

## DOES DYING HURT? PHILODEMUS OF GADARA, *DE MORTE* AND ASCLEPIADES OF BITHYNIA\*

Near the beginning of the surviving part of Book 4 of *About Death (De morte)*, the Epicurean philosopher Philodemus of Gadara takes up an urgent question: does it hurt to die? Epicureans believed that the soul is made of atoms and that death entails the separation of soul from body; if sensations including pain arise from the movement of atoms in the soul,<sup>1</sup> does the movement of the soul when it separates from the body in death cause pain? If it does, then death, like all painful experiences, will be something that a rational person will want to avoid, and the second leg of the Epicurean ‘fourfold remedy’ or *tetrapharmakos*, ‘death is nothing to us’, becomes wobbly if it does not break altogether.<sup>2</sup> It has not been recognized that, in his answer to this question, Philodemus draws on medical theories that we can associate with his older contemporary Asclepiades of Bithynia. Reading the relevant passages of *De morte* with these theories in mind clarifies Philodemus’ argument and provides an insight into the intellectual milieu of Late Republican Rome.

There is nothing improbable in the suggestion that the philosopher Philodemus knew and was influenced by the physician Asclepiades. Both were Greek intellectuals resident in Italy, with patrons in the Roman governing class. They were either near-contemporaries or only a generation apart. Philodemus was certainly well known at Rome by 55 B.C., when he figures in Cicero’s *In Pisonem* as a client of L. Calpurnius Piso Caesoninus; in fact, Philodemus addresses Piso in his work *On the Good King according to Homer* and in one of his epigrams. It used to be generally accepted that Asclepiades was active in Rome at about the same time, since Pliny places him in ‘the age of Pompey’. Elizabeth Rawson, though, has argued that Asclepiades must have been dead by 91 B.C., the dramatic date of Cicero’s *De oratore*, in which Crassus appears to refer to him as though he were no longer living.<sup>3</sup> If we accept Rawson’s dating, then Philodemus will have known of Asclepiades as a fellow Greek active at Rome in the generation before his birth; if we believe Pliny, then they may well have met one another at Rome or on the Bay of Naples. Asclepiades, also, was the kind of physician-philosopher who would have appealed to Philodemus.<sup>4</sup> The titles of works attributed to him

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<sup>1</sup> Epicurus, *Ep. Hdt.* 63.

<sup>2</sup> For the Epicurean ‘fourfold remedy’ (1. God should not concern us; 2. Death is nothing to us; 3. What is good is easy to obtain; 4. What is bad is easily avoided) see Phld. *Adv. Soph. (P Herc. 1005)* 5.9–13 Angeli and Epicurus, *RS* 1–4 with the commentary of C. Bailey, *Epicurus: The Extant Remains* (Oxford, 1926).

<sup>3</sup> E. Rawson, ‘The life and death of Asclepiades of Bithynia’, *CQ* 32 (1982), 358–70.

<sup>4</sup> G. Harig, ‘Die philosophische Grundlagen des medizinischen Systems des Asklepiades von Bithynien’, *Philologus* 127 (1983), 43–60.

include a work on definitions and two commentaries on Hippocrates, and his medical theories, as we shall soon see, could be read with sympathy by an Epicurean.

I turn now to the text of Philodemus. Here with a change of one word ( $\mu[\acute{\epsilon}\rho\eta$  for  $\mu[\acute{\omicron}\rho\iota\alpha$  in line 9) are lines 6–24 of *P Herc.* 1050, col. 8, as they appear in Benjamin Henry's recent edition, followed by my translation of them.<sup>5</sup> (I translate  $\pi[\lambda\epsilon\iota\omicron\nu \eta \mu[\upsilon\rho\iota\omega\nu$ , which seems tolerably certain, in line 20 and  $\delta\iota\epsilon[\sigma[\text{παρ}]μ\acute{\epsilon}\nu\eta$  in line 17; for details, see Henry's apparatus ad locc. and his n. 28 on p. 19):

Φήσομέν τε τὴν συμπάθειαν πρ[ὸς τὸ	
σῶμα τῆς ψυχῆς, εἰ καὶ τὰ πολλὰ . [ . . . .	
μετ' ὀχλήσεως αἰτία . [ . . . .]ς ἢ π[υ]κ[ρ]οῦ-	
σ[η]ς ἀσυμμέτρως τὰ μ[έρη] τῶν ζώων	
ἢ διῆστανούσης, ἀλλ' οὐ φ[α]μέ[ν] γε ἀδ[ύ]να-	10
τον λυθῆναί ποτ' αὐτὴν [ὀλίγ]ης τυχο[ῦ]-	
σαν] ἑτεροιώσεως ἥτις [οὔ]κ ἄρ' [έ]σ[τ]ί τινος	
ἀ[λ]γ[η]δόνος ἀ[ί]τία· λ[ε]π[το]μερῆς γὰρ	
οὐσα καὶ τελέως εὐκίνητος ἢ ψ[υ]χῆ κα[ὶ]	
διὰ τοῦτ' ἐκ μικροτάτ[ων] σ[υ]ν[έ]στηκ[υ]ία	15
καὶ λειοτάτων καὶ περιφε[ρε]στά[τ]ων	
. . .]σ[τ] . .]μένη καὶ παρὰ τοῦτο πολλήν	
ἀπορία[ν] π[α]ρ[έ]χουσα, πῶς οὐ[κ] ἐξίπτα-	
ται λ[. . . . .]ων πόρων ἐν τῇ σα[ρ]-	
κὶ π[. . . . .]ημ[. . . . .] ἢ [έ]κ τίνος [οὔ]κ ἂν	20
εἴ[α]μ[ε] . . . . .]ο[.] αἰτία[ς] . . . . .	
τῆ[ν] . . . . .] διὰ κρισιν [ . . . ( . . ) δε-	
δοίκα[ . . . . .] ἄποτετελεσ-	
μέ[ν] . . . . .] ( . ) ] αμ [ . . . . .	

We shall assert the common suffering of the soul in relation to the body; even if for the most part . . . with distress . . . cause . . . , as it either abnormally lumps together or separates the parts of living creatures, still we say that it is impossible that this common suffering should never be dissolved after undergoing a small transformation, which is not, to be sure, the cause of any pain. For the soul, being fine-particled and completely mobile, and accordingly composed of the smallest and smoothest and roundest particles, when it is dispersed throughout the body and for this reason causing much difficulty, surely just flies out through the pores in the flesh that are there ready for it in countless numbers. Or for what reason should we not say . . . the separation . . . are afraid of . . . once it is completed?

Fear of death may take several forms. We may, for example, fear that dying will bring with it transformation into another, less pleasant state, or that we will lose the good things that we now have, or that by dying we will be deprived of goods that we might have gained by living longer. Epicureans reject all of these notions and have, for the most part, good arguments against each one. Here, however, Philodemus is concerned with a fourth kind of fear that might be reasonable even for someone who rejected those just mentioned: the fear, which he attributes to an opponent (who may be the Stoic Apollonphanes named in the previous column) that the moment of dying may be accompanied by terrible pains ( $\mu\epsilon\tau' \acute{\alpha}\kappa\rho\omega\nu \acute{\alpha}\lambda\gamma\eta\delta\acute{\omicron}\nu\omega\nu$  . . .  $\mu\epsilon\tau' \acute{\omicron}\chi\lambda\acute{\eta}\sigma\epsilon\omega[ς] \acute{\alpha}\nu\nu\pi\epsilon\rho\beta[\lambda\acute{\eta}\tau\omicron\nu$ ) as the soul separates from the

<sup>5</sup> W.B. Henry, *Philodemus, On Death* (Atlanta, 2009). I have not included in my transcription of Henry's text the sublinear asterisk that indicates a letter transcribed incorrectly in one of the *disegni*; see Henry, xxxiii.

body. In the section before us, he addresses this fear. He first grants that pain affects both soul and body (lines 6–7). Then he suggests, quoting Epicurus' description of the soul as a *σῶμα λεπτομερές*,<sup>6</sup> that because the soul is made up of especially small, round atoms, this co-affection or sympathy will not cause any pain as the soul leaves the body. Finally, in lines 23–4 he seems to assert that whatever discomfort there might be must end almost immediately, just as soon as the soul is separated from the body. (Von Arnim's suggestion ἀ]ποτετελεσμέ[νης ἀναισθητήσομεν in line 24 is at least plausible, though far from certain, and has influenced my interpretation of these fragmentary lines.)

The first and third of these assertions are firmly grounded in Epicurean doctrine. Epicurus thought that body and soul suffered together: 'Think it not unnatural', he wrote to a friend, 'that when the flesh cries aloud, the soul cries too'.<sup>7</sup> The soul, moreover, possesses the chief responsibility for sensation because it creates the power of sensation by communicating its motions to the body,<sup>8</sup> but it retains this quality only so long as it is enclosed in a body. Once the atoms of soul, both those that resemble wind or heat and those that are even finer, are dispersed, both body and soul cease to have sensation (*Ep. Hdt.* 63–7). Epicurus also endorsed the belief that pain, yin to pleasure's yang, could always be tolerated. Bodily pain, he held, is either acute or chronic; acute pain can be endured because it is soon over, and chronic pain is never so severe that it cannot be endured (*RS* 4). Any pain that accompanies death, Philodemus wants us to believe, must be not only tolerable but slight.

Thus Philodemus had a starting point for his discussion. But Epicurus had also left Philodemus with a problem. The interconnected activities and transformations and readiness of movement and processes of thought of the soul amount to sensation, as Epicurus himself suggested (*Ep. Hdt.* 63). Is it not the case that the separation of the soul from the body in death is an activity and a transformation, and therefore necessarily accompanied by sensation? Granted that after death we have no existence and therefore no sensation; even so, will we not feel something *at the very moment* of death when the atoms of soul separate from the body and are separated from each other, something that might very well be pain? On this point Epicurus is silent, at least in his preserved works, but Philodemus' older contemporary Demetrius Laco was at least aware of the problem.<sup>9</sup> Lucretius (3.350–5) affirms that sensation depends on the combination of soul and body and that the mind and soul, like the body, can be affected by disease and healed by medicine (3.445–525) but says nothing about the possibility that dying, the separation of soul and body, might be painful in itself. As James Warren observes, 'Given the amount of time they spend discussing death, the Epicureans have surprisingly little to say about the ethical significance of the process of dying ...'<sup>10</sup> Although Warren includes Philodemus in this indictment, I want to suggest here that Philodemus in fact builds on Epicurus by using contemporary scientific and medical theory to explain the possibility that the moment of death might cause pain, and to explain in addition why any such pain must be trivial.

<sup>6</sup> *Ep. Hdt.* 63.

<sup>7</sup> *Incertarum epistularum fragmenta* 44, Bailey (n. 2), 131. Cf. also *Ep. Hdt.* 63.10, καὶ μὴν καὶ ὅτι ἔχει ἡ ψυχὴ τῆς αἰσθήσεως τὴν πλείστην αἰτίαν κ.τ.λ.

<sup>8</sup> A complicated issue. See *Ep. Hdt.* 64 with Bailey (n. 2), 228. Cf. also *Lucretius* 3.350–5.

<sup>9</sup> *P Herc.* 1013 col. 18, quoted by Henry (n. 5), xvi.

<sup>10</sup> J. Warren, *Facing Death: Epicurus and His Critics* (Oxford, 2004), 13.

## ΜΕΛΗ, ΜΕΡΗ OR ΜΟΡΙΑ?

But first I must return to *P Herc.* 1050, col. 8, and in particular to line 9, a place at which the most recent editor and I hold slightly different views. Pain, Philodemus declares, is caused by the agglutination or dispersal of parts of living creatures, τὰ μέρη τῶν ζώων (line 9). Μέρη was proposed by Siegfried Mekler in 1885,<sup>11</sup> but until Henry's path-breaking edition editors preferred to follow von Arnim's suggestion of 1888 and print μέλη.<sup>12</sup> I believe that Mekler's restoration is correct. The chief problem with μέλη is that it makes no sense here. Plato could use μέλη and μέρη to refer to the 'limbs and members' of the body (*Leg.* 795e), but the words are not synonyms. Μέλη in medical or anatomical contexts are 'limbs' – an arm, a leg or, by metonymy, the entire body (*Il.* 7.131). Μέρη are 'parts' – of anything, but in medical contexts frequently organs like the stomach or liver (e.g. Gal. *De loc. aff.* 6.8.387 Kühn, τὰ μετέωρα μέρη τῶν ἐντέρων), structures like the thorax or abdomen, or distinct divisions of them (e.g. Arist. *Hist. an.* 493a11, Θώρακος δὲ μέρη τὰ μὲν πρόσθια τὰ δ' ὀπίσθια). Limbs are parts, but parts are not necessarily limbs.<sup>13</sup> Further, an electronic search of the complete TLG corpus for any form of μέλος within five lines of any word beginning with πυκν- failed to produce any passage where μέλη were described as dense, closely textured or frequent except in musical contexts, where of course individual notes can come thick and fast (e.g. Pl. *Leg.* 812d). Μέρη, on the other hand, can easily be thought of as dense or closely compacted. From many examples I give two of a medical nature. Galen describes the way in which the upper digestive tract has been designed so as to make it possible for us to ingest hard, large or rough items of food. We could not do this, he says, if our digestive parts were not themselves hard and dense: ὑφ' ὧν ἐθλάτο τ' ἂν καὶ κατεξέυετο τὰ μέρη μὴ σκληρὰ καὶ πυκνὰ γενόμενα (*De usu partium* 3.283K). Soranus (*Gyn.* 1.41) points out that spring is the best season for conception. In winter, you see, bodies are dense (πεπυκνωμένων τῶν σωμάτων) and, just like the earth, cannot easily receive seed, and summer makes everything lax, both bodies and their reproductive parts (μέρη).

Some who prefer μέλη want the participles in the phrase ἢ πυκνούσης ἀσυμμέτρως τὰ μέλη τῶν ζώων ἢ διῶστανούσης to mean something like 'shrinks and swells' or 'contracts and expands' the limbs.<sup>14</sup> But no ancient theory of disease, as far as I know, made swelling or wasting of the limbs a distinguishing general feature of disease. Other interpreters take πυκνούσης ἀσυμμέτρως τὰ μέλη τῶν ζώων ἢ διῶστανούσης to mean that illness causes the limbs to contract and relax and so to shake violently, and they adduce the descriptions of epileptic seizure at

<sup>11</sup> S. Mekler, *ΦΙΛΟΔΗΜΟΣ ΠΕΡΙ ΘΑΝΑΤΟΥ Δ.* *Philodemus Ueber den Tod, viertes Buch. SAWW* 110.2, 305–54. Col. 8 is on p. 314.

<sup>12</sup> H. von Arnim, 'Philodemea', *RhM* ser. 3, 43 (1888), 360–75; also, for example, T. Kuiper, *Philodemus Over den Dood* (Amsterdam, 1925) and M. Gigante, 'L'inizio del quarto libro 'Della morte' di Filodemo', *Ricerche Filodemee* 2 (Naples, 1983), 115–61.

<sup>13</sup> See Galen, *In Platonis Timaeum comentarii*, fr. 2, Μέρη μὲν ὀνομάζεται πάντα τὰ συμπληροῦντα τὸ ὄλον ἢ εἰς ἃ διαίρεται τὸ ὄλον, ἰδίως δὲ μέλη τὰ τῶν ζώων καλεῖται μέρη.

<sup>14</sup> So e.g. 'condenses or swells the limbs of living things', D. Armstrong, 'All things to all men: Philodemus' model of therapy and the audience of *De morte*', in J.T. Fitzgerald, D. Obbink and G.S. Holland (edd.), *Philodemus and the New Testament World*, (Leiden, 2004), 15–54, at 24.

Lucretius 3.487–505 and Philodemus, *De ira* col. 8, 28–col. 9, 24 in support.<sup>15</sup> But at *De morte* col. 8, 8–10 Philodemus is talking about illness in general, and there is no reason to specify epilepsy or any seizure disorder. None of these proposed interpretations can account for the most likely meanings of *μέρη*, *πυκνώω*, or *διϊστανώ* in an Epicurean context.

Henry believes that *μέλη* and *μέρη* are both just a little too short to fill the space available, and he points out that *τὰ μόρια τῶν ζώων* occurs frequently in Aristotle. For these reasons he prints *μόρια*. He and I would agree, I think, that while *μόρια* seems to be a better fit and certainly makes better sense than *μέλη*, it is not possible to rule out *μέρη*.<sup>16</sup> The phrase *τὰ μέρη τῶν ζώων* is not unknown in Aristotle (e.g. *Gen. an.* 782a, *Hist. an.* 532b). Inspection of digital images of the papyrus has persuaded me that there is sufficient variation in the hand of the scribe, particularly in his handling of the letter mu, to accommodate either *μέρη* or *μόρια*. Certainty is impossible, but the case for *μέρη* becomes stronger if, as I argue here, it allows us to make better sense of Philodemus' argument than *μόρια*. (Let me add that my conclusion, that Philodemus drew on Asclepiades for the theory of pain that informs *De morte*, can be reached through the phrase ἡ π[υ]κ[νούσ]ης ἢ διϊστανούσης even if *μόρια* proves to be indisputably correct.<sup>17</sup>)

#### WHAT ARE *MEPH*?

When Philodemus states that illness ‘lumps together or separates the particles of living creatures’, does he mean that it lumps or separates the Epicurean atoms of which those creatures are made? I do not think it likely that he does. *Μέρος*, which appears more than 40 times in Epicurus' writings,<sup>18</sup> is a slippery word that acquires its exact sense from its context. Epicurus uses *μέρος* to refer to a part of Epicurean doctrine (e.g. *Ep. Hdt.* 35.10; 36.4; 36.11) or to a portion of some larger structure without indication of size (e.g. *τὸ μέρος τοῦτο τοῦ κόσμου*, *Ep. Pyth.* 112.2). At *Letter to Herodotus* 58 he uses it to refer to hypothetical (and in his view, non-existent) divisions within the ‘minimum of sensation’ (*τὸ ἐλάχιστον τὸ ἐν τῇ αἰσθήσει*), the smallest perceptible magnitude in which there can be no division into parts (*διάληψιν μερῶν*). He does not, however, seem to use *μέρος* to refer to Epicurean atoms.

I now focus on one passage in which *μέρος* describes units which, while very small, are clearly different from the atoms of which they are made. In *Letter to Pythocles* 106 Epicurus describes the formation of hailstones. It illustrates, I think, the Epicurean sense in which Philodemus uses *μέρος* at *De Morte* Book 4, col. 8:

<sup>15</sup> e.g. von Arnim (n. 12), 363, ‘Etiam morbum, qui spasticus dicitur ... cum mutatione animae coniunctum esse apparet, cum anima corporis membra alternis contrahat atque distendat’; Gigante (n. 12), 152: ‘la forza del male scuota le membra del corpo’.

<sup>16</sup> W. Benjamin Henry *per litteras electronicas*, October 28, 2009.

<sup>17</sup> One would then argue that *πυκνώω* refers to aggregation of atomic or corpuscular particles, as it does at *Ep. Hdt.* 62, [*οἱ ἄτομοι*] *πυκνὸν ἀντικέπτουσι*, and *διϊστανώ* to their separation, as at *Ep. Hdt.* 43, *αἱ ἄτομοι ... εἰς μακρὰν ἀπ’ ἀλλήλων διαστάμεναι*.

<sup>18</sup> A search of the *TLG* corpus for all forms of *μέρος* in Epicurus returns 44 instances, but in some cases (e.g. *Ep. Hdt.* 66.10 and 74.2) it is uncertain whether an instance should be assigned to Epicurus or to the scholia which are embedded in the text of Diogenes Laertius' *Life of Epicurus*.

Χάλαζα συντελείται καὶ κατὰ πῆξιν ἰσχυροτέραν, πάντοθεν δὲ πνευματώδων περιστασιν τινῶν καὶ καταμέρισιν καὶ <κατὰ> πῆξιν μετριωτέραν ὕδατοειδῶν τινῶν <καὶ> ὁμοῦ ῥῆξιν, ἅμα τὴν τε σύνωσιν αὐτῶν ποιουμένην καὶ τὴν διάρρηξιν πρὸς τὸ κατὰ μέρη συνίστασθαι πηγνύμενα καὶ κατὰ ἀθροότητα. (107) ἢ δὲ περιφέρεια οὐκ ἀδυνάτως μὲν ἔχει γίνεσθαι πάντοθεν τῶν ἄκρων ἀποτηκομένων καὶ ἐν τῇ συστάσει πάντοθεν, ὡς λέγεται, κατὰ μέρη ὁμαλῶς περισταμένων εἴτε ὕδατοειδῶν τινῶν εἴτε πνευματώδων.<sup>19</sup>

Hail is produced both by a stronger fitting together, a crowding around from all sides and separation of certain windy bodies, and as well by a more moderate fitting together of certain watery bodies and their simultaneous breaking up, which creates at one and the same time the coming-together of them and the breaking-up, as they combine by particles (μέρη) fitting together and by organized structures. The rounded shape, possibly, can happen as the corners melt away or in the joining from all sides, as is said, by particles (μέρη), either of watery bodies or of windy ones, evenly crowding around.

Bailey comments, ‘The text is uncertain and the meaning obscure’.<sup>20</sup> Lucretius offers no illumination; if you want to know how hail and similar phenomena happen, he says, just extrapolate from what you already know about how the basic constituents of matter behave (6.527–34). It is clear, however, that the ‘watery bodies’ and ‘windy bodies’ cannot be atoms, for Epicurean atoms have only three qualities: size, weight and shape. The particles that come together κατὰ μέρη to make rounded hailstones must be larger particles with additional qualities of windiness or wetness. Bailey (ad loc.) seems essentially right in his understanding of κατὰ μέρη ... καὶ κατὰ ἀθροότητα as describing a two-fold process in which ‘the particles congeal, but in separate nuclei’. What Lucretius says about cloud formation sheds additional light on what Epicurus means by μέρη here. Clouds are formed when *corpora* (6.451, 484, 487) or *semina aquai/aquarum* (6.497, 507, 520) join together, first into small, tenuously coherent bodies, then into small clouds, and then into larger ones (6.451–8). *Letter to Pythocles* 106 establishes that the first, post-atomic stages of this process could be called μέρη.

Epicurus himself seems not to have developed a full account of such compound, molecular structures. In his 1896 edition of Lucretius Carlo Giussani appealed to *Letter to Herodotus* 69 and 52 to argue that ὄγκος was Epicurus’ technical term for such larger but still imperceptibly small structures.<sup>21</sup> Giussani’s specific claim has not won general assent,<sup>22</sup> but the two passages on which Giussani relied, as well as Lucretius’ explication, make it clear that Epicureans found it necessary to hypothesize structures with perceptible qualities compounded of atoms but at or below the boundary of sense perception.

These ‘molecules’ help Epicureans to solve a problem arising from their fundamental postulates that only atoms and void have real existence and that atoms have only size, shape and weight. If this is the case, we might expect bodies

<sup>19</sup> I follow Usener and Bailey in reading <κατὰ> πῆξιν μετριωτέραν in preference to Arrighetti’s καὶ τῆξιν. It is not clear to me what ‘a melting of watery elements’ could mean, and Arrighetti’s translation (‘per ulteriore parziale liquefazione di alcuni elementi acquei’) seems to beg the question; see G. Arrighetti, *Epicuro: Opere* (Turin, 1960), 94.

<sup>20</sup> Bailey (n. 2), 311.

<sup>21</sup> C. Giussani, *T. Lucreti Cari De Rerum Natura Libri Sex*, vol. 1: *Studi Lucreziani* (Turin, 1896), 78–84.

<sup>22</sup> e.g. D. Furley, *Two Studies in the Greek Atomists* (Princeton, 1967), 12. Arrighetti (n. 19), 464, however, accepts Giussani’s view.

made of atoms to have only the qualities of their constituent elements, so that our world would contain neither colour nor smell nor taste, but only void and bodies of various sizes, shapes and weights. How do sensible qualities like colour arise, and what is the nature of their existence?

Epicurean ‘molecules’, as Giussani recognized, seem to be implied by Epicurus’ discussion of this problem. In *Letter to Herodotus* 68–9 he considers the relationship between properties and the bodies of which they are predicated. He rules out the possibilities that qualities exist independently of bodies, that qualities have no existence at all, that qualities are incorporeal existences, and that they are separable parts (μόρια) of body. Instead, he says, the qualities of a body permanently accompany it and make it what it is. A medium-sized, round, purple sphere, for example, is such a thing because those qualities are inseparable from it, and because we could not recognize it as such a thing if those qualities ceased to be part of it.

[sc. δοξαστέον] ἀλλ’ ὡς τὸ ὅλον σῶμα καθόλου μὲν <ἐκ> τούτων πάντων τὴν ἑαυτοῦ φύσιν ἔχον αἰδίον, οὐχ οἶον δ’ εἶναι <ἐκ> συμπεφορημένων (ὥσπερ ὅταν ἐξ αὐτῶν τῶν ὄγκων μείζον ἄθροισμα συστήῃ ἤτοι τῶν πρώτων ἢ τῶν τοῦ ὅλου μεγεθῶν τοῦδε τινὸς ἐλαττόνων), ἀλλὰ μόνον, ὡς λέγω, ἐκ τούτων ἀπάντων τὴν ἑαυτοῦ φύσιν ἔχον αἰδίον.

Rather we should suppose that the whole body in its totality owes its own permanent existence to all these, yet not in the sense that it is composed of properties brought together to form it (as when, for instance, a larger structure is put together out of the parts which compose it, whether the first units of size or other parts smaller than itself, whatever it is), but only, as I say, that it owes its own permanent existence to all of them. (Bailey)

The clause in parentheses, ὥσπερ ὅταν ἐξ αὐτῶν τῶν ὄγκων μείζον ἄθροισμα συστήῃ ἤτοι τῶν πρώτων ἢ τῶν τοῦ ὅλου μεγεθῶν τοῦδε τινὸς ἐλαττόνων, confirms that Epicurus imagined bodies as composed of two kinds of part: the ‘first units of size’ (τῶν πρώτων ... μεγεθῶν) and any other parts larger than these but smaller than the whole body. These ‘first units of size’, as Bailey recognized in his commentary on the passage, must be “the first parts” or “molecules”, the *minima* of sensation’ described in *Letter to Herodotus* 58 as the minimum perceptible quantities (τὸ ἐλάχιστον τὸ ἐν τῇ αἰσθήσει). Here, as he often does, Epicurus expects us to extrapolate from size to shape, colour, weight and other qualities like the ones listed at the beginning of his discussion of qualities. There must be first units of colour, shape and weight just as there are first units of size; that is, bodies at the limit of perception, so that if they became any less red or cubical or heavy they would cease to be perceptible as such.

These minimum perceptible qualified bodies include, I suggest, the ‘windy’ and ‘watery’ bodies of *Letter to Pythocles* 106: the minimum bodies that can be perceived as having the quality of wind or water. At the same time, they are not atoms, for atoms do not have qualities other than size, shape and weight.

Lucretius appeals to the existence of such invisible but perceptible bodies to help possibly sceptical readers understand the reality of even smaller bodies, the atoms:

Nunc age, res quoniam docui non posse creari  
de nilo neque item genitas ad nil revocari,  
ne qua forte tamen coeptes diffidere dictis,  
quod nequeunt oculis rerum primordia cerni,

accipe praeterea quae corpora tute necessesst  
 confiteare esse in rebus nec posse videri. (1.265–70)

Come now, since I have shown that things cannot be created from nothing and that once generated they cannot be called back to nothing, lest by chance you begin to distrust my words because the primary constituents of matter cannot be discerned with the eyes, understand in addition that there are bodies which you must admit exist in matter and yet cannot be seen.

As examples of such bodies with perceptible qualities but too small to be seen he adduces invisible bodies of wind (*venti corpora caeca*, 1.277, 295), scent, heat, cold and moisture. Clothing hung by the sea, he points out, becomes moist from what must be tiny, invisible particles of moisture: *in parvas igitur partis dispergitur umor* (1.309). These *partes* (in Greek, *μέρη*) cannot be atoms, for Lucretius is using them as evidence for the existence of atoms and they have perceptible qualities other than size, shape and weight. They correspond to the ‘windy’ and ‘watery bodies’ of *Letter to Pythocles* 106.

When Philodemus, then, speaks of τὰ μέρη τῶν ζώων at *De morte* col. 8, line 9, he refers not to atoms, but to some different and perhaps more complex particle. These particles, he states, cause sickness and pain when they become abnormally lumped together or separated. This description, as I shall now demonstrate, fits the *ἀναρμοὶ ὄγκοι* of Asclepiades of Bithynia and the medical theory that he developed.

#### ASCLEPIADES

Although many features of Asclepiades’ medical theories are unclear or controversial, both ancient sources and modern scholars agree on a few points. Asclepiades explained physiological processes, including disease, in terms of theoretical or non-perceptible particles, which he probably called *ὄγκοι*. These particles moved through, into and out of the body through equally theoretical passages, *πόροι*. Some diseases were caused by impaction of the particles and blockage of the passages; other diseases, it seems, could be explained in a different way.

Controversy begins when we ask what our sources mean by describing Asclepiades’ particles as *ἀναρμοὶ*, *θραυστοί*, *fragiles*, or *delicati* or, as one source does, *corpuscula quae solvantur*. Could the *ὄγκοι* be broken into smaller bits? Are we to imagine one kind of fundamental particle or two? It seems, also, that our ancient sources are in conflict on the question of whether the particles had qualities; Sextus Empiricus affirms that Asclepiades’ elemental particles were *θραυστὰ ... καὶ ποιὰ*, ‘breakable and qualified’ (*Pyrr.* 3.33), but Galen suggests that the *ἀναρμον* of Asclepiades was *ἄποιον*, ‘without qualities’ (*De elementis secundum Hippocratem*, 1.417 K). Caelius Aurelianus (fifth century A.D.), whose translation of Soranus’ (second century A.D.) *On Acute Diseases* is our most detailed source for Asclepiades’ doctrine, seems to agree, for he describes the *corpuscula* as *sine*



*ulla qualitate solita*. Modern scholars for their part dispute Asclepiades' intellectual affiliations; some join Galen in grouping him with the atomists and Epicureans,<sup>23</sup> some follow Sextus Empiricus in seeing him as a follower of Heraclides of Pontus,<sup>24</sup> and some derive his ideas from Plato's *Timaeus*, Democritus, Strato of Lampsacus or atomists whom time has left as barely names.<sup>25</sup> Diels, Stückelberger and recently Vallance have seen the influence of Erasistratus.<sup>26</sup>

There is no need to resolve these controversies about Asclepiades in a short article devoted to the interpretation of a single passage of Philodemus. Let me make only two brief observations. First, the weight of evidence seems to me in favour of the view that Asclepiades' ὄγκοι were breakable (*θραυστοί*, *fragiles*, or on at least one plausible interpretation, *ἀναρμοί*), and that his theory included, as Caelius Aurelianus suggests, two kinds of elementary particle: first, fundamental particles, ὄγκοι, which behaved in some but not all ways like Epicurean atoms; and second, equally theoretical fragments (*θραύσματα*, *fragmenta*) into which these ὄγκοι could be broken and from which they could be reconstituted.<sup>27</sup> Second (to reiterate), the idea of two kinds of theoretical particle is not incompatible with classical Epicureanism. Thus there is no reason for Philodemus or any other Epicurean to find Asclepiades' medical theories uncongential. Asclepiades was not an Epicurean, despite tendentious attempts in antiquity to lump him with the followers of Epicurus. Epicureans, however, would have found his materialistic physiology sympathetic. Philodemus drew in particular on Asclepiades' theories of disease and of pain.

#### PHILODEMUS AND ASCLEPIADES ON DISEASE

Philodemus' statement – if indeed that is what he says – that disease is a cause of distress (when it abnormally lumps together or separates the particles of living creatures (μετ' ὀχλήσεως αἰτία[ς οὕση]ς ἢ πυκνούσης ἀσυμμέτρως τὰ μ[έρη] τ[ῶν] ζώ[ιων] ἢ διίστανούσης, *De morte* col. 8.7–10) closely parallels the account

<sup>23</sup> The view of, among others, J. Pigeaud, *La maladie de l'âme* (Paris, 1981), 141.

<sup>24</sup> On Asclepiades and Heraclides, see I.M. Lonie, 'The ἀναρμοί ὄγκοι of Heraclides of Pontus', *Phronesis* 9 (1964), 156–64, and 'Medical theory in Heraclides of Pontus', *Mnemosyne* 4<sup>th</sup> ser. 18 (1965), 126–43, and especially H.B. Gottschalk, *Heraclides of Pontus* (Oxford, 1980), 37–57. As J. Vallance, *The Lost Theory of Asclepiades of Bithynia* (Oxford, 1990), 12 observes, 'there are no non-doxographical references to Heraclides' corpuscular theory which do not also include Asclepiades'.

<sup>25</sup> Timaeus: M. Wellmann, 'Asklepiades aus Bithynien von einem herrschenden Vorurteil befreit', *Neue Jahrbücher* 21 (1908), 684–703. Democritus: M. Wellmann, 'Spuren Demokrits von Abdera im Corpus Hippocraticum', *Archeion* 11 (1929), 297–330. Strato: H. Diels, 'Über das physikalische System des Straton', *Sitzungsberichte d. Berliner Akademie* (1893), 101–27.

<sup>26</sup> A. Stückelberger, *Vestigia Democritea: Die Rezeption der Lehre von den Atomen in der antiken Naturwissenschaft und Medizin*. Schweizerische Beiträge zur Altertumswissenschaft, 17 (Basel, 1984), esp. 101–16; Vallance (n. 24), 123–30.

<sup>27</sup> Caelius Aurelianus *De morbis acutis* 1.105: *primordia namque corporis primo constituerat [sc. Asclepiades] atomos, [secunda] corpuscula intellectu sensa sine ulla qualitate solita, atque ex initio comitata, aeternum moventia. quae suo incurso offensa mutuis ictibus in infinita partium fragmenta solvantur magnitudine atque schemate differentia; quae rursus eundo sibi adiecta vel coniuncta omnia faciant sensibilia ...* I keep *secunda* or emend to *secundo* and follow Gottschalk (n. 24), 56–7 in taking *corpuscula* as the antecedent of *quae ... solvantur* and *fragmenta* as the antecedent of *quae ... faciant*, so that the *fragmenta* are identical to the *atomos* of the previous clause. See also Vallance (n. 24), 18–21. I confess that I do not see what is meant by *sine ulla qualitate solita*, unless it refers to *sensible* qualities.

of Asclepiades' explanation of fever given by Sextus Empiricus in the geometrical book of his *Against the Professors*. Because Sextus was himself a medical man, he is unlikely to have misunderstood Asclepiades' theory, and because in this passage he is simply giving an example of one kind of *ὑπόθεσις* used in argumentation, he has no reason to distort the theory that he reports:

οὕτω γοῦν τρισὶν ὑποθέσει κεχρησθαί φαμεν τὸν Ασκληπιάδην εἰς κατασκευὴν τῆς τὸν πυρετὸν ἐμποιοῦσης ἐνστάσεως, μᾶ μὲν ὅτι νοητοὶ τινὲς εἰσιν ἐν ἡμῖν πόροι, μεγέθει διαφέροντες ἀλλήλων, δευτέρα δὲ ὅτι πάντοθεν ὑγροῦ μέρη καὶ πνεύματος ἐκ λόγῳ θεωρητῶν ὄγκων συνηράνισται δι' αἰῶνος ἀνηρημήτων, τρίτη δὲ ὅτι ἀδιάλειπτοὶ τινες εἰς τὸ ἐκτὸς ἐξ ἡμῶν ἀποφοραὶ γίνονται, ποτὲ μὲν πλείους ποτὲ δὲ ἐλάττους πρὸς τὴν ἐνεσθηκίαν περίστασιν.

So, then, we say that Asclepiades has used three 'hypotheses' for his demonstration of the blockage (*ἐνστάσις*) causing fever: first, that there are in us certain non-perceptible pores differing from one another in size; second, that particles (*μέρη*) of moisture and air are gathered from everywhere from theoretically observed and eternally moving corpuscles (*ὄγκοι*); third, that certain constant emanations are sent forth from within us to the outside, sometimes more and sometimes less according to the condition at hand. (*Math.* 3.5)

Caelius Aurelianus provides some detail: Asclepiades held that severe fevers were caused by blockage of the corpuscles; quotidian fevers, he reasoned, were caused by blockage of large corpuscles, tertian fevers by blockage of smaller ones and quartan fevers by blockage of the smallest (*Morb. acut.* 1.107–8).

In Sextus' account of Asclepiades' theory and in Philodemus, *De morte* Book 4, certain particles called *μέρη* are implicated in the cause of disease. Neither Philodemus nor Asclepiades makes these *μέρη* the fundamental particles, atoms or *ὄγκοι*, of his physical theory. In Asclepiades as reported by Sextus the *μέρη* are physiological entities compounded from the fundamental particles (*ἐκ λόγῳ θεωρητῶν ὄγκων*). They have sensible qualities, wetness and airiness. The parallel with Epicurus' conjectural explanation of hail is exact. Epicurus wonders whether hailstones arose when watery and windy bodies (*ὑδατοειδῶν τιῶν εἴτε πνευματωδῶν*) come together from all sides (*πάντοθεν*) in particles (*κατὰ μέρη*). Asclepiades hypothesizes that *μέρη* of moisture and air (*ὑγροῦ μέρη καὶ πνεύματος*) come together from all sides (*πάντοθεν*) to create the conditions in which fever and other diseases arise. Philodemus would have found much in Asclepiades' doctrine to remind him of Epicurus, and he used Asclepiades' ideas to defend the second leg of the *tetrapharmakos* against those who argued that dying must hurt.

#### PHILODEMUS AND ASCLEPIADES ON PAIN

Although Philodemus found Asclepiades' aetiology of disease congenial, it was not his chief reason for bringing the Bithynian's theories into Book 4 of *De morte*. His primary concern was with pain, and with the question of whether severe pain inevitably accompanied dying. His opponents had alleged that the strong bond joining soul and body could not be dissolved without correspondingly strong pains (*ἀξιούντων [ν] ἀ]δύν[ατον εἶναι] | τὴν ἀνυπέμβλητον λ[ύ]εσθαι συ[μφυ]τῖ | ἀν μὴ μετ' ὀχλήσεω[s] ἀνυπερβ[λήτου]*, *De morte* 4, *P Herc.* 1050 col. 8, 3–5). To

refute them, Philodemus needed a theory of pain that would let him explain how the Epicurean soul, a λεπτομερὲς σῶμα made up of the smallest, roundest and smoothest of atoms, could leave the body with little or no pain. He found such a theory in Asclepiades.

Caelius Aurelianus, supplemented by an earlier but arguably more tendentious account in Galen, provides our most extensive report of Asclepiades' theory of pain. According to Caelius, Asclepiades held that pain arose from blockage of larger corpuscles (*nam dolor maiorum corpusculorum statione fiet, De morb. acut. 1.119*). For this reason he refused to prescribe bloodletting in cases of phrenitis. That disease, he believed, was likely caused by blockage of small corpuscles in narrow pores, and thus sufferers felt no pain (*phrenitici igitur nullo dolore vexantur, siquidem angustis in viis parvorum facta videatur statio*). Asclepiades, as we have already seen, could attribute different symptoms to the action of different sizes of corpuscle when blockage took place (see above, p. 220).

Galen considers pain in *De elementis* 1.417–18 K, 486ff. K and at *De constitutione artis medicae* 1.248 K in the context of a larger argument about the nature of physiological change. Galen wants to establish that physiological change happens when the four Hippocratic elements act on one another by undergoing change themselves or by causing change in another element. He thus wants to show that all explanations hypothesizing either one kind of substance or unchanging fundamental constituents like atoms fail to account for the phenomena. Pain is an undeniable phenomenon and gives him an undeniable minor premise:

εἰ ἀπαθὲς ἐστὶ τὸ τῆς σαρκὸς στοιχείον οὐκ ὀδυνηθήσεται· ἀλλὰ μὴν ὀδυνάται· οὐκ ἄρα ἐστὶν ἀπαθὲς. εἰ δὲ καὶ πλείω λέγοι τις εἶναι τὰ στοιχεῖα, μὴ μέντοι γε ἀλλοιούμενα, καὶ ἐπ' ἐκείνων ὁ αὐτὸς λόγος ἐρωτηθήσεται κατὰ τὸν αὐτὸν τρόπον. εἰ ἀπαθὴ τῆς σαρκὸς ἐστὶ τὰ στοιχεῖα, οὐκ ἀλγήσει· ἀλλὰ μὴν ἀλγεί· οὐκ ἄρα ἐστὶν ἀπαθὴ τὰ τῆς σαρκὸς στοιχεῖα. ὁ μὲν οὖν πρότερος λόγος ἀνατρέπει τὴν τε τῶν ἀτόμων, καὶ τὴν τῶν ἀνάρμων, καὶ τὴν τῶν ἐλαχίστων ὑπόθεσιν, κατὰ δὲ τὸν δεύτερον ἢ τε τῶν ὁμοιομερειῶν ἀναιρεῖται δόξα, καὶ ἡ Ἐμπεδοκλέους.

If the element making up flesh is impassive, it will not feel pain. But it does feel pain. Therefore it is not impassive. Even if someone should say that the elements are several, but not capable of change, the same argument will be posed against them in the same way: if the elements making up flesh are impassive, they will not feel discomfort. But they do feel discomfort. Therefore they are not impassive. The first argument overturns the hypothesis of atoms and that of *anarmoi* and that of *minima*; the second removes the doctrine of *homoiomeries* and that of Empedocles.

(*De constitutione artis medicae* 1.248 K)

Here Galen confirms Caelius' testimony that the *ἄναρμοι ὄγκοι* of Asclepiades were involved in Asclepiades' explanation of pain. Galen proceeds, however, to suggest what seems to be a different account of how the *anarmoi* produced pain. He asserts that mere separation and conjunction will not produce pain, because in order for pain to occur, something must either undergo change or pass entirely out of existence. 'And so', he continues, 'the breakable *anarmon* of Asclepiades will not feel pain when broken, for it is without perception' (οὐ μὴν οὐδὲ τὸ *ἄναρμον* τὸ Ἀσκληπιάδου θραυστὸν ὃν ὀδυνηθήσεται θραυόμενον, ἀναίσθητον γὰρ ἐστὶν, *De constitutione artis medicae* 1.249 K).

Galen's remark may provide support for the idea that Asclepiades' *ὄγκοι* were breakable, but it does not support a notion that Asclepiades made pain a con-

sequence of the dissolution of his fragile particles and not of their blockage in theoretical passages. Galen often reaches for any stick to beat whatever dog he has chosen as his opponent; in this case, he assigns to Asclepiades a view that Asclepiades never held. The circumstantial testimony of Caelius Aurelianus, which is consistent with the accounts of Sextus Empiricus and other witnesses who make blockage and flow the foundation of Asclepiades' nosology, gives a true picture of Asclepiades' theory of pain.

Philodemus, then, could ask his audience to believe something like this: disease, as Asclepiades teaches, results from blockage of theoretical particles in theoretical passages. Blockage of larger particles causes pain; conversely, diseases like phrenitis, in which only small particles are blocked, are not accompanied by pain. The soul, as Epicurus teaches, is composed of tiny, smooth, round atoms. When, therefore, these small, smooth, round atoms fly out of the body upon death, exiting through the myriad *πόροι* also postulated by Asclepiades, there will be little or no blockage, and little or no pain. Whatever there is will cease immediately when our dying is over, and we are dead.

Our evidence does not, I think, allow us to know in detail how Philodemus interpreted Asclepiades. He may just possibly have thought, as Galen believed he did, that Asclepiades' *ἄναρμοι ὄγκοι* were equivalent to Epicurean atoms or, as argued here, he may have seen them as possessing qualities other than size, weight and shape, and therefore as equivalent to minima of perception like the windy and watery bodies that formed hailstones. Or, in a treatise addressed to an audience of Epicureans, members of other sects, and even non-philosophers,<sup>28</sup> he may have wanted to finesse technical issues in atomistic theory. If so, then *μέρη* was a good word to choose. For Philodemus, Asclepiades' theory of pain offered a way to ground his argument that separation of soul and body was painless, or at worst accompanied by only slight and bearable pain, in a widely accepted medical theory of his day. As Elizabeth Rawson observes, there may have been 'no intellectual figure at work in Rome in the period of the late Republic who had more originality and influence than the Bithynian doctor Asclepiades'.<sup>29</sup>

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<sup>28</sup> Armstrong (n. 14), 19–31.

<sup>29</sup> Rawson (n. 3), 358.