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## Lucretian Architecture: The Structure and Argument of the *De Rerum Natura*

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## Lucretian Architecture: The Structure and Argument of the *De Rerum Natura*

### Abstract

From the arrangement of individual phrases to the grand structure of the entire poem, Lucretius uses poetic form with economy and imagination to attract the reader's attention and to drive home his philosophical message. In their main lines, the structure and content of the poem's argument derive from earlier Epicurean and other philosophical models, and Lucretius' debts to some of his predecessors are quite detailed. But his handling of this material is distinctive, and his greatest originality lies in the reshaping of a philosophical exposition adapted from previous writers to produce a poem whose form instantiates the main points of its argument at every level and is aesthetically satisfying as well.

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# 5

JOSEPH FARRELL

## Lucretian architecture: the structure and argument of the *De rerum natura*

### Introduction

From the arrangement of individual phrases to the grand structure of the entire poem, Lucretius uses poetic form with economy and imagination to attract the reader's attention and to drive home his philosophical message. In their main lines, the structure and content of the poem's argument derive from earlier Epicurean and other philosophical models, and Lucretius' debts to some of his predecessors are quite detailed. But his handling of this material is distinctive, and his greatest originality lies in the reshaping of a philosophical exposition adapted from previous writers to produce a poem whose form instantiates the main points of its argument at every level and is aesthetically satisfying as well.

### The order of argument and the question of Lucretius' source

A long-standing question is: to what extent was Lucretius an original thinker as opposed to a versifier of received wisdom?<sup>1</sup> For the purposes of this chapter, that question reduces to a related one: to what extent is the structure of the *DRN* Lucretius' own design as opposed to something borrowed from a previous work? The first scholars to address this issue simply assumed that Lucretius closely followed some particular source.<sup>2</sup> At length scholars started to leave this question aside, and the assumption that Lucretius worked without a single primary model in mind gained some appeal.<sup>3</sup> More recently, the *Herculaneum papyri* have provided enough evidence to reopen the question.<sup>4</sup> As of this writing, it is impossible to settle the matter. If the point is to understand the structure of Lucretius' poem, however, certain conclusions can be drawn.

<sup>1</sup> See ch. 1 above.

<sup>2</sup> The debate is summarised by Bailey 1947: 22–32.

<sup>3</sup> Clay 1983.

<sup>4</sup> Sedley 1998; see ch. 2 above.

It is likely that Lucretius borrowed the general structure of the *DRN* directly from the writings of Epicurus himself. Most nineteenth-century scholars identified the immediate model as Epicurus' *Letter to Herodotus*. Virtually every topic covered in the letter finds a place in the *DRN*. Conversely, Lucretius' treatment of these topics accounts for almost one-third of his poem – a substantial fraction. Within this fraction, the majority of topics (almost three-quarters) occur in the same order in both the letter and in the *DRN*. If we compare these totals with those found in other situations where we can measure a Latin poem's dependence on a surviving model, we find them comparable and, in fact, impressive. Nevertheless, Carlo Giussani set the tone for subsequent discussion by emphasizing the differences between the two works and arguing that Epicurus' letter could not be Lucretius' model.<sup>5</sup> His goal was evidently not merely to identify a treatise that the *DRN* follows even more closely than it does the *Letter to Herodotus*; ideally the poet would have almost no role in determining the order of his argument but would merely have versified some treatise, following its sequence of topics and arguments as slavishly as possible.<sup>6</sup>

It is no wonder that this effort met with frustration. Of course it is possible that Lucretius simply translated and versified some now lost treatise; but if he did, he would have been behaving most unusually for a Latin poet. It makes better sense to assume that Lucretius started with a text that contained an argument of substantially the same form as we find in the *DRN*, but that he exercised freedom in reordering the sequence of topics, eliminating some of them and adding material from other sources. So, if we may relate to Lucretius what we have learned by studying other poets' handling of their models, the *Letter to Herodotus* could well be the principal model of the *DRN*.

That said, it would make sense if the letter itself – which is more a compendium than a definitive exposition – proved to borrow its own structure from the more authoritative treatise *On Nature*. Indeed, David Sedley remarks that the letter 'is almost certainly presenting itself as an epitome of *On Nature*'.<sup>7</sup> Since portions of *On Nature* have been found among the Herculaneum papyri, the possibility exists that new evidence will confirm Sedley's argument.<sup>8</sup> Among those portions that have been found,

<sup>5</sup> Giussani 1896: 1–11.

<sup>6</sup> Trenchant criticism of this attitude by Clay 1983: 13–53, especially 21–6.

<sup>7</sup> Sedley 1998: 109.     <sup>8</sup> See chs. 1 and 2 above.

however, the most explicit evidence proves that, if *On Nature* was Lucretius' immediate model, he reordered sections of it in fashioning the *DRN* just as dramatically as he would have done had the *Letter to Herodotus* been his actual model.<sup>9</sup> In the current state of our knowledge, then, since the structure of *On Nature* must in large part be inferred from that of the *Letter to Herodotus*, there is no point in arguing about which of these might have been Lucretius' immediate model; still less in the case of the *Great Epitome*, which must be presumed to have followed *On Nature* (the work that it was epitomising!) very closely indeed, but which is itself, in any case, utterly lost.<sup>10</sup>

The main point is that Lucretius' order of argument is anticipated in broad outline in Epicurus' own writings.<sup>11</sup> Whether Lucretius borrowed his argument directly from Epicurus, or copied the work of some lost intermediary or worked independently from first principles, he clearly fashioned an argument that is similar in broad outline to one that Epicurus and perhaps other Epicureans had produced.

### Shaping the argument

If we pass from the murky issue of sources to the architecture of the poem that we have, we find substantially more agreement.<sup>12</sup> While each separate book possesses its own unity and integrity, the poem as a whole may be regarded as falling simultaneously into three pairs of books and into two halves consisting of three books each.<sup>13</sup> The general scheme is represented by the following chart:

<sup>9</sup> The most definite indication of such revision is Sedley's argument (1998: 123–6, 145–6) that Lucretius transferred his critique of the Presocratic philosophers from a late position in his source to an early position in his own poem.

<sup>10</sup> That the *Great Epitome* was Lucretius' model was Giussani's suggestion. We know of this text's existence only because it is mentioned three times in the scholia on the letter to Herodotus: see Bailey 1947: 24–5; Sedley 1998: 138.

<sup>11</sup> In places the order of Lucretius' argument pre-dates even Epicurus: see Sedley 1998: 166–85 and *passim*.

<sup>12</sup> I assume, with most scholars, that the text that we have is substantially complete and freer from disturbance than was formerly thought. Some have argued that the poem contains traces of a substantial change of plan undertaken in the course of its composition: see Townend 1979.

<sup>13</sup> The general scheme represented here is endorsed by Bailey 1947: 31–7; Boyancé 1963: 69–83; Minadeo 1965; Owen 1968–9; Kenney 1971: 12; Kenney 1977: 18–23; Sedley 1998: 144–5; Gale 1994b: 8.

The architecture of the *De rerum natura*

Book	Topic	Organisation by thirds	Organisation by halves
1	elements	} atoms and void	} basic principles of atomic theory
2	compounds		
3	material soul	} psychology	} ethical implications of atomic theory
4	its affects		
5	the world	} natural history	
6	its wonders		

To understand these groupings of books and divisions of the poem, it will be useful to bear in mind a few principles that inform the structure of the poem at every level, from that of the individual sentence or paragraph to that of the poem as a whole. These principles are unity, sequence, balance, parallelism, and inversion.

*Unity*

Apart from the individual hexameter line, Lucretius' most clearly defined structural unit is the book-roll. This is an obvious but fundamental point.<sup>14</sup> Nothing about the length, internal articulation, or logical and rhetorical shape of the individual books is arbitrary or unplanned; each is conceived and designed as a unified whole.

Lucretius begins each book with a formal proemium and generally ends with a peroration in which various closural devices are evident. The proemia are brilliant epideictic performances, rhetorically charged, imagistically rich, and often informed by mythology in a way that seems incompatible with the poem's rationalistic tenor. Prominent in most of them (1, 3, 4, 5, 6) are images of birth and creation. Conversely, the majority of books (2, 3, 4, 6) end with images of enervation, death, diminishment or destruction. Book 6 illustrates the effect of this contrast. The proem celebrates Athens as a parent that gave 'fruitful progeny' (*frugiparos fetus*, 1) to mortals and that 'remade life' (*recreauerunt vitam*, 2) when it 'gave birth' (*genuere*, 5) to Epicurus. But the book concludes with the ghastly image of that city in the grip of plague. This contrast endows the book with an organic shape modelled on that of the human lifespan. The pattern is repeated for the poem as a whole, which begins with the 'Hymn to Venus', a celebration of the goddess as

<sup>14</sup> Kenney 1977: 18 makes the important point that 'Lucretius' is the earliest surviving Latin poem in which the "book" is handled as an artistic unit and plays an integral part in the literary architecture of the whole.' As such it is an important witness to the reception of Hellenistic aesthetic principles among Roman poets of the first century BC.

the life-force that brings everything to birth, and concludes with, again, the ‘Plague of Athens’. These are classic opening and closural devices, tied to the natural rhythms of birth and death; but in the context of this poem, such devices powerfully reinforce one of Lucretius’ basic philosophical themes, as we shall see.<sup>15</sup>

The individual books also share general features of internal articulation, but these are quite variable. Five of the six books are provided with a kind of secondary proemium, normally when the book is about three-quarters complete. These new beginnings add energy to the exposition, provide perspective on the lessons imparted so far and introduce the concluding argument of the book. Beyond this, all of the books can be understood as presenting arguments in either two (Books 1, 3, 5, 6) or three (Books 2, 4) major sections, the proportions of which vary. Table 1 outlines the individual books.

Clearly Lucretius relied on no single formula to shape each book. We see this as well in the occasional digressions, such as the famous ‘Magna Mater’ passage (2.598–643), which Lucretius seems to have deployed at just that point by following his poet’s instinct rather than the specific needs of his argument or any abstract principle of poetic architecture.

### *Sequence*

The most basic relationship among the six individual books is their sequence. Lucretius’ argument develops in linear fashion from the simplest to the most complex aspects of the physical universe, taking the reader from insensible elements to sensible and, indeed, striking and even terrifying phenomena. Thus Book 1 deals with the axioms of Epicurean physics: that atoms and void are the irreducible elements of the physical world; that nothing is created from nothing; and so on. Book 2 expounds the ways in which atoms combine to produce more complex entities. Book 3 shows that the soul is no exception to the laws laid down in the earlier books, but is also made up of atoms and void. Book 4 goes on to address the passions of the soul. With Book 5 we enter the macrocosm, learning about the formation of our world, how the earth produced all the creatures that inhabit it, including human beings, and how humans came to live in societies and develop advanced civilisations without the help of the gods. Finally, Book 6 deals with unusual phenomena, such as thunder and lightning, earthquakes and plagues, and other seemingly capricious occurrences.

<sup>15</sup> On this topic see especially Minadeo 1969 and Penwill 1996.

Table 1

Book	Section	Passage	No. of lines
1	<i>Proem</i> : Hymn to Venus	1-145	145
	1. Atoms and void	146-634	489
	2. Doxography	635-920	286
	<i>Second proem</i> : Poetry and philosophy	921-50	30
	<i>Peroration</i> : Infinity	951-1117	167
2	<i>Proem</i> : Citadel of philosophy	1-61	61
	1. Atomic motion	62-332	271
	2. Atomic forms	333-729	397
	3. Atomic qualities	730-990	261
	<i>Second proem</i> : Hieros gamos	991-1022	32
	<i>Peroration</i> : Exhaustion of the earth	1023-1174	152
3	<i>Proem</i> : A life worthy of the gods	1-93	93
	1. Nature of the soul	94-416	323
	2. Mortality of the soul	417-829	413
	<i>Second proem</i> : Death itself is nothing	830-69	40
	<i>Peroration</i> : Diatribe against fear of death	870-1094	225
4	<i>Proem</i> : Poetry and philosophy	1-25	25
	1. Vision	26-215	190
	2. Sensation and thought	216-822	607
	3. Mind and body	823-1057	235
	<i>Second proem</i> : The real 'Venus'	1058-72	15
	<i>Peroration</i> : Love and sex	1073-1287	215
5	<i>Proem</i> : Epicurus a culture hero	1-90	90
	1. The earth	91-508	418
	2. Astronomy	509-770	262
	<i>Second proem</i> : Birth of the world	772-82	11
	<i>Peroration</i> : Anthropology	783-1457	676
6	<i>Proem</i> : Athens and Epicurus	1-95	95
	1. Meteorology	96-534	439
	2. Geology	535-1089	555
	<i>Peroration</i> : Plagues	1090-1286	197

Closely allied to this linear sequence is the tripartite segmentation of the argument by pairs of books. Thus the first third of the poem (Books 1 and 2) deals with the elements of atomic theory, the middle third (Books 3 and 4) with the nature of the soul, and the final third (Books 5 and 6) with natural history. Within each pair, the earlier, odd-numbered book establishes the relevant fundamental principles: Book 1 that everything consists of atoms and void; Book 3 that the soul is material and mortal; Book 5 that all of nature, including human societies, arose from the atomic interactions previously expounded. The latter, even-numbered books within each pair go on



to state important corollaries of these principles, to explore various specific applications of them and to refute objections to them in some detail.<sup>16</sup> Thus Book 2 argues that the entire universe in all its diversity can indeed have been created from the simple, characterless particles discussed in Book 1; Book 4 examines the workings of the material soul described in Book 3; and Book 6 analyses various pathologies that afflict both the natural and the social worlds that were the subject of Book 5. The logical progression from the first to the second book in each pair enhances the general sense of forward movement that we recognised in the overall six-book sequence. Viewed as a whole, the three pairs of books are arranged in ascending tricolon (2291, 2381 and 2743 lines, respectively).<sup>17</sup>

### *Balance and symmetry*

The poem's tripartite structure involves two further aspects which we may call 'balance' and 'symmetry'. These are closely related and serve to create an impression of unity for sections of individual books as well as for groups of books. At the same time, both principles are in creative tension with the forward movement implied by the sequence of books within each pair and across the poem as a whole.

Balance is exemplified within pairs of books: while the linear exposition leads the reader from the odd- to the even-numbered books, each pair stands as a well-rounded unit, of which each book forms half. Again, opening and closural devices come into play: the 'Hymn to Venus' in Book 1, with its powerful emphasis on creativity, ultimately gives way to the idea that the earth is nearing the end of its creative period, the note sounded at the end of Book 2. Books 3 and 4 end with lengthy diatribes against, respectively, the fear of death and sexual indulgence.<sup>18</sup> In this relationship one sees a strong ethical impulse towards *ataraxia* and against excessive terror of annihilation or false attachment to the pleasures of life. The unity and balance of Books 5 and 6 are especially impressive. Book 5 opens with praise of Epicurus as a culture hero. Then, in the relatively weak closure of that book, Lucretius observes that human nature alone, through experience and unaided by the gods, gradually advanced from its primitive state to the height of civilisation. Then the proem to Book 6 resumes the praise of Epicurus that had opened

<sup>16</sup> As noted by (e.g.) Gale 1994b: 4; Sedley 1998: 144.

<sup>17</sup> 'A pattern of crescendo is suggested by the appearance of Epicurus at the beginnings of the odd-numbered books as successively man (1.66), father (3.9), and god (5.8)' (Kenney 1977: 19; cf. Kenney 1971: 13).

<sup>18</sup> On Lucretius and the diatribe tradition in these passages see Wallach 1976; R. D. Brown 1987: 127-43.

Book 5, but this time locates his activity specifically in Athens. Lucretius praises Athens as, in effect, the pinnacle of civilisation alluded to at the end of the previous book, but especially as the place that made Epicurus' philosophy known to the world. The prominence of Athens here obviously looks ahead to the setting of the plague at the end of the book. But if these opening and closing passages underline the unity of Book 6, continuity between Books 5 and 6 is also very great. Book 5, then, may be said to begin an exposition that ends only in Book 6 about the rise and fall of civilisations. The unity of these two books is greatly reinforced by their midpoint: the last word of Book 5, *cacumen* ('pinnacle'), leaves the reader momentarily balanced, as it were, on a fulcrum between the rise of civilisation in the preceding book and its dissolution in the book that follows. The two perspectives balance one another within an expository relationship marked by logical and chronological progression.

The other aspect of balance is symmetry, which is most easily seen in groups of three. Typically Lucretius uses a symmetrical, triptych arrangement to throw emphasis on the central panel. In the poem as a whole, for instance, the discourse on atoms (1–2) and the discourse on natural history (5–6) surround an account of the materiality, the mortality and the passions of the soul (3–4).<sup>19</sup> There is a clear sense in which this is the central element of Epicurus' message as interpreted by Lucretius, who is relentless in his preaching against the fear of death.<sup>20</sup> Once Lucretius has proved that the soul is material and does not survive to experience the torments of the underworld, his case is won. What follows is important to a complete understanding of the world, but the main point has been made. The centrality of this point is reflected in the centrality of its position within the tripartite symmetry of the poem.<sup>21</sup>

This triptych structure is repeated at many levels of exposition. In some cases a central panel receives emphasis not only by its position, but by expansion as well. Book 2 consists of three major sections covering atomic motion (62–332 = 271 lines), atomic forms (333–729 = 397 lines) and atomic

<sup>19</sup> The idea that Books 1–2 and 5–6 constitute a kind of frame is established in other ways too. Kenney 1977: 19 shows that early in each of the four books (1.146–58; 2.167–81; 5.76–90; 6.50–79), but not in Books 3–4, Lucretius emphasises the idea that 'in the Epicurean universe the gods have no function', and that the earlier book in each of the framing pairs includes a verbatim repetition 'of the famous dictum about the fixed and limited (i.e. atomic) properties of all things: 1.76–7 = 5.89–90'.

<sup>20</sup> Boyancé 1963: 77; Kenney 1977: 19. Early in Book 1, Lucretius states clearly that the fear of death is the prime cause of religious superstition, and that this superstition arises from ignorance about the nature of the soul (1.101–57).

<sup>21</sup> On middles in Lucretius see Kyriakidis 2004.

qualities (730–990 = 261 lines). Here two shorter sections of nearly equal length surround a longer central section. On a smaller scale, the doxographic passage of Book 1 discusses three philosophers at varying lengths (Heraclitus, 635–704 = 70 lines; Empedocles, 705–829 = 125 lines; Anaxagoras, 830–920 = 91 lines). Again the middle section is the lengthiest, and it is also true that Empedocles is treated with much more deference than Heraclitus and Anaxagoras, as many have noted. Empedocles' prominence in this symmetrical arrangement seems clearly related to his importance as a poetic model.<sup>22</sup>

The triptych pattern informs even individual paragraphs and sentences. In the conclusion to the well-known passage on distant views, for instance, Don Fowler discerns the following structure:<sup>23</sup>

Section 1 (2 lines)	}		praeterea magnae legiones <u>cum</u> loca cursu
Section 2 (6 lines =2+2+2)		a. sight (2 lines)	<u>fulgor ibi</u> <sup>24</sup> ad caelum se tollit totaque <u>circum</u>
		b. sound (2 lines)	aeere renidescit tellus supterque virum vi
		c. trembling (2 lines)	excitur pedibus <u>sonitus</u> clamoreque montes
Section 3 (2 lines)			icti reiectant <u>voces</u> ad sidera mundi et <u>circum</u> volitant equites mediosque repente tramittunt valido quatientes <u>impete</u> campos; et <u>tamen</u> est quidam locus altis montibus, unde stare videntur et in campis consistere <u>fulgor</u> .

Besides, when great legions fill the spaces of plains with their manoeuvres as they practice war-games, a gleam there raises itself to the sky and all around the earth glows back with bronze and from below by the force of the men a sound is raised and the mountains, struck by their shouting, echo their voices to the stars, and about them the riders fly and swiftly cross and shake the plains between them with their powerful rush; and yet there is a place in the high mountains, whence they appear to stand and be a still sheen on the field.

The simple disposition of this passage, a steady march of paired hexameters, belies the complex movements that animate it. A single period is bracketed by two two-line cola, while the<sup>24</sup> six central lines divide into pairs. The first two lines (section 1) set the stage via a *cum* clause. Three succeeding couplets (section 2) elaborate the scene in terms of what the onlooker sees, hears and feels (a, b and c, respectively) as the armies practise their manoeuvres. But the elaboration is followed by a final pair of lines (section 3) – the main clause of this ten-line period – so strongly adversative that it negates the elaborations of the central three couplets. In a particularly nice touch, the final word

<sup>22</sup> On this passage see further Farrell 2001.

<sup>23</sup> Here I follow D. P. Fowler 2002: 397–8, with a few minor changes.

<sup>24</sup> Marullus' emendation of the mss. *ubi*: see D. P. Fowler 2002: 401 ad loc.

of line 332, *fulgor*, repeats the first word of the elaboration that begins in line 325, in effect undoing and even correcting that flight of epic pretension: while the sounds that reach hyperbolically to the stars and the shaking of the earth in couplets 1–4 are not even apparent to the distant onlooker in the final lines, the martial gleam of the weapons that, as in epic convention, was also said to rise to the heavens has been reduced to a vague sheen. Here again there is a productive tension between the symmetrical arrangement of the individual cola and the forward movement of the period as a whole. The emphasis – purely rhetorical, in this case – that is gained by the symmetrical placement of framing couplets around a longer central section is undone at the end in a clause that comes as a virtual enactment of Epicurean ethics.

### *Parallelism*

A principle closely related to symmetry is parallelism. Here we may begin with the idea that the poem as a whole falls into halves. This bipartite structure is a more subtle matter, less closely tied to the logical structure of Lucretius' argument than is the division of the poem by thirds, and appreciation of it has been hampered by a perception of formal features intrinsic to it as problems of one sort or other, usually signs that the *ultima manus* was lacking. Most notably, the proem to Book 4 (1–25) repeats some twenty-five lines almost verbatim from Book 1 (926–50), as was noted above. Editors have generally regarded the repetition not as a scribal blunder but as an authorial stopgap, assuming that Lucretius would have replaced these lines with a new proem if he had lived to finish his poem.<sup>25</sup> But G. B. Conte has convincingly explained the repetition as an instance of the 'proem in the middle' that refocuses the reader's attention and, as it were, re-launches the poet towards his goal as he begins to approach the end of his task.<sup>26</sup> On this reading, repetition of a famous passage from Book 1 at the beginning of Book 4 signals a new beginning and divides the poem into halves.

Other features contribute to the same effect. For instance, the theme of death is treated most extensively in two places, at the end of Book 3 (the diatribe against the fear of death) and of Book 6 (the plague at Athens). Exactly what point Lucretius is making by drawing this parallel is open to discussion: is the poem's finale a kind of test for the reader, who after absorbing the lessons of Lucretius' poem should be able to read the concluding passage about the plague with equanimity?<sup>27</sup> Or is he making a historical

<sup>25</sup> See (e.g.) Bailey 1947.      <sup>26</sup> Conte 1992; cf. Gale 1994b.

<sup>27</sup> Commager 1957; Segal 1990: 234.

point about the benighted behaviour under duress of even the most civilised people on earth, prior to the arrival of Epicurus and his philosophy?<sup>28</sup> No matter how one answers these questions, it seems clear that the endings of Books 3 and 6 are designed to comment on one another and to stimulate such questions, even if they do not provide definite answers.

A broadly similar parallel can be found between Books 2 and 5, the central books of each half. Book 2 ends with the idea that our world had a beginning and will have an end, emphasising that it is already quite old and showing its age (1105–74). It concludes with the memorable image of the aged ploughman (1164) groaning and shaking his head at the earth's inability to produce crops comparable to those of his father's day. The idea of the earth's birth and inevitable senescence and death receives a great deal of emphasis from its position at the end of this book, but it is otherwise not very prominent in the first half of the poem. It is, however, a major subject at the beginning of Book 5, where it is developed at length and in great detail (91–508).

In these cases, when Lucretius deals with a particular theme or motif in both halves of his poem, he deploys the similar material in the analogous books of the respective halves (i.e. Books 1 and 4, Books 2 and 5, Books 3 and 6). This tendency greatly reinforces the sense of a bipartite structure. In addition, the analogies involved work in close cooperation with the principle of sequence, in that the earlier occurrence in each case announces a theme that will be developed with greater emphasis in the second half of the poem. A digression on Lucretius' poetic and philosophical mission in Book 1 is redeployed more prominently as the proem to the fourth book, and so to the poem's second half. In Book 2 the idea that the world was born and will die is introduced as the conclusion to a lengthy discussion of atomic compounds. This is, indeed, the logical conclusion to the kind of argument that is found throughout Book 2, but it goes well beyond the other issues with which that book deals, and it does not handle the topic of the world's birth or mortality in anything like a complete or even an adequate way. As such, the passage in Book 2 serves to prefigure the major discussion that is reserved for Book 5. Finally, the images of death that close Book 3, and so the first half of the poem, also prefigure, but pale in comparison to the plague of Athens at the end of Book 6, which closes the second half of the poem and so the poem as a whole. In this sense, the second half of the poem may be regarded as an ambitious rhetorical *amplificatio* of themes announced in the first half.

<sup>28</sup> Bright 1971. See also p. 55 above.

*Inversion*

Lucretius' argument, as we have seen, proceeds in linear fashion from the simplest things in the universe to the most complex. In the same way, it moves from things of which one can have no direct sense experience – atoms and void – to things that force themselves upon the senses – typhoons, earthquakes and plagues. This movement is linear and conforms to the principle of sequence; but at the same time, sequential movement from one part of the poem to another often involves some sort of change. For instance, movement between analogous passages from the first to the second half of the poem involves an element of *amplificatio*. In other cases the sort of change involved may be a complete inversion of the previous movement. In fact, this occurrence is so frequent that it deserves to be recognised as a principle of its own.

Inversion is not exclusively an architectural principle, but it is closely implicated with the poem's structure. The poem begins with an invocation of Venus, and the problem that this beginning presents is familiar.<sup>29</sup> After praising Venus as the generative force of the world and asking her to create conditions of peace in which Lucretius might compose and Memmius might read his poem, the poet suddenly states a general truth about Epicurean gods: they exist in conditions of perfect happiness and are untouched and unmoved by human affairs (44–9).<sup>30</sup> But if this is so, what is the point of invoking Venus and summoning her as an ally or patron? Then, in case we miss this paradox, Lucretius goes on to denounce *religio* at great length as the source of so many human troubles. Finally, as he concludes these preliminaries, Lucretius states the first general principle of his physical argument, that nothing is ever born from nothing through divine agency (*diuinitus* 150). In the space of these relatively few lines, then, Lucretius moves from the position of a conventional poet who petitions the gods for favours, to that of one who asserts that we live in a materialist universe in which the gods play no active role. The inversion of his original position is pointed and pronounced.

Another large-scale inversion that animates the poem's structure involves appeal to the senses. It is a canon of Epicurus' philosophy that all reasoning depends on the evidence of the senses (*Ep. Herod.* 38). But the basic components of the universe, atoms and void, cannot be perceived directly. So, in the earlier books, Lucretius appeals to the senses to explain the unseen by analogy.<sup>31</sup> The famous illustration of atomic motion by the image of dust

<sup>29</sup> The literature on the opening hymn is vast; see Gale 1994a: 208–23, with further references.

<sup>30</sup> On these lines see Clay 1983: 94–5; Sedley 1998: 26–7.

<sup>31</sup> The most comprehensive study of analogical argument in the *DRN* is Schiesaro 1990.

motes in a sunbeam (2.80–141) captures the basic method and attitude of the early books. At the end of the poem, however, Lucretius shifts his ground, using the unseen to explain the phenomenal world and proving that the most terrifying events are not acts of god but merely the result of those chance collisions of atoms discussed in Books 1 and 2. The reader's progress through the six books, then, takes him from the simple to the complex, but also to a new perspective on nature from which the intellectual spectacle of the simple but unseen is understood to be somehow more real and more sublime than the mere epiphenomena that are nature's grandest displays.<sup>32</sup>

### Additions and digressions

For hundreds of years Lucretius' use of 'purple passages' – the six proems and a number of formal digressions from his strictly scientific exposition – has loomed large in the minds of his critics. These passages are in general either drawn from non-philosophical sources or freely composed, and they are used in such a way as to complement and shape argumentative portions of the poem.<sup>33</sup> In the proem to Book 1 Venus and Mars may be taken to represent the Empedoclean principles of Love and Strife, and David Sedley has argued persuasively that Empedoclean influence on the opening of the poem is very considerable indeed.<sup>34</sup> In a similar vein, Lucretius has borrowed from Homer's description of the gods' abode on Olympus in *Odyssey* 6 for the proem to his own Book 3.<sup>35</sup> And of course the poem concludes with the memorable account of the plague, which is famously borrowed from Book 2 of Thucydides.<sup>36</sup> None of these passages appeared in any previous Epicurean treatise of which we know. Each occupies a place of great structural significance, either beginning or ending a book and, in the case of the first and last passages cited, beginning and ending the poem itself.

A curious structural principle thus emerges. While the argument of the poem as a whole may well be borrowed from some previous Epicurean treatise, this argument is conspicuously framed by non-Epicurean material. We cannot say for sure exactly how Lucretius conceived of the relationship between this frame and the philosophical system that it contained, but the role of Homer here is notable. Not only is Homer himself imitated in the proem to Book 3, but the Empedoclean imagery of Love and Strife in Book

<sup>32</sup> See ch. 10 below.

<sup>33</sup> By now the idea that these passages represent an anti-Lucretian element is more a chapter in the history of the poem's reception than a credible interpretative position. On the stylistic issues involved see ch. 6, below.

<sup>34</sup> Sedley 1998: 1–34.     <sup>35</sup> With *DRN* 3.18–22 cf. *Od.* 6.41–5.

<sup>36</sup> With *DRN* 6.1138–1286 cf. *Thuc.* 2.47–52; see Commager 1957, Bright 1971, Penwill 1996.

1 is closely related to allegorical exegesis of Aphrodite's adulterous affair with Ares in the second song of Demodocus (*Od.* 8.266–369). Also in Book 1 Lucretius discusses Ennius' treatment of Homer, in which Homer appears explicitly as a philosopher.<sup>37</sup> It is hard not to infer from such passages that Lucretius' framing material and digressions are intended to mediate between the philosophical exposition that dominates the poem and the expectations of a readership that was either new to philosophy or accustomed to other kinds of poetry.

By the same token, passages that present themselves formally as digressions perform much of the same mediating work. Frequently such passages are explicitly linked to the framing material just discussed. For instance, Book 2 contains the passage on worship of the Magna Mater (600–60). These lines present themselves formally as a digression from the surrounding section (333–729), which concerns the multiplicity of atomic forms. The general thrust of the argument is that this multiplicity accounts for the enormous diversity of the things that the world produces; 'and this is why she is called great mother of the gods, mother of beasts, and parent of our body, all in one' (598–9). Lucretius then embellishes this point with a description of the ecstatic rites associated with the Magna Mater cult. He composes this passage in an elevated, agitated style that imitates the enthusiasm of the cult and that contrasts sharply with the more measured tone of the logical argument that surrounds it. Then he abruptly brings the reader up short, as he so often does, by stating an Epicurean doctrine that flatly contradicts any literal interpretation of the image that he has just presented:

And yet all this, however well and skillfully composed in the telling, nevertheless is very far removed from true reasoning. For of necessity the nature of the gods entirely and in itself enjoys immortality in utter peace, distant and far removed from our concerns. For, being free from any pain or hazard, and utterly self-contained, needing nothing from us, it is neither enticed by benefits nor touched by anger. (644–51)

The last six of these lines are repeated from a similar locus in Book 1, the Venus hymn. As such, they repeat in a new and more fully developed context a lesson that seemed more paradoxical at the very start of the poem; and they contribute to the unity of the argument in Books 1–2.<sup>38</sup>

<sup>37</sup> *DRN* 1.126, where Homer expounds the nature of the universe (*rerum naturam expandere dictis*).

<sup>38</sup> Repetition is much appreciated as an element of Lucretius' style (Minyard 1978), but examples such as this and the previously discussed proem of Book 4 show that it is an important structural principle as well. On the longer repetitions see Bailey 1947: 163–5, 602, and ad locc.



## Analogical structures

Analogy is a major element in Lucretius' argumentative technique. In structural terms, the *DRN* presents itself as a linguistic simulacrum of the entire universe. This aspect is articulated in the argument from analogy in Book 1 concerning the arrangement of *elementa* – atoms or letters of the alphabet – in compounds and in the words of Lucretius' poem, respectively. As he draws to a close his critique of Empedocles' four-element theory, Lucretius presses home the point that an enormous variety of compounds can be created from mere atoms and void. The crucial point is that the very same atoms can be rearranged in different positions and motions relative to one another and can collide with one another in different ways, so as to produce different compounds (817–22). Thus Empedocles' 'elements', earth, air, fire and water, are not elements at all, but compounds formed of (let us suppose) the same atoms, variously arranged. He then continues, 'In fact, even in my own verses, here and there you see many *elementa* that are common to many words, though you have to admit that the verses and words are quite different in their significance and in their sonorous sound' (823–6). That is, the same atoms, differently arranged, produce compounds as different as fire and water, just as the same letters of the alphabet in different arrangements produce all the different words that make up the individual lines of Lucretius' poem. The argument is analogical, but the analogy is strengthened by the fact that *elementa*, the word that Lucretius uses here for 'atoms', is also the Latin for 'letters of the alphabet'.<sup>39</sup> This convergence lends the analogical argument a particularly compelling quality that Lucretius exploits when he returns to the idea a few lines later. In rebutting Anaxagoras' theory that everything consists of particles of the same substance – earth is made from particles of earth, water from water, and so on – Lucretius observes that, since our bodies are nourished by different kinds of food, plants grow from the earth, wood when burned becomes fire, smoke and ash, then the elements of which all these compounds are composed must be different from flesh, earth and wood (858–74). To answer the idea that wood, since it can burst into flames, must contain particles of fire, Lucretius again insists that what wood and fire, being compounds, share is the fact that each substance is a different configuration of the same atoms; and to drive the point home, he again refers to language: 'Now do you see, then, what I said not long ago, that it often makes a great difference with what and in what position atoms are contained and what movements they make and cause one

<sup>39</sup> OLD<sup>3</sup> s.v. *elementum* 3; cf. Greek *stoicheion* (LSJ s.v. II.1 and 2). On this analogy see Aristotle, *Met.* A.4; *Gen. Corr.* 315b14; Cicero, *Nat. D.* 2.93.

another, and that the same atoms, if you change (their movements and positions) a bit, produce both wood and fire?’ (907–12). Here the reader must be reminded that ‘wood’ is *lignum* and ‘fire’ *ignis* – similar-sounding words that, when written, share several letters (or, in Latin, *elementa*). Lucretius goes on: ‘Just like the very words themselves, if the letters are rearranged a bit, when we denote “wood and fire” (*ligna atque ignis*) each by a different word’ (912–14).

This argument subtends the structure of the poem in the largest sense. The *DRN* is to be read not merely as an exposition of the physical universe, but in some sense as its image as well. Similarly, the structure of the poem is cognate with the fundamental conceptual structures that the poet employs to reveal the structure of the universe, in which the simple, fundamental principles of atoms and void combine to produce ever greater and more complex phenomena. In this regard, the structure of Lucretius’ exposition can hardly be regarded as a decorative appliqué or as an attractive container for some difficult lesson. The poem, specifically in respect to the most basic properties of its language and its inexorable movement from small to great, is itself a *simulacrum* of the universe; and the discovery of this homology is both a source of pleasure and one of the great lessons that the poem has to impart.

### Further reading

The best guide to Lucretius’ sources is Sedley 1998. For the view that Lucretius worked independently of any specific sources Clay 1983 is well worth reading. For Lucretius’ shaping of the poem, see Bailey 1947: 31–7; Boyancé 1963: 69–83 (in French); Minadeo 1965 and 1969; Owen 1968–9; Gale 1994b. On analogies see Schiesaro 1990 (in Italian).