:

- 1–20: praise of Venus as *Aeneadam genetrix* and the life force of all nature;
- 21–8: prayer to Venus to inspire Lucretius' poem, because she alone is responsible for making things pleasing, and because Memmius has always been her favourite;
- 29–43: prayer to Venus to intercede with her lover Mars and bring peace to the Roman republic;
- 44–9: it is not in the divine nature to concern itself with our affairs;
- 50–61: programmatic address to Memmius about the content of the poem;
- 62–79: praise of Epicurus' intellectual achievement;
- 80–101: attack on the evils of religion, as illustrated by the sacrifice of Iphigeneia;
- 102–35: warning to Memmius not to be enticed by false religious tales about the survival and transmigration of the soul;
- 136–45: the difficulty of Lucretius' poetic task.

⁶³ As Kingsley (1995), ch. 2, shows, Empedocles' own designation of air is 'aether', and aether in early Greek epic is intimately associated with οὐρανός.

⁶⁴ The huge bibliography on this passage prominently includes Giancotti (1959), Kleve (1966), Kenney (1977), pp. 13–17; Clay (1983), pp. 82–110, Gale (1994a) ch. 6, and all the major commentaries.

The most enigmatic feature of the proem lies in the first three subdivisions, 1–43. How can Lucretius, as an Epicurean, praise Venus as a controlling force in nature, and even beg her to intervene in human affairs? In Epicureanism, the gods emphatically do not intervene in any way in human affairs – as Lucretius himself paradoxically goes on immediately to point out (44–9 = 11 646–51).

To respond that the proem's treatment of Venus is allegorical is not in itself a solution to the puzzle. As Lucretius himself warns at 11 655–60, allegorical use of divinities' names, e.g. 'Neptune' for the sea and 'Ceres' for corn, is permissible only if one avoids any false religious implications. Although Venus might, on this principle, get away with symbolising nature, or even perhaps Epicurean pleasure,⁶⁵ the opening address to her as ancestress of the Romans can hardly be judged equally innocent, nor can the prayers to her to intervene in Roman affairs and to inspire Lucretius' poetry.

It is not that these allegorical explanations do not carry any weight at all. I think there is much truth in them. But the most they can do, for readers who have read on and been surprised to learn that this is an Epicurean poem, is mitigate their bafflement. The question remains, what can have impelled Lucretius to start out so misleadingly, undermining exactly that attitude to the gods that the rest of the poem will so energetically promote? It would scarcely be an exaggeration to say that he spends the remainder of the poem undoing the damage done by the first forty-three lines.

6. FURLEY'S THESIS

In short, the opening of the proem simply is not like Lucretius. But it is very like Empedocles. In his outstandingly important study of the proem, David Furley has observed the high level of Empedoclean content to be found in it.⁶⁶ My object here will be to augment his observations with further evidence of Empedoclean echoes, but then, in the remainder of the chapter, to propose a very different explanation from his for their presence here.

⁶⁵ The suggestion of Bignone (1945), pp. 437–44, but one which faces the difficulty that Lucretius' Venus controls all natural coming-to-be (esp. 21ff.), not just animal reproduction. Asmis (1982) proposes that Venus is here an Epicurean deity invented to take over the role assigned to Zeus by the Stoics; but against the supposition that Lucretius is concerned to resist the Stoics, see Ch. 3 below.

⁶⁶ Furley (1970). The range and depth of Empedoclean nuances in the proem are further enriched by Clay (1983), pp. 22–3, 49ff., 82–110, 253–7.

First, notice the by now familiar technique of working the four elements into a descriptive passage. The poem begins as follows (1–5):

Aeneadum genetrix, hominum divomque voluptas,
 alma Venus, caeli subter labentia signa
 quae mare navigerum, quae terras frugiferentis
 concelebras, per te quoniam genus omne animantum
 concipitur visitque exortum lumina solis.

5

Ancestress of the race of Aeneas, delight of humans and gods,
 nurturing Venus, who beneath the gliding beacons of the sky
 pervade the ship-bearing sea and the crop-carrying lands,
 because it is due to you that every race of living beings is con-
 ceived, and born to look upon the sunlight.

Planted in the text already are references to the sky (which we have seen to represent the element air in Empedoclean imagery),⁶⁷ to the heavenly bodies and the sunlight (i.e. fire), to the sea, and to the land. We then launch into a second catalogue of the same four (6–9):

te dea, te fugiunt venti, te nubila caeli
 adventumque tuum, tibi suavis daedala tellus
 summittit flores, tibi rident aequora ponti
 placatumque nitet diffuso lumine caelum.

From you, goddess, and your approach the winds and the clouds
 of the sky flee away. For you the creative earth pushes up sweet
 flowers. For you the sea's surface laughs, and the sky, made calm,
 shines with diffused light.

Again, the four elements feature: the winds and clouds of the sky, the earth, the sea, the sunlight. And if all this is still not enough, we need only move on to 29–43, Lucretius' prayer to Venus to intercede with her lover Mars. It has long been recognised that here we have a striking allusion to the joint-protagonists of Empedocles' physical poem, Love and Strife – whom Empedocles himself sometimes calls Aphrodite and Ares.

Furley has noted two other Empedoclean echoes in the poem, to which we will come shortly. But first the question must be asked: why should an Epicurean poem start with an Empedoclean prologue?

It is here that I part company with Furley. He argues that Lucretius' act of piety to Empedocles is the acknowledgement of a philosophical debt. Although Lucretius was himself a committed follower of Epicurus, Furley suggests, he recognised Empedocles as the inaugurator or champion of two traditions to which, as an Epicurean, he too adhered. The

⁶⁷ I offer this as a ground for going beyond Furley and detecting all four elements even in lines 1–5.

first of these is the insistence on absolutely unchanging physical elements. The second is the rejection of a teleological world-view, with all its implications of divine intervention.

But this could hardly explain Lucretius' decision to open with a tribute to Empedocles. No reader of the proems to books III, V, and VI can doubt that Lucretius' other philosophical debts pale into insignificance when compared with his acknowledged dependence upon Epicurus. Why then would he give his putative philosophical obligation to Empedocles the undeserved and thoroughly misleading prominence that it gains from a position at the poem's opening?

Moreover, the unwritten rules of philosophical allegiance in the ancient world do not normally permit the imputation of authority to anyone other than the founder of your own school, or, at most, to his own acknowledged forerunners.⁶⁸ The Epicurean school was second to none in observing this principle. It seems certain that Empedocles was not regarded by Epicurus or his successors as any sort of philosophical forerunner; and even an acknowledged forerunner like Democritus was treated with limited respect in the school.⁶⁹ Now Lucretius is admittedly in certain ways a non-standard Epicurean, and I shall be arguing in Chapter 3 that he was not a participating member of any Epicurean group. Even so, his declarations of absolute loyalty to Epicurus as the very first philosopher to liberate the human race from fear of the divine⁷⁰ hardly suggest that he was an exception to this usual style of school loyalty. In any case, he certainly knew his Epicurean source texts well enough to be aware of Epicurus' own reserve with regard to his forerunners.

Even on the two philosophical issues picked out by Furley, element theory and anti-teleology, it is doubtful whether Lucretius or any other Epicurean would have been as generous in acknowledging Empedocles' contribution as Furley proposes. Indeed, so far as concerns element theory, Lucretius is emphatic at 1 734–41 (translated above pp. 12–13) that this is not a topic on which Empedocles acquitted himself with distinction.

⁶⁸ As argued in Sedley (1989b).

⁶⁹ For Democritus as an acknowledged precursor of Epicurus, see Plut. *Col.* 1108E–F; for Epicurus' reserved praise of him in *On nature*, see pp. 142–3 below. Epicurean attacks on Empedocles include those of Hermarchus (see Longo Auricchio (1988), pp. 66–73, 92–9, 125–50, and Vander Waerdt (1988), pp. 89–90, n. 13) and Colotes (Plut. *Col.* 1111F ff.); see also Cic. *ND* 1 29, Diogenes of Oenoanda 6 II–III Smith (1992), with the further passages assembled by Vander Waerdt. In my view (Sedley (1976a)) Epicurus' attitude to his predecessors was more respectful and lenient than that adopted by his followers, but it undoubtedly showed enough coolness to authorise and encourage their attacks. ⁷⁰ 1 62–79, III 1–22, V 9–13.

That there is something, singular or plural, that somehow persists through all cosmogonical and other changes is common ground for all physical philosophers from Anaximander on. No doubt Empedocles' elements were more emphatically unchanging than those of his predecessors. At least, he says that as the elements intermingle they both become different things at different times and remain always alike (B17.34–5). He probably means that they form different compound substances but nevertheless retain their own distinctive properties in the mixture. But other interpretations were possible – for example, that in mixtures the elements do retain their original properties, but that these remain dormant until the compounds separate out again. And, at any rate, I see little sign that Lucretius was prepared to give him the benefit of the doubt on this point. In criticising the four-element theory, he makes no gesture of respect even for the well-advertised indestructibility of Empedocles' elements (B8, B9, B12): on the contrary, his principal ground for rejecting the theory is that stuffs like earth, air, fire, and water are inevitably perishable (I 753–62). As for their unchangeability, he mentions this as no more than a possible interpretation of the theory, and one that would rob it of what little explanatory power it has (I 770–81).

Does Empedocles fare any better in Lucretius' eyes as a champion of anti-teleology? It cannot be denied that Aristotle casts him in that role: in defending the teleological structure of organisms, Aristotle contrasts his view with the zoogonical thesis of Empedocles that originally a set of randomly composed monsters sprang up – graphically described by Empedocles as 'ox-children man-faced'⁷¹ – of which only the fittest survived. This anticipation of one of the principles of Darwinism has earned Empedocles widespread respect, including, it is sometimes suggested, the respect of the Epicureans. For Lucretius testifies (v 837–77) that they adopted a similar-sounding theory of the survival of the fittest as their basis for the origin of species.

I would not want to deny the probability of a historical link between the Empedoclean and Epicurean theories. But it is a large leap from that to the supposition that the Epicureans acknowledged a debt to Empedocles. Indeed, it can be precisely in those cases where a school is drawing on the ideas of another that it is most at pains to minimise the resemblance and to stress its own originality. This appears to have been the Epicurean attitude to the Empedoclean theory of evolution. Plutarch⁷² tells us explicitly that the Epicureans derided Empedocles'

⁷¹ Empedocles B61.2. Cf. Aristotle, *Phys.* 198b32, 199b10–12, *PA* 640a19ff.

⁷² Plut. *Col.* 1123B.

‘ox-children man-faced’. And well they might, for Empedocles’ monsters were themselves the bizarre product of random combinations of limbs and organs that in an even earlier stage had sprung up and wandered about on their own!⁷³ There is nothing like this in the Epicurean theory, as we hear about it from Lucretius; and I can see no attempt in Lucretius book v to restore to Empedocles the credit which the Epicurean school traditionally denied him.⁷⁴

Indeed, since Lucretius certainly knew Empedocles’ physical poem at first hand and did not have to rely exclusively on Aristotelian-influenced doxography,⁷⁵ it certainly should not be assumed that he read Empedocles as a pioneering opponent of teleology. If Aristotle chooses Empedocles rather than the far more suitable Democritus for that role, it is surely because Empedocles, perhaps alone among the Presocratics, has actually supplied him with an illustration of what a non-teleological explanation of an organism would look like. It does not follow that Empedocles’ own intention, taken in context, came over as anti-teleological.⁷⁶ As is well known, he is supposed to have postulated four stages of animal evolution, of which the compounding of the ox-children man-faced was only the second. Either in the first stage, that of solitary animal parts, or perhaps in the third stage, that of the so-called ‘whole-natured forms’, he described the creation of individual animal parts in terms that could hardly have won him the friendship of an anti-teleologist like Lucretius. In B84, already mentioned above, Empedocles describes how Aphrodite⁷⁷ cunningly created the eye, just like someone fitting together a lantern for the preconceived purpose of lighting their way at night. Even if one strips from this the figurative personification of Love as a divine artisan, one is left with the impression of an intelligent and purposive creative force. The architectonic role of Love in Empedocles’ cosmic cycle makes it a very hard task indeed to portray him as a pure mechanist.

⁷³ Empedocles A72, B57.

⁷⁴ Furley (1970), p. 61 with n. 15, supports his thesis with the claim that Lucretius v 837–41 is a translation of Empedocles B57. Although it may pointedly recall the Empedoclean lines, it is hardly a translation. Where Empedocles describes isolated limbs, Lucretius describes whole organisms with congenital defects – and that represents a crucial difference between the two zoogonical theories.

⁷⁵ Cf. Clay (1983), pp. 22–3, 289–90 nn. 43–4. Rösler (1973) correctly stresses Lucretius’ use of doxography in his critique of Empedocles at 1 714–829; but this is, I believe, a special case, in so far as the passage is almost certainly based on Epicurus’ own criticism of earlier physical theories in *On nature* XIV and XV, which in turn will have relied heavily on Theophrastus’ *Physical opinions* (see Ch. 4, §10; Ch. 5, §4; Ch. 6, §7).

⁷⁶ Teleology was not in Empedocles’ day an issue on which sides had to be taken. In what follows, I am describing the impression he was likely to make on later readers attuned to such a debate.

⁷⁷ B86 confirms that Aphrodite was the artisan in question; see Sedley (1992b).