

LUCRETIUS' METHODS OF ARGUMENT (3. 417-614)

BEFORE confronting the mysteries of soul we shall demonstrate Lucretius' methods by a simple concrete example.

SPECIMEN PROOF—FIRE IN CLOUD (6. 204-18)

- A. Lightning falls to the ground (204-5),
- B. because clouds must contain many seeds of fire (206-7).
- C. Indeed when they are dry, they are often coloured (207-8),
- D. since they must derive many (seeds) from the sun's light (209-10),
- E. to make them red (210).
- F. Therefore when the wind compresses them, they pour forth seeds (211-13),
- G. which make the flame colour flash out (213).

A states the phenomenon that requires to be explained. B explains it. C justifies B. D is the furthest reach of the argument and explains C. E begins the way back, stating the consequence of D and therefore balancing C. F is the inference from E and corresponds to B, and G brings us back to A. The logic is closely knit. And it is pointed by repeats and correspondences. In A the fire is *liquidus*; in E *profundant*, in F *profundunt*. In B the clouds must contain *permulta* seeds of fire; in D they must conceive *multa*¹ from the light of the sun, and the repeat of *necesseset*, *necessust* hammers home the argument. Colour is stressed throughout: *color aureus ignis*, *flammeus colos et splendidus*, *rubeant ignesque profundant*, *flammae fulgere colores*. There are clearly variations between these phrases, but there are also many similarities to bind the argument together. *Aureus* is a term applied to flames elsewhere (for example where the torches toss their golden hair in Catullus 61. 95), and as such it coheres with the other colours in the passage. *Rubeant ignesque profundant* 210 seems at first sight to be only remotely similar, but a bridge has already been provided. In *flammeus colos* 208, *colos* looks back to *color* 205, and *flammeus* looks both back to *ignis* and forward to *ignesque* by virtue of its obvious connection with fire (everywhere else in Lucretius it means 'fiery'), and by virtue of the established colour sense ('étant à la fois proche du rouge et du jaune' according to J. André, 'Études sur les termes de couleur dans la langue latine' [Paris, 1949], 116). In the final corresponson *flammae* resumes *ignis*, *flammeus*, *ignesque*; *fulgere* resumes *splendidus* and *aureus*, (by virtue of *aureaque Hesperidum seruans fulgentia mala* 5. 32) and *colores* resumes *color* and *colos*. These variated responsions are tedious to analyse, but effective as teaching because they articulate the argument and make it convincing. They are glorious as poetry because they flash resemblances before the eye and mind of the reader.

So then the lightning, *liquidi color aureus ignis*, is no otiose poeticism. Every word in this phrase is a cog in the argument. On the other hand there are two terms which do not so function: *mobilis* 204, and *deuolet* 205. In this part of the sixth book Lucretius is giving an account of different causes of lightning. We

¹ For *semina concipere* compare 6. 271-3, resuming this passage.

have examined the action of seeds of fire within clouds. The previous cause (173-203) is the action of winds within clouds, and it begins with references to flying and movement (*uolucris* and *mobilitate, motu*). It looks as though Lucretius is attempting to link this series of causes by repeating at the beginning of an argument key terms from the argument that preceded: 'This flying movement occurs also when . . .'

So then, in approaching the proofs of the mortality of the soul in the third book, we are alerted to three possibilities:

1. The logic is tight.
2. It is articulated by corresponding terms.
3. An argument may be linked to its predecessor by the repetition of terms from that predecessor.

INTRODUCTION (417-24)

Nunc age says Lucretius, demanding our attention, and immediately he tells us what he is going to prove in the next large section of his poem: that soul is native and mortal, native in the sense that it is constituted at birth, and mortal in the sense that it dissolves at death. There is no logical difficulty about this section, so we shall use it to study the minutiae of Lucretius' technique of poetic persuasion.

The first two lines are heavy with innuendo:

Nunc age, natiuos animantibus et mortalis
esse animos animasque leuis ut noscere possis, (3. 417-18)

Souls and minds and living creatures, *animantibus . . . animos animasque*, are etymologically connected and the implication is that they will be similar in other ways: that when the living creatures come to an end, their souls and minds are likely to do the same. And these souls and minds are *leuis*, fine in texture, implying that there is little need for surprise if they should dissolve. Epithets in Lucretius are not often purely ornamental. In addition, these two lines demonstrate the buttonholing technique of the preacher and of the ancient didactic poet:¹ *nunc age . . . ut noscere possis*, 'come now, so that you may know'. The end of the first line, with its spondaic climax, lays a great burden of emphasis on the key point of the entire argument: *et mortalis*. This is abstruse and technical material, but it is shot through by the tone of the individual voice, hectoring, wheedling, emphasizing, teaching, teasing, persuading, passionate. Unusual and difficult poetry, but poetry of great power. In 419-20 Lucretius talks of the long but rewarding labour he has devoted to the search for this poetry, *conquisita diu dulcique reperta labore*. Readers who take an interest in the arguments will be sceptical of Kenney's attempt² to play down the philosophical researches of Lucretius.

The remaining four lines of Lucretius' preface inform us that the words *animus* and *anima* are to be mutually inclusive. *Animus*, normally translated as 'mind', is the organ of intellect and of passion, situated in the middle of the chest. *Anima*, 'soul', is distributed throughout the body. Both are material, composed of tiny atoms, and are indissolubly intertwined. *Animus* is moved

¹ W. Kranz, 'Lukrez und Empedokles', *Philologus* xcvi (1944), 74-9.

² E. J. Kenney, 'Doctus Lucretius',

Mnemosyne xxiii (1970), 366-92, finds in this line an allusion to Alexandrian *ars*.

alone in experiencing emotions; but in intense emotions and in physical movements, *animus* transfers its movements to *anima*, the *anima* in turn transfers the movements to the body. This much is expounded in the earlier part of this book (136 ff.).

The soul then is composed of two parts *anima* and *animus*, soul and mind, and these parts are to be mutually inclusive in this section of Lucretius' poem. The mention of either part implies the whole. This is not simply a metrical convenience. In fact the two terms are not arbitrarily varied. In each of the arguments which we shall be examining the terms are used advisedly. *Animus* and its synonym *mens* (94) appear in statements which would not normally apply to the other part of the soul. In proof 3 *animus* grows in time with body; Lucretius adduces no evidence for the proposition that the other part of the soul does. Similarly, it is *animus* which is deranged in delirium and coma (464) and in insanity (510, 521). In piecemeal death it is *anima* which is withdrawing, not *animus*, which is located in the chest. Therefore the manuscript reading *animo* (531) is anatomically inappropriate and must be emended. Similarly argument 9 applies to the fixed intellect and not to the disseminated *anima*, and *mens* and *animus* are the terms employed. In effect Lucretius' law of mutual inclusiveness enables him to draw deductions about the composite soul from propositions which apply only to one of its constituent parts.

To return to our main concern in this section, the technique of this poetry of persuasion:

tu fac utrumque uno sub iungas nomine eorum,
atque animam uerbi causa cum dicere pergam,
mortalem esse docens, animum quoque dicere credas,
quatenus est unum inter se coniunctaque res est. (3. 421-4)

In 421 Lucretius is exploiting the freedom of Latin word order by juxtaposing 'both' and 'one', just as Catullus had done in juxtaposing *all* the gossip and *one* farthing (5. 3). But the dislocation of 'normal' word order goes even further. Instead of some such phrase as *utrumque uno iungas sub nomine*, he writes *utrumque uno sub iungas nomine*. *Sub nomine* go closely together in sense and normal usage; Lucretius violently separates them. This syntactical play is relevant to the sense, indeed a linguistic embodiment of it. Such phenomena are so frequent in Lucretius that it may be useful to give them a name, syntactical onomatopoeia,¹ being syntactical shapes which correspond to logical patterns or intellectual concepts or emotional states. Another such is the repetition of *dicere* in the fifth foot of two successive lines. Another in 424, where soul and mind are one phenomenon, a thing united *inter se*. Here are three notable syntactical features: one, the chiasmic repetition of *est*; two, the plural subject with singular verbs and singular complements; three, the ambiguous *inter se* (itself? themselves?) placed between the two singular complements. All of these are normal Latin, but conspicuous, and they effectively embody Lucretius' contention, the unity-duality of soul.

¹ The phenomenon has often been observed, for example by Ernout on *seque*

gregari 1. 452, 'une tmèse dans le mot même qui exprime l'idée d'une désagrégation'.

PROOF I—DISPERSIBILITY (425-44)

- A. Soul atoms are finer than atoms of water, smoke, or cloud (425-8).
- B. For soul is much more mobile, and is moved by something finer than they are (428-9).
- C. For it is moved by the kind of images of smoke and cloud which we see in sleep (430-2).
- D. For there is no doubt that these are images floating to us (433).
- E. Now, since water spills when its container is broken, and smoke and cloud disperse into the air (434-6),
- F. therefore soul too disperses when it leaves the body (437-9).
- G. Since body, the container of soul, if it is broken or rarefied, cannot keep soul together (440-2),
- H. then soul cannot be kept together by air (443),
- I. since, being rarer than body, it could not keep soul together (444).

AEF form the first proof. A is justified by the parenthesis BCD. GHI is an addition.

Typical in AEF are the repetitions and pleonasms, and typically these are not loose writing; they are not only poetic or ornamental, but are active in the argument. The triple assertion of the fineness of soul (*tenuem, minutis, minoribus* 425-6) gives massive emphasis to the key point of the argument. The liquid moisture of water complete with its archaic genitive (*liquidus umor aquai* 427) sounds like a high tide of poetic pleonasm, but its effect is not to bathe H₂O in a glow of antique splendour, nor merely to make us respond to the abundance and the vividness of the visualization, although abundance and vividness are the signature of Lucretius, but also to support the argument. This repeated assertion of the liquidity of water in A is preparing our minds for the spilling of it in E. There again *diffluere umorem et laticem discedere* 435 is strikingly copious, with duplication of the verb, repetition of the prefix, duplication of the noun, and chiasitic arrangement. Heinze asserts that this phrase mirrors the uncheckable dispersal of the water—syntactical onomatopoeia—but the crucial point again is that both verbs are needed for the argument. Lucretius is comparing soul to water, smoke, and cloud. His first step is to establish that water, smoke, and cloud all behave in the same way. Water is said *diffluere*, the *mot propre* for water; smoke and cloud do not strictly flow, so water is here said also *discedere*. This is the bridge term leading to the verb *discedit* used in the next line of cloud and smoke, thereby assimilating the three items to which soul is compared. More important, however, are the repetitions which cross the barrier between the invisible soul and the visible analogies for it. In the conclusion 437-9 the verbs used of the soul are *diffundi*, *perire*, *dissolui*, and *recessit*. The first is clearly a liquid word picking up *diffluere* 435 and assimilating soul to water. The third *dissolui* which Bailey calls 'the true atomic description' is equally applicable to the atoms of soul and to water, smoke, and cloud. The last *recessit* picks up *discedere* and *discedit* from 435-6, the terms which, as we saw, assimilated cloud and smoke to water. *Perire*, the second verb in the conclusion, conveys the perishing of soul, the objective of the entire argument. But it is also a word applicable to liquids and this applicability lends further credence to Lucretius' arguments. The most familiar example is *lymphae fundo pereuntis imo* (Horace, *Odes* 3. 11. 27), but Lucretius elsewhere exploits this application of the

word (3. 699–70, 936–40). The effect of all these responsions and all this lexical abundance is to strengthen his argument by insinuating that soul is truly and multifariously comparable to the analogies he has selected for it.

The force of Lucretius' writing can not be apprehended if we do not understand the movement of the argument. The argument moves by interlocking repeats and responsions. Commentators should therefore consider carefully these repeats and responsions. On 435 Giussani observes '*diffluere* sinonimo di *discedere*'. To Bailey this is 'tautologous reinforcement'. To Ernout 'redoublement et chiasme'. To Kenney 'linear variation'. But it is not enough to notice and name. We have also to think. How are these patterns serving the argument?

In proposition A Lucretius asserts that soul atoms are finer than atoms of water, smoke, or cloud. Propositions BCD form a parenthesis which justifies that assertion by appealing to the Epicurean doctrine of perception which is not argued until the fourth book. B states that soul is much more mobile than water, smoke, or cloud, and is moved by something finer than they are. The fourth book explains that ocular perception and mental perception, as for instance in dreams, are both caused by the impingement of material particles, *simulacra*, from the object perceived, only the *simulacra* which produce mental perception are finer (cf. 4. 728–9 and *nisi quod mage tenuia cernit* 4. 756). So then this argument could be much simpler: soul atoms are finer than smoke atoms because in perception they are moved by smoke atoms. But it is rendered more cogent by the appeal to the dream perception: soul atoms are finer than smoke atoms because they are moved by the kind of smoke atoms we apprehend in dreams, and these are <even> finer than the smoke atoms seen in waking life.

In proposition D, line 433, Lucretius is in difficulties as the logic extracts from him a further explanation, and a further anticipation of the fourth book: 'for these visual experiences are without doubt caused by *simulacra* reaching us.' 'Without doubt' is his way of saying that if we have any doubts, they will be satisfied by his subsequent exposition.

Creech's emendation *feruntur* provides a characteristic responson, picking up *ferre* in the previous line: when we see in our dreams altars *ferre fumum*, these are *simulacra* which *feruntur* to our minds.

This somewhat technical argument is made clear by repeat and responson at the end of three successive lines, *mobilitate*, *mouetur*, *mouetur* 428–30, not slack writing, but the piston arm of the argument (cf. 1. 66–7 and 5. 680–1). But the argument is made live and interesting by poetic particularity. Lucretius is not content with a general reference to dream perceptions of smoke and cloud, but cites a particular example of such a dream. Dreams of steaming and smoking altars provide a richly suggestive illustration for this anti-superstitious poet. The Roman reader deep in this abstruse argument would suddenly be visited by a complex of remembered sights and smells and emotions and occasions. To this complex the wording of Lucretius adds aural and intellectual stimulus: the ear is teased by the repeated syllable in *alte exhalare altaria*, an anti-clerical assonance (West, 'The Imagery and Poetry of Lucretius', pp. 27–9); and the mind is alerted by the feint at some possible etymologies of *altare*. Are altars so called because of their height (so Servius on Virgil, *Eclogue* 5. 66 and P. Festus 27L.)? Or because of the savour of sacrifice rising *above* them? While juggling with such possibilities suggested by the *figura etymologica* in *alte altaria*, we may agree with Lachmann that the manuscript reading *alta altaria* is

excessively simple-minded, and note also that the adverb is active in integrating the argument: the steam and smoke exhaled on high in 431 correspond to cloud and smoke dispersing into air in *auras* 436, and the suggestion of height is made explicit twenty lines later, in *altas aeris auras*. Even the metaphor in *exhalare* is functional. Steam and smoke are metaphorically breathed by altars. They are being compared with soul, *anima*,¹ and *anima* is breathed by human beings and animals. It would be foolish to insist upon this, but rash to deny it. Lucretius is often concerned to insinuate resemblances between the invisible soul and the visible substances to which he compares it.

There is a difficulty. *Vapor* 432, which we have been translating as 'steam', does not mean 'steam' in Lucretius. It means 'heat',² and that is how commentators take it here. Despite the lexical difficulty, this is inconceivable. *Vapor* must be visible in this argument. If Lucretius says we see something, we see it. If he writes *cernimus uaporem*, he is not talking about heat. Should any doubt remain, it is removed by responsions: *uaporem* and *fumum* in 432 correspond to *nebula* and *fumus* 428, 430, and 436, which has the added responson in *auras* to pick up *alte* 431. Nor is there any temptation to see with Kenney a hendiadys, 'hot smoke', in *exhalare uaporem ferreque fumum*. This is a grammarian's manoeuvre. The triple responson demands that *uapor* be different from smoke and be related to cloud. The argument demands that it be visible. *Vapor*, therefore, is steam, although we have to wait perhaps a decade for lexical support, until Cicero, *De Natura Deorum* 2. 27, 118.

GHI is an addendum which attempts to reinforce the argument AEF. So far Lucretius has been arguing about the dispersibility of gaseous substances solely in terms of their fineness of texture. He now supports his conclusion that soul disperses at death, with reference to its container: the body rarefied by haemorrhage cannot keep soul together; but air is finer than body (even rarefied body); therefore air cannot keep soul together. This reinforcement has been mustered in order to meet a possible objection: 'All very well to argue about soul and body from water and pot, but let us grant that soul will leave the body, what then? Is it not possible that it is so light in texture that air will be able to hold it together?' 'No,' replies Lucretius, 'if body is too weak to hold it together, what chance has air?' So much for the arrival of the new responding terms, *rarefactum* and *nostro corpore rarus magis, cohibere, cohiberier, and incohibessit*.³

Conquassatum does not fit this argument. If the receptacle of soul is broken there is no scope for this argument from rarefaction. It is not logical to say that soul will not be held together by air, because if I break my skull, soul comes out

¹ For such play between *anima* and *animus*, see the commentators on Virgil, *Aen.* 1. 57; H. Trankle, 'Die Sprachkunst des Properz' (Wiesbaden, 1970), 38; Virgil, *Aen.* 10. 357 'uenti proelia ceu tollunt animis'; and Plato, *Phaedo* 77 c.

² To concede the point. But I believe that the *corpora multa uaporis et aeris* (5. 490) are particles of steam and mist. The fiery *aether* is already formed, 458. The sun and moon are in position between the *aether* and the earth, 472. The heat of the sun forces the earth to sweat and increase the volume of the sea, 487-8. Now, in 456 and 459 the

atoms of fire are rare; so if in 490 atoms of *uapor* and *aer* are making the glowing quarters of the sky dense, then *uapor* is not heat, but vapour or steam. Lucretius is explaining the genesis of cloud.

³ Kenney obelizes *incohibessit*, unable to accept it because the sense 'strives to hold it in' is more than the inceptive verb can provide. The subjunctive *incohibessit* is the smallest change that produces a similar sense 'could be holding it in' (see Neue, 3. 510, citing *habessit* in Cic. *de Leg.* 2. 8. 19 and half a dozen examples from *prohibere*).

of the hole. For his argument Lucretius needs to invoke not the rupture, but the rarefaction of the receptacle. Nevertheless, the presence of *conquassatum* does not damage the argument. To resume, body is the container of soul; when rarefied it cannot keep soul together; but air is rarer even than rarefied body; therefore air cannot keep soul together; therefore when a body dies no matter how, by rarefaction, or by breaking (to resume our former instance, *quassatis* 434), the soul disperses. To translate with Kenney *quassatis* as 'broken' and *conquassatum*, as 'shaken' would be inattentive. The prefix does not mar the responsion. Its function is to intensify the alliteration, making twelve occurrences of the same sound in two lines 440-1.

PROOF 2—CONTEMPORANEOUS DEVELOPMENT (445-58)

- A. Mind is born, grows, and ages in time with the body (445-54).
- B. Therefore it must dissolve also into the breezes of the air (455-6),
- C. since it is born, grows, and wears out in time with the body (457-8).

The mind behaves like the body in the first three stages of life. It will therefore behave like it in the fourth. The demonstrandum is restated in very similar terms in the conclusion. This is teaching technique. Clarity is the main objective.

To lend conviction and interest to the exposition, 447-54 describe three phases of development of body and mind. These three phases are marshalled in a clearly articulated ascending tricolon, *nam* introducing the first phase in two lines, *inde ubi* introducing growth in the next two, and *post ubi* introducing senility in the next four. The success of the argument depends upon Lucretius' success in establishing the comparability of mind and body, and he sets about this with his two standard techniques of repeat and responsion, and of assimilation of analogy, whereby mind is described throughout in terms which apply to the body. The infant mind is *tenuis* 448 and this corresponds to the infant body *infirmo teneroque corpore* (Kenney hears a word play); the infant body totters (the sense of *uagatur* is established by its use at 1052 of the gait of a drunkard) and the infant mind goes with it (*sequitur*), preserving the notion of walking. The concept of strength which enters in the first phase with *infirmo*, *tenero*, and *tenuis*, is continued in the second with *robustis uiribus*, where a new concept is introduced, the concept of time, in *aetas*; in this second phase the grown mind is expressed in bodily terms, *maius et auctior* 450, which pick up the sense of *adoleuit*, and lead to the strength of mind in *animi uis*, where Kenney hears an echo with *tenuis* 448. In the third phase body has its strength shattered by the strength of time, with *aeuo* picking up *aetas*, and *ualidis uiribus* and *obtusis ceciderunt uiribus* all continuing the concept of strength. *Obtusis* applied to body is particularly helpful to the argument since it is so often used of the blunting or failing of the senses or the mind. Lucretius' main device for assimilating the analogy is to use bodily terms of the mind, but in this phrase he enriches the assimilation by reversing the process. The aged mind in 453-4 has no explicit mention of strength but the description is full of terms which continue the correspondence by referring to its collapse. The peak of assimilation of analogy is reached in 453, where the intellect hobbles (this neatly connects with the tottering infant 447); the tongue, *animi interpret* 6. 1149, wanders (the physical sense of *delirat* is active in the argument 'to wander from the straight in ploughing') and the mind falls or collapses (*labat* is Lachmann's supplementation of

the gap in the manuscripts and it provides an appropriate climax to the tottering of infancy in 447 and corresponds to the falling at the climax of bodily senility in *ceciderunt* 452). C we noted as a repetition of A. We now realize that two of its lexical innovations have been prepared and justified by the intervening description of the three phases of life in 447-54: *aeuo* by the repetition of the concept of time in *aetas* 449 and *aeui* 451. *Fessa fatisci* is more complex. Its common metaphorical sense is 'to grow worn and weary', but the two words are cognate and the *figura etymologica* draws attention to the literal sense of *fatisci*, suggesting 'to split and disintegrate' (cf. 5. 308). Just as *deficiunt* and *desunt* in 454 continue the correspondence with the concept of strength by alluding to its failure, so *fessa fatisci* completes the correspondence by predicating disintegration. Many of these correspondences are logical correspondences in the sense that they assist the argument by binding the demonstrandum to the conclusion, for example, or by assimilating the analogy. But others have no logical function. The argument depends upon the comparability of mind and body; the strength of time has nothing to do with the case. It is an illogical correspondence. So too is the verbal interplay of *sentimus*, *senescere*, *sententia* (noted by Kenney) and *mentem* in 445-6. Logical responsions add clarity and conviction; illogical responsions work at a different level, which is difficult to understand. The effect is sometimes incantatory or expressive. Despite the commentators it has here nothing to do with the Epicurean theory that language imitates reality.¹ There is in Lucretius a love of correspondence for its own sake. He seems to take pleasure in playing with the key words of his argument. It was not necessary for him to assimilate the phases of development to each other, but apart from the responsions we have observed, the ear cannot miss the structural similarities in

infirmo pueri teneroque uagantur corpore (447)

robustis adoleuit uiribus aetas (449)

ualidis quassatum est uiribus aeui (451)

obtusis ceciderunt uiribus artus (452)

Another inessential resposion may be observed here. There is no logical benefit in linking the argument to the previous one, but that is surely the purpose and effect of the mention of smoke in 456. Smoke has no role to play in this argument, but is active in 428, 430, 432, 436. One example establishes nothing, but it may serve for the moment to remind us of a possibility (cf. above on 6. 204-5).

PROOF 3—DISEASE (459-62)

- A. As body undergoes disease and pain (459-60),
- B. so mind undergoes care and grief and fear (461).
- C. Therefore it must be a partner in death too (462).

Argument 3, like argument 2, is analogical. Mind and body each suffers disease. (But body dies.) Therefore mind too dies. If this argument is to have any success, Lucretius must assimilate the diseases of body and the diseases of

¹ P. Friedländer would have realized this more clearly than some of those who quote him (see 'The Pattern of Sound and Ato-

mistic Theory of Lucretius', *A.J.P.* lxi (1941), 24 and 30). See also Norden on Virgil, *Aen.* 6. 204 ff.

mind, namely care, grief, and fear. This he does in two ways: by assimilating the sound and structure (*immanes morbos durumque dolorem* resembles *curas acris luctumque metumque*), and by his choice of words (*dolorem* is applicable equally to bodily or mental suffering, and *acris*, primarily a physical word, is here applied to mental suffering).

PROOF 4—DELIRIUM AND COMA (463–73)

- A. In bodily diseases mind strays (463–4),
- B. for it wanders into delirium and withdraws into coma (464–9).
- C. Therefore it must be dissolved also (470),
- D. since disease enters it (471),
- E. for pain and disease are both creators of death (472).

Proofs 4–6 are physiological. When body suffers disease, intoxication, or epilepsy, mind too suffers (and from those bodily afflictions, not the grief and fear of proof 3). But disease leads to death. Therefore mind too suffers death.

Delirium is caused by wandering of mind, conveyed by *auis*, *errat*, *dementit* and *delira*. For this connotation of *delira* see the commentators on 453. And the notion that *demens* is applied *quod de sua mente decesserit* (Festus 150L.) appears to be exploited by Ennius:

Quo uobis mentes rectae quae stare solebant
antehac dementes sese flexere uiui? *Annales* 202–3 Vahlen
Your minds used to stand straight in the past. To what point
have they now bent from the road out of their minds?

This crude translation shows that by a characteristic Latin poetic procedure¹ straight contrasts with bent (*rectae*, *flexere*), the former stance with the new deviation (*stare solebant*, *quo flexere*), and *mentes* with *dementes*.

Coma is caused by the withdrawal of mind, apparently into the depths, *gravi lethargo fertur in altum . . . soporem* 465. The distance of this withdrawal is suggested by *unde*, *exaudit*, and *reuocantes*, mind drifting down to a point from which it cannot catch the voices of those calling it back, bedewing their cheeks and lips with tears, 469. The extremity of this distress is not only vivid scene-painting, pathetic or contemptuous. It emphasizes the remoteness of the withdrawal. It is part of the argument.

The difficulty is that death enters this argument too soon, with *aeternum soporem* 466: mind suffers coma unto death; but disease creates death; therefore mind dies. To avoid this anticipation of the conclusion in the premiss, commentators hold that *aeternum* means not 'eternal' but 'unbroken', and Kenney takes from Bailey who took from Merrill the assertion that *aeternum* means 'unbroken' at 907. But at 907 *aeternum* means 'eternal'.² In 466 therefore the logic is destroyed. But in Lucretius we are dealing not with pure logic but with logic in a poem. The effect of this flaw is to make the argument more

¹ D. West in (ed.) C. D. N. Costa, *Horace* (London and Boston, 1973), 29–57.

² "No day will remove the eternal grief from our hearts." We must ask this person the question, "If everything reverts to sleep and stillness, what is there so bitter that it can cause a man to be able to waste away

with eternal grief?" This argument has always caused dissatisfaction because *possit* has not been translated. The point is scientific. 'Given atomic physics, how *could* anybody waste away for ever?' This interpretation is supported by the same argument at 3. 986.

persuasive. In effect the point is now being established by two different methods: one, by the bare logic as sketched above; two, by a vivid evocation of a terminal coma. In one we prove that the mind dies; in the other we see it dying. The deathbed scene is so vividly presented that it is easy not to notice that it destroys the logic of the argument. The persuasiveness of this argument is heightened by the ambivalence of 467-9. On the face of it these lines are fully and satisfactorily explained as a description of the behaviour of friends and relatives trying to call a man in a coma back to consciousness. But just as death can supervene almost imperceptibly in a coma, so such behaviour can merge, and in this context, after *aeternum soporem*, it does surely merge, with the week-long mourning ritual of the *conclamatio*, the keening. So with great cunning and poetic effect, Lucretius conjures up death, the visible proof of his argument, but masks it with ambiguity in attempting not to invalidate his deduction by anticipating it.

There is one other difficulty about this argument. The logical conclusion is 'Mind dies', but the actual conclusion in 470 is 'Mind dissolves'. Dissolution has not been at issue, and has not been explicitly established. It is an easy step, necessary to his ruling contention, and previously established in 437-8. Perhaps Lucretius' reason for supplying this variant in the conclusion is a desire to avoid or dissemble the tautology we have observed. He does not say 'Mind sickens unto death, therefore it dies', but 'Mind sickens unto death, therefore it dissolves.'

The last two lines 472-3 are appended to complete the logic. Heinze notes the macabre paradox in *leti fabricator*, 'the fashioner or creator of death', and interprets it in the light of Lucretius' obsession with the case he is arguing. Lucretius is so concerned with death, the destroyer, that he thinks of it positively as the creator of destruction.¹ *Perdocti* 473 is another grim touch. Disease leads to death. This is a truth we have learned *very well* by an incontestable abundance of examples.

PROOF 5—INTOXICATION (476-86)

- A. When wine enters and permeates body (476-7),
- B. body is weighed down, behaviour is affected (478-80),
- C. because wine has disturbed soul (481-3).
- D. But whatever can be disturbed, can by a greater force be destroyed (484-6).

'But', said the Christian editors, 'wine affects body, not soul.' As though to thwart any such attempt to drive a block between B and C, Lucretius selects in B eight symptoms from which the disturbance of soul may be inferred. The weight of the limbs and the obstruction of the legs argue that soul is failing in its function of supporting the body (5. 556-7); the slowness of the tongue justifies assertions about soul since the tongue is *animi interpres* 6. 1149; the fuddling of the intellect (*madet mens*), justifies the inference that soul as a whole is affected, but Lucretius has forced his case by expressing the fuddlement in liquid terms. The wetness of the mind is a *petitio principii*. At this stage in the argument he is instancing observable behaviour from which he can deduce that soul is affected: the fuddlement of the intellect would be legitimate, but the wetness of the intellect is a leap to his conclusion. The wetness of the eyes on the other hand is

¹ P. M. Brown refers me to a similar oxymoron *stragemque propagant* 1. 280.

a valid observation, and the inference too is valid. If the eyes are awash, perception will be affected and hence too soul, the instrument of perception; shouting, sighing, and brawling are all observable aspects of drunken behaviour from which it may be deduced that soul (or mind) is affected by wine. *Singultus* are presumably the sighs of self-pity or maudlin sex; *clamor* and *iurgia* are shouting and quarrelling. Wine affects different people in different ways. Kenney's notion of a mounting loss of self-control seems to suggest the wrong progression. Lucretius is not presenting the graded narrative of a single drunken bout from tipsiness towards insensibility, but rather a list of symptoms which support the inference that soul is affected. The first symptoms, like the weight of the limbs, provide the basis for a somewhat remote inference; from the last, like quarrelling, the inference is more direct. Similarly *cetera de genere hoc* does not reflect Lucretius' unwillingness to describe the more disgusting phenomena of drunkenness. If it had helped his argument to adduce vomiting or incontinence, we may be sure he would have done so. Lucretius is not squeamish.

So much for the outline of the logic. As usual, the wording supports the logic in multifarious ways. Soul is dispersed throughout the body, *per totum dissita corpus* 143. So in 476–7 Lucretius does not say simply 'when we drink wine', but *penetrauit acris*. The wine is sharp, and penetrates, and its heat is diffused and dispersed through the veins, *discessit diditus*. This penetration is repeated in C, where Lucretius deduces that wine has disturbed soul in the body. *Corpore in ipso* 483 is a responsion to the terms we have just noted in 476–7. Another responsion, this time an audible echo, reinforces this logical connection: *uini uis penetrauit acris* in A corresponds to *uemens uiolentia uini conturbare* in C and also to *durior insinuarit causa*¹ in D. On first reading *acris* 477 might be taken simply as an ornamental epithet lending typical Lucretian tension to the exposition. But, as we saw, it is also in close causal interaction with *penetrauit*. And most important, its responsions with *uemens* 482 and with *durior* 485 serve to integrate the logic. This responsion of *durus* and *acer* we have already passed without comment in 460–1. There, as here, the responsion works because what is hard is well equipped to cut. Finally, responsions make it clear that the symptoms of intoxication are induced by the disturbance of soul (*conturbare, conturbari* 483–4) and by the obstruction of soul as deduced from the obstruction of the legs (*praepediuntur* 478, *inque pediri* 484). So then the distinction between arguments 4 and 5 is clear and is emphasized by responsions. Delirium and coma are caused by wandering and withdrawal of mind, whereas the symptoms of intoxication are caused by the disturbance and obstruction of soul. Kenney, following Heinze, ignores this and finds instead in 5 a reversion of the argument of 4. 'Whereas disease attacks the body, which then communicates its effects to the mind, drunkenness attacks the *anima* directly (483)—which in turn affects the body.' Several reasons conspire against this analysis. One, Lucretius nowhere mentions this sequence of events, but 'leaves it to be inferred by his readers'. Two, line 483 does not state or imply that drunkenness attacks the *anima* directly; but rather that wine disturbs soul in the body, a statement better explained as above as responding to *penetrauit* and *insinuarit*. Three, no such sequence would have point in the argument. His general point in

¹ Kenney takes *causa* as 'disease', comparing *morbi . . . causa* 502. But at 502 *causa* clearly means 'cause' and in 486 there is no

need to restrict the word to disease. The *durior causa* might well be a knock on the head.

arguments 4 and 6 is that bodily afflictions affect the soul and this is obviously in accordance with his ruling contention. If argument 5 argued that soul affected body, this would not fit the arguments on either side of it, and would not contribute to his ruling contention. Four, in 476 the distribution of wine throughout the body is described in great detail, and precedes the description of the symptoms from which Lucretius deduces that soul has been disturbed, thus providing the physiological explanation of that disturbance. In short, Lucretius' point is not that drunkenness is caused by the operation of soul upon body, but that the bodily symptoms of drunkenness lead us to infer that wine has disturbed soul.

PROOF 6—EPILEPSY (487–509)

- A. The epileptic experiences certain bodily symptoms (487–91).
- B. These are to be explained as the tossing and tearing of soul, and the recovery from the fit as the recovery of soul (491–505).
- C. Since soul is tossed and torn within the body (506–7),
- D. it could not survive in the open air (508–9).

The crux of this argument, as of the last, is that bodily symptoms justify the inference that soul is disturbed. Nine symptoms are recorded (489–91); for three of these the inference is explicitly drawn in 493–501, the loss of consciousness, the moaning, the frothing at the mouth. *Desipientia* 499 picks up *desipit*. Loss of consciousness is caused by the disturbance of *animus* and *anima*. The intelligence, the organ of thought and motion and emotion, is torn violently apart from the vital principle, the agent of the senses. This is confirmed 504–5 where recovery is closely associated with the retrieval of *anima*. Similarly *gemitus* 495 picks up *ingemit*. The epileptic groans, broadly speaking (*omnino* indicates that Lucretius does not wish to anticipate his fourth book by launching into a detailed exposition) because the seeds of voice are bundled together and drawn out of the mouth by their normal established route, a metaphor which aptly explains that groaning is the uncontrolled emission of *anima* by the line of least resistance. The argument depends upon the association of *anima* soul and *anima* breath which we have found already in 432. Similarly *agens spumas* 493, if that be the correct reading, picks up *spumas agit*. It is astonishing that this should have to be stated, that commentators should reject these prominent reponsions and flirt with *agens animam*. Apart from anything else, the normal sense of this, 'breathing one's last', is fatal to the argument. What of the other six symptoms? *Ante oculos aliquis* is an invitation to visualize, and anybody who has seen an epileptic fit will respond to this description. But there is more to this poetry than a vivid *repraesentatio*. These symptoms are selected for dialectical reasons. Each of them leads to an inference about soul. Soul is distributed throughout the body (*per totum dissita corpus* 143); it is intermingled with the muscles (*nerui* 217, 567, 691, 789); it is responsible for the movement of body (3. 158–60). When therefore the victim falls to the ground in an epileptic fit, the limbs tremble, the muscles stretch and writhe, and the limbs are tossed about, it is a reasonable inference that soul is violently disturbed. This leaves unexplained only the gasping (*anhelat* 490), but this lack may be supplied from the explanation of foaming at the mouth, which follows immediately.

Foaming at the mouth is explained 492–4. According to Kenney's text, the

violence of the disease is torn throughout the limbs, disturbs soul, and throws out foam. How can Lucretius argue this connection between soul and froth? By a simile. What makes waves boil and causes spume? The mighty strength of the winds. Spume then is caused by gales. Just so foam is caused in epilepsy by a disturbance of *anima*. Lucretius is again exploiting the range of meaning of *anima*—wind, breath, soul. Kenney remarks that the simile is emphatic, picturesque, and ‘literary’. It is also part of the argument, and exposed as such by correspondences. *Vi morbi* is the agent in 487 and 492, and corresponds to *uentorum ualidis uiribus* here in 494, and is picked up again in the *ualidis uentis* of the conclusion 509. So the froth is picked up by *ueneno* 501 and *acer umor* 503.

In 493 OQ read *turbat agens animam spumans* ‘the force of the disease disturbs the soul, drives out the breath, frothing’ an impossibly awkward collocation of participles, and awkward also in asserting that the force of the disease is frothing (cf. *quasi morbus posset animam agere* Lachmann). *Spumas*, as object of *agens*, solves these problems and provides, as argued above, a perfect response to *spumas agit* 489. Similarly *turbat animam* is confirmed by the whole run of the argument, and in particular by *uis animi atque animai conturbatur* 499–500.

Such correspondences might be thought to confirm this very slight emendation, but the fit is not exact. In 492 *uis morbi distracta per artus* is problematic: it is not the violence of the disease that is torn apart throughout the body, but the soul which is torn apart by the violence of the disease (see 487, 499–501, 507). Ernout and Bailey read *ui morbi distracta per artus turbat agens anima spumas*. Against this reading may be urged the lengthening of the short vowel before the initial double consonant *anima spumas*, unique in Lucretius. This could be stomached if it produced the correspondences. But an anomaly remains. *Turbat* is used intransitively, not in itself impossible, but in this disputed context conspicuously odd as a response to *conturbatur* (500). In other words the argument here requires *ui morbi distracta per artus turbatur agens anima spumas*. The Ernout–Bailey solution demands a metrical anomaly and an uncomfortable correspondence between *turbat* and *conturbatur*. This combination of difficulties seems incredible. The Büchner–Kenney solution involves an extension of the sense of *distracta* to mean ‘violently dispersed’, and an uncomfortable correspondence between *uis morbi distracta* and the three other uses of this verb passively with *anima* as subject. This is still difficult, but credible since we have seen that Lucretius elsewhere argues by means of such irrational resemblances. It is in his nature, part of his techniques of persuasion, to claim support for *anima ui morbi distracta* by the assertion of *uis morbi distracta* which *turbat animam*.¹

So far those last three arguments have been presented as three separate examples of malfunction of soul, delirium and coma as its wandering and withdrawal, drunkenness as its disturbance and obstruction, and epilepsy as its disturbance and tossing and rending (493 and 500, 501 and 507, 500–1, and 507). Commentators do not so distinctly separate these arguments. Kenney for instance takes 484–6 as the basis for the whole demonstration from 463 to 525 although correspondences clearly key it into the section on intoxication (476–86), and although the basis for the argument for 463–9 is explicitly stated in 470–3. A similar point is made by Kenney on *tantis morbis* 506, ‘the reference is

¹ Notably in Proof 2 above. For such fraudulency with metaphors see West, *The Imagery and Poetry of Lucretius* (Edinburgh,

1969), 81–92: and with similes *ibid.* 74–8, and *Philologus* cxiv (1970), 273–4.

to coma and drunkenness as well as to epilepsy.' These words coming after the three examples of malfunctioning of soul do look back to gather arguments 4-6 under one head, but the wording of 507 *iactentur, distracta*, is related specifically to the epilepsy which constitutes the last example. On the other hand, as we have already seen, Lucretius tends to link his arguments by including in them a term belonging to their predecessors. Just as the smoke (456) repeats without any dialectical force the smoke which was dialectically active in the previous argument 436, so *penetrant* (471) points forward to 476 and 485; so *reflexit* 502 seems to be a medical term and points forward to 511 and 522.

PROOF 7—CURE (510-22)

- A. The fact of cure is an indication that soul is mortal (510-12).
- B. For any changing or influencing involves addition or transposition or subtraction (513-16).
- C. But the immortal does not tolerate transposition or addition or subtraction (517-18),
- D. for anything that changes and leaves its boundaries, dies (519-20).
- E. Therefore, cure, as well as sickness, indicates mortality of soul (521-2).

Many responsions bind B to C. Addition, transposition, subtraction are answered by transposition, addition, subtraction with variation in order and in wording to avoid mechanical repetition, but sufficient responsion to carry the logic. *Transferri* picks up *traiecere*, *tribui* picks up *addere*, and *partes* is the object of two active verbs in 513 and the subject of two passive verbs in 517. *Quicquam neque defluere hilum* picks up *aliquid prorsum detrahare hilum*. At 517 Lucretius could well have repeated *detrahare*, but instead he writes *defluere*, a word he uses nowhere else, the prefix providing the responsion, while the root lends variety.

To say with Giussani that 519-20 is the general conclusion to this whole group of proofs is to ignore the many responsions which bind A to E. *Aegrum* is picked up by *aegrescit*, *flecti medicina* by *flectitur a medicina* (with *flectitur* appearing also in B in 516),¹ *mortalem* by *mortalia*. *Praesagit* 512 'is a slightly unexpected word' writes Kenney, surprised by the apparent allusion to prophecy. The exact balance between A and E clearly shows that it corresponds to *signa mittit* 521. *Signa* is a medical term meaning symptoms (Pliny, *N.H.* 7. 171, Lucretius 6. 1182 and Kenney on 3. 468). The explanation of *praesagit* is that it too is a medical term, used by Celsus of clinical prediction (7. 6. 2; 7. 26. 5H.). The conclusion corresponds exactly to the *demonstrandum*.

After proof 7 there appears a short bracing interlude 523-5 which has the ring of 'Areopagitica' to it. 'I cannot praise a fugitive and cloistered virtue, unexercised and unbreathed, that never sallies forth and seeks her adversary.' Motors tend to overheat on the hill. Kenney for instance is excellent on *effugium praeccludere eunti*, on *ancipiti* the double-headed axe, and on the dilemma of 521-2. But 'the true argument bringing the false to bay, and hewing it down in open combat' is at best a spirited extension of *occurrere* and *convincere*.

¹ I have not found *flecti* used as a medical term. Virgil, *Aen.* 12. 46 (*haudquaquam dictis uiolentia Turni flectitur; exsuperat magis aegrescitque medendo*) betrays its Lucretian origin by the close collocation of *flecti*,

aegrescit (only here in Virgil) and *mederi*. Compare also *uiuiscit et inueterascit alendo* (4. 1068). The odds are therefore that *Aen.* 4. 35 is to be traced to the same source, *aegram nulli quondam flexere mariti*.

PROOF 8—PIECEMEAL DYING (526–47)

- A. A man often dies piecemeal (526–30).
- B. Since soul is cut into pieces before leaving the body (531–2),
- C. it is mortal (532).
- D. But perhaps the gradual loss of the senses is caused by the concentration of the soul at one point in the body (533–5).
- E. If this is so, there ought to be a place of heightened sense (536–7).
- F. There is no such place (538).
- G. Therefore, the soul is torn apart and disperses (538–9).
- H. Therefore, it perishes (539).
- I. But even if there were such a place (540–2),
- J. soul would still be mortal; it makes no difference whether it disperses and dies, or concentrates and goes inert (543–5),
- K. since the man as a whole has progressively less life and sense (546–7).

A states the same general proposition twice in two different ways. B selects five clinical details to demonstrate it, toes and toenails, feet and legs, the other limbs. These seven statements are linked by correspondences, notably the three adverbs ending in *-tim* and the verb *ire* 526 to die, 530 to go, where death's cold footprints go draggingly over the limbs. Is this a crack in the Lucretian façade? Does this show that Lucretius is afraid of death, after all? Kenney seems to think so, but in extenuation suggests that the personification of death may be purely 'literary' (*sic*), citing 1. 852. But Lucretius is arguing against the fear of what happens after death. He is under no obligation to claim that it is pleasant to die. This chilling image, literary or not, is closely interlocked into the surrounding argument. So are the grinding of the teeth of death in 1. 852 (West, *The Imagery and Poetry of Lucretius*, 130). Nor do the footprints necessarily entail personification. Rather animalculification (cf. 388–90).

In 531 the text has not been established. The manuscripts read *scinditur atque animo haec quoniam*. *Animo* is wrong. This argument is about the failure of *sensus* 527, 535, 537, 546, and *anima* the organ of *sensus* is discussed throughout (536, 541, 543). *Atque* is also wrong, since Lucretius always puts it first (see Lachmann ad loc.). *Itque* leaps to mind to respond to *ire* 526, 530 and *interit* 539. Hence Bailey suggests *scinditur itque animae haec quoniam natura*. Kenney casts doubts on the sense of *haec* and the elision of *ae*, and these doubts would drive the text to *scinditur itque animae quoniam natura*.¹ This provides a cohesive argument: 'We often see a man departing moment by moment, and limb by limb losing his vital sense. Since soul (the organ of sense) is cut into pieces and departs, it must be held to be mortal.' *Scinditur* corresponds to *membratim* and *itque* to *ire*. This double correspondence is maintained in 531–2: 'soul does not emerge in one piece' (*nec sincera et existit*); and also in 539: 'it is dispersed after being torn, therefore it perishes' (*dilaniata dispargitur, interit ergo* picking up at four points *quoniam scinditur itque mortalis habendast*).

¹ Compare *scinditur et discedit*, 3. 640. If the suggested reading were to be accepted, this would be the only occurrence in Lucretius of *quoniam* before its apodosis without a conjunction or relative pronoun to link it to what has preceded. Büchner

reads *animo* and supports it by the suggestion that *animo haec* in the manuscripts may arise from an attempt to correct *animo* by writing *ae* over the *o*. This might be so, but we would suppose against Büchner that the corrector was right to read *animae*.

So much for A-C. In D piecemeal loss of sense (*sensum deducere membris* 535 answers *membratim uitalem deperdere sensum* 527). D introduces an imaginary objection. Piecemeal dying may be not the gradual dispersal of soul but gradual concentration to some point within the body. E-H refutes this possibility. I-K argues that even if it were granted it would not affect the conclusion. *Obbrutescat* in J causes surprising difficulties. Scholars talk of the soul growing 'dim', or 'besotted', or even 'obtunding'. These indulgences have nothing to do with the Latin, the argument, or the poetry. 'Stupidity' is also invoked, but stupidity is a condition of *animus* and this paragraph is about *anima*. 'Weight' is called in as being the etymological sense of the root of *brutus*, cf. *βρῦς*. But the essential meaning of *obbrutescat* in the paragraph is 'to become inert, lifeless, *empfindungslos*' (Heinze). Without this the argument does not work, and the commentators who misunderstand *obbrutescat* are quite right to say that it doesn't. The imaginary objector is arguing that when a man is dying piecemeal, his soul is concentrating at one point within the body, and we are left to imagine that it will then be able to leave in one piece at the moment of death. 'But', replies Lucretius, 'when a man is dying piecemeal, the sense and life of that man as a whole (*totum*), of the whole organism, body and soul, grow less and less.' Even if soul is concentrating at one point, the progressive decrease in the *uitalis sensus* (cf. 527) of the whole organism indicates that the concentrated soul is also losing its vital function, and such a loss is not consistent with immortality. *Totum* is often misunderstood. Kenney applies it to the imaginary objection and produces a circular argument: there are no areas of concentrated *anima*, therefore there is no concentration of *anima*. It must be read rather as an appeal to our observation of piecemeal dying as in 528-30: the *uita* and *sensus* of the whole organism are visibly decreasing. Therefore his *anima* is decreasing, no matter whether centrifugally or centripetally. This sense is logically necessary and is confirmed by a correspondence. *Contracta suis e partibus obbrutescat*, 'gathering all its parts together it grows inert' answers *pereat dispersa*, 'it perishes after dispersing'.

Lambinus compares the last moments of Socrates, and the Platonic narrative, or some such other clinical account, does seem to have stimulated Lucretius at three points. First, the allegedly literary personification of death includes a clinical detail mentioned twice in the *Phaedo*. *Gelidi leti* should remind us of the friendly jailer who pinched Socrates' foot, and shins and so on upwards, showing they were cold (*ψύχουτο* and later *ψυχόμενα* 118 a). Second, Lucretius seems to have developed from Plato the notion of 'going'. The jailer was going on upwards, *ἐπανιών*, as the *uestigia leti* are said to 'go'. And he said that Socrates would depart, die, *οἰχθήσεται*, just as the man is said to depart, die, *ire*, a euphemism much commoner in Greek than in Latin.¹ Third, a difference, wholly characteristic of Lucretius, of his prodigality, his eye for detail, his exploitation of detail in argument: unlike Plato, he mentions toes and toenails.

PROOF 9—INTEGRAL CONNECTION (548-57)

- A. Since mind is an individual fixed part of man (548-9),
- B. just as eyes and ears are (549-50),

¹ In the *Phaedo* 118 a 3-4 and 115 d 3-4, biguity in *οἰχθήσεται*: C. Gill, 'The death of Socrates makes some play with this am-

Socrates', *C.Q.* xliii (1973), 27.

- C. and just as hands and eyes and nostrils cannot function or exist apart from us, but swiftly decompose (551-3),
- D. so mind cannot exist without body, which is its receptacle, or whatever is even more integrally linked to it than that (554-7).

No comment is required but it may help to clear away three accumulations of scholastic debris.

First, Brieger's suggestion (p. xxii) that the *quoniam* clause of 548 has no apodosis. 'Since x, and just as y, so z', is not an anacoluthon. *Veluti* and *sic* bind y and z, but x and z also cohere grammatically.

Second, the nostrils. Why have the ears of 549 become the nostrils of 551? Kenney, telescoping Giussani, writes 'not merely to save the metre, but because the removal of the external flap of the ear . . . does not destroy the hearing'. This has nothing to do with the argument. Lucretius' point is that mind like ears cannot function if amputated. To say that the flapless ear can still function is not relevant. Giussani's point was that the removal of the whole ear, unlike the gouging out of the eye or the cutting-off of the hand, was not very easy to imagine, whereas the amputation of the ear flaps did not make the case. But it can be risky to ask why a poet wrote one word rather than another. If Lucretius really noticed that ears raised this difficulty, why did he not go back and change *ures* 549 to *nares*? And besides can we be much surer that the excision of nose would remove the sense of smell? Whatever may be the true answers to these difficult questions, one basic factor certainly is operating. *Manus* in 551 is an extra element, a variation on the ears and eyes of 549. Whether or not he anticipated Giussani's observation about ear-flaps, he certainly wanted variety and irregularity, hoping thereby to lend conviction to his central thesis by suggesting the large stock of analogies he had at his disposal. *Nares* is a not very notable example of the exuberance of imagination and intellect which are typical of this poet.

The third dustcloud envelopes *animus non quit sine corpore et ipso esse homine illius quasi quod uas esse uidetur* 554-5. Heinze says that *et ipso homine* was added by Lucretius since the soul is part of man, not part of the body. By itself, this does not make sense. To say soul cannot exist without body is unimpeachable, and Lucretius would never have added anything to that 'because soul is not part of body'. The reason for the insertion of *et ipso homine* is Lucretius' desire for responsions. 'Since *mens* is a part of man (548) . . . and just as hand and eye and nostrils cannot function if separated from us (*ab nobis*), so *animus* (= *mens*) cannot function without body, without the man himself', and *homine* integrates the argument by picking up *hominis* 548 and *nobis* 552. Heinze's second point is perfectly valid, that *corpore* and not *homine* is the antecedent of *quod*. The reason for this is philosophical (body, not man, is the receptacle of soul since man includes soul); not grammatical as might be suggested to the unwary by Kenney's note '*ipso homine* (as Heinze remarks) is not only explicatory but also parenthetical, since *quod* can only refer to *corpus*.' Grammatically, of course, *quod* could very well refer to *homine* (cf. Munro on 94).

These separate arguments for the mortality of soul seem sometimes to be linked by irrational verbal repeats (cf. p. 106). So here *pars* 548 may be picking up *partibus* 545. In the first passage soul is imagined gathering its scattered parts together. In the second mind is a single, fixed part of man. Similarly, the discussion of the relationship between soul and body which is appended to this

proof forms a link with the next: *animus non quit sine corpore esse* (554-5) linking with *corporis atque animi uiuata potestas* 558.

PROOF 10—THE SINGLE ENTITY (558-79)

- A. Body and mind live and function as a unit (558-62).
- B. Just as the eye cannot see if separated from the body (563-4),
- C. so soul and mind can do nothing by themselves (565).
- D. Since they are inextricably held together by the body and their atoms are not free to leap apart and leave great gaps between each other (566-9),
- E. therefore, so enclosed, they move the motions of sense (569-70).
- F. If they were thrown out of the body, they would not be able to move these motions after death (570-1),
- G. since they would not so be held together by body (572).
- H. For air will be body and living body at that if it can hold soul together and enclose it within these motions which it used to perform within the body (573-5).
- I. Therefore, when the covering of the body is dissolved and the breath of life is dispersed into the air (576-7),
- J. soul and the senses of mind are also resolved (578-9),
- K. since body and soul form one unit (579).

In 559 body and soul function and live joined together, and the separate senses of these two verbs (*ualent uitaque fruuntur*) are remembered in what follows. Mind by itself cannot perform the movements of life 560 (this refers to *ualent*, function), nor can body survive without soul 562 (this relates to *uita fruuntur*) nor use the senses (this reverts to function, *ualent*).

Lucretius now proceeds to support this general principle first, in B and C, by means of an analogy with the eye, and second by means of a physiological explanation of the process of perception as a function of the union of body and mind and soul. This process has already been described in general terms in 136-60. *Animus* in the middle of the breast can be moved by itself. It can also move *anima*, dispersed throughout the body, and *anima* in turn can move body. This relationship explains the use of *animi* in 561 referring to the first phase in the process of sense, the initiation of the movements of life by the *animus*. It explains also the use of *anima* in 562 and 574 referring to the second phase, the movement of body by *anima* dispersed throughout it (cf. *exim corpus propellit et icit* 160). The demonstrandum 558, repeated 564, and the conclusion 578-9 combine *animus* and *anima* as one entity contrasted with *corpus*.

D-G make the point that the atoms of soul function only because they are held together by body, and negatively that they would not be able to function after death, when expelled from the body. The gap in the argument is that we are not here told why anything is needed to hold these atoms together. Bailey provides the explanation from the general exposition of the movements of atoms in 2. 80-141, where it is explained that the atoms of solid substances are closely-packed and their movements (or trajects as Bailey calls them) within the substances are very short, whereas anything of finer texture like air or light has fewer atoms and the trajects of these atoms are much longer. But the atoms of soul are very small. Therefore they would tend to long trajects. They would therefore not stay together to perform the movements of sense unless they were

physically restrained within the body. This notion of containment and contained movement is repeatedly invoked in the course of this paragraph, *tenentur* 567, *conclusa mouentur* 569, *haud possunt eiecta moueri* 571, *tenentur* 572, *cohibere* 573, *concludere* 574.

The last two propositions J and K develop different terminology. If the covering of the body is resolved (*resoluto tegmine*) and the vital airs expelled (*eiectis*), then soul and mind are dissolved (*dissolui* 578) since soul and mind and body are a unit. So then Kenney is to be corrected on 563 in translating *radicibus* as 'anchorage'. The metaphor of rooting gives a vivid picture of the relationship between *anima* and *corpus*, a relationship explicitly described in 566–7 in terms which conform to rooting but not to anchorages (cf. 3. 325). Also on 567 where *tenentur* is translated as 'are protected', so blurring the logical correspondences listed above. Also on 578 where the statement, derived from the Delphin Classics xlix (1823), that the *sensus animi* seems to be little more than a convenient periphrasis for *animum*, shows no understanding of another set of logical responsions. Soul, sense, life, and movement are inextricably intertwined throughout this argument (558, 559, 560, 562, 570, 574), and far from being a poet's convenience *sensus animi* is the final assertion of this complex in close connection with *uitalibus* in the previous line. Also at 577 where Kenney suggests that the use of *aura* in this different sense, so soon after *auras* at 570, is probably inadvertent. This repeat exploits the identity of soul and breath just as it has been exploited already (cf. p. 99 n. 1) and vividly presents the vulnerability of soul in the open air. When Lucretius argues that the expulsion of the breath of life entails the dissolution of *anima*, this is the same trick of argument as he has already used in 508–9 (cf. 495–8 and 573).

There is no animus in these frequent criticisms of Kenney's grasp of the argument, nor any retraction of the view that this is an alert and helpful commentary. There are very few lapses in its competence in matters grammatical and metrical. 569–70 is one of the few. *Mouentur motus* certainly provides an example of an internal accusative but none of the other examples cited by Kenney occurs with a passive or middle verb.¹ But the rarity of the phenomenon does not cast any suspicion on the reading. The text is so secure that Lambinus uses the correspondence to correct *motus quos mouere* of the manuscripts in 571 to *moueri* and all editors have followed him.

Heinze notes that the end of this argument is a reprise of the beginning. *Corporis atque animi* are picked up in *duobus*; *uiuata* and *uita* in *uitalibus*; *potestas* and *ualent* in *sensus*; *coniuncta* in *coniuncta*. But there is nothing in the first proposition to cohere with *causa* in the last whether *causa* be the cause of destruction of body and soul, or the cause of their life. Nor is it clear what

¹ W. M. Lindsay, *The Syntax of Plautus* (Oxford, 1907), 53 cites half a dozen possible examples of the government of an accusative case by an impersonal third person singular, and they are all transcribed by H. D. Jocelyn, *The Tragedies of Ennius* (Cambridge, 1967), p. 338 on fragment 202. Only two of the six survive any scrutiny: Ennius frg. 202 (Jocelyn = 241 Vahlen) *praeter propter uitam uiuitur*, where J. B. Hofmann *Ph.W.* lxiii (1943), 20 accepts the conjecture *uita* (see *A.L.L.* v. 331), and

Plautus, *Casina* 185, where the text is very uncertain and Leo's emendation probably correct. But neither of these impersonals is parallel to *mouentur motus*. Merrill cites Horace, *Epistles* 2. 2. 125 *Cyclopa mouetur* and Lucretius 4. 1274 *id moueri*. Professor G. B. A. Fletcher has provided three other examples, governing *tanta*, Manilius 4. 84; *quodcumque*, Lucan 9. 850; and *Satyrum*, Persius 5. 123. Lambinus comes nearest with κίνησιν ἢ κινεῖται (Aristotle, *De Anima* 1. 3. 406^a).

would be the cause of life of body or soul. For these two reasons, *causa* may not mean 'cause' but rather 'situation', 'circumstances' (§ 14 s.v. *Oxford Latin Dictionary*), 'their existence'. There is another possibility. The basis of this proof has already been established, that body and soul cannot live except together (324-32), and cannot function except together (333-49). In that passage *causa salutis* is a vital corresponsion,¹ and the language is very like the language of 558-79. It may be that *causa* in 579 is an anomalous survival from line 348.

PROOF 11—DECAY AND STENCH (580-91)

- A. Body cannot endure the separation of soul without decay and stench (580-1).
- B. Therefore soul has arisen from the bottommost depths
and diffused
and flowed out
like smoke (582-3).

So far this is an uncharacteristic *non sequitur*. The putrefaction of the body does not prove that soul came from the depths of the body, nor diffused, nor flowed out like smoke, and not all the assertions of commentators can make it do so. Heinze argues that if the soul left in one piece by one route, the body atoms would sustain only a slight shock and could remain in their previous state; but surely the shock sustained by the body would depend on the importance of the part of which it is deprived, not on whether the part left in one piece or by one route. Kenney argues that the 'foul smell' reflects the collapse and decay of the body, which can only be caused by a corresponding collapse of the soul; but surely the collapse and decay of body argue not for the collapse of soul but only for its importance to the body, and the foul stench does not seem to be adding anything to the logic.² Boyancé (*Lucrèce et l'épicurisme* [Paris, 1963], p. 165) concludes that these two proofs (557-91) are not developed very clearly, nor, to tell the truth, very convincingly ('ni, à vrai dire, bien démonstrative').

Lucretius seems to sense that the argument does not cohere or convince, so he repeats it with variation:

- C. The body is transformed by this great collapse and putrefaction (584-5),
- D. because its foundations are moved from their bottommost depths as soul flows out through the limbs and all the winding ways and orifices of the body (585-8).

But this argument is no more successful. Body could collapse and decay without this flowing out of the soul by many routes. On the other hand, an analogy is now powerfully suggested. The soul is the foundation or dwells in the foundations of the body. It is not difficult to deduce that the body is being compared to a house. What is wrong with the house? Why are its foundations shaken? Why has it fallen? (585-6). The answer is already given in 3 places (*taetro odore* 581; *uti fumus* 583; *putre* 584). The house is on fire. Hence the stench, a conspicuous and memorable feature of a burning house put to vigorous use in this analogy with the corpse.³

¹ With *peste maloque* 347, a responsion lost by Heinze and by Bailey ('wrack and ruin').

² P. M. Brown suggests that the link may be the proposition that a compound which passes through another must be divided in

the process (3. 695-6, 700).

³ For other dialectical exploitations of building images see 3. 773-5 and West, *The Imagery*, 64-72.

To produce a characteristic Lucretian argument we have to follow these broad hints and assemble the analogy as in C below:

- A. When body is separated from soul (580–1),
- B. its deepest foundations are moved from their place (585), it stinks (581, 584), it collapses (584) and disintegrates (583).
- [C. But when a house catches fire, its foundations are moved, it collapses, and disintegrates, and smoke pours out of all its passages and cracks and causes a stench.]
- D. Therefore at the collapse of body, soul rises from its depths and diffuses and flows out like smoke (582–3), pouring out of all the passages and pores of the body (586–8).

But it will be objected that this remaniement is too drastic, that the analogy is so remote that the reader could not be expected to perceive its force. Against this, the fall of the house is there for all to see (*ruina, conciderit, mota loco fundamenta*). It is surely not too much to expect the Lucretian to put this beside the smoke and the stench of 581, 583, 584, and arrive at the required analogy. And it is required. It is no objection to this interpretation to argue, 'not clear, therefore not Lucretian'. This section is not clear on any account. But invoke the burning house, and at least it works as an argument. Note the terms in this argument which fit the suggested analogy, *taetro odore, ex imo penitusque coorta emanarit uti fumus, tanta putre ruina, conciderit, penitus mota loco fundamenta, foras emanante, per uiarum omnis flexus atque foramina, prolapsa foras enaret in aeris auras*. Note too that the analogy leads straight to the conclusions Lucretius desired, namely the piecemeal departure of soul, *diffusa, dispertitam, distractam*.

Even if this analysis were accepted, doubts remain. Did Lucretius express the argument thus loosely, calculating that the reader could be left to put it in formal order? It is much more likely that for once he had not put the pieces in order in his own mind.

PROOF 12—FAINTING (592–606)

- A. While still within the boundaries of life soul often seems to suffer a shock and wish to depart and be wholly dissolved from body and body slumps (592–6),¹
- B. as when we say 'his mind is affected', 'his soul has left him' [these are like Plautine expressions meaning 'he has fainted'] and everybody is alarmed and tries to hold on to the end of the rope of life (597–9).
- C. For then mind and soul are violently shaken and collapse along with body in such a way that a more powerful impact could dissolve them (600–2).
- D. Therefore soul, outside body, unprotected, could not subsist for a second (603–6).

¹ *cadere omnia membra* OQV *cadere omnia corpore membra* F *trunco cadere omnia membra* Lachmann. Heinze finds no point in Lachmann's distinction between trunk and limbs, 'all the limbs fall slack on the bloodless trunk.' For surely the limbs are bloodless too. He adopts the reading of F, which provides a more meaningful distinction. 'All the limbs fall slack and the body goes bloodless.' Giussani had objected to F on the

grounds that the false reading in 594, *de corpore omnia membra*, is clearly derived from a version of 596 which ended *omnia membra*. Kenney correctly replies that the corruption of 594 may have occurred *after* the corruption of 596 to *omnia membra*, but seems to make a slip in his apparatus in suggesting that 594 may have derived its error from 596 *before* 596 was corrupted.

Proof 12 is clearly like proofs 3–6. Fainting, like disease, intoxication, and epilepsy, is a physical accident which affects soul. Heinze explains the placing of this argument by pointing to its connections with argument 11. Lucretius has just argued from the dissolution of soul as it leaves the body at death (*foras emanante* 586 and cf. 589–91): he now contrasts the shocks sustained by soul within body (*finis uitae intra* 592) and argues from them to the likelihood of its dissolution at death (602–6). How does Lucretius bridge the gap between body and soul? How does he get from the physical symptoms to assertions about the soul? First, he chooses a physical condition whose symptoms resemble the symptoms of death, and says that they do. 'The features slacken as though in the last moment of life, the body is bloodless and the limbs go slack.' Second, he appeals to his readers' introspection. 'In fainting', he says, 'the soul seems to wish to depart and to be wholly dissolved from the body.' Third, by word play. We have already a twist of this in the assertion in 594 that the soul seems to wish to depart, *ire* (cf. p. 109 n. 1). It is difficult not to remember the use of *ire* meaning to die in 526. But word play is the crux of this argument. *Animo male factum est huic* means 'she fainted' (Plautus, *Miles Gloriosus* 1331–2). *Animus hanc modo reliquerat* means 'she had just fainted' (ibid. 1347). From these and other such phrases we can deduce that fainting was frequently expressed as the suffering or the withdrawal of *animus*. Lucretius bends these idioms to his dialectical purpose. *Male factum* picks up *labefacta* and both are resumed in *collabefiunt* 601. *Animam liquisse* picks up *uidetur ire anima* and *solui de corpore* and both are resumed in *dissoluere* 602. Lucretius is using the idioms of speech to enforce his appeal to his readers' experience. Soul is affected when we faint, because that is how we express it! He cheats. The idiom refers reasonably to the suffering or withdrawal of the conscious mind, *animus*. Lucretius replaces *animus* by *anima* 598, availing himself of his own law of interchangeability (3. 421–4) to suggest that the whole *animus/anima* complex is affected.

'When there is alarm', writes Lucretius in 598–9, 'and everybody is eager to hold on to the last link with life'. Who is everybody? Is it the fainters, as Bailey takes it on page 1091 (Latham joins him: 'straining to hold fast the last link with life')? Or is it the bystanders as Bailey takes it on page 1094, following *inter alios* Rouse: 'when all is trepidation, and all these present desire to pull back again the last bond with life'. The latter. Compare the description of coma (467–9) with the efforts of the bystanders to call the patient back to consciousness. Compare too 6. 568–9 where the horse (or rather its metaphorical counterpart) is not holding on but is being held on to:

uis nulla refrenet
res neque ab exitio possitprehendere euntis.

Besides, as Rouse's translation shows, this interpretation accords well with what precedes. After the impersonal *iam trepidatur*, surely *et omnes* refers much more naturally to all the bystanders rather than all those who faint. By this passage, then, Lucretius stimulates the imagination of his readers by turning a clinical account into a scene of everyday life. He also tightens the screw of his argument. The soul is still inside the body *finis uitae uertitur intra*; but it seems to be trying to get out (*uidetur ire anima*); people are hard pressed to hold on to it; and it will in time get out *extra prodita corpus* . . . *foras* 603–4. But what is the image? Kenney sees 'a boat held by a single remaining mooring'. This does not

quite make nautical sense. If there were any case for alarm about a boat held by a single remaining mooring, the people on the quay would not be trying to take back that mooring or hold on to it, but would instead be trying to make fast another one. Nor does the picture fit the sense of *extremus*. The word occurs in thirteen other places in Lucretius, always referring to the outermost surface or edge or limit, never to the last remaining individual. If this image is to be seen in the nautical sphere, a boat is breaking loose. People are trying to keep it from being swept away by tide or current. They have a grip only on the end of the rope. But the boat could also be a corralled horse (cf. 592 and 6. 569), or a toppling tree, or a well-bucket. The critic does not need to specify if the poet has not.

There remain many problems: hardly anything has been said about the forms of Lucretian logic or the sequence of the arguments or the transitions between them. This study has been confined to the movement of thought within each of these thirteen arguments. Most of the principles are obvious from the first example (3. 425-44): the articulation of the argument by means of repeats and responsions; the dialectical function of the literal sense of words used metaphorically; of abundance, particularization, and vivid visualization; of *figura etymologica* and other forms of word play; the assimilation of analogy to demonstrandum and vice versa. These characteristics recur throughout, and others appear in the arguments that follow: in the second syntactical responsion and word play without logical function; the clash between the desire for effect and the claims of strict logic in the fourth (*aeternum*) and the fifth (*madet*); in the second and the sixth the occurrence in one proof of a term which belongs to another adjacent proof. These general conclusions are unsurprising. What is astonishing is the passionate intensity of Lucretius' intellect, his immense devotion to the details of the presentation of his arguments, and our continuing failure to understand them.¹

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