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Madness in Lucretius' *De Rerum Natura*

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A dissertation submitted in fulfilment of the requirements for the award of the degree of Master of Arts in Classical Studies.

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COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

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Abstract

In the following thesis I examine the experience and etiology of madness in Epicurean philosophy and focus on Lucretius' accounts of epistemology, disease and emotion in *De rerum natura*. I situate my general argument within Lucretius' accounts of the physical and cognitive aspects of emotional disorder.

In the introduction I provide a brief survey of ancient views on madness from the perspective of poets, medical writers and Hellenistic philosophers and demonstrate a critical bifurcated tension between physiological and cognitive accounts.

In the first chapter, 'Madness according to Epicurean Physics,' I provide an account of the physical soul according to Epicurus and Lucretius and give a survey of Epicurean epistemology and perception. I argue for a theory of perception in which various epistemological aspects (preconception, mental selection, belief and judgement) are shown to be included within the perceptual *minimum* and responsible for the 'total effect' in Epicurean perception. The accounts of Lucretius and Diogenes of Oenoanda on dream visions show the conditions in which *synaesthesia* or hallucination takes place within Epicurean physics and show that a necessary condition is the simultaneous disturbance of the rational soul (*animus*) and irrational soul (*anima*).

In my second chapter, 'Psychogenesis of Madness,' I provide an account of Epicurean moral and intellectual development. I distinguish between true and false beliefs in terms of the Epicurean ethical taxonomy of natural and unnatural desires and argue for an Identity Theory of

Mind which is consistent with observations from the first chapter and shows that rational developments depend both on the mind of the rational agent and on environmental exposure. I demonstrate the interrelationship of mind and sensation and distinguish between the *pathe* of pleasure and pain and full blown cognitive emotions. I conclude the chapter with a discussion of the normative function of Epicurean emotions as therapeutic and not retributive and relate these again to ethical taxonomies. I stress the importance of mnemonics and repetition in Epicurean psychological procedure, as these reflect and address the mental complexity of the disturbed subject's associative developments.

In the third chapter I turn to Lucretius and examine the poetic surface of his text as it relates to the reception of information from a perceived object. I provide an account of a general movement in the text from *species* to *ratio* and show that this broadly tracks Epicurean discussions of intellectual development and a movement from appearance to reality. I discuss various examples of physiological disturbance in Book 3 and contrast these with an account of the psychological development of the 'madness' of love in Book 4. Lucretius implies towards the end of Book 3 that madness is peculiar to the mind and the gradual emotional progression of love at the end of Book 4 supports this. I conclude the chapter by distinguishing between the debilitating transient effects of disease and intoxication on the *animus* and *anima* which depend on external causes and the emergence of madness proper which seems to depend on an internal cognitive stimulus from the *animus* which affects the *anima* and so affects perception and awareness. This reading solves, in terms of Epicurean physics, the contrast between cognitive disorders and physiological *melancholia*.

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Introduction

Near the beginning of *De rerum natura* (1.102-106) Lucretius warns his dedicatee, Memmius, not to deviate from the philosophical path or be overwhelmed by the fear-mongering threats of soothsayers (*vatum dictis*, 1.102-3). These men concoct dreams (*fingere ... somnia*, 1.104-5) which subvert the rational principles of life (*vitae rationes*, 1.105) and confound (*turbare* 1.106) good fortune with fear. Lucretius conversely identifies himself as a philosopher *medicans* who treats problems of the mind¹ and his warning comes after a passage on the sacrifice of Iphigenia and the ironic consequences of superstition (*religio*, 1.83) which leads, through fear, to evil and impious deeds (*scelerosa atque impia facta*, 1.83).² Lucretius appears to have both poets and prophets in mind in his use of *vates*³ and certainly presents each as dangerous or misleading. Both poets and prophets concoct dreams of one kind or another,⁴ and Lucretius (1.121-2) shows that Ennius is one of those responsible for misleading descriptions of the underworld and it is from here that Homer visits Ennius in a dream (1.124-5).⁵ Homer provides two feminine

¹ Cf. Debra Hershkowitz, *The Madness of Epic: Reading Insanity from Homer to Statius*, (Oxford; New York: 1998), 5-6 and see generally Marcello Gigante, "'Philosophia Medicans' in Filodemo," *CronErc* 5 (1975), 53-61.

² Cf. Lucr. 1.101: *tantum religio potuit suadere malorum*.

³ See Diskin Clay, *Lucretius and Epicurus*, (Ithaca; London: 1983), 222: 'poets and priests,' cf. James J. O'Hara, "Somnia Ficta in Lucretius and Lucilius," *CQ* 37 (1987), 518: 'Lucretius is exploiting the ambiguity of the word *vatum* in 102,' but see T.P. Wiseman, *Historiography and Imagination: Eight Essays on Roman Culture*, (Exeter: 1994), 56. Wiseman warns against identifying the Lucretian *vates* as the Augustan 'inspired poet.' The identification is certainly problematic but not essential, as Lucretius clearly has Ennius and Homer in mind (1.117; 1.121-5).

⁴ See O'Hara (1987), 517-519 who demonstrates a potential connection between '*somnia ficta*' in Lucretius and Lucilius (484-9 M); 518: 'both Lucretius and Lucilius appear to link superstition with belief in the lies of poets'

⁵ See O'Hara (1987), 518: Lucilius mentions the 'fictions of Homer' (480-3 M: *multa homines portenta in Homeri versibus ficta | monstra putant, quorum in primis Polyphemus ducentos | Cyclops longus pedes: et porro huic maius bacillum | quam malus navi e corbita maximus ullast*); at 519 O'Hara concludes: 'Lucilius would seem to be linking belief or disbelief in the *ficta* of Homer with belief in the *ficta* of religion, providing precedent for the thought as well as the language of Lucretius 1.102f.'

daemonic personifications of madness, Ate and Lyssa. Ate, Zeus' eldest daughter, means in Homer a 'disastrous state of mind' and is connected with the internal causes of madness: inner confusion, delusion and recklessness.⁶ Agamemnon refers to 'savage *ate*' (ἄγριος ἄτη, *Il.* 19.88) who damaged his *phrenes* and caused his misjudgement in offending Achilles (*Il.* 19.86-89);⁷ in other descriptions (*Il.* 1.103), his dark *phrenes* are filled with rage, *menos* (μένεος δὲ μέγα φρένες ἀμφιμέλαινα | πίμπλαντ' 1.103-4) and his eyes flash with fire (ἔσσε δέ οἱ πυρὶ λαμπετόωντι, 1.104).⁸ Lyssa, the daughter of Nyx,⁹ dominates as the personification of madness in fifth century tragedy (λύσσα appears only three times in Homer, all in the *Iliad*: 9.239, 305, 21.542); she goads men to disaster and destruction, has a canine aspect and is associated with the outward signs of madness, meaning *rabies* and 'wolfish rage.'¹⁰ In Euripides' *Heracles* she causes Heracles' madness: he tosses his head (τινάσσει κρᾶτα, 867), rolls his eyes (διαστρόφους ἐλίσσει σῖγα γοργωπούς κόρας, 867) and cannot control his breathing (ἀμπνοᾶς δ' οὐ σωφρονίζει, 869). Together these two divinities 'epitomise epic and tragic

⁶ Ruth Padel, *In and Out of the Mind: Greek Images of the Tragic Self*, (Princeton: 1994), 162; see *Il.* 19.91-5.

⁷ See Padel (1994), 162; *Il.* 9.505-7, 19.86-89. Cf. Shirley Darcus Sullivan, *Psychological activity in Homer: a Study of Phrēn*, (Ottawa: 1988), 150-152: 'By being present in *phrenes*, *ate* distorts their nature and function. These *phrenes*, blinded by *ate*, were clearly involved in the decisions Agamemnon reached.'

⁸ See Sullivan (1988), 46: 'One explanation offered for these 'dark' *phrenes* is that they become suffused with blood as the emotion of rage (*menos*) takes over; a second explanation is that the darkening of the *phrenes* occurs because of smoke or vapour welling up and engulfing them ... *menos* too may be experienced in a similar way as it arises within. If *menos* is experienced as a form of fire rising within the chest, the reference to eyes become part of the image. Smoke may darken the *phrenes* and the same fire may blaze out of the eyes.' For blood see F. Kudlein, "Schwärzliche' Organe im frühgriechischen Denken," *Medizin-historisches Journal* 8 (1973), 53-58; for smoke see Eleanor Irwin, *Colour Terms in Greek Poetry*, (Toronto: 1974), 138.

⁹ *HF* 822, 844.

¹⁰ Padel (1994), 163; *HF* 815-73. See A. Ernout, "Lyssa," *Revue de Philologie* 23 (1949), 154-6. Ernout relates *lyssa* to the Greek *lykos* (wolf) and notes the specialised usage to denote the illness 'rabies.' The word is not used for wolves, only for other animals and humans (155). See Bruce Lincoln, *Death, War, and Sacrifice: Studies in Ideology and Practice*, (Chicago ; London: 1991), 134-5: 'one does not speak of the "wolfish rage" of wolves as a disease – wolves are wolfish by nature. It is only when a domesticated species begins to act wolfish that something is wrong.'

representation of psychic disintegration,¹¹ and some distinction between the internal causes and the external experience of madness emerges in Homer and the dramatists: these kinds of madness may come about as a consequence of our actions and influence our subsequent actions but both have their origins in divine intervention.¹²

The author of the Hippocratic *De morbo sacro* (*On the Sacred Disease*) attempted to demythologise so called diseases of the soul like epilepsy, which was traditionally associated with madness in the ancient world: it is shown not to be the result of external divine intervention but rather an internal physiological cause.¹³ The kind of madness which afflicts Heracles in Euripides' play of the same name could be interpreted by ancient physicians to be caused by a natural and internal event (related to phlegmatic or bilious accumulations) separate from the external divine visitation of Lyssa.¹⁴ Euripides (who is probably influenced by medical writing) and the author of *On the Sacred Disease* describe similar symptoms: rolling eyes, foaming at the mouth and irregular breathing.¹⁵ This separation between internal and external causes of madness also distinguishes the medical writers from the philosophers who treat madness as a

¹¹ Padel (1994), 163.

¹² Padel (1994), 44-48 emphasises the connection in Homer and the dramatists between the 'physical' and 'psychological' aspects of human beings, esp. 48: 'In the *Iliad*, multiplicity, and damage, is a condition predominantly of the external body, but from Homer onward, the *innards*' damage is seen as madness. Tragedy, unlike Homer, specializes in insight into the disunity of, and damage done to, mind ... Greek mind-words, in fact, suggest a unity in multiplicity somewhat similar to that which preoccupied Greek philosophers from the beginning, as they set out to give an account of inner and outer worlds in terms of the same material.'

¹³ See Hershkowitz (1998), 2-3.

¹⁴ For a reading of Heracles's madness in light of late fifth century learning and *On the Sacred Disease* see e.g. Heinrich von Staden, "The Mind and Skin of Heracles: Heroic Diseases," in *Maladie et Maladies: Histoire et Conceptualisation: Mélanges en l'honneur de Mirko Dražen Grmek*, ed. Danielle Gourevitch, (Geneva: 1992), 131-50.

¹⁵ For arguments for and against see Brooke Holmes, "Euripides' Heracles in the Flesh," *CIAnt* 27 (2008), 231-281. esp. 239: 'It is likely that *On the Sacred Disease* was performed publicly in the last quarter of the fifth century. It offers solid evidence that symptoms, especially spectacular ones, had become contested sites of interpretation in this period, which coincides with the probable date of the performance of *Heracles*.'

disease of the soul. Heracles remarks at the end of the play that the poets' stories of gods who are set in opposition and engage in adultery are lies 'since god, if he is really a god, wants for nothing' (δεῖται γὰρ ὁ θεός, εἴπερ ἔστ' ὀρθῶς θεός,| οὐδενός, 1345-46); the remark is a difficult one in terms of the mythological integrity of the play and Heracles 'invokes a contemporary understanding of divinity that is detectable in the fragments of Xenophanes and other early philosophers.'¹⁶

Just as religious models, as opposed to the medical writers, might associate madness with dysfunctional social relationships 'between man and man' (in the case of pollution and pursuit by the Erinyes or Furies) and 'between man and god' (in the case of divine intervention),¹⁷ Cicero (*Tusc.* 3.5) demonstrates that philosophers distinguish between diseases of the body (*morbi corporis*) and diseases of the soul (*morbi animi*) and stresses an intellectual rather than a medicinal cure. Cicero urges that philosophy, as an *animi medicina*, requires the participation of disturbed patients to heal themselves (*ut nosmet ipsi nobis mederi possimus*, *Tusc.* 3.6). Philosophy, like the religious models, accepts external causes and associates diseases of the soul with the emotions and perceptions of the mind.¹⁸ For the Stoics, 'psychological equilibrium is based on the domination of the λόγος':¹⁹ a divine element which is all encompassing, both manifest and implicit in all things.²⁰ The Stoic universe is made of matter and its formation and quality is

¹⁶ Holmes (2008), 251. See Holmes (2008) n66: 'Xenophanes (DK21 B11; B23). But see also Meliss. (DK28) B7-8; Antipho. (DK87) B10; Emp. (DK31) B134; Anaxag. (DK59) B12; Democr. (DK68) B166. At X.Mem. I.IV.10-11.'

¹⁷ Hershkowitz (1998), 4-5.

¹⁸ Hershkowitz (1998), 7.

¹⁹ See Giuseppe Roccatagliata, *A History of Ancient Psychiatry*, (New York: 1986), 53.

²⁰ See M. E. Reesor, "Fate and Possibility in Early Stoic Philosophy," *Phoenix* 19 (1965), 286; the term belongs to Heraclitus of Ephesus (see Sextus Empiricus *Math.* 7.132-3).

dependent on the soul (πνεῦμα) of the universe (which itself is a living being, a ζῶον)²¹ and derives from 'god' (θεός) which is the purest, unsubordinated form of λόγος.²² λόγος manifests itself in the various forms and qualities of matter e.g. 'shape' (width, breadth, height), 'weight' and 'colour' and, depending on the complexity of the substance, more qualities are added to the basic ones, e.g. for animals qualities such as 'life', 'growth' and 'sensation' and, only in man, 'intelligence'.²³ The λόγος is synonymous with fate because it is responsible for all of the movements between the elements and for the composition of the elements in their various qualitative *substrata*.²⁴ For Chrysippus the workings of λόγος through its divine mind (νόος) and providence (πρόνοια) entails a normative view of all events (they are all fated and representative of god's will, which is necessarily good) and so-called malfunctions, or 'bad events' merely seem that way from the perspective of individuals (but are good from the divine perspective). Cleanthes, however, maintained that individual badness is not attributable to god and that there is a portion of the world that is not in accordance with god's will.²⁵ The physical account of the Stoic cosmos demonstrates the connection between 'human rationality' and

²¹ *SVF* 2.633; (cf. Diog. Laert. 1.106,5-23) and see J. Gould, "The Stoic Conception of Fate," *JHI* 35 (1974), 17-32. This idea is present in Plato's conception of the world as a 'ζῶον' but the analogy is not carried out as extensively as it is by the Stoics. It is worth noting that the Epicureans also apply the analogy to some aspects of the cosmos (although it is never a physical reality in the sense that the cosmos is alive), they consider atoms as a sort of 'cosmological food' (see F. Solmsen, "Epicurus on the Growth and Decline of the Cosmos," *AJPh* 74 (1953), 34-51).

²² See L. Edelstein, "The Philosophical System of Posidonius," *AJPh* 57 (1936), 290 and Reesor (1965), 286.

²³ Reesor (1965), 286, cf. Margaret Graver, *Stoicism and Emotion*, (Chicago: 2007), 20 and see *SVF* 1.58.

²⁴ For Chrysippus, Fate is 'all-embracing Truth' and 'all-determining cause,' (Susanne Bobzien, *Determinism and Freedom in Stoic Philosophy*, (Oxford: 1998), 60: fate is the 'determining cause,' i.e. the 'final cause' and the agenda of fate is divine providence) it is a 'nexus of causes' and consists of *pneuma* ('wind'/ 'air') and is thus corporeal. Things which are in accordance with fate are at the same time things which are 'true' and they are actualised predicates or states which are qualified though movements in time (see Bobzien (1998), 60).

²⁵ Bobzien (1998), 47.

‘divine purpose;’²⁶ for the Stoics, experience of the passions (πάθη, *affectus*) is a sign of madness in rational beings (who share and participate in *logos* and whose physical characteristics are products of πνεῦμα)²⁷ and the Stoic sage, or wise man, does not experience the ‘passions’ (πάθη), but only ‘good feelings’ (εὐπάθειαι). The Stoic’s emphasis in psychology is on cognitive ‘propositional content’ (i.e. the beliefs and intentions) of our mental experience, yet the mind is a material thing causally embedded in the material world and Stoic authors supplement their cognitive accounts of human emotions with descriptions of low-level accounts of the theoretical physics of mental events.²⁸ Stoic perception involves the ἡγεμονικόν, or mind, located in the chest, and the ψυχή, or soul, which is diffused through the sense organs which are subordinate to it;²⁹ the mind registers an impression (φαντασία) or alteration of the ψυχή which produces awareness and proceeds to form a cognitive opinion about it, the mind then can convert this impression, in the form of a ‘pre-emotion’ (προπάθεια) or ‘bite’ (δηγμός), into a belief (i.e. form an opinion, δοξάζειν) through assent (συγκατάθεσις) and does so by determining if the impression is true or false and it is here that moral accountability lies.³⁰ Assent can trigger an impulse (ὄρμη) to certain kinds of action and emotions involve assent to impressions of a

²⁶ Graver (2007), 17.

²⁷ Fate is seen to exploit the nature of animals (including human beings). In a passage by Origen (*SVF* 2.988), animals respond to certain kinds of presentations which arise in them and respond accordingly in impulse reactions (e.g. spiders making webs and bees making honey; see Gould (1974), 22: these are responses to ‘a movement of nature which has been presentationally arranged,’ *SVF* 2.988). Human beings have the ability to choose and judge between presentations because of their *logos*, but still, this is so that we might be guided ‘in accordance with them (sc. presentations),’ (So the presentations which arise within us are still responsible for guiding us, *SVF* 2.988). Human *logos* is seen to be an aspect employed by fate; man, guided by his own ‘impulse reflective’ *logos*, chooses the best presentation to react to, this, though, happens in accordance with fate. It is perhaps easier to envisage if human *logos* is imagined as a qualitative *substratum* of the divine *logos* (human *logoi* are envisioned as constitutive of the divine *logos* and therefore human free will is subsumed as an aspect of the free will of the whole cosmic organism – hence human freedom is a *substratum* of divine freedom and cannot help but be in accordance with the ‘fate’ of the whole – i.e. what is freedom of the divine manifests as fate in its parts).

²⁸ Graver (2007), 16-18.

²⁹ Graver (2007), 22.

³⁰ Graver (2007), 26.

propositional nature.³¹ People are ‘hard-wired’ in their pursuit and rejection of good or bad and having the correct beliefs about these distinguishes the Stoic sage from common people. For the Stoics anger was seen as unnatural; when human beings are properly human³² (i.e. when they are a Stoic wise man or *sophos*, σοφός) they will not feel anger. It was also an unacceptable response (seen as useless and counterproductive)³³ and a false response (the result of an incorrect judgement about good and evil).³⁴ Emotional detachment and ‘extirpation of the passions’ (ἀπάθεια) is an important tenet of Stoicism. The passions (πάθη), both in their origins and their effects, are considered irrational and the wise man must be free from such irrationality: only the Stoic wise man is sane, and everyone else is, in a sense, mad.³⁵ The ‘good feelings’ (εὐπάθειαι) of the sage might resemble the destructive emotions (πάθη) of the common man but they are rationally ‘corrected versions’ of common emotions.³⁶ The Stoics distinguish between two types of insanity and appeal to the physical in their explanations: the relatively normal deficient moral and epistemological rationality of all who are not wise and therefore susceptible to emotion (explained in the Stoic paradox ‘all fools are mad’),³⁷ and the medical condition of *melancholia* (i.e. expressed in the Hippocratic texts as the result of the dark humor of black bile, μέλας χόλος) which affects the agent’s ‘capacity for impressions’ and is

³¹ Graver (2007), 26-7; Cf. 33.

³² Cf. Graver (2007), 51: ‘The perfected human would resemble Zeus in goodness, though not in comprehensiveness; he or she would be practically a lesser divinity.’

³³ Cf. Seneca, *De ira* 1.5.1.

³⁴ See John Procopé, “Epicureans on Anger,” in *The Emotions in Hellenistic Philosophy*, ed. Juha Sihvola and Troels Engberg-Pedersen, (London: 1998), 185.

³⁵ Hershkowitz (1998), 7-8. The wise man can experience some emotions but these are distinguished from ‘the passions’ (πάθη) as ‘good feelings’ (εὐπάθειαι)... e.g. joy (χαρά) vs. pleasure (ἡδονή), watchfulness (εὐλάβεια) vs. fear (φόβος) and wishing (βούλησις) vs. appetite (ἐπιθυμία). Wise men therefore can be moved by emotions as long as they are moved by ‘good feelings’ (εὐπάθειαι) and not ‘the passions’ (πάθη). Cicero criticises Zeno and such orthodoxy (*Acad.* 2.135).

³⁶ Graver (2007), 52.

³⁷ See Graver (2007), 111.

‘deranged and hallucinatory.’³⁸ Chrysippus says that it is the latter sort (i.e. non-culpable madness, *melancholia*) which afflicts Orestes who suffers a fantasy or hallucination (φανταστικόν) of Furies that no-one else can see.³⁹ Hallucinations of this sort, according to Chrysippus, have no real object ‘underlying’ them (ὑπόκειται)⁴⁰ and Stoic epistemology distinguishes between *phantasia* and *phantasma*: the former refers to the making of an impression (*phantaston*) which is causally derived from an existent object,⁴¹ the latter is the product of ‘empty attraction’ (διάκενος ἔλκυσμός, *SVF* 2.54) and produces hallucination (φανταστικόν) without any external cause and examples of these are dream images (see Diocles of Magnesia, *SVF* 2.55)⁴² and the hallucinations of the insane (*SVF* 2.65), though sometimes hallucinations may derive from existent objects but do not properly represent that object, as, apparently, in the case of Orestes (*SVF* 2.65, though this appears to contradict Chrysippus above),⁴³ and sometimes both dreams and delirious ravings may seemingly derive from significant sources.⁴⁴ There is some indication in Stoic thought that these two species of

³⁸ Graver (2007), 111-2.

³⁹ Graver (2007), 111-114. Aetius, *Views of Philosophers* 4.12 (Long and Sedley 39B).

⁴⁰ Aetius, *Views of Philosophers* 4.12 (Long and Sedley 39B).

⁴¹ See R. J. Hankinson, "Stoic Epistemology," in *The Cambridge Companion to the Stoics*, ed. Brad Inwood, (Cambridge: 2003), 61.

⁴² Cf. Diog. Oen. fr. 10 Smith col 1.1-4: ‘κενὰ σκιαγραφήματα τῆς διανοίας’ (i.e. ‘empty fantasies of the mind’). Note, however that the Stoics deny the existence of emptiness, or ‘void,’ in the Epicurean sense (See Diskin Clay, "An Epicurean Interpretation of Dreams," *AJPh* 101 (1980), 350) and Stoic physics leaves no room for uncaused motions; an uncaused motion would disrupt the space-time causal network (i.e. fate) of the Stoic *cosmos*; it was seen by the Stoics as ‘the destruction (or explosion) of an otherwise unified cosmos,’ Gould (1974), 18, citing *SVF* 2.912. An uncaused event would imply something happening independently from the divine *logos* and would deny the ‘two principle’ system of Stoic cosmogony and physics in which all elements and movements are qualified and derived from the world-soul.

⁴³ *SVF* 2.65, ‘some (impressions) are such that, although they come from an existent object, they do not represent that object, as in the case of mad Orestes.’ Hankinson (2003), 61. There is clearly some contradiction between Chrysippus and the statement in *SVF* 2.65.

⁴⁴ E.g. prophetic dreams of a divine cause, see Cicero *De div.* 1.118.2-9: ‘*Nam non placet Stoicis singulis iecorum fissis aut avium cantibus interesse deum; neque enim decorum est nec dis dignum nec fieri ullo pacto potest; sed ita a principio inchoatum esse mundum, ut certis rebus certa signa praecurrerent, alia in extis, alia in avibus, alia in fulgoribus, alia in ostentis, alia in stellis, alia in somniantium visis, alia in furentium vocibus.*’ Cicero also speaks of Chrysippus’ *Liber somnium* (*De div.* 2.6.134) and its contents can be conjectured from *SVF* 2.1196-1206, see Clay (1980), 349: ‘it is

madness, cognitive impairment and medical *melancholia*, might be related:⁴⁵ Posidonius identifies 'impressions' as corporeal events in association with the mind' in the same category as 'melancholy,' 'lethargy' and 'pre-emotions' or 'bites,' and so the causation of insanity may be similar to the experience of 'impressions' in dreams (which come about through relaxed pneumatic tension) and the effects of alcohol on perception, thought and speech.⁴⁶ For the most part, however, common or foolish irrationality and internal disease appear to be discrete and mutually exclusive for the Stoics.⁴⁷

For the Epicureans there is no divine ruling principle permeating and guiding physical reality; the gods are relegated to the μετακόσμιος, the space between the worlds;⁴⁸ they did not create the world⁴⁹ and they do not intervene in the affairs of mortals. The Epicurean universe is founded on the atomic system of Democritus: the world consists of permanent, moving atoms and void; the ultimate realities of the universe are matter (i.e. atoms) and void and every

most unlikely that Chrysippus, whose intention was to illustrate the workings of divine providence through prophetic dreams, would have described dreams as 'empty' or 'illusory representations of the mind,' if, indeed, he thought of them as a significant means of contact between gods and men.'

⁴⁵ Graver (2007), 112: 'while the etiology of deranged or hallucinatory insanity could be assigned to black bile or other medical causes, it may also have been a Stoic view that repeated episodes of strong emotion can cause a person to become mentally ill.'

⁴⁶ Graver (2007), 114; one brief fragment calls drunkenness a 'little insanity,' Stobaeus, *Ecl.* 3.18.24 (519W [SVF 3.713]), citing Chrysippus.

⁴⁷ Graver (2007), 112: '(*melancholia*) as the conception directly opposed to ordinary rationality (i.e. the madness of fools), sets the bearer beyond the scope of responsible action; in effect, it makes one morally subhuman.'

⁴⁸ *Epist. Herod.* 76-8. See Dirk Obbink, "Epicurus and Greek Religion," in *Philodemus: On Piety*, (Oxford: 1996), 7: 'Epicurus states emphatically that the gods, being blessed and imperishable, could not conceivably reside in this world where they could be neither entirely free from care nor immune to terrestrial forces of destruction.' Cf. Lucretius 5.146-7, *illud item non est ut possis credere, sedis | esse deum sanctas in mundi partibus ullis* and see Cicero *De div.* 2.40 for the gods dwelling in the *intermundia*, the interstices between *cosmoi* in the Epicurean universe. Epicurus, it seems (*De pietate* col. 12), believed that the gods did not have a constitution like ordinary objects, which have a one-to-one correspondence with themselves (an apple is an apple, because every bit of matter in the apple, no matter how small, exists in a defined relationship both to itself and to every other bit). Instead, the gods are a relationship between certain recurring states of matter, rather like thoughts in some current models of human cognition, or action in a movie, or, to use Obbink's own metaphor, a waterfall.

⁴⁹ *Lucr.* 2.167-83.

compound object, including the whole word, is a temporary atomic *concilium*. The vibrations of atoms within a compound cause it to shed fine atomic films (εἰδωλα, *simulacra*) which are responsible for our sensations, thoughts and dreams. The mind (*animus* or *mens*) and soul (*anima*)⁵⁰ are, like the body, material; they are born with the body and they die with the body – a point made emphatically by Lucretius in Book 3 of *De rerum natura*. Epicurus was primarily a moral philosopher; philosophy, for him, was supposed to secure the ‘happy life’⁵¹ and its primary aim is to free the mind from all disturbances and fears (pains) and attain tranquillity of mind (ἀταραξία); in a fragment Epicurus compares medicine and philosophy: one is for treating the body, the other, the soul.⁵² In outline the ethical system that Epicureanism presents is a simple one: pain is bad and pleasure is good and these two ‘feelings’, or πάθη, form one of the three *criteria* for truth in Epicurean epistemology, along with ‘preconceptions’ (πρόληψις) and ‘sensation’ (αἴσθησις).⁵³ In the psychosis of madness and during dreaming empty *simulacra* move the mind: for Epicurus these empty appearances are not empty attractions produced by nothing, as the Stoics seem to maintain with the hallucinations (*phantastikon*) of *melancholia* in which objects appear to be present when they are not,⁵⁴ but are the result of real *simulacra*, atomic images, colliding with the mind. In Epicureanism the types of images we select from the multitude which are available at all times and the kinds of beliefs

⁵⁰ Technically the *animus* and *anima* (mind and soul/spirit) are held together, compound in nature, the mind situated in the breast dominates the *anima* which is broadcast throughout the body which is responsible for sensation and responds to the *animus*.

⁵¹ 219 Us.

⁵² 423 Us. = Plutarch *Non Posse* 1091B and see Martha Craven Nussbaum, *The Therapy of Desire: Theory and Practice in Hellenistic Ethics*, (Princeton: 1994), 102.

⁵³ These three criteria are apparently given in the *Canon* (see Diog. Laert. 10.33); Epicurus thinks that we have certain ‘preconceptions,’ concepts such as ‘body,’ ‘person,’ ‘usefulness,’ and ‘truth,’ which are formed in our (material) minds as the result of repeated sense-experiences of similar objects. Further ideas are formed by processes of analogy or similarity or by compounding these basic concepts. Thus, all ideas are ultimately formed on the basis of sense-experience.

⁵⁴ See Graver (2007), 113 and Chrysippus in *SVF* 2.54. Empty attraction (διάκενος ἔλκυσμός).

we formulate about them are dependent on our psychosomatic state. Epicureanism's emphasis on the bodily nature of the soul and on the causal atomic truth of all perceptual information (i.e. that *all* perceptions are caused by atomic *simulacra*) encourages a physicalist reading of mental phenomena in terms of the status of the mental instrument and the status of the perceptual object. Cicero (*Tusc.* 3.7) demonstrates that the Latin *morbus* does not adequately express the Greek πάθη and uses *perturbationes* to describe movements of the soul which do not obey reason (*motus animi rationi non obtemperantes*).⁵⁵ Lucretius uses the word repeatedly in his descriptions of the soul's atomic disorder during sleep and illness (e.g. 4.666, 4.922, 4.930) but also for the *emotions* produced in illness (e.g. *perturbata animi mens in maerore metuque*, 6.1097). Epicureanism does distinguish between the kinds of diseased states described by the Hippocratic physicians and which take place below the experiential level and cognitive emotional states such as anger which, in excess, is said to lead to madness (484 Us. = Sen. *Ep.* 18.14), but cognitive disorders are described in terms of their physical and constitutional causes and their effects on the body and the soul, so that in Epicureanism, because the soul is somatic, it is possible to examine the relationship and similarities between *morbi corporis* and *morbi animi* more closely.

Madness is a difficult subject to define or circumscribe for ancients and moderns alike and paradoxically resists rational definition because, by definition, it lies outside of reason.⁵⁶ It seems best, in searching for a definition, to consider three kinds of madness understood by the ancients to be relevant to philosophy. The first is 'divine madness' encountered in Homer and

⁵⁵ See Hershkowitz (1998), 7.

⁵⁶ See generally Hershkowitz (1998), 1-13.

Euripides where characters, because of their actions, are driven crazy by various gods (or goddesses) and experience hallucinations. These classic examples are reduced in Stoic explanation to diseases of the body, the kinds which the Hippocratic physicians describe in terms of bile or phlegm and which, the Stoics say, afflicts Orestes. For the Stoics the divine, or the *logos*, represents reason and does not produce the opposite.⁵⁷ Common man is also said to be mad in a psychological or social sense in terms of his inability to construct appropriate beliefs about his experiences of the outside world (i.e. the fool's paradox that nearly everyone is mad). Lucretius' approach appears to encompass all three relevant ancient models (religious, medical and psychological): he describes emotions such as anger in terms of the contributions of the atoms of the soul (i.e. dysfunctional internal processes) to the appearance of the angry person; he explains the same emotional states in cognitive terms of intentions, desires and false beliefs where delusion is produced by a misapprehension of nature; he also explains the onslaught of delusional emotions in the form of empty *simulacra* in the delusional's own terms: i.e. that they represent the attack of a god (e.g. the shafts of Venus causing the *furor* and *rabies* of love in Book 4).

In the first chapter I intend to present a model of delusional and hallucinatory madness within the context of Epicurean physics by examining Epicurean epistemology and its relationship to the accounts of dream experiences found in Lucretius and Diogenes of Oenoanda. Having established the physical conditions for this particular symptom of madness, I will show, in the

⁵⁷ Cf. *On the Sacred Disease* 1: οὐ μέντοι ἔγωγε ἀξιῶ ὑπὸ θεοῦ ἀνθρώπου σῶμα μιᾶνεσθαι, τὸ ἐπικηρότατον ὑπὸ τοῦ ἀγνοτάτου (the body of a man cannot be defiled by god, the perishable by the pure).

second chapter, how Epicurean moral and intellectual development provides a framework in which these sorts of conditions might be cognitively generated. In the last chapter, I will examine various case studies in Lucretius, focussing on the catalogue of diseases and bodily afflictions in Book 3 and the psychological progression of the 'madness' (*furor*, 4.1069, 1117) of love in Book 4, to show that, while Lucretius may superficially distinguish between *morbi corporis* and *morbi animi* in these examples, there is significant overlap in relation to symptoms. Finally I show that, despite their external similarity, disease and cognitive psychosis have fundamentally different etiologies: the pathological disturbances which characterise disease, intoxication and transient emotional states rely on external stimulation and may be an efficient cause, over time, for cognitive impairment; extreme emotional states, on the other hand, affect perception and the body internally and encompass both the traditional physical and cognitive characteristics of madness and entail delusional and hallucinatory states.

Madness according to Epicurean Physics

The world in which the Epicurean lives is an inherently chaotic one. He is bombarded by a stream of independently unintelligible atoms which collide, coalesce and apparently swerve unpredictably in infinite space, at least from time to time. Against this background, the Epicurean tries to eliminate the turbulence around him or at least parse it into something meaningful, ordered and untroubled, as he engages in a task that requires interaction between this outer world and his own internal one. In his *Letter to Herodotus* Epicurus explains that the mind, along with the other sensory organs, participates actively in sensation (*aisthesis*) as it receives images from outside and, according to Lucretius' account of Epicurean physics, 'prepares itself' (*se ipse paravit*, 4.804) for the images received as mental thoughts, and this process opens up tiny channels into our waking soul.⁵⁸ Analogous to ordinary sensation, the atomic content of emotions and thoughts exists in the first instance both inside and outside the receiving mind, and since *all* mental events are physical and atomic in constitution and contingent on external reality, empirically, the ingredients for madness are readily available at all times in the ambient constitution of the cosmos itself.

Madness is not an explicitly defined *topos* in extant Epicurean literature and in most descriptions madness is linked with extreme emotion. Epicurus, who seems to have written little on the subject, explains that 'immoderate anger begets madness'⁵⁹ a connection reinforced by

⁵⁸ 'Soul,' in this chapter, unless otherwise stated is equivalent to Lucretius' *animus-anima* complex.

⁵⁹ Us. 484 = Sen. *Ep.* 18.14: '*inmodica ira gignit insaniam.*'

Philodemus of Gadara who aligns madness and irascibility, calling anger ‘madness of a short duration.’⁶⁰ Near the beginning of his treatise on anger Philodemus provides a *πρὸ ὀμμάτων* (before the eyes) description of the outward physical appearance of the angry person,⁶¹ he has the eyes of *madmen* (μαῖν)ομ[έ]νων... τοὺς ὀφθαλμούς) which flash and ‘send forth sparks of light’,⁶² his face is flushed or even blood red, his neck strained with swollen veins and his saliva bitter. Lucretius’ vocabulary of anger in Book 3 of the *De rerum natura* strikingly resembles that of Philodemus: ‘the mind has also that heat, which it takes on when it boils in wrath and fire flashes more fiercely from the eyes.’⁶³ Philodemus associates the state of being angry with the physical condition of ‘pyrexia,’⁶⁴ while Lucretius explains that those who are angry have a preponderance of heat-like atoms in their soul and indicates that there are types of people who are more susceptible to an intense form of anger: ‘there is more of the hot in those whose bitter hearts and irascible minds easily boil over in anger.’⁶⁵ There is sufficient consensus between Lucretius and Philodemus here in terms of their physical descriptions of the state of being angry and if, as Philodemus says, anger is ‘short-lived madness,’ then those who are irascible or

⁶⁰ *De ira* col. XVI ‘ὀλιγοχρόνιον μανίαν’ cf. Horace *Epist.* 1.2.62; Cicero *Tusc.* 4.52.

⁶¹ *De ira* 1. fr. 6. I am extremely grateful to David Armstrong for providing me with a working version of his forthcoming English translation of Philodemus’ *De ira* (to be published in the series ‘*Writings from the Greco-Roman World*’ of the Society of Biblical Literature). See David Armstrong, ed. *Vergil, Philodemus, and the Augustans* (Austin: 2004), 12: ‘its “vividness,” its quasi-medical and therapeutic use in putting the ugliness of unrestrained anger and particularly the vicious pleasure of revenge *pro ommaton*, “before the eyes,” and gives a long diatribe of his own in the Stoic manner...’

⁶² *De ira* 1. fr. 6.

⁶³ Lucr. 3.288-289: *est etiam calor ille animo, quem sumit, in ira | cum fervescit et ex oculis micat acrius ardor*. I am using the English of the translation by W. H. D. Rouse (updated by M. F. Smith, 1992) unless otherwise indicated.

⁶⁴ *De ira* 8.22 (ἐκπυρώσεως) .

⁶⁵ Lucr. 3.294-295: *sed calidi plus est illis quibus acria corda | iracundaque mens facile effervescit in ira*. Here using Sanders’ translation in Kirk R. Sanders, “Lucretius on Irascibility and Anger: Lucr. 3.294-295,” *SO* 82 (2007), 52-4, accepting Sanders’ rejection of R. Bentley and E. J. Kenney’s proposed emendation (*iram* for the mss. *ira*). Sanders’ rejection is adduced from Philodemus’ categorisation of genuinely irascible people (ὀργίλοι) who suffer intense or prolonged anger called ‘rage’ (θυμός) or ‘empty anger’ (κενή ὀργή). Sanders, 53: ‘Lucretius’ image of an irascible mind that “boils over in anger” (*effervescit in ira*) suggests susceptibility to a similarly intense form of anger.’

pathologically angry (*iracundia*) are identifiable as mad and the emotional response (anger) and the pathological state are at least physically convergent.⁶⁶

Epicurus also associates the delusional states of madness and dreaming, explaining that both the hallucinations of madmen and the dreams one receives are 'real' or substantial because they induce a real response in those who experience them,⁶⁷ and Epicurus assures his mother in a letter⁶⁸ that her anxious dreams about him, although they may seem to be connected with him, only appear to be so and are really just impressions or presentations (φαντασίαι) from film-like images (εἶδολα) travelling through pre-configured pores or passages into her soul.⁶⁹ As a topic in Epicurean philosophy and psychology, dreams have only recently become an area of more intense study and the literature is fairly underdeveloped. New fragments uncovered from excavations at Oenoanda, specifically between 1969 and 1970, from Diogenes' *Physics Treatise*⁷⁰ have added considerably to an explanation of Epicurean dream interpretation and help to shed light on Lucretius' treatment of the subject in Book 4. Lucretius discusses dream visions alongside accounts of ordinary sensation and mental perception and follows this with a rejection

⁶⁶ The distinction between the πάθη of pleasure and pain and cognitive emotions will be discussed in the next chapter.

⁶⁷ Diog. Laert. 10.32: 'τά τε τῶν μαινομένων φαντάσματα καί <τά> κατ' ὄναρ ἀληθῆ, κινεῖ γάρ', see Clay (1980), 349.

⁶⁸ Diog. Oen. fr. 125 Smith (= fr. 52 Chilton). Smith's edition provides the text of the available inscription: Martin Ferguson Smith, *Diogenes of Oenoanda, The Epicurean Inscription*, (Naples: 1993). For concerns over the authenticity of the inscription see Pamela Gordon, *Epicurus in Lycia: the Second-Century World of Diogenes of Oenoanda*, (Ann Arbor: 1996), Chapter 3. That the inscription is Epicurean and agrees philosophically with Lucretius is enough for my purpose.

⁶⁹ The idea concerning the creation of these pores (the verb is ποροποιεῖται, fr. 9 Smith col. 3.8) is inferred from Diogenes of Oenoanda's *Physics Treatise* (esp. fr. 9 Smith cols. 3-6) and identified as an explication of phenomena described in Epicurus' *Letter to mother*. Clay (1980), 353.

⁷⁰ Diskin Clay provides a valuable survey of the text and layout of Diogenes' inscription: Diskin Clay, "The Philosophical Inscription of Diogenes of Oenoanda: New Discoveries 1969-1983," *ANRW* 36.4 (1990), 2446-2559, and a translation of the relevant portion of the text (fr. 9. Smith cols. 3-6 [=NFF 5/6]) is provided in Clay (1980). NF = new fragment(s) of Diogenes' inscription. NF 1-124 were first published by Smith between 1970 and 1984 and have been re-edited and renumbered in Smith (1993).

of teleology. In this section (4.722-822) Lucretius frequently pairs waking and dream visions and it is clear that both abstract thinking and dreaming participate in similar modes of perception.⁷¹ Both involve mental responses to special kinds of external *simulacra* which are finer in texture than those which cause vision.⁷² These *simulacra* move in all directions and stimulate the mind directly, without the involvement of the senses, and are responsible for mental visions, among which Lucretius catalogues visions of monsters: Centaurs, Scyllas, Cerberus and the dead (all of which do not exist on the Epicurean view).⁷³ These chimeras are the result of fine *simulacra* from real solid objects forming composite images, combining as they move through space. What distinguishes waking and dream visions is that, while asleep, the same kinds of mental images cannot be recognised as false because the sleeping mind does not have its ordinary recourse to the senses and sense perception (αἴσθησις) remains the basic *criterion* for truth⁷⁴ which, together with the feelings (πάθη), provides the foundations of opinion and belief (πίστις).⁷⁵ Waking hallucinations, those ‘hallucinations of madmen’ which Epicurus describes, stem likewise from an inability to refute the falseness of certain kinds of images⁷⁶ while awake and in this way the physical state of dreaming bears a resemblance to the mechanisms at play in the delusional aspects of madness and insanity.

⁷¹ Indeed, Lucretius seems to interleave his discussion of mental perception and dream visions. Asmis proposes a rearrangement of the text between 4.768 and 4.822 in Elizabeth Asmis, "Lucretius' Explanation of Moving Dream Figures at 4.768-76," *AJPh* 102 (1981) 138-145. The topics are nevertheless parallel in Lucretius and both are introduced together from 4.777 onwards.

⁷² Lucr. 4.728-729: *quippe etenim multo magis haec sunt tenuia textu | quam quae percipiunt oculos visumque lacessunt.*

⁷³ Lucr. 5.878-924.

⁷⁴ Lucr. 4.762-764 and cf. Diog. Oen. fr. 9. Smith col. 4.7 – 6.3.

⁷⁵ *Epist. Herod.* 63.1-2.

⁷⁶ Cf. David Konstan, *Some Aspects of Epicurean Psychology*, (Leiden, 1973), 59: ‘a false opinion concerning empty *simulacra*.’ This statement refers to ‘irrational fears and desires.’

In Book 3 Lucretius also mentions madness (*furor*) in a catalogue of afflictions which affect both the soul and the body in an argument for the soul's mortality. Lucretius assimilates mental and somatic afflictions brought on by disease and intoxication. Along with bodily disease, the mind also experiences disease in the form of the emotions of care, grief and fear (*curas acris luctumque metumque*, 3.461) and the soul is physically affected in delirium and coma (3.464-9, the *animus* wanders in the former and withdraws in the latter) and the *anima* is disturbed (*conturbare animam*, 3.483) by wine when its heat (*ardor*, 3.477) penetrates the body (3.476-86). The mind is also afflicted by epilepsy, the 'sacred' disease, and the symptoms bear some similarity to his descriptions of extreme anger: foaming at the mouth (3.489), delirious raving and strained tendons or nerves (3.490). Epilepsy was associated with madness in antiquity,⁷⁷ and Lucretius' account is of physical and atomic dysfunction: the soul foams in violent disturbance like the wind-ravaged surface of a stormy sea (3.493-494) and is torn apart (3.500-501). As a conclusion to his argument Lucretius describes the susceptibility of the mind to cognitive afflictions and torments of its own, quite apart from those brought on by diseases of the body (*praeter enim quam quod morbis cum corporis aegret*, 3.824). These are described in intentional terms: fear of the future, care and remorse (3.825-827) and added to them is madness (*furor*) which is 'peculiar to the mind' (*animi proprium*) and which is connected to failing memory and the unconsciousness of lethargy (3.828-829).⁷⁸

⁷⁷ See Hershkowitz (1998), 3. This is illustrated in the example of Heracles' madness in Euripides.

⁷⁸ See Cyril Bailey, *De rerum natura*, (Oxford.: 1947), vol ii, 1131: "*oblivia rerum* and *lethargi ... undas*, are the successive stages of it." I'm not convinced by Bailey's reading of '*adde quod ... atque ... adde quod* (3.828-9)' as successive stages of *furor*, see E. J. Kenney, *Lucretius: De rerum natura Book 3*, (Cambridge: 1971), 192: '*praeter quam ... quod* "apart from the fact that..." leading the reader to expect that L. will proceed *accedit quod* "there is the additional fact..."; instead he switches to a personal construction, *advenit id quod* "there arrives (cf. 821-2 *veniunt*) that which torments ...", i.e. the susceptibility if the mind to anxiety and fear.'

These species of madness (anger, dreams and disease) require a working model of the Epicurean soul and an account of mental perception to explain how they operate on a physical level. This is not to exclude the relevance of the mostly cognitive emotional psychogenesis of anger or states of madness in the first place. However, for the Epicureans, the soul and the mind are necessarily material (the binary physics of atoms and void available to the Epicurean does not permit an alternative) and any sensation, thought or mental activity can, theoretically, be described in terms of its low-level atomic interactions. In *De Anima* Aristotle explains that emotions such as anger comprise dual cognitive and physiological aspects where anger can be defined alternately as ‘a desire for retribution’ or ‘the boiling of blood or heat around the heart.’⁷⁹ Aristotle indicates that an emotional state can be described in both ways and that these need not conflict with one another.⁸⁰ In the framework of Epicurean physics, which rejects peripatetic teleology,⁸¹ it is difficult to ascertain to what extent cognition can be separated from

⁷⁹ Aristotle *De Anima* 403a 30: anger is ὄρεξις ἀντιλυπήσεως and ζέσις τοῦ περὶ καρδίαν αἵματος see *Rhet* 2.4 1382a 1-5 (on friends and enemies): ‘ὄργη μὲν οὖν ἐστὶν ἐκ τῶν πρὸς αὐτόν, ἔχθρα δὲ καὶ ἄνευ τοῦ πρὸς αὐτόν ...’

⁸⁰ See Graver (2007), 16: ‘both may be true in their own way’ and see Richard Sorabji, “Body and Soul in Aristotle,” in *Articles on Aristotle 4. Psychology and Aesthetics*, ed. J. Barnes, M. Schofield, and R. Sorabji, (London: 1979), 55. For Aristotle, anger is not merely a physiological process. Emotions cannot meaningfully be separated into mental and physical components because, like other phenomena, emotions consist of both matter and form. Aristotle uses the analogy of a house (403a 25 – b 17) where the function of the house is differentiated from its bricks and mortar, also see Gerrit Glas, “Hierarchy and Dualism in Aristotelian Psychology,” *PRef* 57 (1992), 99.

⁸¹ See *Lucr.* 4.713f for Lucretius’ broad rejection of teleology. Philodemus also objects on ethical grounds to Aristotle’s statement that ‘apart from the pleasure of revenge, anger is suffering’ (*De ira* fr. 1.1), cf. Aristotle *NE* 3.8, 1117a6: ‘οἱ ἄνθρωποι δὲ ὀργιζόμενοι μὲν ἀλγοῦσι, τιμωρούμενοι δ’ ἡδονταί’ (‘And human beings feel *pain* when angry, and take *pleasure* when taking revenge’). Following Indelli (Giovanni Indelli, *L’ira: Edizione, traduzione e commento*, (Napoli: 1988), 133) and Philippson (R. Philippson, “Philodems Buch über den Zorn. Ein Beitrag zu seiner Wiederherstellung und Auslegung,” *RhM* 71 (1916), 427): generally in the first three fragments of *De ira* we are given the thoughts of the Peripatetics. See also David Armstrong, “Be angry and sin not: Philodemus versus the Stoics on Natural Bites and Natural Emotions,” in *Passions and Moral Progress in Greco-Roman Thought*, ed. John T. Fitzgerald, (London; New York: 2008), 80: ‘Philodemus’ *On Anger* offers a clever variation from the Epicurean side on Aristotle’s classic definition. The *pleasure* of anger is joy in revenge, a prime example of an untrustworthy and unnecessary “kinetic” pleasure.’

physiological processes; certainly many kinds of complex emotional activity can seemingly be described only in intentional terminology, and the reductibility of the physical soul is called into question. Various solutions have been offered, from theories of radical emergence to compatibilism. These are relevant to a certain extent and will be considered later in this section; for the most part, however, these are peripheral to the main task of providing an account of how physicalism *does* provide at least a partial description of states of madness, and these may inform an analysis of madness at the cognitive level.

The precise constitution of the soul according to Epicurean philosophy is reasonably contested and reconstruction depends on the problematic *Letter to Herodotus* by Epicurus and support by subsequently attested material. Lucretius' account in Book 3 of the *De rerum natura* of the structure, combination and operation of soul atoms is framed frustratingly, but not unexpectedly, by an apology that the subject cannot be adequately expressed in the Latin language;⁸² he proceeds to give a rather basic description, and on this there is at least some consensus. Kerferd's survey⁸³ provides a stable basis for more recent scholarship and describes the four-element structure of the soul.

Epicurus gives a summary of Epicurean physics in his *Letter to Herodotus*⁸⁴ and he describes the physical nature of the soul. The soul consists, he says, of a relatively stable⁸⁵ structure made of

⁸² Lucr. 3.260: *abstrahit invitum patrii sermonis egestas*. Cf. 1.136-139, 832.

⁸³ G. Kerferd, "Epicurus' Doctrine of the Soul," *Phronesis* 16 (1971).

⁸⁴ Diog. Laert. 10.63-68.

⁸⁵ See Konstan (1973), 62; n12: 'On the physical causes of the stability of the soul, cf. David J. Furley, *Two Studies in the Greek Atomists*, (Princeton, N.J.: 1967), 230-31, who explains the 'resistance' of

smooth and very round atoms⁸⁶ which is responsible for its ‘disposition’ (διάθεσις) and its atoms are ‘fine particles’ (ὅτι ἡ ψυχὴ σῶμα ἐστὶ λεπτομερές) dispersed throughout the frame of the body (παρ’ ὅλον τὸ ἄθροισμα παρεσπαρμένον) and it is ‘exceedingly mobile’ (αἰεὺ κίνησις).⁸⁷ Epicurus goes on to describe the internal structure and composition of the soul or mind and it is here that his account becomes problematic:⁸⁸ the soul is a mixture (κρᾶσις) of particles similar to heat (θερμός) and breath (πνεῦμα) and furthermore there is a part (μέρος) which is superior in fineness and speed and is affected by feelings (συμπαθής). The problem resides in different readings of the passage: (1) that it refers to three elements which compose the soul (heat, breath and a third ‘unnamed’ element)⁸⁹ or (2) that the whole soul is both like heat and like breath and is possibly divided into parts which do not correspond to any material distinction between these two ‘aspects’ (though the reference to a ‘part’ in the letter could simply be used to designate the soul as a ‘part’ of the body).⁹⁰ The latter arrangement is plausible (though not necessarily widely accepted) on a minimalist reading of the language in *Letter to Herodotus* which indeed indicates a unitary soul (by the singular ‘σῶμα λεπτομερές’). This construction, however, is exacerbated by traditional dissections of the soul in later Epicurean authors and commentators into two basic parts (τὸ λογιστικόν and τὸ ἄλογον:

atoms as a consequence of their weight, and Cyril Bailey, *The Greek Atomists and Epicurus, a study*, (New York: 1964), 337-8, 345-9, who suggests that *concilia* have a kind of organic cohesion.’

⁸⁶ Scholium in *Epist. Herod.* 66 = 311 Us.; cf. *Lucr.* 3.177-230 for Lucretius’ arguments on the size and shape of soul atoms. These atoms are extremely different from (yet analogous to) those atoms which compose fire, see Kerferd (1971), 82-3 and Julia Annas, *Hellenistic philosophy of Mind*, (Berkeley: 1992), 137.

⁸⁷ *Epist. Herod.* 63.

⁸⁸ See Annas (1992), 137: ‘It is puzzling that Epicurus’ own *Letter to Herodotus* 63 so undermines the doctrine as to be seriously misleading’ and n50 on Kerferd’s solution to what he identifies as ‘The problem of the first two sentences of par. 63’ (Kerferd (1971), 80–96).

⁸⁹ For this view see Bailey (1964), 388-9; Furley (1967), 196-7 and Annas (1992), 137-8.

⁹⁰ This is Kerferd’s reading, Kerferd (1971), 81-82.

Lucretius' *animus* and *anima*)⁹¹ and into four constituent elements (which in Lucretius are breath, heat, air and a nameless element).⁹² This appears to challenge the second view, that the whole soul is uniform in structure, yet this model is compatible with the standard division into two basic parts (*animus* and *anima*)⁹³ and these can be reconciled with an elemental soul if the four elements are common to both parts⁹⁴ and are understood to be so combined that the resultant mixture forms a single body with its own properties.⁹⁵ The mixture is explained by Aëtius as a κρᾶμα⁹⁶ and Epicurus suggests that this is not a mere juxtaposition of substances but a dissolution and re-combination at the atomic level to produce a new substance (akin to Stoic σύγχυσις).⁹⁷ The importance of the unity of parts is demonstrable in the violent and sometimes lethal consequences of the disruption of the soul in Book 3; the soul's existence as soul is not amenable to separation and depends physically on its complex nature.⁹⁸

The soul is responsible for life, sensation and thought:⁹⁹ Diogenes of Oenoanda explains that 'the soul provides nature with the reason for the presence or absence of life.'¹⁰⁰ The entire

⁹¹ Lucr. 3.136 f (cf. 311 Us. = Diog. Laert. 10.66; 312 Us. = Aetius 4.4.6 = 140 Arr.; Diog. Oen. fr. 37 Smith col. 1). Note that in the scholium on *Epist. Herod.* 66 the division into rational and non-rational parts is attributed to Epicurus.

⁹² Lucr. 3.245 (so Aetius 4.3.11 = 315 Us. = 139 Arr., Plutarch *Adv. Col.* 1118d = 314 Us. = 138 Arr., Alexander Aphr. *De Anima* 1.8 = 315 Us.).

⁹³ This division is attributed to Epicurus in the scholium on *Epist. Herod.* 66. Here with the caveat that μέρος in *Epist. Herod.* 63 may not refer to parts of the soul at all but rather the soul as a part of the whole body (Kerferd (1971), 94).

⁹⁴ See Kerferd (1971), 84-85 (so Bailey (1964), 392). This is the prevailing view.

⁹⁵ So Kerferd (1971), 89-90.

⁹⁶ Aetius 4.3.11 = 315 Us., 139 Arr. the soul for Epicurus is a κρᾶμα. Cf. Plut. *Adv. Col.* 1109e, Alexander Aphr. *De Anima* 215.11, 231.28, 232.28.

⁹⁷ Kerferd (1971), 90; Epicurus is opposed to Democritus here (60 Us = Plutarch *Adv. Col.* 1110 b = 20. 2 Arr.) and cf. Arius Didymus (fr. 28) *ap. Stobaeus Ecl.* 1,153,24-155,14 Wachsmuth (= *Dox. Gr.* 463,14-464,8 = *SVF* 2.471) on the Stoic categories of μίξις, κρᾶσις and σύγχυσις.

⁹⁸ Cf. Lucr. 3.231: '*nec tamen haec simplex nobis natura putanda est*' and cf. 3.234: '*nec calor est quisquam, cui non sit mixtus et aer.*'

⁹⁹ Kerferd (1971), 83.

¹⁰⁰ Diog. Oen. fr. 37 Smith col. 1 and trans. Annas (1992), 137.

structure of the soul is atomic, as Epicurus' meagre physical ontology demands, atoms and void being the only ultimate realities, and this is also the case for Lucretius where interactions between body and soul demonstrate its material nature.¹⁰¹ The soul is clearly composed out of a separate kind of material from that which comprises regular inanimate bodies¹⁰² and it is only in conjunction with the atoms of the body that it exists in the first place and can produce the necessary qualities of life.¹⁰³ Lucretius describes the soul as a combination of four kinds of atom, they are like¹⁰⁴ fire, like air or like breath and added to these is another, fourth, element (*quarta natura*)¹⁰⁵ which does not have a name;¹⁰⁶ he expands these analogies to explain the effects of the soul's διάθεσις on the individual, and this is, apparently, his own innovation:¹⁰⁷ wild lions have an excess of heat, timid stags an excess of cold and placid cows have peaceful air (3.288-322). The mixture of the elements has a temperamental influence on emotional states, and an excess of heat, for example, results in an angry disposition (i.e. like that of a lion). The fourth element has no analogical counterpart in nature and therefore its nature is entirely theoretical and its existence inferred.¹⁰⁸ Lucretius explains that it is like 'the soul of the soul' (*animae quasi totius ipsa* | *proporrost anima et dominatur corpore toto* 3.280-1): the fourth element is that which

¹⁰¹ See Annas (1992), 124 on Epicurus' φυσική: for Epicurus the soul acts and is acted upon (void cannot do this), *Epist. Herod.* 64-65; for Lucretius the soul affects the body and the body affects the soul (i.e. their nature must be similar), 3.161-76 and 2.246-255.

¹⁰² Kerferd (1971), 83.

¹⁰³ *Lucr.* 3.323-32, 3.331-36, 3.350-58; See Annas (1992), 148-9.

¹⁰⁴ So Annas (1992), 137 n51: 'Plut. *Adv. Col.* 1118d-e; *Aët.* 4.3, 11, 9. 388 Diels; *Lucr.* 3. 231-322.' But see Sharples (1980, 117-20) who argues that Lucretius is talking about real fire, air and wind.

¹⁰⁵ *Lucr.* 3.241.

¹⁰⁶ These correspond to Aëtius' κρᾶμα ἐκ τεττάρων (4.3.11 = 315 Us.) the four elements being πυρώδης, ἀερώδης, πνευματικόν, and ἀκατονόμαστον.

¹⁰⁷ These diathetical analogies are unattested elsewhere and see Annas (1992), 138: 'Lucretius develops a theory about differing contributions made by the first three elements.'

¹⁰⁸ Annas (1992), 139. Cf. Lucretius 3.238-40.

animates the soul just as the soul animates the body and is made of unsurpassed subtleness.¹⁰⁹ This element, specifically, is responsible for sensation, sense perception (αἴσθησις)¹¹⁰ and, for Lucretius, it initiates the ‘movements of sensation’: *nec tamen haec sat sunt ad sensum cuncta creandum, | nil horum quoniam recipit mens posse creare | sensiferos motus et quaecumque ipsa volutat* (3.238-40). The fourth element is also traditionally associated with emotions and higher cognitive faculties; according to Plutarch it is ‘that by which the agent judges and remembers and loves and hates, and in general the intelligence and reasoning.’¹¹¹

Lucretius explains that the *animus*, ‘rational soul’ or ‘mind’ (*animus ... mentem quam saepe vocamus* 3.94) has a fixed location in the chest¹¹² and is responsible for reasoning, cognition and emotions¹¹³ while the *anima*, the ‘irrational soul’, is spread throughout the body and the limbs and is responsible for movement and sensation.¹¹⁴ These two together are parts of a single compound and are made of the same substance.¹¹⁵ The four elements seem common to both parts (this agrees with Kerferd’s reading of *Letter to Herodotus*),¹¹⁶ indeed for Lucretius it is the *remaining part* of the *anima* (*cetera pars animae*)¹¹⁷ which is spread out in the body (i.e. apart

¹⁰⁹ Annas (1992), 141: ‘the fourth element stands to the soul as the soul stands to the body; it and the other soul elements are mutually dependant in that without them it would have nothing to ‘animate.’ And without it they would not hold together as a single kind of thing.’

¹¹⁰ Aët. 4,3 11, p. 388 Diels (= 315 Us.); cf. Lucr. 3.237-42.

¹¹¹ Plutarch, *Adv. Col.* 1118e.

¹¹² 3.140-42; damage to this part is more destructive than damage to other parts.

¹¹³ Annas (1992), 144; indeed, the location is in the chest ‘because this is the region of emotions.’ Cf. Lucr. 3.141-42 (*hic exultat enim pavor ac metus, haec loca circum | laetitiae mulcent*) and see Schol. in *Ep. Herod.* 66 (= 311 Us.).

¹¹⁴ Lucr. 3.143.

¹¹⁵ *atque unam naturam conficere ex se* (3.137); see Kerferd (1971), 83: ‘The important statement which follows in the scholium (in *Epist. Herod.* 66) clearly attributes the basic distinction between *animus* and *anima* to Epicurus, but it does so in such a way as to suggest that they are differentiated by location rather than by any difference in the constituent elements’ cf. Bailey (1964), 392.

¹¹⁶ See Kerferd (1971), 85 for doxography.

¹¹⁷ Lucr. 3.143.

from that which constitutes the *animus*).¹¹⁸ The elements form a composite whole (Lucretius calls the *whole* soul the *anima*)¹¹⁹ and their collective atoms are intermingled, moving at speed among themselves (*inter enim cursant primordia principiorum | motibus inter se* 3.262-3); this ‘mixture’ (κρᾶμα) is not simply a juxtaposition of the elemental substances but rather a new configuration of their constituent atoms to form one body (*ex his | omnibus est unum perfectum corporis augmen*; 3.267-8) which cannot be separated (*nil ut secernier unum | possit nec spatium fieri divisa potestas*; 3.263-4).¹²⁰ This physical mixture of elements to form one substance which is phenomenologically distinct from any of its components is responsible, on some readings, for the mind’s epiphenomenal or emergent qualities, and this seems to be the concept Lucretius is having difficulty describing in Latin at 3.260.¹²¹

David Konstan remarks that ‘sensation and other modes of awareness [are] accidents (συμπτώματα) of the motions of atoms in the soul, bearing to the soul the same kind of relationship that colour bears to physical objects.’¹²² Certainly this interpretation is broadly compatible with the kind of comprehensive physicalism that Epicureanism asserts, where sensation, and even mental perception, could be understood as passive sensory impinging on the

¹¹⁸ Cf. note 34 above.

¹¹⁹ Lucretius says explicitly that when he refers to the soul as a whole he will use *anima*, the word for the irrational soul (3.421-24).

¹²⁰ Cf. Alexander of Aphrodisias, *On Mixture*, 140 (214.28 - 215.8) = 290 Us.: and see Kerferd (1971), 90.

¹²¹ See Kerferd (1971), 89-90 for the idea that ‘atomic blending’ is the concept Lucretius is struggling with in his Latin translation at *Lucr.* 3.260 and for the idea that this has to do with a ‘doctrine of molecules’ in Epicurus.

¹²² Konstan (1973), 67. See *Epist. Herod.* 64, 70-1 and cf. David Sedley, “Hellenistic Physics and Metaphysics,” in *The Cambridge History of Hellenistic Philosophy*, ed. Keimpe Algra, et al., (Cambridge, U.K.: 1999), 381-2

body-soul complex,¹²³ but Lucretius seems to imply more than this. Exactly how sensation and specifically the kinds of mental perceptions which are responsible for our awareness and, crucially, our beliefs and emotions actually operate at the physical level continues to be a subject of debate. Mental sensation includes ‘thoughts, dreams, memories, hallucinations, and so on’¹²⁴ and the mind, like any sense organ (and Lucretius makes clear that the mind is as much a part of the body as hands or eyes),¹²⁵ senses by receiving particles from the outside in the form of *simulacra*, atomic streams flowing off solid objects. As with the other senses, this is not simply a passive reception of impressions from the perceptual stream of atoms, but an active response through ‘direct application’ (ἐπιβολή) by the sense organ.¹²⁶ In Book 4 Lucretius describes mental images (4.768-822) and defends Epicurus’ view that the mind has an active role in perception and also that no sensation is self-caused.¹²⁷ Here he is dealing with two criticisms of Epicurean theory: (1) how can the mind think of anything at will? (2) how do dream images appear to move?¹²⁸ The responses to both of these problems depend on the same physical model of mental sensation and thought¹²⁹ and are important in dissociating the physical conditions of

¹²³ See Julia Annas, "Psychology," in *Companions to Ancient Thought*, ed. Stephen Everson, (Cambridge: 1991), 99-100.

¹²⁴ Elizabeth Asmis, "Epicurean Epistemology," in *The Cambridge History of Hellenistic Philosophy*, ed. Keimpe Algra, et al., (Cambridge: 1999), 265.

¹²⁵ Lucr. 3.96-7.

¹²⁶ Diog. Laert. 10.62: ἐπεὶ τό γε θεωρούμενον πᾶν ἢ κατ' ἐπιβολὴν λαμβανόμενον τῇ διανοίᾳ ἀληθές ἐστίν. cf. Lucretius' *animi iniectus* (2.740). See Asmis (1999), 271-272 contra Furley (1967), 208.

¹²⁷ I.e. that perception is ‘true’ because it is not self-caused and in itself is evidence of atomic causation and perceptual continuity; this is the reason why the things which appear in dreams and the hallucinations of madmen are true, see Diog. Laert. 10.31.7-32.1: πᾶσα γὰρ, φησὶν, αἴσθησις ἄλογός ἐστι καὶ μνήμης οὐδεμιᾶς δεκτικὴ· οὔτε γὰρ ὑφ' αὐτῆς κινεῖται οὔτε ὑφ' ἑτέρου κινηθεῖσα δύναται τι προσθεῖναι ἢ ἀφελεῖν.

¹²⁸ Lucr. 4.777-793.

¹²⁹ The *same* mental images are involved: ‘*nisi quod simulacra lacessunt | haec eadem nostros animos quae cum vigilamus*’ (Lucr. 4.758-759). But cf. P. H. Schrijvers, "*Horror ac divina voluptas; Études sur la poésie et la poésie de Lucrèce*" (Ph.D Thesis, Amsterdam: 1970), 103-6 who differentiates between the images evoked at will and dream images (as the former are used to ‘give meanings to words’ and inform reason, whereas the latter invite false opinion because sense perception and reason are deprived. See also Asmis (1981), 141.

waking visions compared to irrational dream visions. Almost all editors have identified a disorder in the text here and variously attributed problems to textual revision or transmission,¹³⁰ but the arrangement has little import on the broad interpretation of the passages.¹³¹ Indeed a critical discrepancy over the logical sequence of lines 4.794-801¹³² demonstrates that Lucretius' explanations here are homologous in terms of their general relevance to either question and to the overall picture of Epicurean mental sensation.

Lucretius' description of the mechanism of mental sensation is 'overwhelmingly visual'¹³³ and he explains the dependence of mental thought and impressions on external atomic images: there are a great many images supplied to the mind in any particular moment and space (*fit uti quovis in tempore quaeque | praesto sint simulacra locis in quisque parata* 4.797-8)¹³⁴ and the mind cannot perceive any of these clearly unless it prepares itself (*se ipse paravit* 4.804) for a particular sequence of streaming images, at which point the other images perish; clear and sequential thought then occurs based on the mind's expectation of what will follow on from a particular

¹³⁰ See Asmis (1981), 138: '(1) following Lachmann, many have supposed that lines 777-817 were composed by Lucretius some time after he had composed lines 768-76, as a revision or addition which he did not fully integrate with the earlier text; and (2) following Merrill, others have supposed that all of the text from line 768 to line 822 was written as a single rough draft which Lucretius would have revised if he had had the opportunity.' Lines 4.768-776 are mostly a repetition of 4.788-801 and appear to offer a solution to one of the two questions only posed later at 4.777-793 (see also Bailey (1947), vol iii. 1274-1275). Attempts at re-arranging the texts have involved transposing 4.768-776 into the passage and revising the logic of Lucretius' sequence accordingly.

¹³¹ The consensus is that 4.768-776 is a response to the second question on the movement of dream images.

¹³² E.g. Bailey assigns 4.794-801 to the second question (and 4.802-818 as the response to the first [i.e. in reverse order]; Bailey (1947), vol iii. 1274) whereas Asmis suggests that 4.794-815 belongs to the first ('Lucretius now claims that it is no longer at all difficult to know the answer to the second question. The reason is that he has already supplied the answer in his explanation of the first problem.' Asmis (1981), 140).

¹³³ Brooke Holmes, "Daedala Lingua: Crafted Speech in *De Rerum Natura*," *AJPh* 126 (2005), 551: 'This is unsurprising, given that the extremely fine, mobile mental *simulacrum*, like the corresponding *eidolon* in Epicurus (*Epist. Herod.* 49), is modeled on the visual one.'

¹³⁴ Here the relative divisibility of time is related to the ubiquity of *simulacra* in space; see Bailey (1947), vol. iii. 1274.

image. Lucretius compares this process to the focussing of eyes on a particular visual *simulacrum*¹³⁵—this requires attentiveness and a deliberate ‘active response’ to the perceptual atomic stream which in turn ‘determines the effect of the incoming streams’.¹³⁶ Certainly it is not *voluntas*, or ‘will’, which summons or materialises particular *simulacra* (this is the suggestion of the hostile critic at 4.781-787) but rather, as Lucretius appears to explain, a weaker process of catalysis initiated by an impinging *simulacrum* from the many available which produces something like a chain reaction in which the mind ‘hopes for’ or ‘expects’ (*speratque* 4.805) each subsequent image.

The same influx of images is responsible for producing dreams in the sleeping mind and it is important to account for the relative ‘truth’ of these images in terms of Epicurean epistemology and to explain how the mind’s state is disordered during sleep and so conducive to mental delusion. Perceptible bodies emit *simulacra* in a continuous stream that extends from the solid to the sense organ and produces ‘presentations’ or ‘impressions’ (φαντασίαι) and this process is identical to ‘perception’ (αἴσθησις).¹³⁷ Because of the rapidity of this stream *simulacra* cannot be perceived individually; rather the perceptual object itself is perceived as a ‘total effect’ which also preserves the likeness (*effigia*)¹³⁸ of atoms deep within the solid.¹³⁹ Given the distinction already made between mental and visual *simulacra*, Lucretius describes how images which reach us come about in different ways: they can stream directly from an external source, preserving its

¹³⁵ Lucr. 4.749-751; 4.807-813.

¹³⁶ Asmis (1999), 272.

¹³⁷ Asmis (1999), 264. Epicurus classifies mental sensation as a subdivision of ‘perceptions.’ Later Epicureans made it a separate category, but this did not alter Epicurus’ theory.

¹³⁸ Lucr. 4.42, cf. 4.85 and 4.105

¹³⁹ Mark Holowchak, "Lucretius on the Gates of Horn and Ivory: A Psychophysical Challenge to Prophecy by Dreams," *JHPH* 42 (2004), 357 also Asmis (1999), 264 – 269.

likeness, or they can form spontaneously in the air (like clouds 4.129-42) which appears to be the result of *simulacra* combining into composite images as they travel through space (4.722-48).¹⁴⁰ No matter the source, these images are *always* considered to be true in themselves, they consist merely of stimulation from an external referent (or composite referents) and their collision with a receiving mind constitutes a ‘raw act of cognition;’¹⁴¹ it is only a secondary motion within ourselves that adds beliefs which may be true or false to the presentation.¹⁴² Dreams belong to a category of images which Epicurus identifies first as ‘likenesses’ or simulations of what is ‘existent and true’ (as opposed to straightforward perception of what is ‘existent and true’),¹⁴³ but while the images which form dreams may appear to be false in that they do not intuitively seem to correspond to present external reality their *similarity* to identifiably true sensations of an everyday kind implies that they are in fact true semblances of real things (‘things we encounter’) and so the categories seem to collapse.¹⁴⁴ Presentations can be called real or true for two reasons: the first is phenomenal: they bear accurate resemblance to

¹⁴⁰ Asmis (1999), 270, conflates images which form spontaneously and those which combine: ‘...and a stream may form spontaneously (i.e. combine) in mid-air.’ I suspect she and the commentators are correct in this, although she does not appear to qualify this assumption, indeed she complicates it with her introductory remark that ‘[these] images do not ... come from an [one?] external source.’ For a counter-interpretation see Holowchak (2004), 357. It is difficult, though, to see how images could actually generate spontaneously with no external referent in the first place: this would deny atomic continuity and causality between the perceptual object and its impression which is one of its crucial epistemological features.

¹⁴¹ Asmis (1999), 265.

¹⁴² Asmis (1999), 265-6; *Epist. Herod.* 50-2.

¹⁴³ Asmis (1999), 266; *Epist. Herod.* 50-2. See Sextus Empiricus *Math.* 8.65 on this distinction between appearances that come from solid bodies and appearances that come from images.

¹⁴⁴ ‘Epicurus’ language is circumspect and strained’ (Asmis (1999), 266). Epicurus seems ultimately to approximate ‘images obtained as a likeness or that happen in sleep’ to images obtained in ordinary sensation (‘things we encounter’ πρὸς ἃ βάλλομεν) as part of his proof that falsehood or error is *always* something which is added to the presentation (despite our possible intuitions to the contrary). This would account for his initial separate categorisation as an organised response to the Stoic (?) critic. Cf. Sextus Empiricus *Math.* 7.206: ‘What fools some people is the difference in the appearances that seem to strike us from the same perceptible (e.g. visible) thing, in virtue of which the existing thing appears to be of varying color or varying shape or in some other way changed. For they supposed that, of the appearances that thus differ and compete, one of them must be true, while the other one of opposite origins turns out to be false. Which is silly, and typical of men who fail to see the nature of reality.’ Cf. Sextus Empiricus *Math.* 8.57.

the perceptual object; the second is causal: the images are obtained from real atoms from real objects causing authentic impacts on the sense organ. But the truth of the causal event (2) explains why we can see things accurately (1); in other words, perception is true because of atomic causation specifically because it is caused by something external and is not self-moving.¹⁴⁵ The kind of truth, which depends on the complete phenomenal accuracy of perception, does not always seem to be guaranteed:¹⁴⁶ images can degrade after travelling long distances and so the perceptual stream becomes disturbed and images which merge in the air and form composites no longer faithfully resemble the entire referent.¹⁴⁷ The impinging *simulacra* we encounter are nevertheless true in that the atomic information contained in the stream is real information (causally)¹⁴⁸ which requires the correct interpretation (in the formation and addition of true or false beliefs) to prevent false conclusions.¹⁴⁹ Sextus Empiricus employs the example of the madness of Euripides' Orestes repeatedly and explains how, for the Stoics, Orestes' vision of a Fury (when he is actually seeing Electra) is both true (Electra was real) and false (there was no Fury).¹⁵⁰ For the Epicurean, Orestes' madness and his sensation of the Furies is 'activated by images' which are true (the images exist) but 'the intellect in thinking that they were solid Furies had a false opinion.'¹⁵¹ Sextus links Orestes' madness and the state of

¹⁴⁵ Asmis (1999), 267-8.

¹⁴⁶ Asmis (1999), 269-70.

¹⁴⁷ This should not, I think, preclude their truth value: in any perception we only perceive a part of the sensory information from the available stream and so degraded or hybridised/corrupted information is not even phenomenally compromised in terms of its authenticity if we interpret it as such.

¹⁴⁸ See Sextus Empiricus *Math.* 7.210: 'The specific role of sense-perception is to apprehend only the thing that is present and affecting it.'

¹⁴⁹ Sextus Empiricus explains this difference between the impinging *simulacra* and their source as the reason for the diversity of opinions both true and false (Sextus Empiricus *Math.* 7.210).

¹⁵⁰ This is a non-apprehensive appearance which is both true and false; the appearance was not 'drawn in accordance' with the real thing, but was nevertheless 'drawn from' the real thing (Sextus Empiricus *Math.* 7.244-9).

¹⁵¹ Sextus Empiricus *Math.* 8.63 and see Asmis (1999), 268.

dreaming,¹⁵² indicating these are both to do with confusion between true and false appearances for the Stoic, true and false beliefs for the Epicurean.

Sextus complains that Epicurus falls into the same epistemological paradox of those who distinguish between true and false appearances in his own theory of true and false beliefs.

Appearances can be deceiving (through degraded or merged *simulacra*, or, as in the case of Orestes, through belief), yet our means of testing these impressions by judging our beliefs to be true or false depends on 'plain experience' (i.e. via sensation) in the first place.¹⁵³ Beliefs consist of a secondary and internal motion added to perception ('another motion that is attached to perception, but is distinct from it').¹⁵⁴ Belief itself, though, is judged by our perceptions (they are 'the ultimate basis of judgement; for there is no further criterion by which the perceptions themselves can be judged').¹⁵⁵ That perceptions judge our beliefs about perceptions is troubling to ancient and modern critics alike, for how is a mad or otherwise deluded person able to refute his beliefs about a particular perception if his beliefs must yield to perceptual information in the first instance?

¹⁵² Sextus Empiricus *Math.* 7.245 on Stoic apprehension, also Sextus Empiricus *Math.* 8.59 on truth, against Democritus and Plato.

¹⁵³ Sextus Empiricus *Math.* 8.64-5.

¹⁵⁴ *Epist. Herod.* 51 and cf. Sextus Empiricus *Math.* 7.203: 'Epicurus says that there are two objects that are connected with one another – appearance and opinion.'

¹⁵⁵ Diog. Laert. 10.32; Asmis (1999), 266: 'the claim that there is no falsehood in perception is boldly counterintuitive.' Cf. Sextus Empiricus *Math.* 8.66: 'It is especially absurd that he tries to demonstrate things that are less under investigation by means of things that are more under investigation. For while we are inquiring about the reliability of apparent things, he introduces this monstrous and mythical opinion about images.'

Sextus' criticism is simplistic and Lucretius' explanation of the state of the dreamer offers some solution: the dreamer is not able to refute falsehood with truth because during sleep the senses are obstructed and memory is deactivated, only the mind is awake (4.762-767).¹⁵⁶ This indicates that correct judgement depends on concomitant information from the other senses and on memory. Diogenes states that we form beliefs (δόξαι) about perceptions in the form of preconceptions (προλήψεις).¹⁵⁷ Preconceptions are derived from sense perception and, according to Diogenes, are a 'memory of what has often appeared from outside' – repeated exposure to *simulacra* formulates 'concepts'¹⁵⁸ which are stored memories of things and which determine our expectations of incoming images.¹⁵⁹

Preconceptions constitute so-called 'special beliefs' formed by 'an accumulation of sensory impressions' and they are acts of 'application'.¹⁶⁰ The status or 'self-evidence' of preconception is complex; preconceptions appear to belong to the category of sensation (as the product of accumulations of impressions), but seem also to consist of a distinct motion added by the mind which attends and forms concepts and inferences from these accumulations that would render them epistemologically subordinate to sensation (as the ultimate *criterion* which is always true).¹⁶¹ Preconceptions are clearly responsible for ordering sensory information into *a priori*

¹⁵⁶ Lucr. 4.758: '*mens animi vigilat*'

¹⁵⁷ Diog. Laert. 10.32-33; cf. Asmis (1999), 277: 'their function is to serve as points of reference for inquiry.'

¹⁵⁸ Asmis (1999), 277: 'nor would we name anything unless we had first acquired a preconception of it' and see n25.

¹⁵⁹ Asmis (1999), 276-7; Diog. Laert. 10.33.

¹⁶⁰ Asmis (1999), 277 and see Clem. Alex. *Strom.* 2.4.16.3: '[Epicurus] expounds "preconception" as a close attention directed to a clear object and a clear concept of the object.'

¹⁶¹ Asmis (1999), 278. Asmis leaves this rather unresolved, concluding that 'sensory impressions turn into a conception.'

concepts and categories which are crucial to interpreting sensory information correctly in the mind. If perceptions are subordinate to scrutiny by the senses, then they provide evidence which is not always accurate in terms of their relevance to present external reality. As Elizabeth Asmis points out, this is essentially a restatement of the problems regarding the relative epistemological status of *simulacra*, and it is the frequency of common perceptions (in turn based on frequency of presentations) and consensus among them which appear to ensure their epistemological accuracy as opposed to supposed 'false suppositions' such as notions about centaurs.¹⁶² This suggests that proleptic reliability can be assessed statistically; presumably those merged *simulacra* which result in presentations of centaurs and other non-real entities are a relatively infrequent event on this account and as such do not constitute a valid preconception.

Preconceptions are imprinted patterns in the mind,¹⁶³ they are special and natural 'beliefs' implanted in the mind through steady accumulation of *simulacra*. Cicero differentiates between natural and taught beliefs,¹⁶⁴ but it is difficult to determine whether this distinction is properly Epicurean.¹⁶⁵ The distinction leads to a theoretical division within the structure of mental processes which separately identifies preconceptions and beliefs: a preconception is 'an inferred pattern imposed naturally *from outside*' whereas reasoning is 'an activity produced *in* the mind by means of atomic movements.'¹⁶⁶ Both of these phenomena concern the arrangement of images:

¹⁶² Asmis (1999), 278-80: this is conjectural; *Epist. Men.* 123-4 refers to the relevance of beliefs which are commonly held.

¹⁶³ Asmis (1999), 281.

¹⁶⁴ Asmis (1999), 278, 281 Cicero *ND* 1.43-4.

¹⁶⁵ Cicero is speaking of belief in the gods in the Epicurean view which is not 'established by some convention or custom or law,' but this does not necessarily imply that other beliefs are necessarily established in this way.

¹⁶⁶ Asmis (1999), 281 (*italics mine*).

with preconceptions this is accomplished automatically through successive streams of images which ‘impose’ some kind of pattern in which those images are stored in an arrangement according to their similarity or difference; this natural faculty apparently trains our ability to arrange these images deliberately in the form of reason (*ratio*), a second movement in ourselves.¹⁶⁷ In summary, this model generally presents a process that extends from an object in external reality to the formation of an impression prior to a belief about that object which can be judged true or false according to subsequent sensory evidence. This process begins with impinging *simulacra*, which are followed by mental selection and attendance (ἐπιβολή) on a particular sequence of impressions contained within the stream (to the exclusion of others), these perceptions result in preconception as those images to which we are frequently exposed are accumulated (according to similarity and difference) as natural patterns of memory in the mental sense organ. These actions occur prior to belief formation both temporally and epistemologically and are regarded as automatic and true in themselves and so free from interpretation or investigation; beliefs are rational inferences added by the mind from within and are similar to and formed from preconceptions (but supposedly not the same as preconceptions).

This model seems unnecessarily complex and is a result of criticism which has been influenced by Epicurus’ and others’ not insignificant tendency to distinguish between beliefs proper and preconceptions, while simultaneously ascribing to preconceptions at least part of the domain of

¹⁶⁷ Asmis (1999), 281.

belief.¹⁶⁸ The range of belief-formulation constantly diminishes in the physical model, as application, sensation, preconception and memory are shown to be normal acts of physical perception and subsequent natural arrangement rather than some elusive, secondary and cognitive movement in ourselves. The conceptual problem has to do with ascribing to these ‘first’ acts an equivalent epistemological status because they are identical to, or derived naturally from, sense perception and distinct from ‘*ratio*’ which, though contingent on sensory data, somehow operates separately inside ourselves once formed. Lucretius makes this distinction between the outward appearances of things and ‘the inner workings’ repeatedly in his formulaic phrase *naturae species ratioque* (1.148 = 2.61 = 3.93 = 6.41). Lucretius, however, typically alternates his descriptions of outward appearances and inner workings to describe identical phenomena as part of his protreptic approach which combines poetry and philosophy. Indeed, the relationship in Lucretius of poetry to *species* and Epicurean doctrine to *ratio* is well observed and has been responsible for the identification by nineteenth century critics of the insidious ‘anti-Lucretius’ lurking beneath the text.¹⁶⁹ Lucretius’ depictions of ‘the self destructiveness of mankind’ have historically been set in contrast to the Epicurean goal of ἀταραξία achieved through following its doctrinal philosophy.¹⁷⁰ This apparent contradiction in Lucretius has been demonstrated to be part of his integrated approach for the uninitiated which takes account, on the surface, of human fears, subjectivity and frailty.¹⁷¹ Part of Lucretius’ approach, I suggest, is to address a problem with the distinction between physiological and cognitive descriptions of

¹⁶⁸ Diogenes explains that he will sometimes use πρόληψις for δόξα ὀρθή (Diog. Laert. 10.33: τὴν δὲ πρόληψιν λέγουσιν οἰοεὶ κατάληψιν ἢ δόξαν ὀρθήν ἢ ἔννοιαν ἢ καθολικὴν νόησιν ἐναποκειμένην, τοῦτ’ ἐστὶ μνήμην τοῦ πολλάκις ἔξωθεν φανέντος).

¹⁶⁹ Charles Segal, *Lucretius on Death and Anxiety: Poetry and Philosophy in De rerum natura*, (Princeton: 1990), 9-12.

¹⁷⁰ Segal (1990), 10.

¹⁷¹ Segal (1990), 3-26.

the same processes, a duality already outlined by Aristotle. In Book 3 he provides typically distinct versions of human emotion: after the proem we are presented with a catalogue of 'outward' descriptions of irrationality in the form of various vices and superstitions explained psychologically in intentional terms and induced by the fear of death (3.31-93: avarice, ambition, cruelty etc.). His subsequent argument on the material nature of the soul rapidly advances, after a brief description of oneiric irrationality (3.112-116), to a physical description of the quadripartite soul and a 'bottom-up' explanation of human emotions according to Epicurean doctrine (3.231-322). That the mention of dreams provides a transition into physicalism reinforces, perhaps, the relevance of how this state clarifies ordinary mental experience in terms of its basic physics.

Modern attempts at describing the mental assemblage and its functioning are typically frustrated by this tension between physicalist and cognitive accounts. It is tempting to interpret perceptions and preconceptions (which have also been described as acts of application) as forming a physical account of beliefs and to entertain the possibility that our beliefs themselves are identical to our various preconceptions. This approach is partially compatible with later proponents of the School like Zeno of Sidon who assimilated preconceptions to the building blocks of rational enquiry,¹⁷² Philodemus, who seems not to distinguish between the testing of initial perception and the testing of reasoning,¹⁷³ and quite possibly with Lucretius who asserts

¹⁷² Asmis (1999), 281.

¹⁷³ Asmis (1999), 282.

that memory may have a role in judgement in that it has the capacity to contradict certain kinds of irrational appearances: the kinds we experience when asleep.¹⁷⁴

Moreover, one of the problems of the model which moves from mental application to belief and subsequent judgement is that it fails to explain exactly how the mind performs any kind of initial rational selection from the readily available abundance of impinging *simulacra* at any given moment. The most coherent account of mental application (ἐπιβολή) to incoming streams is given in Lucretius and, as mentioned earlier, this process involves an active response on the part of the mind because the organ is 'in a state of attentiveness.'¹⁷⁵ The selection of the first image is not, however, arbitrary: it requires some form of mental participation. Unfortunately Lucretius does not clarify how exactly it is that the mind is capable of initiating this kind of action (or indeed many other sorts of mental activity) and the frustratingly reflexive '*se ipse paravit*' (4.804) betrays, at least, a difficulty in Epicurean physicalism or a complexity beyond the scope of Lucretius' argument and purpose. Preconception, however, is involved in a similar sort of activity: the information grouped in stored preconceptions 'explains why we seek things,' by placing expectations on incoming information perceived by the senses (without these we would not seek anything).¹⁷⁶ Preconceptions are also 'applications' and it seems plausible to suggest that they constitute the same applications of the mind which catch hold of parts of the sensory stream in perception; ἐπιβολή is based on expectations of subsequent *simulacra* and preconceptions are based on expecting, or seeking, subsequent *simulacra* according to

¹⁷⁴ Lucr. 4.765-767.

¹⁷⁵ Asmis (1999), 272.

¹⁷⁶ Diog. Laert. 10.33 and see Asmis (1999), 277.

preconceived concepts. In this way preconception will ensure the rational function of ἐπιβολή and ‘tune’ or direct the mind’s attention to those particular parts of the perceptual stream which are compatible with its own preconfigured pattern of associations and confirm the true nature of these perceptions if they are consistent with concomitant data from the other senses. Only the relevant προλήψεις will materially collide with the *simulacra* which match it.

Diogenes uses the example of distant objects:¹⁷⁷ a real distant cow would only be able to be ‘sought’ if we had already come to know the preconception of ‘cow’ (i.e. by frequent sensory exposure to cows). If this is what constitutes ἐπιβολή, then all other images (apart from those apprehended by similar application) would ‘vanish’ (or not collide with a προλήψεις) and the incoming stream would thus be ordered according to the imprinted configurations of the physical mind. As Diogenes appears to say, we can only follow sequences according to our preconceptions. Beliefs also have to do with expectations placed on perception and are divided into two categories: (1) beliefs about what is waiting and (2) beliefs about what is non-evident.¹⁷⁸ The first kind of belief is verified by ‘witnessing’ and falsified by ‘counterwitnessing’:¹⁷⁹ a belief is tested by subsequent evidence from the senses which either corresponds to the belief and proves it to be true or does not correspond to the belief and proves the belief to be false. Sextus uses a strikingly similar example to the one already described by Diogenes for preconceptions: if Plato is approaching from far away, a belief that it is Plato will be confirmed if it turns out to really be Plato on closer inspection, but be denied if it does

¹⁷⁷ Diog. Laert. 10.33.

¹⁷⁸ Asmis (1999), 283.

¹⁷⁹ *Epist. Herod.* 48, 50-1.

not.¹⁸⁰ Normally stated, ‘preconceptions correspond to the utterances used to state a belief;’¹⁸¹ preconceptions are true in themselves in that they are causal evidence of atomic exposure, but they are subject to evidential investigation when they are present applications in which the mind seeks images.¹⁸² Beliefs take the form of expectations and are subject to the same scrutiny by sensory information and it is certainly possible to identify beliefs as present applications of preconceptions, be it Plato or cow which is approaching from afar. This is to explain the ordinary functioning of ἐπιβολή, preconception and belief as expressions of the same coordinated act of presentation and response. Certainly all are involved in filtering and parsing the atomic stream – all are also contingent on our expectations of what will follow on from a particular image for a coherent and directed apprehension of the physical world. The conclusion should be that, while we can clearly distinguish between acts of reason on the one hand and sense perception on the other, they are both bound up in similar physical processes and this sort of rational proleptic organisation and subsequent sensation must be squared with Lucretius’ physical account of the soul and Epicurus’ theories of mental development in rational beings.

The second type of belief is more complicated: these are beliefs about things which do not exist and are disproved by observing existent things which necessitate their existence (as the non-existence of void is disproved by the observation of objects moving through space).¹⁸³ Belief of this sort is associated with higher reasoning and is not stimulated in any abundantly clear way by a present or impinging image like Sextus’ distant image of Plato. Indeed here it becomes

¹⁸⁰ Sextus Empiricus *Math.* 7.212

¹⁸¹ Asmis (1999), 276.

¹⁸² If the object is counterwitnessed this will presumably refine our preconception of that object.

¹⁸³ Asmis (1999), 285-6; Sextus Empiricus *Math.* 7.213-4.

more difficult to trace any identification of preconception with belief, but there are indications that this sort of reasoning utilises more advanced configurations of preconceptions of the properties which inform the belief and the counterwitnessing claim (i.e. using preconceptions of the phenomena of body, motion and void).¹⁸⁴ Present applications of preconceptions are at least very close to beliefs in their function and are afflicted in similar ways by the same general problems;¹⁸⁵ they are also involved in the mind's selection of images from the stream. However the relationship between ἐπιβολή, preconceptions and beliefs is precisely understood, it is clear from Lucretius that when we are asleep we no longer have access to memory (which otherwise enables us to apply beliefs or at least expectations about images to incoming *simulacra*) or to common sensory information which would normally enable us to accept or refute the beliefs we form while following successive *simulacra*.

Returning briefly to the accuracy of images, another reason for supposed misperception is that the sense organ itself may become deranged and so alter its perception. Lucretius describes the process of physical derangement in Book 4 in a passage that is clearly meant to have broader intellectual implications in the work at large since he is discussing honey in terms of sweetness and bitterness – images and concepts he has deployed famously elsewhere in the honeyed-cup simile (1.936-50 = 4.11-25) to demonstrate the relevance of his poetic enterprise in terms of Epicurean ethics. Lucretius states that foods contain many different sorts of atoms; just as these are of different sizes and shapes and combined in different ways so is the configuration of the

¹⁸⁴ Asmis (1999), 287.

¹⁸⁵ Beliefs share in the epistemological problems surrounding the accuracy of perceptions and preconceptions; see Asmis (1999), 285.

sense organ's passages or pores (4.642-657). This is why taste perceptions vary between organisms, because only atoms which correspond to the configuration of pathways in the sense organ are received and absorbed. Honey contains both smooth and rough particles which are responsible for sweet and bitter tastes respectively (4.671). In a healthy receiver the sweet particles in the honey stimulate the sense organ; if the sense organ is unhealthy, then the positions of its atoms are deranged (4.666-7: *et omnes | commutantur ibi positurae principiorum*) and the organ receives other sorts of particles from the object, in this case 'rough and hooked'¹⁸⁶ particles produce a bitter sensation. It is not only the atoms of the palate which can be disturbed in this way, but the atoms of the 'whole body' (4.666: *peturbatur ibi iam totum corpus*). This theory is also observed in examples of visual sensation, the same presentations are not suitable to all organisms: lions supposedly fear the sight of roosters because particles from the rooster happen to be shaped in such a way that they cut into the pupils of lions and cause pain (4.710-17), yet this does not occur in normal humans.¹⁸⁷ Epicurus also explains that a sense organ receives what is 'commensurate' (σύμμετρον) with it: the arrangement of the sense organ determines which parts of the perceptual stream it will encounter.¹⁸⁸

Lucretius explains that when we sleep our soul is re-arranged (4.916-53),¹⁸⁹ and it is clear from Lucretius's discussion above that derangements in other sense organs result in attention to parts

¹⁸⁶ Lucr. 4.662: '*aspera ... hamataque.*'

¹⁸⁷ Note David Konstan's remark that 'What we think of as fear in the case of animals is rather an instinctive avoidance of pain, and hence operates on the perceptual level, without necessary recourse to reason' (David Konstan, *Lucretius and the Epicurean Attitude toward Grief* (unpublished manuscript presented to the conference 'Lucretius: Poetry, Philosophy and Science' at the University of Manchester, 6-7 July 2009), 3). Cf. Pliny for this superstition (Pliny *HN* 10.47.9-48.1).

¹⁸⁸ *Epist. Herod.* 53 (of hearing and smelling). See also Asmis (1999), 270-1.

¹⁸⁹ *peturbari* (4.922, 930), *conturbantur* (4.943).

of the stream which do not conform to proleptic consensus.¹⁹⁰ The body is exposed to repeated blows by the air from without and by the air within us while we breathe and is possibly even ruptured (4.932-42).¹⁹¹ These bombardments also invade the interstices or pores (*parva foramina*, 4.940) of the body and together they effect a collapse (*ruina*, 4.942) throughout the whole.¹⁹² This passage is strikingly similar to proofs offered in Book 3 of the interdependence of the body and soul; if the entire shell of the body is broken apart (3.576-78: *resoluto corporis omni | tegmine ... dissolui*), then the sensations of both the *animus* and the *anima* are dissolved (3.578-9) as the soul is scattered outside the body (3.580-591). Lucretius frequently compares sleep to death referring to ‘the quiet sleep of death’ (3.211: *leti segura quies*, 3.977: *non omni somnio securius exstat?*), but it is clear that the assaults in Book 4 are non-lethal kinds from which we can be resuscitated.¹⁹³ During sleep this assault likewise affects both the *animus* and the body: their particles are disordered (4.943-44: *conturbantur enim positurae principiorum | corporis atque animi*), and part of the ‘spirit’ (*pars animai*, 4.944) is cast outside the body while part is withdrawn inside it, another part, extended throughout the frame (*distracta per artus*, 4.946), is no longer ‘interconnected’ (*non queat esse coniuncta inter se*, 4.946-7) or capable of coordinated motion (*neque motu mutua fungi*, 4.948) and this affects the limbs and the senses which lose their strength (4.944-54). Editors have struggled with Lucretius’ use of *animus* (4.944) which suggests that the ‘rational soul’ is affected in addition to parts of the *anima*, or

¹⁹⁰ Honey is attested only as sweet elsewhere by Lucretius: (2.398-407, 3.191-195).

¹⁹¹ *Plaga* (4.940) and *ictus* (4.934) are words which Lucretius uses to describe ‘blows’ or ‘strokes’ in general as well as ‘cuts’ or ‘wounds’: ‘the overall effect is physical [and] perhaps very violent’ (Holowchak (2004), 558). Lucretius does not explain why this phenomenon only occurs during sleep, for surely we are continually exposed to these kinds of attacks?

¹⁹² Bailey (1947), vol. iii. 1294: ‘this is not the direct effect of the blows, but as Lucretius Explains in the next two lines, the air causes changes in atomic *positurae* and that is the cause of the collapse.’

¹⁹³ Holowchak (2004), 358 n26: ‘When the blow is not lethal, the vital motions prevail, stilling the prodigious disorders and rekindling sensation.’

‘irrational soul’ (which are quite clearly repositioned), noting that it conflicts with Lucretius’ earlier statement that, in sleep, ‘the mind remains vigilant’ (4.758: *mens animi vigilat*).¹⁹⁴ It seems unlikely that this could be any kind of textual error or confusion since *animus* appears in such close proximity with *anima* on the same line (4.944: ‘...corporis atque animi. fit uti pars inde animai...’); Bailey suggests that *animus* could be being used here in the sense in which it is apparently taken to refer to the whole soul,¹⁹⁵ but Lucretius tends to call the whole soul (*anima* and *animus*) the *anima*, rather than the reverse, and tells us that he does this (3.421-4).¹⁹⁶ Again it seems unlikely that he would use *animus* here in an inclusive sense because of its textual and contextual proximity to *anima*. We have already demonstrated that preconceptions, or at least beliefs, take the form of rational events in the mind (*animus*) with an intentional aspect and that these assume a mediating role between external objects and their rational mental assimilation. Lucretius uses the word *notitia*, or ‘concept,’ to describe a range of mental applications: from ordinary preconceptions of secondary qualities like ‘colour’ (2.745) to abstract knowledge of concepts like ‘truth’ or ‘falsehood’ (4.496) which clearly inform rational applications. Lucretius does not appear to use a separate word for ‘belief’ or talk about beliefs in a concrete way, but does use *credo* to describe our believing in things which are non-evident using reasoning.¹⁹⁷ The closest he comes to actually discussing ‘belief’ is *credendum* (2.1027) where he is explaining the

¹⁹⁴ Bailey (1947), vol. iii. 1294: ‘*animi* is unexpected, for the *animus* is, as has been seen 757 ff., 788 ff., unaffected in sleep.’

¹⁹⁵ Bailey (1947), vol. iii. 1294: ‘*animus* may be used here in the inclusive sense of *animus* + *anima* as opposed to *corpus*.’

¹⁹⁶ David West interprets this as meaning that ‘the words *animus* and *anima* are to be mutually inclusive’ (David West, “Lucretius’ Methods of Argument (3. 417-614),” *CQ* 25 (1975), 95), yet proceeds to demonstrate that ‘*animus* and its synonym *mens* (3.94) appear in statements which would not normally apply to the other part of the soul.’ He explains the inclusivity as conceptual rather than arbitrary and it enables Lucretius ‘to draw deductions about the composite soul from propositions which apply only to one of its constituent parts.’ This is appropriate seeing that both parts of the soul share in the same atomic ingredients (as has been shown).

¹⁹⁷ On this type of belief see Asmis (1999), 283.

discovery and formation of new truths (2.1023-47). There is nothing, he says, which is so easy to believe that it is not (at first) more difficult to believe; that is, all things are difficult to believe at first (*neque tam facilis res ulla est quin ea primum | difficilis magis ad credendum constet*, 2.1026-7).¹⁹⁸ Conversely, no new thing is so wonderful that it will not, over time, cease to cause wonder and become ingrained (2.1027-29). He then discusses the ordinary kinds of evident things to which we are routinely exposed: the sky, the stars, the moon and the sun; we are used to these things, because we have prepared proleptic concepts in our minds from exposure.¹⁹⁹ There are some things for which we are not prepared (*ex improviso*) and we will not eliminate these if we ponder them with judgement and find them to be true. Lucretius does not say here that we should judge any beliefs about these things, but that we should judge the things themselves which could only be done if we are already attending to them. Presumably we can attend to these types of things in the first place because we are able to construe other proleptic information gathered by the senses to extend arguments about non-evident things.²⁰⁰ Lucretius ends this passage with a flight of the mind (*animus*) through the universe as it extends its ἐπιβολή (*animi iactus*, 2.1047) ever onwards through infinite space, gathering and applying sensory information and seeking the *ratio* of distant things.

In all cases *notitiae*, *ratio* and ‘beliefs’ are derived from the senses and are formed as patterns in the mind, i.e. the *animus*, which is as much a part of the body as the other sense organs;²⁰¹ and

¹⁹⁸ I am taking both *facilis* and *magis* with the gerund.

¹⁹⁹ Because Lucretius juxtaposes these to things for which we are not prepared (*ex improviso*). Cf. 2.744-45: *scire licet nostrae quoque menti corpora posse | vorti in notitiam*.

²⁰⁰ See Asmis (1999), 287.

²⁰¹ Lucr. 3.96-7.

it is the body which is physically assaulted in sleep. Bailey hesitantly offers a third explanation of Lucretius' use of *animus* in his discussion of dreams, suggesting that the *positurae* of its atoms are changed but that this does not preclude its vigilance.²⁰² He suggests that the reconfiguration of the organ may even enhance its vigilance;²⁰³ his hesitation is because he can find no Epicurean doctrine which supports this theory. We might take a cue from Lucretius here and attempt to reason about things unknown by what is evident.²⁰⁴ As already stated, the mind is as much a sense organ as the others, and sense organs can become deranged such that they become commensurate with obscure parts of the atomic stream. If the positions of the atoms of the *animus* itself are re-arranged in sleep, then this mental derangement will make the mind, as a sense organ, commensurate with the 'wrong' parts of the perceptual stream. Further, this will explain why we encounter abnormal and novel mental visions in dreams: wonderful shapes, images of the dead (4.35) and dreams of those who are not present.²⁰⁵ These types of things do not always constitute the normal contents of the presentations we encounter in waking life, yet we are told that these images which form dreams are abundantly available all the time and in any given place (4.768-776).²⁰⁶ It is possible, I suggest, to be more precise about exactly why this particular example of mental derangement in dreams results in these kinds of presentations and so reinforce this hypothesis. Lucretius explains that memory is inactive in sleep, and it is memory which can rationally reject (*dissentit*, 4.766) incoming information such as that in images which present someone who is dead (which cannot be accurate because the person is not

²⁰² Bailey (1947), vol. iii. 935.

²⁰³ Bailey (1947), vol. iii. 935: '[this may] enable it to give greater attention to *simulacra*.'

²⁰⁴ Though the dangers of this form of inductive reasoning, possibly adopting *a priori* claims from the Eleatic School, are, however, duly noted (Asmis (1999), 286-94).

²⁰⁵ See Diog. Oen. fr. 125-26 Smith = Epicurus' *Letter to Mother* (Clay (1980), 353).

²⁰⁶ Cf. Diog. Oen. fr. 9 Smith col. 4.5-6: 'dreams are created by the constant flow of images which impinge upon the soul from without' (Clay (1980), 353).

present, 4.765-7). This *must* imply disturbance of the *animus* since it is the location of preconceptions that store this kind of memory which is responsible for mediation between concepts and solid bodies. The mode in which memory, in the form of repeated sense perceptions, is physically stored in the mind has been debated and has not been satisfactorily resolved.²⁰⁷ Some suggest that images physically enter the mind and that their particles are atomically retained,²⁰⁸ others maintain that it is preserved in patterns of arrangement of the soul atoms²⁰⁹ or in alterations to the *kinesis* of soul atoms without affecting their arrangement.²¹⁰ Kerferd's objection to the second solution is that changes in the pattern of arrangement of soul atoms will interrupt the soul's 'psychicity' (its capacity for sensation and thought)²¹¹ which depends on its special structure.²¹² While it makes sense the soul's abilities depend on its specific structure, the case of memory or preconception need not preclude a finely tuned and organised arrangement, if we consider the probability that the whole organ's capacity for rational perception, preconception and judgement is in fact dependent on its ordered, commensurate relationship with frequently arriving *simulacra* from the natural world. In other words, the special characteristics of the soul consist in this adapting and adjusting arrangement (formed and fine tuned from sensory evidence through accumulation) which conforms itself in accordance with its exposure to external reality. On this view, preconceptions and belief are compatible, if not identical, with this rational arrangement of the mental sense organ which explains how, in the case of the rational mind, the arrangement of the organ ensures that

²⁰⁷ See Kerferd (1971), 87-88.

²⁰⁸ So Bailey (1964), 245, 417-419.

²⁰⁹ Kerferd (1971), 87.

²¹⁰ So Furley (1967), 202.

²¹¹ Kerferd (1971), 83. Kerferd coins this term from the Italian *Psichicità* to describe the soul's essential and unique qualities; it does not seem to make the transition into later criticism.

²¹² Kerferd (1971), 87 cf. 94.

commensurate information is received, because preconceptions are stored concepts that explain why we seek things (ἐπιβολή) and expect successive images to conform to prepared types. This suggests a sympathetic relationship between proleptic arrangement and the natural order of external reality (for this is the order which frequently imprints itself on the mind): Lucretius explains in Books 2 and 5 why Centaurs, Scyllas and Chimaeras do not exist according to the fixed law of nature which places limitations on physical variation and this is evident (2.707: *manifestum est*).²¹³

In dreams the mind (*animus*) is deranged and so (like other senses) it will receive deranged information; the more precise reason, in the case of the mind, is that this disordering is a disruption of proleptic arrangement which is responsible for directing ἐπιβολή and receiving images which are commensurate with our preconceptions. If our preconceptions are deactivated, as Lucretius implies they are, then we can no longer expect what will follow on from a particular image according to any preconceived concept; we are no longer prepared – instead our access to the external world is much more haphazard, disordered and volatile. In dreams we perceive wondrous objects (*figuras ... miras*, 4.34-5) as if we are seeing things for the first time without preparation, a phenomenon described earlier as producing wonder (2.1033-5: *si primum ... | ex improviso si sint obiecta repente | quid magis his rebus poterat mirabile dici*). Bailey's interesting suggestion of hypervigilance is presumably to explain why during sleep the mind selects and perceives things which it does not ordinarily encounter in waking life, but preconceptions determine our mental selection and the expectations we attach to certain

²¹³ 2.700-729; 5.878-924.

impinging *simulacra* to the exclusion of others. These expectations normally involve simultaneous sensory scrutiny and elimination if they do not conform to plain sensory evidence and Lucretius explains that during sleep we have no access to the senses (4.763-4); so, even though we are exposed to the same images as we are when awake, we accept them *all* as real in the absence of sense *criterion*. It is clear that waking mental perception which, as we have seen, is not merely a raw perceptual act, but involves seeking images which are in accordance with stored concepts, is also subjected to the evidence of ordinary sensation, like vision, when we are awake.

This is corroborated by Diogenes of Oenoanda (fr. 9 Smith col.4.7 - 6.1):

col 4.7:	... ὅτε καθεύ-
	δομεν, τῶν αἰσ-
	θητηρίων πάντων οἰ-
10	ονεὶ παραλελυμένων
	καὶ ἐξβεσμένων αὐθ[ις]
	[καθ'] ὕπνον, ἢ [ψ]υχὴ, [ἔτι]
	κ[αὶ γ]ρηγοροῦσα κ[αὶ γι]-
	[νώσκειν οὐ δυναμέ]-
col 5.1:	[νη τὸ] σύνπτωμα καὶ τὴν
	κατάστασιν αὐτῶν τὴν
	τότε, τὰ δὲ ἑαυτῇ προσι-
	όντα εἶδωλα ἐγδεχο-
5	μένη, ἀνέλεγκτον πε-
	ρὶ τούτων καὶ ψευδῆ λαμ-
	βάνει δόξαν ὡς καὶ κα-
	τὰ τὴν στερεμνίαν φύ-
	σιν ὄντων ἀληθῶν.
10	οἱ γὰρ ἔλενχοι τῆς δό-
	ξης καθεύδουσιν τό-
	τε. ἦσαν δὲ οὗτοι τὰ αἰσ-
	θητήρια. ὁ γὰρ κανὼν
	[τῆς ἀληθείας] καὶ τὸ ...

‘When we are asleep and our sense organs are, as it were, paralysed and extinguished (in) sleep, our soul and mind within are (still) awake (and cannot distinguish ?) ... the occurrence and the (true) state (of these images) at that time, as it (the soul) receives the images that come to it, (and) about these it adopts an opinion which cannot be confirmed (by the senses) and is false in the sense that it interprets these images as realities in the same category as solid bodies. For the means to verifying opinions are then asleep. Now these were the sense organs. For (these are) the rule and criterion (of truth).’ (trans. Clay (1980), 363-4).²¹⁴

Diogenes explains that while the soul ([ψ]υχή, col. 4.12) is receiving impinging images (προσι-
|όντα εἶδωλα ἐγδεχο-|μένα, col. 5.3-5) it draws an opinion or a belief (λαμ-|βάνει δόξαν,
col. 5.6-7) about all of them (πε-|ρὶ τούτων, col. 5.5-6) which is irrefutable (ἀνέλεγκτον, col.
5.5) because the refuters of opinion, the sense organs, lie asleep (οἱ γὰρ ἔλεγκτοι τῆς δό-|ξης
καθεύδουσιν ... τὰ αἰσ-|θητήρια, col. 5.10-13) and this opinion is false (ψευδῆ, col. 5.6) as it
draws (λαμ-|βάνει, col. 5.6-7) this opinion as if it were conforming to the solid nature (κα-
|τὰ τὴν στερεμνίαν φύ-|σιν, col. 5.7-9) of true realities (ὄντων ἀληθῶν, col. 5.9).²¹⁵ We are
thus deluded in sleep, thinking that appearances during dreams constitute accurate perceptions
of solid bodies in external reality and this thinking takes the form of false beliefs or suppositions.
So the disorder in sleep is thorough: we are disposed, through mental derangement, to receive a
disordered mental account of reality, our memory depends on an ordered disposition and is
interrupted by this disorder such that the mind selects incoherent frequencies of the stream.
Ordinarily such selections and expectations (which form opinions or beliefs) are rapidly
eliminated by progressive evidence from the senses as part of the co-ordinated perceptual and

²¹⁴ For a possible reading of the end of col 4., see Smith (1993), col. 4.13-5.1 ‘κ[αὶ] | γινώσκειν οὐ
δυναμένη’ and cf. Jürgen Hammerstaedt, "Zum Text der epikureischen Inschrift des Diogenes von
Oinoanda," *Epigraphica Anatolica* 39 (2006), 11-13:

²¹⁵ Diog. Oen. fr. 9. Smith col. 5.

cognitive process, but in sleep this is impossible. During dreams there is no escape from delusion (*frustraminis*, 4.817) because without the senses we consistently add large conclusions from small signs (4.816-7).

I am careful to translate Diogenes of Oenoanda literally here. The present tense ‘grasps’ (λαμβάνει) is syntactically co-ordinate with the present temporal participle ‘receiving’ (ἐγδεχομένη), and the singular nouns ‘accident’ and ‘belief’ (σύμπτωμα and δόξαν) are opposed to the plural ‘images’ (εἰδώλα). Diogenes provides a special case. This appears to describe the arrival and reception of a single and discrete ‘thought’ or mental impression, forming a belief from multiple images.²¹⁶ The formation of the belief is participating in a co-ordinated perceptual act, and the model which moves temporally from perceptions and preconceptions (as prior acts) to beliefs and judgement (as secondary acts) is called into question. Lucretius explains that time is ‘parasitic’ for its existence on solid bodies,²¹⁷ perception of time is delimited by the perception of things (*tempus item per se non est, sed rebus ab ipsis consequitur sensus*, 1.459-60). Demetrius of Laconia says that time depends on the motion and rest of bodies²¹⁸ and for Epicurus time is a σύμπτωμα and can only be analysed by analogy (*Epist. Herod.* 72-3)²¹⁹ and ‘viewed’ by ‘reason’ (*Epist. Herod.* 46-7): in the ‘times which reason can perceive’ (τοὺς διὰ λόγου θεωρητοὺς χρόνους, 47.1), a body in motion does not exist in two places whereas in ‘perceptible time’ (ἐν αἰσθητῷ χρόνῳ, 47.3) we cannot grasp the distance of

²¹⁶ Cf. *Epist. Herod.* 48: ὅτι ἢ γένεσις τῶν εἰδώλων ἅμα νοήματι συμβαίνει.

²¹⁷ See Sedley (1999), 370.

²¹⁸ Sextus Empiricus *Math.* 10.219-27 and see Sedley (1999), 370.

²¹⁹ See *Epist. Herod.* 72-73 and see D. N. Sedley, *Lucretius and the Transformation of Greek Wisdom*, (Cambridge: 2003), 112.

its movements between two points in infinite space (i.e. once the body is perceived it is already moved to a different location, 47.5). The *minima*, the arriving εἶδωλα,²²⁰ which constitute a present impression are perceptually non-existent and the event (Lucretius' word for σύνπτωμα is *eventum*) is the smallest perceptual unit. Any authentic 'priority' of processes within the act is perceptually meaningless and sub-perceptual acts are all instantaneous. The status of the belief *inside* the perceptual act is 'false' because the senses are asleep and therefore sensory elimination of the image as a real one does not occur, the senses should identify the class of the image by correspondence (because the mind perceives one kind of image while the senses perceive another) and thereby differentiate between abstract thoughts or images and solid bodies.

I suggest that mental-perception or belief formation, ἐπιβολή and judgement are effectively an instant act and that this explains why the mind as a sensory organ is not epistemically subordinate to the other senses (for no sense can refute another, Lucr. 4.483-488) since the formation of true *ratio* (which constitutes an instant mental impression) is internally subject to sensory scrutiny (inside a single perceptual moment) and should not form a solid (i.e. evident) presentation if the senses short-circuit this process; instead it will conform to a supposition. This clarifies why sometimes we may talk about the various movements between ἐπιβολή and true belief at the sub-perceptible level but why there is no temporal discrimination between them and why the act of ἐπιβολή instantly eliminates certain impressions, as the co-ordinated act includes judgement and determines the 'total effect'. The same is true for words from which

²²⁰ There is an implicit analogy between the atomic *minima* and the sub-perceptible units in sensation (see Sedley (1999), 375). The agglomeration of such theoretical *minima* which make up solid bodies is analogous to the perceptual stream and to not being able to see *simulacra* individually

we receive concepts, for in the time it takes to perceive something, which is the time it takes to utter a word, there are many ‘times’ (*quia tempore in uno cum sentimus, id est, cum vox emittitur una | tempora multa latent ratio quae comperit esse, 4.795-6*).²²¹ Words need to form intelligible and internally consistent sequences for them to conform to a recognised type.

Diogenes of Oenoanda makes clear that impressions exist in themselves as true natures (φάσματα [φύσεις ἀλη]-|θεῖς)²²² but what the mind receives in sleep is a secondary nature, or ‘accident’ (σύνπτωμα, col. 5.1),²²³ and the soul cannot assess the actual condition (κατάστασιν, col. 5.2) of these mental presentations in relation to present solid bodies because the sense organs are not simultaneously engaged. The images we receive in sleep form unfalsifiable mental impressions; the indication is that we only successfully form visual (i.e. solid) impressions in dreams because part of the process is missing – the verification by the senses – which would normally effect to interrupt this process and eliminate the image. The unfalsifiability of the δόξα means that the presentation survives the elimination process which is why we ‘see’ the image. This implies that some beliefs, at least, are subsumed within the minimum perceptual unit responsible for forming a presentation. We lock onto the ‘wrong’ mental images when πρόληψις is disordered²²⁴ and form the wrong impressions when the senses do not sub-perceptibly interrupt mental αἴσθησις and prevent it from becoming a visual presentation. This means, on the physical view, that if our beliefs are not internally falsified we

²²¹ Cf. *Epist. Herod.* 47 on χρόνοι (pl.) διὰ λόγου vs. αἰσθητός χρόνος (sing.).

²²² *Diog. Oen. fr.* 9 Smith col. 1.6-7.

²²³ ‘Accidents,’ cf. Lucretius’ *eventa* (1.450, 1.458, 1.467) as opposed to permanent properties (*coniuncta* = συμβεβηκότα), cf. *Epist. Herod.* 40, 68-73

²²⁴ There is no ordered preconception (memory) in dreams and so belief formation itself is erratic or even total (πε|ρὶ τούτων ... δόξαν), which it should not be.

will actually form three-dimensional impressions of things which do not exist. This constitutes a hallucination by the *synaesthesia* of thoughts (mental impressions) as reality (visual impressions), and the implications of this are that any of our irrational and unwarranted beliefs have the ability to assume physically the illusion of present reality in those with pathological, diathetical imbalances and impaired senses.²²⁵

This does not exclude every mental event as false. Diogenes' problem is that, in sleep, images and beliefs are being drawn as if they correspond to natural solid bodies (fr. 9 Smith col. 5). A 'true' opinion of mental *simulacra* would be one which is drawn preventing them from assuming solid form: if they are 'natural' mental images they should form thoughts (in the form of true beliefs) and not solids; if they are 'unnatural' mental images (i.e. the result of proleptic derangement) they should not even form complete mental presentations (an ordered constitution will not seek them), let alone visual presentations. The mental *simulacra* which are treated as visual *simulacra* are described by Diogenes as being drawn *κατὰ φύσιν*. Plato uses *κατὰ φύσιν* to identify the conformity of things or actions with their true nature or true opinion (i.e. *κατὰ τὴν ὀρθήν*)²²⁶ as opposed to conformity with other opinions (*κατὰ πᾶσαν δόξαν*) or contradictory to nature (*παρὰ φύσιν*)²²⁷ and this seems to be the sense used here. For the Stoics *κατὰ φύσιν* designates what is in accordance with nature and *παρὰ φύσιν* what is not, and this is related to moral character (*προαίρεσις*).²²⁸ Another relevant example comes

²²⁵ Cf. Lucr. 4.1020: fear of death becomes a real experience in dreams.

²²⁶ *Cra.* 387a-b. Cf. Diog. Laert. 10.33.

²²⁷ E.g. *Cra.* 387a. *κατὰ φύσιν* is contrasted to both *κατὰ ἡμετέραν δόξαν* and *παρὰ φύσιν*. Cf. 387b. *κατὰ πᾶσαν δόξαν* is contrasted with *κατὰ τὴν ὀρθήν*.

²²⁸ Gisela Striker, *Essays on Hellenistic Epistemology and Ethics*, (Cambridge: 1996), 200. See Cleanthes' revision of Zeno reported in Stobaeus (2.7.6-6a): 'τέλος ἐστὶ τὸ ὁμολογουμένως τῇ φύσει

from Sextus' discussion of the Fourth Trope of Pyrrhonism, that circumstances or conditions alter perception (*PH* 1.101): he uses *κατὰ φύσιν* to designate the 'natural state' of perception as opposed to the supposed 'unnatural state' (*παρὰ φύσιν*); he uses similar examples of sensory derangement to Lucretius (*PH* 1.101.10: *καὶ τὸ αὐτὸ μέλι ἐμοὶ μὲν φαίνεται γλυκὺ, τοῖς | δὲ ἰκτερικοῖς πικρὸν*) and includes delusional delirium and divine possession (*οἱ μὲν φρενιτίζοντες καὶ οἱ θεοφορούμενοι δαιμόνων*). Sextus provides the Sceptic view that no state is more unnatural than the other and that the ontological existence of objects themselves is entirely relative to the subjective state of the receiver (e.g. waking or sleeping, *PH* 1.104). Epicurean ontology is not relative or variable,²²⁹ and, for Lucretius, contradictory perceptions are the result of attention to incommensurate parts of the stream (because of physical derangement of the *animus*) and malfunctioning belief formation (because of sensory impairment through disturbance of the *anima* or affectation of the sense organs themselves, or both).

The world the sleeper experiences is a different one and this is a result of his subjective state, but Epicureanism differentiates epistemologically and ethically between healthy and sick (or compromised) states in the same way it differentiates between true and false belief.²³⁰ In the

ζῆν' (cf. Chrysippus: 'ζῆν κατ' ἐμπειρίαν τῶν φύσει συμβαινόντων' and Diogenes: 'εὐλογιστεῖν ἐν τῇ τῶν κατὰ φύσιν ἐκλογῇ καὶ ἀπεκλογῇ')

²²⁹ For Epicurus' 'general refusal to privilege the atomic ontologically over the macroscopic' see Sedley (1999), 381-2. Cf. Polystratus' response to Sceptical critics (*De Contemptu*, 23-6).

²³⁰ Cf. Sedley (1999), 381-2: 'accidental properties' (i.e. *σύνπτωμα*) are not '*per se* existents.' Cf. 30 Us. = Plutarch, *Adv. Col.* 7, p. 1110C: 'αὐτὸς γὰρ οὖν ὁ Ἐπίκουρος ἐν τῷ δευτέρῳ τῶν πρὸς Θεόφραστον οὐκ εἶναι λέγων τὰ χρώματα συμφυῆ τοῖς σώμασιν, ἀλλὰ γενεῖσθαι κατὰ ποίας τινος τάξεις καὶ θέσεις πρὸς τὴν ὄψιν, οὐ μᾶλλον φησι κατὰ τοῦτον τὸν λόγον ἀχρωμάτιστον σῶμα εἶναι ἢ χρῶμα ἔχον.' Subjectivity does affect our perception of 'accidental properties,' but Diogenes of Oenanda's description shows that these *σύνπτωματα* are either in accordance with nature or are not and that this is what normally determines their 'truth.' And see Tim O'Keefe, "Action and

proleptically and pathologically disturbed sleeper, false beliefs physically supplant the reality of their bedroom and constitute 'visions' (*conclusoque loco caelum mare flumina montis | mutare ... videmur*, 4.458-462). The mechanism by which we obtain false impressions in sleep shows that the various processes involved in rational awareness, from ἐπιβολή to belief formation and judgement, are contained in the *minima* which constitute perception. For Epicurus, the φαντάσματα of the dreamer and of the mad seem to belong to the same category (fr. 125 Smith); both, then, involve derangement of the *animus* (which affects ἐπιβολή and πρόληψις and belief formation) and occlusion or impairment of the senses which is a result of a disordered *anima*. Hallucinations are a recurring theme in traditional depictions of madness: Pentheus sees a double sun; Orestes is pursued by Furies that no one else can see; Heracles sees Eurytheus instead of Amphitryon and Ajax slaughters a flock of sheep believing they are Greek warriors.²³¹

Responsibility," in *The Cambridge Companion to Epicureanism*, ed. James Warren, (Cambridge: 2009), 151: 'Famously, Democritus asserts that sensible qualities like sweetness, bitterness, and heat exist only 'by convention', whereas in reality there are atoms and the void (DK 68 B9). Because honey tastes sweet to some and bitter to others, Democritus infers that the honey is in itself neither. The Epicureans think that this eliminativism with regard to sensible qualities leads Democritus to deny that knowledge is possible. To avoid this scepticism, which would make life impossible to lead, Epicurus staunchly defends the reality of sensible qualities.'

²³¹ See Graver (2007), 110 on this common characteristic of madness.

Psychogenesis of Madness

In the passage already cited in the previous chapter (fr. 9 Smith col. 4-6 [pages 48-9]), Diogenes of Oenoanda implies that our opinions or beliefs in dreams are false because they are being drawn as if they were both natural and solid (κατὰ τὴν στερεμνίαν φύσιν fr. 9 Smith col. 5.6-9) and, as we have seen, similar expressions are used by Plato and the Stoics to designate natural things as opposed to the unnatural. For the Stoics, selection of natural things and rejection of unnatural things is not precisely identical to what is good or bad, as these ethical characteristics come with moral and rational development and maturity.²³² Epicurean ethics identifies good and bad as self-evident from sense perceptions causing pleasure or pain on a fundamental level.²³³ The terms natural and unnatural can find their proper place in the Epicurean theory of emotions and the taxonomy of ‘natural’ and ‘empty’ desires which depend on the distinction between true and false beliefs (*KD* 29).²³⁴ An unnatural desire (ἐπιθυμία οὔτε φυσική) arises from an empty belief (παρὰ κενὴν δόξαν) and true beliefs conversely give rise to natural desires (ἐπιθυμιαί φυσικαί). A scholium on *KD* 29 explains the canonical view: natural desires such as thirst can be easily fulfilled to alleviate pain; unnatural desires are insatiable, ultimately painful and predicated on false beliefs about their object’s intrinsic worth – examples include kingship, wealth and power. In *De ira* Philodemus implies that desires and emotions are connected and describes anger as the desire and anguish to exact revenge (δεινῆς | ἐπιθυμίας τοῦ μετελ|θεῖν

²³² Sen. *Ep.* 121 and cf. Striker (1996), 200.

²³³ See Diog. Laert. 10.33. Dem. Lac.; *PHerc.* 1012, 51.4-8. Cf. Voula Tsouna, *The Ethics of Philodemus*, (New York: 2007), 17.

²³⁴ *KD* 29 = Diog. Laert. 10.149: ‘τῶν ἐπιθυμιῶν αἱ μὲν εἰσι φυσικαὶ καὶ <ἀναγκαῖαι> αἱ δὲ φυσικαὶ καὶ οὐκ ἀναγκαῖαι· αἱ δὲ οὔτε φυσικαὶ οὔτ’ ἀναγκαῖαι ἀλλὰ παρὰ κενὴν δόξαν γινόμεναι.’

καὶ ἀγωνίας, 8.24-26). Anger and the fear of death are both described by Philodemus as empty emotions;²³⁵ empty anger (κενήν ὀργήν) is bad (κακόν) because it results from a bad disposition (διαθέσεως γίνεταί πα[μ]πονήρου) and brings endless suffering (μυρία δυσχερῆ).²³⁶

Philodemus explains that beliefs, or suppositions, create delusions (ἀπο|φα[ί]νει ... [τῶ]ν ὑπολήψεων τὰς | ἀπ[α]τήσεις ἀπεργαζομέ|νω[ν], *De ira* fr. 12)²³⁷ and highlights the association of mental images with destructive emotions.²³⁸ Defective beliefs affect our perception of the world and, as we have seen, when this includes sensory impairment, both our mental and our visual perceptions of external reality. False beliefs entail unnatural perceptions, invite unnatural desires in the form of empty emotions²³⁹ and so lead us to seek things which appear more than what they really are (like the examples of kingship, wealth and power). The angry person avenges himself imagining he is Apollo attacking the Niobids or that he is Dionysos punishing Cadmos (*De ira*. 16.18-26), and he is mistaken both in believing he is a god and that his revenge is justified.²⁴⁰ Voula Tsouna identifies such apparently symptomatic ‘mental images’ (e.g. imagining yourself to be a god) along with the feelings as one of the extra-

²³⁵ Tsouna (2007), 40.

²³⁶ *De ira*, 38.1-3. But cf. 6.14-15 (ψευδοδοξ[ίαν]) and Tsouna (2007), 43: empty beliefs are not identical with the passions.

²³⁷ ‘Suppositions created the delusions.’ His use of ἀπεργάζομαι (technically ‘complete’) is especially interesting in light of Diogenes’ implication that the formation of impressions can be interrupted.

²³⁸ Tsouna (2007), 42: ‘pictorial thinking’ (but all ‘thought’ is constituted from ‘images’).

²³⁹ Tsouna (2007), 43: ‘[false beliefs] persist as the intentional content of the emotion ... [feelings] correspond to its affective content.’

²⁴⁰ See Tsouna (2007), 42 (and cf. *De mort.* 32.36-7 imagining the fate of your corpse at sea) – but another extremely important point here is that the children of Niobe and Cadmus are ‘innocent’ victims. Such delusions are the result of emotions which are described as dispositional or ‘content-sensitive’ states. Tsouna (2007), 38-39: ‘they involve one’s reactions to certain types of situations in accordance with what one perceives to be the case.’ Emotional instances derive from relevant dispositions.

cognitive aspects of emotion (i.e. non intentional)²⁴¹ contrasted to desires or beliefs, but it seems counterproductive to separate such mental images ('imaginings') from false beliefs since imagining oneself to be a god is similar to believing your revenge to be appropriate. Both of these are false beliefs because each of their objects is drawn as if it were natural when it is not (the angry person is not a god and his victims are innocent). Such mental imaginings do not simply accompany the violent emotions resulting from false belief; rather they are false beliefs themselves which are delusional perceptual effects.

Unnatural desires or fears predicated on false beliefs always bring pain²⁴² because they are empty, and they are destructive for this reason: they obstruct the 'hedonic calculus' and therefore the rational pursuit of pleasure which is the goal, for they are unattainable.²⁴³ Their unattainability can be stated in terms of perceptual delusion as it relates to reality and can be expressed at the atomic level in terms of those mental *simulacra* which coalesce and combine in the air to form new shapes: there is something added to these, no single referent can be found in reality and they are alien. These *simulacra* are also the content of supernatural and superstitious mental presentations like centaurs, Furies and the denizens of the underworld which cause fear.²⁴⁴ We will only experience such unnatural mental presentations consistently if we are proleptically disposed to seek abnormal images and so the formation of fully-fledged mental impressions (pictures, concepts, thoughts etc.) that are not in accordance with nature is a sign of a

²⁴¹ Tsouna (2007), 41-2.

²⁴² Epicurus (*KD* 30) admits some natural desires are also caused by false belief but cause no pain (these are natural but not necessary).

²⁴³ Tsouna (2007), 35, 38.

²⁴⁴ Cf. W. V. Harris, "Roman Opinions about the Truthfulness of Dreams," *JRS* 93 (2003), 27: 'dreams for [Lucretius] are among the weapons of superstition (1.102-6).'

dispositional defect: we are having false beliefs concerning empty *simulacra* and our constitution is seeking things which are not real. Philodemus calls such defects vices (κακίαι): e.g. arrogance, flattery and greed - these are 'stable dispositions' to form certain kinds of beliefs and to behave in particular ways.²⁴⁵ Vices and other character flaws such as irascibility (ὀργιλότης)²⁴⁶ pathologically prompt the formation of false beliefs precluding a correct understanding of nature; for Philodemus, all vicious people are irrational and unable to explain rationally their actions in terms of the hedonic calculus of pain and pleasure.²⁴⁷ Lucretius describes the faults (*mala*, 3.310) as the original traces of the nature of the mind (*naturae cuiusque animi prima vestigia*, 3.309) and relates each pathological tendency to one of the parts of the soul (heat, breath and air) explaining how each both dominates the mind and constitutes the natural character of various animals (3.294-306). What sets human beings apart from the animal examples is the capacity, through reason (*ratio*, 3.321), to all but eradicate any constitutional defects, and so these will not prevent us from living the good life (3.319-22). A higher order of reasoning is peculiar to human beings and is not available in the perceptual and cognitive responses of other animals.²⁴⁸ Philodemus specifies that it is principally lack of 'self-awareness' which makes the vicious human being irrational:²⁴⁹ our rational powers seem to depend on our *prolepsis* of ourselves. It is clearly our rationality which enables us to develop morally and, according to Lucretius, to

²⁴⁵ Tsouna (2007), 32-4: 'the vices are states that Philodemus describes as stable dispositions.' Cf. e.g. *De superb.* 2.27: 'the arrogant man has the disposition (διάθεσιν) to think himself as superior to others, to feel disdain towards them (6.29-30), and hence to express his arrogance in his actions and be generally hubristic (6.30-4).'

²⁴⁶ Tsouna (2007), 43. Philodemus does not appear to include all dispositions (e.g. irascibility) as 'vices', but these are clearly dispositional states (e.g. *De ira* 34.20: δια[θ]έσεως).

²⁴⁷ Tsouna (2007), 34-6: various examples.

²⁴⁸ Konstan, *Lucretius and the Epicurean Attitude toward Grief*, 1: 'In ancient Greek, the relevant term is *logos*, and by and large philosophers, and probably most people, agreed that this was peculiar to human beings, and constitutive of what it was to be fully human.'

²⁴⁹ Tsouna (2007), 35.

overcome the predispositions hard-wired into us from birth.²⁵⁰ This involves the rational ordering of our desires and beliefs about the world, yet there is also an implication that the right kinds of desires are connected with something in our constitution which relates to what is natural. The Epicurean sage is not prone to the formation of false beliefs or empty desires because his constitution is delimited according to nature (κατὰ φύσιν).²⁵¹

Moral development over and above our innate constitutions seems to imply that rational beings exert some kind of agency over their atomic natures; we can alter or subdue our innate tendencies in ways that do not appear to be 'predetermined by our natural endowment.'²⁵² The simple ontology of Epicurean atomism raises serious concerns in relation to free will and agency with respect to metaphysical views on the relationship of the mind and body. A difficult passage in Book 25 of Epicurus' *On Nature*²⁵³ preserved in three damaged Herculaneum papyri (*PHerc.* 697, 1056 and 1191) concerns responsibility for action and psychological development and appears to try and reconcile human agency with our atomic nature. In a summary of the book²⁵⁴ Epicurus distinguishes between internal and external causes for action ([τ]ῶν αἰτιῶν [τ]ῶν

²⁵⁰ Cf. Annas (1992), 129.

²⁵¹ 548 Us.: 'τὸ εὐδαιμον καὶ μακάριον οὐ χρημάτων πλῆθος οὐδὲ πραγμάτων ὄγκος οὐδ' ἀρχαί τινες ἔχουσιν οὐδὲ δυνάμεις, ἀλλ' ἀλυπία καὶ πραότης παθῶν καὶ διάθεσις ψυχῆς τὸ κατὰ φύσιν ὀρίζουσα.' Cf. Konstan (1973), 63.

²⁵² Julia Annas, "Epicurus on Agency," in *Passions and Perceptions: Studies in Hellenistic Philosophy of Mind: Proceedings of the Fifth Symposium Hellenisticum*, ed. Jacques Brunschwig and Martha Craven Nussbaum, (Cambridge: 1993), 67.

²⁵³ Commonly known as *liber incertus de libertate agendi*. See David Sedley, "Epicurus' Refutation of Determinism," in *ΣΥΖΗΤΗΣΙΣ, Studi offerti a Marcello Gigante*, (Naples: 1983) and David Sedley, "Teleology and Myth in the *Phaedo*," *BACAP* 5 (1989) and Annas (1992), 125 n5: 'The text can be found in Arrighetti [34]; there are sections with translation in Sedley (1983); in Long and Sedley (1987, 2:20 B and C; 1:20 j); and in Laursen (1988).' See Annas (1993), 53 n1: 'That this is its number has now been established by S. Laursen (1987) and (1989).'

²⁵⁴ The text corresponds to [34.30] 27 – [34.33] Arr. (with additions) and its present form with line numbers are found in Simon Laursen, "The Summary of Epicurus 'On Nature' Book 25," in *Papiri letterari greci e latini*, ed. Mario Capasso, (Galatina: 1992) 141-154.

δι' ἡμᾶς καὶ τῶν διὰ τὴν φύσιν καὶ | τὸ περιέχον,' 41-3) and relates each of them both to our feelings (*pathological*) and to 'causes' (*aitiological*).²⁵⁵ In his discussion of these Epicurus mentions that we have 'after-sensations' which have their origin in us (τὸ ἐξ ἡμῶν ἐπαίσθησις, 10) and that the truth value of these are based on self-evidence.²⁵⁶ The capacity for after-sensation, or perception,²⁵⁷ is described as a 'permanent attribute' (ἀίδ[ι]ον, 15), a potential which 'directs us at the beginning towards something else' (ἐξ ἀρχῆς πρὸς ἕ[τ]ε[ρον] ἀγ[ωγόν], 16) and these potentials (seeds) are responsible for our psychological development and ethical progress. Our after-sensations lead to 'after-thoughts' (ἐ]πινοημ[ά]των, 27) or concepts and finally to 'after-reasoning' (τὸν ἐπιλογισμὸν) or empirical reasoning through a process which appears to depend both on 'mechanics' and on 'conscient choice.'²⁵⁸ What Epicurus seems to be discussing here is a gradual formation from initial sensations and perceptions to our preconceptions or rational constitution, and finally its application in the form of reasoning through our beliefs.²⁵⁹

²⁵⁵ 'κ[α]ὶ ὁ παθολ[ο]γικὸς | τρόπος καὶ ὁ αἰτιολογικὸς' (43-44). This is presumably in response to criticisms like those of Sextus asking how pleasure can be found in 'the heap of atoms' that is the soul (Annas (1992), 125).

²⁵⁶ Laursen (1992), 149.

²⁵⁷ In Epicurus ἐπαίσθησις pertains to perception, without involving reason or *logos*: see Elizabeth Asmis, *Epicurus' Scientific Method*, (Ithaca, N.Y.: 1984), 113, n21; 162-63.

²⁵⁸ Laursen (1992), 153.

²⁵⁹ See Laursen (1992), 153: 'The philosophical schooling, now in progress, makes the pupil interested to grasp the full meaning of terms and phenomena relating to mental activity - words, thoughts, "after-thoughts", representations and the ethical qualities connected with them. He therefore, as he has already decided to do by his "after sensation" above, starts his search for some criterium for his knowledge etc.: he possibly goes through yet another "after-sensation", by which he acquires "after-reasoning", this is not clear. But he eventually ends in a little-by-little investigation of the problems which he set out to investigate.'

Intuitively, a problem exists in reconciling a fatalist²⁶⁰ or at least predictable description of the world at the low atomic level with a world that permits what appears to be freedom of action and responsibility at the macro-level (if it is atoms and their motion which give rise to animate souls in the first place). Solutions to this problem are various, and Epicurus produces a commonsensical ‘self-refutation’ argument²⁶¹ to assert that human beings *are* rational agents with some level of free will and that there are things which happen that ‘depend on us’ (παρ’ ἡμᾶς).²⁶² His argument is that human beings are a cause (αἴτιον) in themselves and that we cannot consistently argue against our *prolepsis* of ourselves as rational agents because to do so would undermine the validity of this form of argumentation in the first place—in order to be able to argue anything at all our reasoning must be ‘causally efficacious,’²⁶³ and so legitimise our practises of praise or blame.²⁶⁴ Sedley (1983, 1989) reads the argument as anti-determinist and anti-eliminativist,²⁶⁵ that the mind possesses emergent qualities, and as evidence of a breach of Epicurean physicalism. Annas (1993) interprets it to mean that human beings are ‘not just nodes in causal chains,’²⁶⁶ that there are ‘facts about atoms’ and ‘[irreducible] facts about human

²⁶⁰ Cf. Tim O’Keefe, “The Reductionist and Compatibilist Argument of Epicurus’ *On Nature*, Book 25,” *Phronesis* 47 (2002), 160: ‘I prefer to call it his “anti-fatalist” argument, because this avoids prejudging important interpretative issues. The person who thinks that all things occur of necessity is contrasted with one who thinks that some things “depend on us.”’

²⁶¹ περικά[τω] | γὰρ ὁ το[ι]οῦτος λόγος τρέπεται, 34.28.1-2 Arr. = A. A. Long and D. N. Sedley, *The Hellenistic Philosophers*, vol. 2, (Cambridge: 1987), 20C [5]. Annas (1992), 127: ‘He is using a standard ancient “overturning” argument. It involves what we would call pragmatic self-refutation’ and see *Vatican Sayings* 40 (Long and Sedley (1987), 20 D) and Annas (1992), 125-7. Lucretius uses a similar argument against refutation of the senses.

²⁶² Long and Sedley (1987), 20C (1). Cf. *Epist. Men.* 133.7.

²⁶³ O’Keefe (2002), 166.

²⁶⁴ i.e. The argument itself must be assessed on its merits to be successful or not.

²⁶⁵ Annas (1992), 128 n16.: ‘... he conflates reductivism [reductionism?] with eliminativism and takes the argument to be stronger than it is, claiming that it shows that Epicurus was not only not a determinist but not a physicalist either.’ This type of self-refutation argument is similar to P Boghossian, “The Status of Content,” *Philos. Rev.* 99 (1990), 157-84.

²⁶⁶ Annas (1992), 126: ‘He begins from the fact that we have practises of praise, blame and the like, which make sense only on the assumption that we are agents capable of choice between perceived alternatives, and not just nodes in causal chains.’

agency' which are compatible but not identical, and this might make some sense on an anti-determinist or anti-reductionist reading of the passage²⁶⁷ in which the protagonist argues that complex accounts of human action (like argumentation) cannot be reduced to simplex descriptions of necessitated atomic movements. However, the soul is not simplex:²⁶⁸ it is a complex mixture of atoms and the lacunal text clearly supports multiple readings of the argument, but it seems prudent to favour a weaker interpretation since atomic motion is surely not a mere 'aspect' of reality or psychological influence but rather, for the Epicurean, a well-established truth. O'Keefe (2002) demonstrates that while Epicurus' opponent thinks that all things occur 'of necessity' (κ[α]τ' ἀνάγκην), Epicurus sets out to show that there are things which depend on us (παρ' ἡμᾶς), precisely that we do participate in the causal network—this argument is essentially anti-fatalist and need not, in its weakest form, deny causal determinism, reductionism or epiphenomenal explanations of mental activity.²⁶⁹

The Epicurean universe is, as already stated, materialist and entirely composed of atoms or particles, the atomist system is inherited from Democritus and is strictly determinist in its implications in that 'physical laws governed all events.'²⁷⁰ Atomic motion, however, does give rise to various compounds, and among them, animate souls. In the surviving fragments of Book

²⁶⁷ Annas (1993), 128 explains that 'the argument is more properly antireductivist than antideterminist,' that there are 'facts about human agency' which cannot be reduced to 'facts about atoms' (i.e. they are not identical).

²⁶⁸ See O'Keefe (2002), 159: 'The soul has many capacities that individual atoms do not. It can perceive, deliberate, and feel emotions ... A reductionist can accept that wholes have properties that their parts do not.'

²⁶⁹ See O'Keefe (2002), 169: 'Epicurus nowhere in this passage says that, in order for an action to depend on us, it must not be antecedently caused.' Sedley (1987, 20) inadvertently supports this view in supposing that Epicurus appeals to a version of the 'Idle Argument' and its potentially disastrous consequences in the hypothetical example of Democritus in Long and Sedley 20C 13-14. Cf. the example in Stoic causation discussed by Bobzien (1998), 189.

²⁷⁰ L Edmunds, "Necessity, Chance and Freedom in the Early Atomists," *Phoenix* 26 (1972), 343.

25 of *On Nature* Epicurus appears, on the surface, to refute pure atomic determinism and reductive physicalism, and to reject an ‘Identity Theory of Mind.’²⁷¹ The main challenge, then, is to discover what exactly it is about our identity that makes us responsible agents or at least makes things depend on us (παρ’ ἡμᾶς). It is difficult to sustain metaphysical attempts at solving the problem when Epicurean physicalism elsewhere means that any distinctions we might make in describing different parts of our mental identity can consistently be collapsed into descriptions of our atoms and their interactions—in Book 3 Lucretius elaborately defends the corporeality of the mind (*naturam animi atque animai | corpoream ... esse* 3.161-2); indeed this is axiomatic to his primary argument in this book: against the fear of death. Lucretius’ account of the ravings of epileptics as a result of soul atoms tossed about like foam on a stormy sea (3.487-495) is another testament to this.²⁷² Sedley (1987) provides an account of developing selves with ‘radically emergent’ properties which attain causal independence from their atoms and exert ‘downwards causation’ on those atoms; here the psychological ‘self’ is fundamentally different from its bundle of atoms and Lucretius’ atomic swerve is cited to provide an aperture for the special ‘non-physical’ causes of the mind in a manner which does not defy physicalism, but somehow takes advantage of the innumerable low-level atomic deviations predicted by the swerve to provide an account of volition.²⁷³ It is hard to imagine, though, an account of any mechanism by which volition could directly influence one way or the other any of the possible outcomes for atomic motion inherent in the swerve that is at the same time consistent with

²⁷¹ See O’Keefe (2002), 153. i.e. similar to a ‘reductionist reading’: ‘the mind *is* a group of atoms in the chest, mental processes *are* atomic processes, and various mental capacities are explained from the ‘bottom up’ by appealing to the intrinsic properties of the atoms constituting the mind and to their relationships to one another.’

²⁷² See Tim O’Keefe, *Epicurus on Freedom*, (Cambridge, UK ; New York: 2005), 79.

²⁷³ Long and Sedley (1987), 110; Sedley goes on to relate this superficially attractive theory to ‘modern quantum indeterminism.’

Epicurean physicalism. While it is true that the swerve does weaken physical determinism on the atomic level so that any atomic motion potentially has various possible outcomes, it does not adequately explain how *non-physical* ‘psychological causation’ would actually work to exploit this uncertainty,²⁷⁴ especially considering that both Lucretius and Epicurus require that all causes, including mental events, depend on contiguous physical touch: ‘only bodies can act and be acted upon’.²⁷⁵

Epicurus separates different aspects of ‘self’ in his descriptions of agency in Book 25:²⁷⁶ ourselves, our psychosomatic constitution (διάθεσις), ‘nature’ (φύσις), our ‘developments’ or ‘products’ (τὰ ἀπογεγεννημένα)²⁷⁷ and our seeds (σπέρματα).²⁷⁸ Together these terms are taken to inform a theoretically complete picture of human development and agency. He explains that from the very beginning (ἐκ τῆς πρώτης ἀρχῆς) our ‘seeds’ (σπέρματα) direct us towards various things and that these seeds are of actions, thoughts and dispositions (καὶ δια[θέσε]ων).²⁷⁹ Our initial atomic composition is pluripotent in relation to the actions, thoughts and characteristics our atoms (i.e. ‘us’ / ourselves)²⁸⁰ can produce and our predisposition to develop in certain ways depends on this initial make-up (i.e. on us, παρ’

²⁷⁴ For similar complaints against Sedley see O’Keefe (2002), 157 and J. Purinton, “Epicurus on the Degrees of Responsibility of ‘things begotten’ for their Actions: a New Reading of *On Nature* XXV,” in *Epicureismo Greco e Romano: Atti del Congresso Internazionale Napoli, 19-26 maggio 1993*, ed. G. Giannantoni and M. Gigante, (Naples: 1996), 286-288.

²⁷⁵ This is well attested: *Lucr.* 3.161-7 and see O’Keefe (2002) on Epicurus and Lucretius (157-8).

²⁷⁶ Long and Sedley, 1987, 20C

²⁷⁷ See O’Keefe (2002), 172: ‘Laursen (1998, 10) translates the term ‘products.’ Cf. O’Keefe (2002), 172 n47: ‘Sedley translates the term as “developments.” I follow Sedley (and most other interpreters) here and assume that the ‘products’ are mental states of some sort.’

²⁷⁸ Annas (1993), 55; Annas (1991), 88 and cf. Annas (1992), 129: the section of *On Nature* here is ‘unfortunately fragmentary and difficult.’

²⁷⁹ Long and Sedley (1987), 20C (1-3).

²⁸⁰ This takes for granted O’Keefe’s ‘Identity Theory of Mind’ and Annas (1992), 129 admits that for Epicurus ‘it is a truth of physics that I am atoms.’

ἡμᾶς)²⁸¹ while our subsequent development will incorporate information we receive from outside ourselves, from nature, which is shaped by our beliefs which, in turn, come from us (καὶ τὰ | ἐκ τοῦ περιέχοντος κ[α]τ' ἀνάγκην διὰ τοὺς πό[ρους] εἰσρέο[ν]τα παρ' | ἡμᾶς π[ο]τε γει[νε]σθαι καὶ παρὰ τ[ὰς] ἡμε[τέρας] [ἐ]ξ ἡμῶν αὐτ[ῶν] | δόξ[ας]).²⁸² What Epicurus seems to suggest is that we are responsible for our actions, thoughts and characteristics inasmuch as they depend on our developing selves together with our beliefs about the world.²⁸³ The distinction between our constitution and our developments is a crucial one in Lucretius, who stresses the importance of our ability to avoid or diminish whatever defects may be latent in our initial psychic constitution (*usque adeo naturarum vestigia linqui | parvula quae nequeat ratio depellere nobis | ut nil impediatur dignam dis degere vitam*, 3.320-22). Human souls, then, are different from other atomic *consilia* in that their growth and development as agents is not accidental but depends on our beliefs that come from ourselves. As we have seen beliefs are directly involved in the formation of mental perceptions and this makes sense of the difficult phrase which says that things which flow in through the pores out of necessity from our environment also depend on us.²⁸⁴ This does not imply a breach of physicalism but rather shows that our developments rely on both external information and our internal beliefs. Philodemus (*De ira* fr. 12) also separates 'necessity' (τῆς ἀνάγκης) and beliefs (τῶν ὑπολήψεων), showing

²⁸¹ Annas (1993, 55-44) suggests that παρ' ἡμᾶς (i.e. 'depends on us') is weaker than ἐπὶ ἡμᾶς (i.e. 'up to us').

²⁸² Long and Sedley (1987), 20C (4-7).

²⁸³ Epicurus distinguishes between what flows in of necessity from the environment from what depends on us (παρ' ἡμᾶς). Cf. Susanne Bobzien, "Moral Responsibility and Moral Development in Epicurus," in *The Virtuous Life in Greek Ethics*, ed. B. Reis and S. Haffmans, (Cambridge: 2006), 212: 'beliefs are certain structures of the atoms in the mind which make it possible that certain external influences can enter our mind (and be thought, and reacted upon), whereas others cannot.'

²⁸⁴ Cf. Annas (1992), 130: 'How they [rational agents] develop depends to some extent, though not totally, on themselves, on what they do with the information they take in, how they decide to react selectively to it, and what kinds of character and dispositions they build up.'

that false beliefs create delusions (ἀπατήσεις) because reason is abandoned (λογισμῶι τοῖ καταλειφθεῖς).²⁸⁵ We have various heuristic potentials and our developments depend on us, at first, absolutely (ἀπλῶς)²⁸⁶ and Lucretius stresses the importance of *ratio* (3.221) in modifying the natural state of our constitution. Reason (*ratio*) allows for our developments and distinguishes rational agents from wild animals which, according to Hermarchus, do not have λόγος, only 'irrational memory.'²⁸⁷ Lions are naturally irascible because of their pyretic constitution and so are disposed to respond in anger to their environment and they have no choice in the matter because they are incapable of moral development.²⁸⁸ Another passage from Book 25²⁸⁹ explains that in the case of animals their products or developments (τὰ ἀπογεγε[ν]ημένα) and their constitution (τῆ[ν] σύστασιν) are conflated or entangled as a single thing (ὁμοίως ... συμπλέκοντες):²⁹⁰

ἂν δὲ κ[αὶ] βαδίζη[ι] διὰ τὴν ἐξ ἑαυτοῦ ἤδη α[ἰ]τίαν εἰς τὸ ὅμοιον τῆι ἐ[ξ] ἀρχῆς συστάσει φαύληι οὔσ[η]ι. ἔτι μᾶλλον ἐνίοτε κακίζομεν, ἐν νουθετήτικῶι μέντοι μᾶλλον τρόπῳ[ι] καὶ οὐχ ὥσπερ [τ]ὰ ἄγρια τῶν ζώων, [κ]α[θ]αίρομεν μὲν ὁμοίως αὐτὰ τὰ ἀπογεγε[ν]ημένα [κ]αὶ τῆ[ν] σύστασιν εἰς ἓν τι συμπλέκοντες. οὐ μὴν ο[ὔ]τε τῶι νουθε[τ]ητικῶι τρόπῳι καὶ ἐπανορθω[τ]ικῶι οὔτε τῶι ἀπλῶς ἀ[ντι]ποι[η]τικῶι χρώμεθα[.]μ[.]καθ[α]ίρομεν.

'If he, exactly because of the cause out of himself, goes in the direction of what is similar to the original constitution which is bad, we occasionally criticize him even more - and not in the way

²⁸⁵ For an examination of this passage see Anna Angeli, "Necessità e autodeterminazione nel *De ira* di Filodemo (*PHerc* 182 fr. 12 Indelli)," *Pap.Lup.* 9 (2000), 15-64.

²⁸⁶ Long and Sedley (1987), 20C (1).

²⁸⁷ Hermarchus, in Porphyry *de Abstin.* I 7-12, 26, 4. See O'Keefe (2002), 173-4 and Annas (1993), 66-9.

²⁸⁸ See John M. Rist, *Epicurus: An Introduction*, (Cambridge: 1977), 97

²⁸⁹ Long and Sedley, 1987, 20j

²⁹⁰ This passage has been revised from Long and Sedley's edition. See Simon Laursen, "Epicurus *On Nature* XXV (Long-Sedley 20, B, C and j)," *CronErc* 18 (1988) and see Appendix Passage [B] in O'Keefe (2005), 166.

in which we exonerate those animals which are wild by conflating their products and their constitution alike into a single thing, and indeed do not use either the admonitory and reformatory mode or the simply retaliatory mode.’ (trans. O’Keefe (2002), 164).

This passage is also interesting from another perspective; the opening conditional clause is added by Laursen (1998) to Sedley’s text and appears to introduce a case of abnormal development in rational agents. Whereas in animals we may conflate their developments with their constitution,²⁹¹ in human beings we should distinguish between the two because *ratio* has a mediating role in our developments. The person presented here has gradually developed in the direction of the original constitution (ἐ[ξ] ἀρχῆς συστάσει) which is bad (φάυλη οὐσ[η]). This person, though endowed with reason and therefore the capacity to develop flexibly, has not rationally developed towards ‘something else,’²⁹² but has developed instinctively in line with his original constitution like Lucretius’ lion and may be blamed for this.²⁹³ This case study agrees with Philodemus’ description of the irrational or vicious person: his developments are aligned with the character flaws (Lucretius’ *malae*, 3.310) in his original constitution, this is a systematic error and his desires are determined by empty or false beliefs, and our beliefs are up to us: this is surely the meaning of ‘the cause from ourselves’ (τὴν ἐξ ἑαυτοῦ ἤδη α[ι]τίαν) in the passage above.²⁹⁴

²⁹¹ See Annas (1993), 61: ‘What it does is fixed by its constitution. That is, we take it that their behaviour is produced by instinct and that it is not open to the animal to develop in one way rather than another.’

²⁹² Here I am inferring the meaning from Epicurus’ summary given by Laursen (1992): ἐξ ἀρχῆς πρὸς ἔ[τ]ε[ρον] ἀγ[ωγόν] (16).

²⁹³ A similar interpretation is found in O’Keefe (2002), 164-5 and cf. Annas (1993), 61-2.

²⁹⁴ This ‘cause’ in ourselves need not be a sign that we must distinguish between our ‘physical’ and ‘psychological’ selves as Annas (1993), 63.

Another longer and more difficult passage from Epicurus *On Nature* Book 25²⁹⁵ elaborates the case of mentally disturbed or disordered agents. In this passage we are told that there are many developments (or products)²⁹⁶ capable of producing ‘this or that’ (πολλὰ δὲ καὶ τῶνδε καὶ τῶνδε[ε φ]ύσιν ἔχοντα ἀπεργαστικά [γί]νεσθαι). We criticise and attack these when they are in accordance with the nature which is disturbed from the beginning (κατὰ τὴν ἐξ ἀρχῆς [τα]ραχώδη φύσιν).²⁹⁷ So far this passage supports the previous example, where blame can be attached to agents who develop along the lines of their original flawed constitution, and the passage agrees with Lucretius and Philodemus. The next part of the text causes some difficulties:²⁹⁸

οὐθὲν γὰρ αὐτοῖς συνήργηκεν εἰς ἕνια ἔργα τε καὶ μεγέθη ἔργων καὶ διαθέσεων ἢ τῶν ἀτόμων φύσις, ἀλλ' αὐτὰ τὰ ἀπογεγεννημένα τὴν πᾶσα[ν ἢ] τὴν πλεῖ[σ]την κέ[κτ]ητ[αι] αἰτίαν τῶνδὲ [τι]νων.

‘For the nature of the atoms never did help them in any way to (perform) certain acts or to (develop) certain dimensions of acts and dispositions, but the products themselves were fully or for the most part responsible for these particulars.’ (trans. O’Keefe (2002), 172).

This section appears to indicate a clear distinction in this instance between our atoms (here ἄτομοι) on the one hand and our developments (ἀπογεγεννημένα) on the other. Here the defective actions and dispositions (ἕνια ἔργα τε καὶ μεγέθη ἔργων καὶ διαθέσεων) of the agent are shown *sometimes* to be caused by their development rather than by their ‘atoms’ (and

²⁹⁵ Long and Sedley 1987, 20B

²⁹⁶ Laursen (1998) argues convincingly that the subjects here are ἀπογεγε[νν]ημένα. O’Keefe (2002) and Annas (1993) accept this suggestion.

²⁹⁷ Long and Sedley (1987), 20B 2.

²⁹⁸ Long and Sedley (1987), 20B 3.

these developments are later shown to ‘transmit’ this cause ‘to the primary natures:’ εἴτ’ ἄ[να]διδ[οὺς] εὐθὺς μ[έ]ν [μέ]χρι τῶν [πρ]ώτῳ[ν] φύσε[ω]ν, Long and Sedley, 1987, 20B 6) hence Sedley’s interpretation of a radically emergent self, distinct from its atomic nature, which exerts ‘downwards causation’ on those atoms. Epicurus’ obscure jargon is notoriously difficult, exemplifying Lucretius’ well-worn analogy where language itself is considered as great a barrier to understanding such ‘*Graiorum obscura reperta*’ as the conceptual difficulties of the new ideas themselves (1.136f.), and the ‘dark findings of the Greeks’ are compared implicitly with the mental turbulence afflicting those uninitiated into the inner workings of Epicurean *ratio*.²⁹⁹ Annas (1993) identifies key terms and concepts in the passage which are the source of conflicting interpretations of our identity because they appear to be discrete: the ‘agent,’ the ‘atoms,’ the ‘developments’ and the ‘nature.’³⁰⁰ As Annas points out, these could be understood as different ‘aspects’ of the agent in the text and can be conflated in various ways, ultimately collapsed into the total self which is, she seems to maintain, atomic. The agent or ‘self,’ depending on context, can sensibly be identified with how we develop differentially over and beyond our initial psychic constitution where the self is identified as a centre of moral concerns connected with praise or blame, or the ‘self’ can, of course, be identified as the whole person: the parts which develop and the parts which do not.³⁰¹ In the passage our developments are

²⁹⁹ cf. Clay (1983), 9, 40-5 on the ambiguity of Lucretius’ double journey and see Katharina Volk, *The Poetics of Latin Didactic: Lucretius, Vergil, Ovid, Manilius*, (Oxford: 2002), 115 on the *De rerum natura* as thus both an *iter* ‘primus’ and a ‘secundus’ and see 91: the respective ‘paths’ (and here Volk includes Memmius’ journey) are ‘similar structures bound up in similar processes’ and see David Konstan, “Lucretius on Poetry: III.1-13,” *ColbyQ* 24 (1988), 67: ‘the “dark matter” refers both to the difficulty of Epicurus’ doctrines and to the essential invisibility of the atoms posited by Epicurean physics, and the cross-reference illustrates the way in which Lucretius’ claims for his poetry can seem to be in competition with the achievement of Epicurus.’

³⁰⁰ Annas (1993), 57.

³⁰¹ Annas (1993), 57 and see 59: ‘if we use the qua-locution we shall not get confused.’

distinguished from the 'atoms' and yet our developments themselves, according to Epicurean physics, must be atomic, as indeed Epicurus implies.³⁰² It is a question of terminology and here we can make a distinction between the whole self on the one hand, and that part of the self which subsists only in our differential developments (our 'developing self') on the other, where the latter is physically subordinate to the former which includes our 'atoms.' What Epicurus means by our 'atoms' cannot, therefore, be our whole selves (unless we introduce a metaphysical account of our developments) and seems far more likely to correspond to that part of us which does not apparently develop: our initial constitution.

When Epicurus talks about the 'nature' he seems to use 'nature of x' to refer to the extrinsic or relational properties of different objects and according to Annas' reading 'the nature' can often be substituted periphrastically for the object itself.³⁰³ Here the 'nature' is most commonly attached to our 'atoms' and, as we have seen, our unchanging constitution and contrasted with our 'developing self'. Annas argues for a progressive interpretation of what Epicurus calls our 'original constitution' which consists of a compound constitution which is measured at each point before any mental event which involves receiving information from our environment, and is not the same as our 'initial constitution at birth.'³⁰⁴ However we understand this, the overall picture presented is one in which the 'atoms' the 'constitution' and the 'nature' all refer, in some sense, to our constitution, i.e. that part of us which does not change and this is distinguished

³⁰² Annas (1993), 60 on passages [20] 6-14 Arrighetti; [24] 3-15 Arrighetti – 'The development itself has a primary constitution ... [and] this is the same as the primary constitution of the atoms ... and thus is itself atomic.'

³⁰³ Annas (1993), 57.

³⁰⁴ Annas (1993), 58.

from our 'self'³⁰⁵ and our developments. This entire picture is of an atomic *concilium* in which certain aspects are separated conceptually by Epicurus³⁰⁶ so that he can assign certain properties to each for the sake of clarifying primarily those aspects of our self which are fixed at birth and those which consist in our developments.

It is important to remember that, even with this distinction (between our atoms and our developments), these are, in the end, merely aspects of the same thing, the self, which is inevitably one atomic whole. The distinction that Epicurus makes, however, is of a seemingly irreducible duality in agents which have a 'cause in themselves' which is somehow separate from the 'cause through nature.' This might lead us to the uncomfortable conclusion that 'they or their developments have a cause of a kind that does not reduce to the causality of their bodily constitution and its atomic make-up'³⁰⁷ and that agents 'can bring things about in ways that cannot be ascribed to their atomic nature alone.'³⁰⁸ The familiar problem emerges between our 'physical and psychological'³⁰⁹ selves which is reminiscent of Aristotle's distinction between physiological and cognitive descriptions of the mind, but it is not enough to rely on the cognitive framework of desires and beliefs in a system on which ethics is subordinate to physics.

Annas' solution is to explain that it is in the very fact that our atomic natures undergo

³⁰⁵ As far as this may be said to subsist in our developments.

³⁰⁶ See O'Keefe (2002), 174-5: 'Thus, Epicurus recognizes that we can distinguish between different 'things' in thought which are in reality all aspects of a single thing. We can distinguish the product from the atoms that make up the product, but this does not imply that the development is something non-atomic.' Here O'Keefe is commenting on another passage from book 25 (Arrighetti [11]), translated by Annas (1993), 59: 'We could talk about this particular thing not just *qua* (*hēi*) assemblage, but also *qua* atoms and *qua* moving atoms or assemblage, not speaking only of the moving itself.'

³⁰⁷ Annas (1993), 62.

³⁰⁸ Annas (1993), 63.

³⁰⁹ Annas (1993), 63 uses this pragmatic description of selves as physical and psychological to attempt to explain why 'atomic natures' and 'constitutions' should be expected, but does not seem to arrive at a satisfactory conclusion.

developments and are not static that the developments can be said to be distinct, but this need not imply that they are irreducible even in this relational aspect, yet, although we are capable of development, there is no obvious explanation as to what it is about our atomic constitution which makes it pluripotent, capable of differentiating with some freedom towards this or that. The problem is topographically reflected in Lucretius' structural explanation of the soul where there is nothing which constitutionally divides the rational *animus* from the irrational *anima* apart from its fixed position in the chest:³¹⁰ they are the same substance, but they are given different attributes.

Epicurus does not seem to provide a readily available explanation for how it really is, atomically, that some part of us is able to respond in a rationally flexible way. The apparent distinction between the causal efficacy of the atoms (i.e. of those of the 'original constitution') and our developments in the passage from Book 25 (Long and Sedley, 1989, 20B 3) seems to imply that there is some extra-physical cause which supervenes on the atomic. O'Keefe (2002) has convincingly shown that some of the passages taken by Sedley to support this argument are amenable to quite different readings. Sedley takes our developments to be emergent and bases this on phrases from the last parts of the passage (Long and Sedley, 1989, 20B). The first of these comes from section 5 where Sedley reads that our developments take on some 'distinctness' from the atoms (τινὰ ἑτερότητα τῶν ἀτόμων) but τῶν ἀτόμων could be taken as a subjective genitive: i.e. the developments take on some distinctness 'within' the

³¹⁰ Both contain the four elements and one is merely a part of the other.

atoms.³¹¹ This interpretation suggests that developments are not separate from the atoms but rather a ‘complicated atomic structure’ within the atoms.³¹² The phrase cited from (20B 5) follows with: κατά τινα τρόπον διαληπτικόν, οὐ τὸν ὡς ἀφ' ἐτέρου διαστήματος. Sedley takes διαληπτικόν as ‘transcendent’ but the word need imply no more than ‘difference’ or ‘distinction.’³¹³ The phrase ‘οὐ τὸν ὡς ἀφ' ἐτέρου διαστήματος’ which Sedley takes to mean ‘not like in the way that is viewing from a different distance’ - i.e. not in the way that colours (or συμπτώματα) differ from atoms. Sedley has supplied ‘viewing’ and this is highly conjectural. Purinton interprets the phrase differently: ‘not in a way which is of a different spatial interval,’³¹⁴ which changes the sense entirely: developments (or products) take place in the same location as the atoms: ‘the atoms and the product occupy the same space.’³¹⁵

The next phrase (20B 6) says that after these differential developments (i.e. different from the original constitution) the agent acquires a cause out of himself and this is immediately transmitted to the ‘first natures’ (ισχάνε[ι]τὴν ἐξ [ἐ]αυτοῦ αἰτίαν. εἶτα ἀναδίδωσιν εὐθύς μέχρι τῶν πρώτων φύσεων). Sedley distinguishes between the cause (τὴν αἰτίαν) and the

³¹¹ O’Keefe (2002), 173-4.

³¹² O’Keefe (2002), 174.

³¹³ O’Keefe (2002), 173.

³¹⁴ J. Purinton, “Epicurus on ‘Free Volition’ and the Atomic Swerve,” *Phronesis* 44 (1999), 293.

³¹⁵ This presumably means the same atoms. See O’Keefe (2002), 174. Another implication of the phrase ‘κατά τινα τρόπον διαληπτικόν’ rests on the meaning of the word διαληπτικόν and its derivative, διαλήψις, which could mean something along the lines of προλήψις; and διαλήψις can also mean ‘distinguishing in thought.’ See O’Keefe (2002), 175: ‘The Greek word from which διαληπτικόν is derived, διαλήψις, can mean simply a distinction of parts, but, as do many words that come from the verb λαμβάνω, to grasp, it often has overtones of some sort of mental grasp.’ Cf. 175 n54: ‘For instance, the Epicurean technical term προλήψις or “preconception,” and the Stoics’ “kataleptic impressions,” the supposedly infallible impressions that are the foundation for knowledge.’ So O’Keefe translates the whole phrase: ‘Whenever something is produced that takes on some otherness within the atoms in a (mentally) distinguishable way, not in the way as when things are at different spatial locations.’

atoms (which he interprets from ‘πρώτων φύσεων’).³¹⁶ Lucretius describes our initial disturbed constitution as *naturarum vestigia* (3.320), ‘traces of our natures,’ and to interpret ‘πρώτων φύσεων’ as our initial constitution seems generally compatible with Epicurus’ argument here.³¹⁷ Epicurus introduces a temporal term (εἶτα) which indicates a priority of processes: we acquire a differential cause out of ourselves in the form of a belief and this is transmitted to our primary disturbed constitution.³¹⁸ We have seen that Epicurus may talk in terms of priority when he is discussing sub-perceptible intervals but that these can constitute an effectively instantaneous and co-ordinated act. The act of perceiving the environment and believing also seem co-ordinate and co-dependant in 20C 5-7. What Epicurus appears to be describing in 20B 6 is the incremental formation and consolidation of our προλήψεις from our exposure after birth to our surroundings, which is corroborated by O’Keefe’s interpretation of our ἀπογεγεννημένα as ‘complicated atomic structures.’ The process describes ‘psychological integration’³¹⁹ which depends on the arrangement of soul atoms, our beliefs and our environment as we have seen προλήψεις do.³²⁰ The summary of Book 25 shows that our

³¹⁶ O’Keefe (2002), 176.

³¹⁷ There are other more convincing proofs of this interpretation, see O’Keefe (2002), 176-8: ‘Laursen notes that ἡ ἐξ ἀρχῆς σύστασις seems to be identical with ἡ ἐξ ἀρχῆς φύσις (‘the original constitution’ and ‘the original nature’).’

³¹⁸ Cf. Bobzien (2006), 218: ‘we ourselves become causes at the moment at which we – consciously – identify with an incoming idea or thought which is not in keeping with the beliefs we have so far taken in from our environment ‘unthinkingly’, as it were, and in accordance with the original nature of our mind. More precisely, when we identify with this new thought, we incorporate it into our mind, and thus change our mental dispositions; as a result, from then on our actions can be caused by behavioural dispositions that are at least partially the result of our identifying with something that was not part of our original constitution.’

³¹⁹ O’Keefe (2002), 178.

³²⁰ Cf. O’Keefe (2002), 179: ‘If the products are simply certain aspects of the mind (itself a body), which the mind acquires when the soul atoms are arranged in a particular way, Epicurus could consistently maintain that these features of the atomic arrangement do make a causal difference in the way the atoms of the body move, while denying that there is any sort of special “non-atomic” causation going on. The mind, at a certain point in its development, acquires the ability to take in information from the environment and to respond to that information. This ability will make the mind act differently than it would if it did not have that ability, and thus it does affect the atoms, without there being any sort of non-atomic causation.’

developments track the psychological consolidation of perceptions as we move from ‘after-sensations’ (ἐπαισθήσεις) and ‘after thoughts’ (ἐπινοήματα) to reasoning (ἐπιλογισμός).

In transient mentally disturbed states, such as sleep, it is proleptic derangement which is responsible for our seeking incommensurate parts of the atomic stream and thereby forming false beliefs. The descriptions from *On Nature* Book 25 show that although we are capable of pluripotent differentiation from the beginning (ἐξ ἀρχῆς πρὸς ἔ[τ]ε[ρον] ἀγ[ωγό]ν),³²¹ sometimes we develop (or form προλήψεις) only in accordance with our initial constitution which is flawed (as in the case of the mentally disturbed), which in turn will entail false belief and invite delusions. O’Keefe (2002) suggests that the way in which we can receive differential information is through ἐπιβολή τῆς διανοίας (which Lucretius describes in Book 4 as our process of mental selection)³²² but ἐπιβολή depends on our preconceptions because these explain why we seek things, and so the argument regresses and it becomes difficult to see how rational and *intentional* flexible differentiation is possible in its initial stages. The process of psychological development is clearly a gradual one:³²³ Lucretius offers a picture of development in Book 3 in which mental development tracks bodily development from infancy through to maturity and old age: the mind is initially weak along with the body (3.445-448), with maturity its powers are increased (3.449-450) and with old age, as the body is wrecked with time (*validis*

³²¹ See Laursen (1992), 149.

³²² O’Keefe (2002), 166 n36: ‘This is what I think Epicurus is referring to (when) he says “the things which of necessity flow in through our passages from that which surrounds us are at one stage up to us and dependent upon beliefs of our own making.” The Epicureans talk about the *epibolê tês dianoias*, the “focusing of the mind,” to explain how we can respond to the information that we take in differently from somebody else receiving the same information. For instance, Lucretius uses this to explain how we are able to focus on the image (e.g. a person walking) that we need to in order to do what we want (e.g. walking), out of the multitude of images constantly impinging on our mind.’

³²³ E.g. Bobzien (2006), 215. Cf. Laursen (1992), 153.

quassatum est viribus aevi | corpus, 3.451-2), so the mind fails and falls while the intellect limps and the tongue raves in delirium (*delirat lingua*, 3.453-4).³²⁴

Passage 20C mentions that information comes from without through our pores (διὰ τοὺς πόρους) and these might explain how we form initial and irrational rudimentary coherence from the atomic stream. Diogenes of Oenoanda (fr. 9 Smith col. 3.6-14) explains that while we are asleep images penetrate through the pores of the sleeper. These pores are created through our repeated exposure to images we receive while awake (μετὰ δὲ τὰς τῶν πρώτων ἐνπτῶσεις εἰδώλων ποροποιεῖται, 3.6-8) and as a result the soul is predisposed to receive similar kinds of images during sleep even if the objects are no longer present (καὶ μὴ παρόντων ἔτι τῶν πραγμάτων ἃ τὸ πρῶτον εἶδεν, τὰ ὅμοια τοῖς πρώτοις τῇ διανοίᾳ δεχθῆναι, 3.10-14).³²⁵ Lucretius provides a similar account (4.962-1014): constant attention (*assiduas dederunt*, 4.974) to certain things opens up passages in the mind (*vias in mente patentis*, 4.976) and similar images can flow in. Lucretius shows that even animals are affected by this sort of perceptual exposure (horses dream of races, 4.987-8) and I suggest that this may be what Hermarchus identifies as ‘irrational memory’ (ἄλογον μνήμην).³²⁶ The pores are distinct from

³²⁴ Cf. Bobzien (2006), 215 on 34.24 Arr.; Laursen 1997: 28: ‘We may perhaps think of these necessitated developments as a kind of genetically directed ‘maturing’ of the mind. (Thus in this way it is determined that an individual develops a soul, and that that soul has a disposition and motion of a particular size.) We can imagine that with age our minds unfold to greater and greater complexity (in the combination of the atoms), and this means that we acquire more and more capacities and dispositions.’

³²⁵ See Clay (1980), 352-353: ‘What the new discussion of this same problem in Diogenes of Oenoanda supplies is the explanation of why the φαντασῖαι or dream apparitions of people who are distant from the sleeper are to be equated with the apparitions of people who are at hand: they have originally created passages from the eye to the soul within and these are capable of conducting the same or similar appearances to the waking soul of the sleeper.’

³²⁶ See Annas (1993), 67. Lucretius makes it clear that animals have a mind (both *mens* and *animus*). In his account of the atomic swerve the race horse has a *mens* (2.265, 268) and an *animus* (2.170) also deer have a *mens* at 3.299. Hermarchus denies that animals have *logos* (Porphyry *de Abstin.* 1.12.5-6) and Polystratus (*On Irrational Contempt for Popular Opinions*) elaborates that they can ‘take in’

proleptic arrangement in that they appear to be perceptual and do not in themselves constitute beliefs and Lucretius implies that memory lies inactive while this is going on (4.765). Perception may be distinguished (Diog. Laert. 10.34 = 260 Us.) in terms of the πάθη of pleasure and pain (ἡδονὴν καὶ ἀλγηδόνα), these exist in every animal (περὶ πάντων ζῴων), have to do with ourselves and our environments (καὶ τὴν μὲν οἰκεῖον, τὴν δὲ ἀλλότριον) and demonstrate our choices and avoidances (κρίνεσθαι τὰς αἰρέσεις καὶ φυγᾶς). Lucretius declares in Book 2 that nature demands (*nil aliud sibi naturam latrare*) that pain (*dolor*) be absent from the body (2.17-18) and Epicurus says that it is by our ‘experience on its own’ that we avoid pain (αὐτοπαθῶς οὖν φεύγομεν τὴν ἀλγηδόνα).³²⁷ Lucretius’ account of the swerve in Book 2 suggests that it is here that *voluntas* enters in and it is driven by *voluptas* (pleasure): *unde est haec, inquam, fatis avolsa voluntas, | per quam progredimur quo ducit quemque voluptas* (2.257-8). The verbal parallel suggests a strong connection between *voluntas* and *voluptas*³²⁸ and shows that our will perhaps consists in our initial and unpredictable perceptual responses (i.e. sub-cognitive affective responses to *simulacra* of pleasure and pain) which are

(συννοεῖν) certain things but do not understand them and they cannot form prudential concepts. Annas (1993, 68) identifies a problem here that ‘memory does not seem to rely on inferential capacity’ and I think she is right to distinguish between reasoning and *irrational* memory: ‘Polystratus may be accepting that animals have irrational memory but denying them some more intellectual kind.’ Polystratus also insists (Annas 1993, 70) that ‘animals do not have inferential or reflective beliefs.’ Cf. Konstan, *Lucretius and the Epicurean Attitude toward Grief*, 1-25. Konstan (1-2) shows that emotions depend on *logos* and these are distinct from our affective or perceptual responses which are common to humans and animals alike. Among perceptual responses he includes ‘sympathy’ and ‘parental love’ (cf. Polystratus: ‘animals have an appearance of the relevant things,’ (Annas 1993, 68) and these ‘arise on the basis of perception alone’ and are ‘instinctive responses’ (i.e. on my reading they will not involve preconceptions). These arise (3) from hard wired instinctive traits like aggressivity (i.e. from the original constitution). Konstan (15) also points out that Lucretius ‘is not entirely consistent with his use of *animus* and *anima*.’

³²⁷ Diog. Laert. 10.137 = 66 Us.

³²⁸ A subtle yet emphatic link is made by the placement of *voluntas* and *voluptas* at the ends of their respective lines; they are metrically equivalent and there is only the difference of one letter which sets them apart; the implication is that, if pleasure is leading, then that is where we will voluntarily go, wherever our mind has carried us’ (...*sed ubi ipsa tulit mens* 2.260), because our minds are drawn to pleasure.

responsible for our differential³²⁹ pursuit of pleasure. Lucretius suggests that this is the foundation of the cause within us (*unde haec innata potestas*, 2.286).³³⁰ The example goes on to describe race horses bursting from the starting gates (2.261-71), exactly what we find race horses dreaming of later in Book 4. Interestingly these physical channels are capable of affecting our waking visions (4.978-983): we might seem to see (*videantur cernere*, 4.979-980) swaying dancers or to hear the lyre or to be watching the theatre. This is an extremely important feature of the pores, one which seems to be overlooked in discussions of psychological development and its implications are disturbing. In my argument I have distinguished between mental delusions and hallucinations: mental delusions, or false beliefs, require proleptic derangement (i.e. some kind of disorder in the mind or *animus*); for delusions to cross the aesthetic barrier and invade our visual perception our senses need to be compromised. This passage in Lucretius demonstrates that exposure (or over exposure) to images not only modifies our proleptic psychology but also affects our various non-mental senses³³¹ to the extent we seem to see things. This is disturbing because the *aesthetic* canon is meant to ensure that this kind of synaesthesia does not occur. Although the sub-cognitive effects of perception (i.e. *πάθη*) are usually transient, these appear with frequency to alter the epistemological guarantees of the senses and

³²⁹ The specific internal mechanism of atomic swerve, which accounts for our free action, is difficult to determine. See P. Conway, "Epicurus' Theory of Freedom of Action," *Prudentia* 13 (1981), 81: (1) Bailey suggests that each free choice is caused by swerve and that this free choice is not irrational and random because overall the mind (a group of atoms) is rational – these atomic deviations can tip the balance in an overall reaction to a set of presentations. In the individual atom there is chance, in the overall movement there is 'conscious chance,' which to Epicurus is will. (2) Furley suggest a correspondence between Epicurus and Aristotle: the swerve breaks the 'internal necessity' of each individual's *inherited character*; somehow the swerve allows us to reform our characters. (3) Long suggests that not every free action is preceded by an atomic swerve, but that the swerve is a source of new ideas, 'helping the true Epicurean to initiate new actions in the pursuit of tranquility.' It seems that the

³³⁰ Notice, however, that the motivation for the horses to begin the race is expressed as a desire of the horse's 'mind:' *mens avet* (2.265).

³³¹ Cf. Lucretius on sleep: Lucretius says that bombardments invade our pores (*parva foramina*, 4.940) and that this produces a total collapse which affects the *anima* and so affects our perceptions.

so not only do false beliefs or delusions occur, but the beginnings of hallucinations. This feature points, I think, to proleptic psychological modifications which *do* alter our rational perception of the world and also to sensory derangement as a result of compulsive behaviour. Though this is illuminating and explains how it is through exposure that developments begin to form (and thus form differently depending on one's environment)³³² and how a pathological person may suffer profound sensory confusion, it does not explain how we might *choose* between this or that other than at the demands of nature.

The dilemma is best expressed in different definitions of moral responsibility: that it means 'causal responsibility' or that it means we can choose to do otherwise.³³³ The various passages of Book 25 show that our faculty of reason consists in the application of our beliefs about the world in our perceptions and so determining which of them will inform a preconception which is integrated into our constitution. The passage describing the mentally disturbed makes it clear that our responsibility is not with 'the atoms' of the original constitution but with the developments: they (the mentally disturbed) are 'disturbed from the beginning' (ἐξ ἀρχῆ[ς τ]αραχώ[δῃ] φύ-|σιν) and they are described as objects of rebuke (οἷς | δὴ καὶ μάλιστα μαχόμεθα καὶ | ἐπιτιμῶμεν). The next sentence is consecutive: 'For in their case the nature of the atoms has contributed nothing to some of their actions, but the developments themselves contain all or most of the cause of some of these things.' This should not, I think, be read to mean that the the person is disturbed *because* their actions are caused by their developments and

³³² Cf. O'Keefe (2002), 180: 'That would help to explain why two people who have the same basic atomic nature develop differently - they respond to different inputs, to different environments, and hence develop differently.'

³³³ For this distinction see Bobzien (2006), 206.

not their atoms,³³⁴ rather this is why we rebuke them. They are not responsible for their initial constitution any more than, say, a lion is, but we rebuke them because of how their developments have influenced their actions (because developments are complex and flexible and can be altered).³³⁵ The disturbed agent has developed along the lines of his original constitution (i.e. he is like a wild animal or an immature agent) and has not overcome his character flaws but instead reinforced them and developed false beliefs. The only feasible mechanism by which these abnormal developments could come about is through repeated exposure to the kinds of affective perceptual responses that the original flawed constitution produces.³³⁶ There is no indication of how we can control or limit our instinctive responses (i.e. avoid pathological behaviour) apart from our capacity to reason from nature and there is no reason to infer in Epicurus a moral responsibility which requires choice.³³⁷ This indicates that our practices of

³³⁴ E.g. Annas (1993), 65: ‘their choices are not made within the *normal* limits of constraint by our bodily nature [i.e. atoms], and *thus* are deviant’ (italics mine). The problem with this is that we are told that the natural initial condition of all animals’ constitutions is one which is already disturbed from the beginning. If we read ‘original constitution’ for ‘atoms,’ is this really what we want affecting or limiting our actions in the first place? There is a problem locating our ‘natural limits and desires’ in our unstable initial psychic constitution (as Annas seems to do here) when this is simultaneously the location of that those *malae* which must be suppressed in Lucretius (3.310).

³³⁵ I.e. reading γάρ as consecutive on the fact that we rebuke the mentally disturbed and what we are given is simply an account of what makes us responsible and not what makes us mentally imbalanced. For this interpretation see O’Keefe (2002), 180: ‘I interpret this sentence as follows, given the context. Some people fail to develop in the way they should, and they behave in accordance with their original, disturbing constitution. For instance, some people, because they have an overabundance of fire atoms, are naturally quick-tempered and angry. Unlike lions, however, people have the ability to overcome this original tendency. Many people fail to do so. How do we explain this failure? We do not say that it is because of the nature of their atoms. After all, other people have just as great an original preponderance of fire atoms and yet manage to overcome this disposition. People who have the same basic atomic make-up develop differently, and it is because of these later developments that one person overcomes his natural anger and another does not. That is why, even though the “disordered motions” of anger are a result of the fiery nature of the person’s atoms (C4), we do not place responsibility for these disordered motions on the atoms, but on the person’s inability to overcome this disposition.’

³³⁶ Bobzien (2006), 208: “A preconception is some kind of veridical general conception or true opinion that we have acquired empirically, by having repeatedly the same sort of perceptual experience.”

³³⁷ See Bobzien (2006), 207: ‘our sources univocally suggest that Epicurus had a concept of moral responsibility based not on the agent’s ability to do otherwise, but on the agent’s causal responsibility.’ And cf. 212: ‘There is no trace of a concept of moral responsibility which takes it to be a necessary condition that we (the same persons, in the same circumstances) are capable of deciding or acting otherwise than we do.’ This is similar to the argument found in O’Keefe (2002), who finds *On Nature* 25 consistent with causal determinism.

praise and blame are therapeutic and non-retributive,³³⁸ they are useful tools in moral correction because they come from the environment and so have the ability to reform our character.³³⁹ The young, because they have yet not developed complicated belief structures, will accept the beliefs of others as ‘face value’ sensory information in the same way that they receive other kinds of perceptual information from their environment.³⁴⁰ Epicurus advises, for example, that we should watch over the young to prevent them forming ‘maddening’ or insatiable desires (τὰς ἐπιθυμίας τὰς οἰστρώδεις),³⁴¹ which should be compared to his statement that excessive anger begets madness.³⁴² Thus reason (*ratio*), once it has attained causal independence³⁴³ from perceptions (these are progressively accumulated as preconceptions and inform our beliefs), operates independently as the cause within us, and our troubled constitution can be settled in a cognitive way.

This also explains, from one perspective, why empty anger (κενὴ ὀργή or θυμός, which is expressed as a *desire* for revenge) is irrational (i.e. as an example of retributive and non-therapeutic blame),³⁴⁴ but we also encounter what Philodemus calls ‘natural anger’ (φυσικὴ ὀργή) and this potentially has a didactic purpose. Philodemus says that empty anger ‘comes

³³⁸ Cf. Bobzien (2006), 210: ‘There is, then, one element all these passages on moral responsibility have in common: they connect the concept of moral responsibility with us as causal factors of the things for which we are considered morally accountable.’

³³⁹ So O’Keefe (2002), 180-1.

³⁴⁰ See Bobzien (2006), 215-6. Cf. *De ira*. 37.32-9: natural anger, for example, arises ‘from an examination of what the nature of states and affairs really’ (trans. Armstrong).

³⁴¹ Vatican Sayings 80.

³⁴² 484 Us. = Sen. *Ep.* 18.14.

³⁴³ This is a distinct cause because it no longer relates only to present external *stimuli*. Cf. O’Keefe (2002), 183: ‘reason is predictable only to souls not to individual atoms.’ But *ratio* is predictable to atoms if we say that it is identical to complex atomic structures and demonstrate that our responsibility is causal.

³⁴⁴ ‘Empty anger’ is based on the false opinion that any worthwhile satisfaction comes from revenge (that retaliation and punishment are intrinsically good) and the Epicurean would say that these things only lead to greater pains.

about from a bad disposition,³⁴⁵ it is bad in itself and in the evils it brings. The Epicurean sage does get angry, but not *very* angry, he is subject to ὀργή but not to θυμός;³⁴⁶ this sort of anger may be a ‘good’ and it derives from a good constitution.³⁴⁷ In relation to the distinction between our original constitution and our developments, we may distinguish between perceptual affects (πάθη)³⁴⁸ and cognitive desires or emotions (i.e. just as Epicurus and Lucretius have been shown to distinguish between our instinctive responses to perceptual information based on our original constitution and our developments which form our ordered and rational response to the world). Natural anger, ὀργή, is a πάθος, but excessive and uncontrollable anger, θυμός, is the result of our developments and is a cognitive defect. All emotions are accompanied by pain, what Philodemus calls a δηγμός or ‘bite,’ a term probably derived from the Stoics, who use it to describe ‘feelings without assent,’³⁴⁹ but in Epicurean criticism often identified with a fully-fledged emotion.³⁵⁰ Feelings of pleasure and pain, though,

³⁴⁵ *De ira*. 37.

³⁴⁶ See Don Fowler, "Epicurean Anger," in *The Passions in Roman Thought and Literature*, ed. Susanna Morton Braund and Christopher Gill, (Cambridge: 1997), 26.

³⁴⁷ *De ira* 38.18. See James Warren, *Facing Death: Epicurus and his Critics*, (Oxford: 2004), 195: there are ‘feelings which even the wise man will inevitably and naturally feel’ and cf. Elizabeth Asmis, "Philodemus' Epicureanism," *ANRW* 20.2 (1990), 2398: ‘it is good insofar as it attends a correct view of nature in general and personal losses and fitting punishments in particular. Against the Stoics, Philodemus maintains that anger is not always associated with false beliefs, but may result from true beliefs. If it attends the disposition of someone with correct beliefs, it is good in relation to the disposition, though bad in itself. A person naturally feels anger when insulted or harmed and it is good to admit this natural anger, and bad not to admit it.’

³⁴⁸ See David Konstan, *A Life Worthy of the Gods: the Materialist Psychology of Epicurus*, (Las Vegas: 2008), 22. Konstan argues that ‘Epicurus deliberately restricted the use of the term *pathos* to the non-rational sensations of pleasure and pain, as opposed to emotions such as fear that entail rational judgements.’

³⁴⁹ Konstan, *Lucretius and the Epicurean Attitude toward Grief*, 16: ‘this has been the source of some confusion, since the Stoics employed the same term to describe the effects of pre-emotions, those non-rational or instinctive responses, such as jumping at a loud noise, to which anyone, including the Stoic sage, would naturally react.’ See Graver (2007), 85 -108 (esp. 92-3 on feelings without assent).

³⁵⁰ See e.g. Tsouna (2007), 48: ‘The Epicurean sage feels the ‘bite’ of a real emotion (which is more or less severe), whereas the Stoic sage senses the ‘bite’ of some pre-emotional state’ and Armstrong (2008), 83: ‘They are all produced by a correct understanding that some state of affairs is true; they are not mere reactions as with the Stoics.’

appear to be directly mediated by perception and are specific to the *anima*³⁵¹ (whereas fear and joy depend on beliefs and are specific to the *animus*).³⁵² These natural feelings (πάθη) or ‘bites’ also attend rational emotional states (because, as we have seen, these are perceptual but involve beliefs and preconceptions),³⁵³ for example Philodemus (*On Death* 25 Kuiper) describes the natural bite (δηγμός φυσικώτατος) at the thought of the pain experienced by loved ones left behind after one’s death.³⁵⁴ It is for this reason that our characters may be reformed, even rational behaviours are accompanied by basic pleasure or pain and these will affect our beliefs in sufficient quantity. In the second part of *De ira*, Philodemus relates actions in terms of what the ‘wise man’ or *sophos* would or would not do; the Epicurean sage who is neither angry or irascible (ἀόργητος) may give the appearance (φαντασία) of being irascible and even Epicurus does this.³⁵⁵ In *De ira* Philodemus refers (36.17-28) to another work *On Freedom of Speech*, Philodemus demonstrates that a wise person appears to get angry at the mistakes of neophytes, though will not suffer rage (θυμός).³⁵⁶

³⁵¹ See Konstan (2008), 12-15, 15: ‘The *pâthe* (i.e. pain and pleasure) are very elementary forms of awareness, operating at the level of the non-rational *psukhê*. They constitute the physiological basis of approach and avoidance, and are instinctive, pertaining as much to animals as to human beings. In themselves, they admit of no deliberation, no reasoning.’ E.g. the lion’s avoidance of roosters, an example of physical pain produced directly by *simulacra*: ‘The entire process occurs at the level of the non-rational soul’ (21).

³⁵² See Diog. Laert. 10.66 = 311 Us. Fear and joy are used as proof here that the *animus* is in the chest since this is where we feel the emotion. See Konstan, *Lucretius and the Epicurean Attitude toward Grief*, 15 and Konstan (2008), 7: ‘These latter (fear and joy) pertain to the rational part of the soul; that is why our awareness of them in the chest proves that the rational part of the soul is located there.’ Cf. Lucretius 3.141-2: ‘*hic exultat enim pavor ac metus, haec loca circum | laetitiae mulcent: hic ergo mens animusque*’ and 3.145-146: ‘*idque sibi solum per se sapit | id sibi gaudet, | cum neque res animam neque corpus commovet una.*’

³⁵³ Tsouna (2007), 50: the bites of grief (which is, as Konstan argues, a rational emotion) ‘consist of both sensings and beliefs.’

³⁵⁴ Konstan, *Lucretius and the Epicurean Attitude toward Grief*, 17-18: ‘The sentiment that Philodemus discusses in *On Death* is a kind of proleptic pain.’

³⁵⁵ See *De ira* generally 34.16 – 37.9.

³⁵⁶ Fowler (1997), 28 and cf. Giovanni Indelli, ‘The Vocabulary of Anger in Philodemus’ *De ira* and Vergil’s *Aeneid*,’ in *Vergil, Philodemus, and the Augustans*, ed. David Armstrong, (Austin: 2004), 104.

So we have seen that *ratio* is contained in our psychological developments³⁵⁷ and that these are stored structures of the information we receive from our environment (perceptions). Irrationality or madness stems from our common pathological diathetical defects and our differentiated developmental abnormalities (it tracks the former, though not necessarily, and is defined by the latter) and we have seen that beliefs are at least partially bound up in perception and are responsible for our delusions, which are dependent on our psychosomatic constitution which is also responsible for our desires and rational emotional responses. Philosophical truths are also counted as evidence or ‘signs’ and fall within our experiential ambit. We may attend to these directly, as the summary of *On Nature* 25 shows: we can have an ‘after-sensation’ or a perception of a philosophical maxim, and such perceptions are essential for accomplishing the goal.³⁵⁸ All dispositions and environments differ from one individual to another from birth onwards and according to Seneca, this leaves individuals who have developed cognitively in one of three situations:³⁵⁹ (1) some can attain *ataraxia* by their own impulses (*ex se impetus*) and efforts (e.g. Epicurus (*si quaeris huius quoque exemplar, Hermarchum ait Epicurus talem fuisse*)), (2) some can easily follow in the footsteps of someone else (*bene secuturos*), and (3) some need force, or to be compelled to truth. Mental correction requires restructuring one’s *prolepseis*, and

³⁵⁷ Though exactly how self-prolepsis is achieved is somewhat mysterious. Perhaps this is the usefulness of Lucretius’ discrete positioning of the *animus* in the chest. The *animus* must receive sensory information via the *anima* (Lucretius uses the absurd example of the removal of the eyes to improve vision, *Lucretius*, 3.367-9). The *animus* does not simply have direct sensory awareness, but these things, along with pleasure and pain, are transmitted to it. Perhaps this allows the *animus* to have a prolepsis of *anima* in a unique way. Cf. Bobzien (2006), 225: ‘our natural instinct to pursue pleasure may be helpful for adopting the belief that we should pursue pleasure.’ This broadly follows a ‘homunculus argument’ and may be prone to some of the same problems of endless regress, see Gilbert Ryle, *The Concept of Mind*, (Harmondsworth: 1976).

³⁵⁸ Laursen (1988, 149) clarifies ‘we should understand the essential phrase ‘what had its origin in us was the after sensation of the *maxime*’ etc. to mean that whenever someone is to accomplish what the book is about, he must do so by an ‘after sensation.’’

³⁵⁹ Sen. *Ep.* 52.3-4. See Laursen (1992), 152-3: Seneca’s source is, probably, ultimately the letters of Epicurus.

consequently, one's beliefs and desires.³⁶⁰ For Epicurus this is a complex task, since our beliefs about the world are complex and inter-dependent, contingent on what has been a gradual and compound process. Therapy will require a complex, multi-faceted and convincing didactic approach that addresses gradually the complex total of our rational belief structure.³⁶¹ Repetition is vital since preconceptions are only ingrained over time (and single thoughts which are not compatible with our beliefs are rejected).³⁶² Bobzien rightly concludes that this explains the method of philosophy in the Epicurean school, 'the practice of memorising the canon of Epicurean philosophy by repeating it again and again to oneself and others;³⁶³ hence Epicurus' advice to Menoecus (*Epist. Men.* 135) to repeat or 'practice' (μελέτα) the doctrines contained in the letter (e.g. the *Tetrapharmakos*) to prevent disturbances (διαταραχή) both while awake and asleep, so that he will live like a god among men (ζήση δὲ ὡς θεὸς ἐν ἀνθρώποις).³⁶⁴ Similarly, the Epicurean practice of producing a number of different arguments to prove the same point becomes comprehensible in this way.' It is as if the therapeutic method must resemble the complexity, organisation and associative intersection of our proleptic developments which are responsible for false beliefs and the delusions they create.³⁶⁵ Human beings only

³⁶⁰ See Bobzien (2006), 223.

³⁶¹ See e.g. Bobzien (2006), 225: 'For this (i.e. fear of the gods) I may have to rehearse the arguments against the existence of vengeful gods repeatedly, and as many such arguments as possible, and especially so, when the clouds get darker.'

³⁶² See Bobzien (2006), 227.

³⁶³ Bobzien (2006), 228.

³⁶⁴ See Michael Erler and Malcolm Schofield, "Epicurean Ethics," in *The Cambridge History of Hellenistic Philosophy*, ed. Keimpe Algra, (Cambridge: 1999), 670-1: 'Practise here must mean simultaneously verbal repetition and the attempt to put Epicurus' teaching into effect. The last page of the *Letter*, for example, recapitulates the *Tetrapharmakos*: Menoecus will need to run through its main points in his mind over and over again, so that as they become settled convictions they will drive out the deeply rooted empty opinions which fuel fear of pain and death.'

³⁶⁵ See, e.g. Bobzien (2006), 228: 'similarly, the Epicurean practice of producing a number of different arguments to prove the same point becomes comprehensible in this way. (Recall the twenty-nine or so proofs for the mortality of the soul in Lucretius, book 3).' See also P.H. Schijvers, "Le regard sur l'invisible: Etude sur l'emploi de l'analogie dans l'œuvre de Lucrèce," in *Lucrèce*, ed. Olof Gigon, *Fondation Hardt Entretiens sur l'Antiquité classique* (Geneva: 1978) translated by Monica Gale in P.H.

acquire reason by making generalisations or preconceptions (correctly or incorrectly) from discrete experience. However, reason is not discrete or simplex, and so it makes sense on some levels to use complex cognitive (i.e. non reductive) vocabulary when discussing emotions and emotional disorders and O'Keefe (2002) who puts forward an Identity Theory of Mind is forced to conclude that 'reason is predictable only to souls, not to individual atoms.'³⁶⁶

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Schrijvers, "Seeing the Invisible: A Study of Lucretius' Use of Analogy in *De Rerum Natura*," in *Lucretius*, ed. Monica R. Gale, (Oxford: 2007), 258: 'the theory which flows to analogy or root metaphor relies on the selection, emphasis, suppression and – in general – the organisation of aspects of the primary *illustrandum* by association with properties of the secondary subject. This heuristic function of the root metaphor can be seen very clearly, in Lucretius' argumentation.'

³⁶⁶ O'Keefe (2002), 183.

Lucretius

Epicureanism assumes that the central goal of life is to secure happiness or tranquillity of mind (*ataraxia*), to free the mind from all disturbances, pains and terrors (Lucretius' *terrorem animi*, 1.146 = 2.59 = 3.91 = 6.39), and so the vices or our pathological disturbances and subsequent cognitive and perceptual abnormalities are 'diseases of the soul which must be cured.'³⁶⁷ These diseases of the soul are necessarily complex inasmuch as the soul is complex.³⁶⁸ Human nature is, from the beginning, disturbed and the remedy for this exists both inside and outside of ourselves.³⁶⁹ Memmius is probably an example of the third candidate for learning in Seneca's divisions; he needs to be coaxed, as Lucretius demonstrates in the honeyed-cup simile where he compares himself to a doctor coating the rim of a cup containing bitter medicine with honey so that children might benefit.³⁷⁰ Lucretius explicitly identifies his own path as he writes his poem as following Epicurus' godlike flight of the mind³⁷¹ and so Lucretius can be shown broadly to

³⁶⁷ Tsouna (2007), 60. This is 'considered in the light of a normative conception of nature an psychic health.'

³⁶⁸ See e.g. Hershkowitz (1998), 2-10.

³⁶⁹ See Nussbaum (1994), 30-31. Ancient accounts of 'human nature' are value laden accounts, 'they select some aspects of human beings and their lives as especially important or valuable, deciding only then that a certain element should be counted as part of our nature ... norms follow from an account of "nature" because the account is frankly normative to begin with.' Cf. Procopé (1998), 171-2: 'Epicurus too, though not a teleologist, could none the less speak in quasi-religious language of 'blessed nature' who makes it easy to obtain what is needful.'

³⁷⁰ *Lucr.* 1.936-950, 4.11-25. Note that Philodemus also perceives the philosopher as a kind of doctor, see Tsouna (2007), 60. Cf. Nussbaum (1994), 13, 132 on 221 *Us.* ('Empty is that philosopher's argument by which no human suffering is therapeutically treated. For just as there is no use in a medical art that does not cast out sickness of bodies, so too there is no use in philosophy, unless it casts out the suffering of the soul') and Hershkowitz (1998), 6: 'the division between what would now be termed philosophy of mind and psychology is non-existent.'

³⁷¹ This journey is developed over the course of the poem, instead of wandering the untrodden realm of the Pierides in a distinctly poetic image from book 1 (*avia Pieridum peragro loca nullis ante | trita solo...* ; 1.926-7), in book 3 we read that Lucretius is planting his feet in Epicurus' footsteps (*te sequor, o Graiae gentis decus, inque tuis nunc | ficta pedum pono pressis vestigia signis*; 3.3-4); the path is ultimately connected with the travelling of Epicurus' mind which brought him beyond the flaming

represent each of the three kinds of character type. Lucretius provides a direct visual analogy to the troubling kinds of mental *simulacra* to which our disturbed minds are exposed: he describes clouds massing together and marring the sky at peace (*ut nubes facile interdum concrecere in alto | cernimus et mundi speciem violare serenam*, 4.134-5). Just as abnormal minds can detect strange patterns in mental *simulacra*, so we can discern strange shapes, giants and monsters in the turbulence of the darkening storm clouds (4.136-42). The imagery of clouds marring the peaceful light of the heavens is connected with Lucretius' pervasive themes in the poem of light and darkness and of order and disturbance.

The figure of Venus at the the opening of the poem who drives away the clouds (*te, dea, te fugiunt venti, te nubila caeli | adventumque tuum*, 1.6-7) and ensures tranquillity for mortals (*tu sola potes tranquilla pace iuvare | mortalis*, 1.31) is substituted in Book 3 by Epicurus who brings light out of great darkness to mortals, showing them the good life (*O tenebris tantis tam clarum extollere lumen | qui primus potuisti inlustrans commoda vitae*, 3.1-2), and whose teachings disperse the the terrors of our souls (*diffugiunt animi terrores*, 3.16) by revealing *all* of nature (*quod sic natura tua vi | tam manifesta patens ex omni parte resecta est*, 3.29-30). The transition is gradual and has been shown to demonstrate a transition from *species* (or the outward appearance of nature) to *ratio* (reason provides the hidden inner workings of nature).³⁷² This movement is

ramparts of the world (*processit longe flammantia moenia mundi | atque omne immensum peragravit mente animoque* 1.73-4).

³⁷² See E.M. Thury, "*Naturae Species Ratioque: Poetic Image and Philosophical Perspective in the De Rerum Natura* of Lucretius" (Ph.D Thesis, 1976), 140-146 for the 'erosion' of Venus imagery subsequent to the first proem. Cf. Hahn, E. A. (PAPA 72 [1941] XXXII-XXXIII); and see J.M. Duban, "Venus, Epicurus and Naturae Species Ratioque," *AJPh* 103 (1982) who observes the association between Venus and *species* (the 'outward appearance of nature' / 'human observation') and between Epicurus and *ratio* (the 'law or inner workings of nature' / 'active human reasoning').

precisely the kind associated with mental development as perceptions (i.e. from *species*) are consolidated into complex preconceptions (*ratio*), this can especially be seen in the shift from *nubila caeli* to *animi terrores* since this is the implication of Lucretius' analogy in Book 4, and Lucretius' therapeutic approach is suitable because it tracks our initial superstitions or false beliefs based on the *prima facie* appearance of nature (i.e. the figure of Venus)³⁷³ and deconstructs these progressively into rational images, concepts and personifications. Venus is also linked with Epicurus through use of similar vocabulary and expressions: '*te diva ... te sequitur*' (1.13-16) anticipates the hymnic invocation of Epicurus in the third proem '*te sequor, o Graiae gentis decus*' (3.3);³⁷⁴ the extensive use of second person pronouns are characteristically hymnic and at the same time provide a 'syntactic framework for the substitution of Venus by Epicurus and the deification which attends such replacement.'³⁷⁵ The symmetry of imagery and language between these *prooemia* (in Books 1 and 3) is important because it is as if we are looking at the same scene but with modified perception, as if Orestes is made gradually to realise that he is looking at Electra and not the Furies. Venus is not a personification of the

³⁷³ Epicurus himself asserts the existence of the gods. Discussions dealing with the gods appear repeatedly at the beginning of Epicurean writings; see Obbink (1996), 4-5, gods are the subject of the first of the *Kuriai Doxai* and are at the beginning of Epicurus *Ad Menoecum*, cf. Lucretius (1.62-4), Diogenes of Oenoanda (fr. 34 Smith col.7) and in the first colon of the *tetrapharmakos* quoted by Philodemus (*PHerc* 1005, 4.9-14). Epicurus maintains that they are 'supremely blessed' and immortal' (τὸν ζῶον ἄφθαρτον καὶ μακάριον, *Epist. Men.* 123 and see Obbink (1996), 5) yet he makes clear that they do not intervene in mundane affairs or in the workings of the cosmos on account of their blessedness. See *Epist. Herod.* 76-8 and cf. Obbink (1996), 7: 'Epicurus states emphatically that the gods, being blessed and imperishable, could not conceivably reside in this world where they could be neither entirely free from care nor immune to terrestrial forces of destruction.' Cf. Lucretius 5.146-7, *illud item non est ut possis credere, sedis | esse deum sanctas in mundi partibus ullis* and see Cicero *De Div.* 2.40 for gods dwelling in the *intermundia* the interstices between *kosmoi* in the Epicurean universe; This view contrasts and develops the ideas of Epicurus' atomist predecessors like Democritus (whose gods consist as virtually indestructable circumambient εἴδωλα, larger than human beings, prophetic, and capable of conferring beneficent or malific influence).

³⁷⁴ See Duban (1982), 174: 'The verbal link *tua vi*, so intimately connecting the powers which Venus and Epicurus respectively command, is one of many devices through which Epicurus 'replaces' Venus in the scheme of prologue three.'

³⁷⁵ Duban (1982), 174.

good life, rather it is Epicurus who represents the godlike *ataraxia* which we glimpse in the poets.³⁷⁶ The gods are not troubled by clouds and winds *or* by any terrors of the mind:

*apparet divum numen sedesque quietae,
quas neque concutiunt venti nec nubila nimbis
aspergunt neque nix acri concreta pruina
cana cadens violat semperque innubilis aether
integit et large diffuso lumine ridet:
omnia suppeditat porro natura neque ulla
res animi pacem delibat tempore in ullo.* (3.18-24)

Such deconstruction or rationalisation of things which appear at first sight to be something which they are not in reality is pervasive in Lucretius and can be translated into the language of empty desires such as love. Lucretius lists the emptiness of sexual desire alongside the natural and quenchable desires of hunger and thirst and the emptiness of dreams in a discussion of appearance and reality and his infamous diatribe against love. The lover ‘feeds’ on images emanating from the body of the beloved but love is deceitful (and women conceal their individual imperfections, 4.1171-91) and his desire attaches significance to what is nothing but *simulacra*, little ‘hopes’ that are often lost in the wind (*nil datur in corpus praeter simulacra fruendum | tenuia quae vento spes raptast saepe misella*, 4.1095-6).³⁷⁷ The verbal echoes in the *prooemia* of Books 1 and 3 are significant because they point to a degree of convergence at the micro-level, an effect achieved through repetition and variation (both of which we have seen

³⁷⁶ The abode of the gods is an adaptation of the conventional Homeric description at *Odyssey* 6.42-6.

³⁷⁷ Cf. Hershkowitz (1998), 173. Hershkowitz discusses love as a ‘crisis of engulfment’ (i.e. loss of self to the other) but in Lucretius’ account physical engulfment cannot be attained. Aspects of engulfment are a common conceit of erotic poetry (Hershkowitz provides examples from Catullus 64 and Ovid’s *Metamorphoses*).

to be important in Epicurean therapy in the previous chapter). Lucretius draws the analogy between words and images of things in his discussion of perceptible time in Book 4: words correspond to perceptual units but many sub-perceptible times lurk beneath.³⁷⁸ Lucretius' modifications of words and letters suggest simulacric modification, or changes that affect which parts of some underlying atomic stream is grasped and the mimetic relationship of the textual surface of the *DRN* to the kinds of *simulacra* described within it has been well noted.³⁷⁹ In Book 2 (398-407) Lucretius makes an implicit correlation between the construction of a substance out of atoms of a different quality and shape, and the construction of words out of different qualities and shapes.³⁸⁰ Poetry is especially suited to Lucretius' task because of its repetitive format; Lucretius can modify or tune the simulacric surface of the text and subtly alter our perceptions and associations. Lucretius will sometimes change the *positurae* of the letters within a word to effect his atomic manipulations of the mimetic stream. Sometimes this is marked by perceptual difference involving the guiding sensations of pleasure and pain,³⁸¹ sometimes the difference is not mediated by perceptual affect in terms of the feelings associated with the word based on its physical (i.e. atomic) qualities but by meaning and detectable only

³⁷⁸ *quia tempore in uno cum sentimus, id est, cum vox emittitur una | tempora multa latent*, 4.795-6

³⁷⁹ See E.M. Thury, "Lucretius' poem as a *simulacrum* of the *rerum natura*," *AJPh* 108 (1987), 270-294 and Jane McIntosh Snyder, *Puns and Poetry in Lucretius' De rerum natura*, (Amsterdam: 1980), e.g. 1.196-8.

³⁸⁰ See e.g. Snyder (1980), 92.

³⁸¹ Lucretius describes how pleasant substances (like milk and honey: *uti mellis lactisque liquores*; 2.398) are rolled in the mouth and provide a pleasant sensation on the tongue (*iucundo sensu linguae tractentur in ore*; 2.399) because they are formed with smooth, round atoms, and are therefore appealing to our senses (*ut facile agnoscas e levibus atque rutundis | esse ea quae sensus iucunde tangere possunt*; 2.402-3); on the other hand, foul-tasting wormwood and astringent centaury twist up the mouth with their repulsive taste (*...foedo pertorquent ora sapore*; 2.401). Just as liquid honey is attractive to the senses because of its atoms, so the word '*mellis*' is attractive because of the collocation of its letters, especially the liquid sound 'l' which is emphasised by the position of *liquores* (2.398) and *linguae* (2.399); the liquid sounds associated with honey are brought out in the honeyed cup simile in 1.938: *mellis dulci flavoque liquore*. The words themselves are actually composed and arranged so that they act directly on the reader's senses; i.e. the words are the substances themselves. See Snyder (1980), 92.

with reason,³⁸² for example, in his deconstruction of *amor* to *umor* (4.1052-1057) which suits his rationalisation of irrational desires.³⁸³ We, non-Epicureans, perceive *umor* as *amor* and our perception is, on an atomic level, only minutely defective in doing so, yet the effects are disastrous and painful. Small modifications of internal atomic *minima* within structures (and therefore the images they shed) produce entirely different compound appearances (e.g. Lucretius' example of *ignis et lignum*, 1.912),³⁸⁴ which applies to mental as well as visual objects. Interestingly here *umor* is not compared to another existent (as in the case of *ignis et lignum*) but to a supernatural non-existent. We are presented with a physical and mental manifestation of the desire: *umor* and *amor* (or, more appropriately, Love i.e. Venus: '*haec Venus est nobis; hinc autemst nomen amoris*, 4.1058).³⁸⁵ If we mistake *umor* for the mental image of love (with its various poetic connotations) or the goddess³⁸⁶ then we are committing a grave error indeed and one that borders on synaesthetic madness, mistaking the physical for the mental.³⁸⁷ Lucretius proceeds with a description of how empty images feed love: when the object of desire is absent their images are still present (*nam si abest quod ames, praesto simulacra tamen sunt | illius, et*

³⁸² In book 1 Lucretius describes invisible particles which can only be seen with *ratio* (*in parvas igitur partis dispargitur umor | quas oculi nulla possunt ratione videre* 1.309-10). Note that his use of *umor* in this explanation prepares us for its usage later.

³⁸³ See Robert D. Brown, *Lucretius on Love and Sex: a Commentary on De rerum natura IV, 1030-1287, with Prolegomena, Text, and Translation*, (Leiden: 1987), 64: 'the woman casts love from her body and the man casts liquid into it' and 188: 'thus emphasising the physical essence of love.' See also Snyder (1980), 95: 'the blunt physiological reference in association of *amor* and *umor* is perfectly consonant with the treatment of sex elsewhere in Book 4, as, for example, when Venus is used to mean *membrum virile* (4.1200 and 4.1270).'

³⁸⁴ See Snyder (1980), 41: 'the two substances are composed, he says, of slightly different combinations of atoms, and the two words are composed of slightly different combinations of letters.' Cf. Paul Friedländer, "Pattern of Sound and Atomistic Theory in Lucretius," *AJPh* 62 (1941), 17: on this argument *contra* Anaxagoras.

³⁸⁵ See Snyder (1980), 94 and Friedländer (1941), 18. Friedländer takes *haec* (4.1058) with *umor*.

³⁸⁶ Konstan (2008), 71: 'In Lucretius, and in literature of the Roman republic generally, (*amor*) often had the sense of a mad and limitless idea or obsessive love.'

³⁸⁷ It is important, however, that non-Epicureans do not '*see*' Venus, rather, they might believe in her. This is a delusion or false belief. For this to cross the 'synaesthetic' barrier and become an hallucination our senses need to be compromised. In other words mistaking *umor* for *amor* is to mistake a physical thing for a mental thing. Hallucination requires mistaking a mental image for a solid object.

nomen dulce observatur ad auris 4.1061). Lucretius' use of *nomen dulce* indicates that this is probably a lingering perceptual affectation³⁸⁸ and it seems likely that this is the sort which initially creates pores by compulsive or obsessive activity (cf. *per multos itaque illa dies eadem observantur*, 4.978). Here our defective pathologies begin and here Lucretius cautions us to turn away (*sed fugitare decet simulacra et pabula amoris | absterrere sibi atque alio convertere mentem*, 4.1063-4). The progression is gradual, the sore thrives (*ulcus enim vivescit*, 4.1068) and becomes fixed, presumably in our preconceptions (*inveterascit alendo*, 4.1068): this is compatible with our model of perceptions, pores and preconceptions. Lucretius describes this abnormal development as a growing madness (*furor*)³⁸⁹ accompanied by pain (*inque dies gliscit furor atque aerumna gravescit*, 4.1069). Lovers 'confuse' their first wounds with new blows (*prima novis conturbes volnera plagis*, 4.1070).

Apart from this description (4.1070), *conturbo* occurs only seven other times in Lucretius and its usage is quite technical:³⁹⁰ three times in Book three (discussing the disordering of the soul atoms in alcohol intoxication and epilepsy), three times in Book four (once discussing the degradation and combination of words in the air over distance and twice discussing the psychic derangement of sleep) and once in Book 6 (describing the slow formation of gathering clouds which cause disturbance and compel change as an analogy for the spreading of the plague). Combined with the mention of *plaga* and *volnera* (which echo the language of psychic disarray

³⁸⁸ Cf. E. J. Kenney, "Doctus Lucretius," in *Lucretius*, ed. Monica R. Gale, (Oxford: 2007), 319: 'a desire, prompted by a physical stimulus in which the mind has no part, to transplant seed from one body to another.'

³⁸⁹ Here I am following Indelli (2004), 103-110: Indelli identifies Epicurean ὀργή with *ira* and θυμός with *furor*.

³⁹⁰ 3.483, 3.484, 3.500, 4.559, 4.943, 4.958, 6.1122.

in somatic destruction and sleep from Books 3 and 4) we should interpret this instance as an account of similar mental disturbance created by blows (*plaga, ictus*) from without (this is the aetiology of somatic and psychic disturbance in the previous examples).³⁹¹ Lucretius also uses the same violent words fairly often to describe impinging *simulacra*,³⁹² most significantly in an example preceding this one where *ictus* is related to love's wound:

*idque petit corpus, mens unde est saucia amore;
namque omnes plerumque cadunt in vulnus et illam
emicat in partem sanguis, unde icimur ictu,
et si comminus est, hostem ruber occupat umor.* (4.1048-1051)

Here we find the comparison of *amor* and *umor*. The body seeks what had wounded the mind with love. This is a conventional image of love's wound found in the Greek epigrammatists and Euripides, and it also resembles the madness of Medea in Ennius,³⁹³ though, I think, he has carefully located it in both (Euripides' ἐκπλαγεῖσ' and Ennius' *saucia*). Lucretius has adapted it to his purpose and the connotations in this passage are both military and perceptual. The wounded lover falls towards the direction of the blow like a wounded warrior and his blood spurts out just like the lover's *umor*.³⁹⁴ This is a response to *simulacra* striking the senses³⁹⁵ and

³⁹¹ E.g. *plagae per parva foramina* (4.940); Cf. *unde icimur ictu* (4.1050); (*ictus* in this context: 2.954, 3.488, 3.636, 3.813, 4.746, 4.934). Not how often *ictu* occupies the final spondee of the hexameter.

³⁹² Cf. e.g. 2.136, 2.808, esp. 4.746-7 (*facile uno commovet ictu | quae libet una animum nobis subtilis imago*), etc.

³⁹³ See Kenney (2007), 300-327. Kenney has shown that Lucretius draws extensively on the imagery and vocabulary of love poetry, especially Greek epigram, precisely in order to reject the ideal of romantic love, its idealisations and disillusionments. See 316 on the *Garland* of Meleager and Love's bow and arrows: 'There is, it seems to me, a characteristically Roman immediacy and vividness about the word *saucius*; for the relatively colourless Euripidean ἔρωτι θυμὸν ἐκπλαγεῖσ' ('her mind struck with love,' *Medea* 8) Ennius in his version had given the emphatic and pathetic Medea *animo aegro amore saevo saucia*, 'Medea, her sick mind wounded by savage love.' Cf. Brown (1987), 191, '[the] application [of *saucius*] to the *mens* is highly novel.'

³⁹⁴ See Kenney (2007), 318.

the beginning of Lucretius' discussion of sexual desire is located in his passage on dreams (where *simulacra* of a beautiful form strike the mind and produce ejaculation, 4.1030-1036); from the first love is positioned within the discourse of mental delusion and hallucination.

Lucretius' use of *conturbo* (*prima novis conturbes volnera plagis*, 4.1070) indicates psychic derangement whereby we mix up new sensory assaults as if they are connected to the initial and delusional impact of the appearance of the beloved. This indicates obsessive and pathological reception of incoming sensations and the kind of psychic disturbance that becomes assimilated to a mental disorder.³⁹⁶ Lucretius indicates that it is possible to interrupt this process while it is still in its initial pathological stages by diversifying our obsession (*volgivaque vagus Venere*, 4.1071) or by turning our minds in some other direction (*aut alio possis animi traducere motus*, 4.1072). This advice indicates that sex is not intrinsically empty, only the psychopathological desire called love. Love for Epicurus, comes from a natural desire, but the sort which can invite false belief in the wrong attitude about sex, a desire for sex with a specific person or even a specific kind of sex is misguided because it brings pain (i.e. it has an unstable object), it is neither natural nor necessary.³⁹⁷ Epicurus distinguishes between the terms 'natural' and 'necessary' which seem to be defined physiologically in terms of their expression of desires for objects that produce *kinetic* and *katastematic* pleasure respectively.³⁹⁸ Sex *per se* is fine, in terms

³⁹⁵ Cf. *mulier toto iactans e corpore amorem*, 4.1054.

³⁹⁶ Cf. Donald Reynolds Dudley, *Lucretius*, (London: 1965), 122: 'Love was a source of disturbance, a *ταραχή* which must from the outset be separated from its pseudo-romantic attributes. Hence he embarks on his denunciation by way of its physical origins.'

³⁹⁷ See testimonies collected under 456 Us. And see Julia Annas, "Epicurean Emotions," *GRBS* 30 (1989), 152.

³⁹⁸ Fowler (1997), 25 and 25 n14: 'Hence, Annas' point (152 n16) that 'we have as plausible a need for sex as for clothing' is invalid: you do not feel pain or die without sex.' But cf. Hor. *Sat.* 1.2. Sex is

of its obvious *kinetic* pleasure, but love is predicated on unnatural, unnecessary and empty beliefs about the intrinsic and unique properties of the beloved. Lucretius (4.1073-1076) distinguishes between love and the 'fruit of Venus' (*nec Veneris fructu caret is qui vitat amorem*, 4.1073) and asserts that he who enjoys indiscriminate sex has all the *kinetic* benefits and none of the drawbacks (*sed potius quae sunt sine poena commoda sumit*, 4.1074). The kind of frustration and pain attendant on sexual desire for the particular *qua* particular will only offer transient pleasures and its long term pains will be an obstacle to *katastematic* pleasure; this is the kind typified in Catullus' portrayal of his affair with Lesbia.³⁹⁹ Lucretius compares the madness of love to an insatiable hunger; whereas love is empty, hunger for food is both natural and necessary and can be easily fulfilled.⁴⁰⁰ Love feeds on little images, fine and insubstantial thoughts which can no more fulfil desire than the dream images of water (*laticum simulacra*, 1099) can slake real thirst (*sitiens*, 4.1097).⁴⁰¹ Irrational passions stem from real needs but have an unreal or 'misperceived' object,⁴⁰² love's object is like the dream of water, not water itself, even though it stems from a natural desire for sex. Similar images of frustrated, or empty, activity appear in Lucretius' figurative mythological descriptions of the suffering of vicious and superstitious people in his finale of Book 3 (978-1023).⁴⁰³ The irony is that superstitions and

clearly a natural desire, but I suspect Fowler is mistaken in suggesting there is no pain associated with abstinence. For Lucretius some *can* divert their attentions, others *must* divert their affections.

³⁹⁹ See e.g. Catullus 86. The language of Catullus is remarkably similar to Lucretius here. Quintia is beautiful to others (in all of her features), but Catullus cannot reductively trace her beauty. Lesbia, to him, is totally beautiful but this is not physically qualified; instead she has, according to his delusions, 'robbed all the Venus from all other women.'

⁴⁰⁰ See Brown (1987), 41.

⁴⁰¹ Konstan (2008), 70.

⁴⁰² Konstan (2008), 72.

⁴⁰³ Lucretius' finales mirror one another, see Brown (1987), 50.

vices are simultaneously responsible for their suffering on earth *and* for their false belief in the reality of supernatural punishment in the afterlife.

From the passage on the genesis of love it is clear that abnormal pathology and proleptic derangement are co-ordinate and mutually influential which should be expected: the initial presentation of the beloved is delusional; we mistake *umor* for *amor* and so are proleptically seeking the wrong images in the first place and not parsing the atomic stream quite correctly (this could be through genetic defect or perhaps a bad education in the poets). The pathology, as we have seen, requires a false belief which interprets new sensations as connected with the original impact (this further points to deranged proleptic seeking and the verb *conturbo* suggests this), these pathologically similar images presumably create pores, as any repeated exposure to the same thing would (this begins as a non-rational or sub-cognitive process and we continue to hear the sweet name of the beloved in her absence), and so our perceptions become increasingly compromised as these are consolidated, through exposure, into our rational proleptic memory. Lucretius emphasises that it is possible to avoid pathologies with our mind (*simulacra et pabula amoris* | *absterrere sibi atque alio convertere mentem*, 4.1063-4) which indicates that there is a point up to which 'irrational memory' (i.e. ἄλογον μνήμην) can be prevented from becoming thoroughly mentally integrated (*inveterascit alendo*, 4.1068) as madness (*furor*), before it is too late (*ante recentia cures*, 4.1071) through the involvement of the *animus*. The perceptual affects suffered by the *anima* do affect the *animus* over time but do not immediately entail mental derangement.

In sleep, sensory impairment depends on disturbance of the *anima*,⁴⁰⁴ which is responsible for sensation and the concomitant πάθη of pleasure and pain because of its connection with the body;⁴⁰⁵ the *anima* is connected with the outward physiological symptoms of the sufferer in other examples. In the case of wine (3.476-486), the *anima* is disordered (*conturbare*) by the violent force of the wine: *vemens violentia vini | conturbare animam consuevit* (3.482-3). That the *anima* is disturbed is inferred from the various outward symptoms:⁴⁰⁶ e.g. heaviness of the limbs (*gravitas membrorum*, 3.478), slurring tongue (*tardescit lingua*, 3.479), swimming eyes (*nant oculi*, 3.480) and the drenching of the mind (*madet mens*, 3.479). These symptoms compromise the senses, most noticeably the wetness or deviant motion of the eyes,⁴⁰⁷ and so two criteria are affected: αἴσθησις and the πάθη which depend on it. We also see that the mind is affected (*madet mens*, 3.479) and so the remaining criterion (πρόληψις) is also compromised. Lucretius' language, however, does not specify that this is necessarily an example of mental 'derangement'

⁴⁰⁴ Cf. 3.365: *at dimissa anima corpus caret undique sensu*.

⁴⁰⁵ This is the point of Lucretius' argument, see 3.143 (*per totum dissita corpus*) and 3.483 (*corpore in ipso*) and cf. West (1975), 95: '*Nunc age, nativos amantibus et mortalis | esse animos animasque levis ut noscere possis*, (3.417-18). Souls and minds and living creatures are etymologically connected.'

⁴⁰⁶ The implication of *nisi* (3.482). There is some debate over which is first affected in this example, body or *anima*. See Kenney (1971), 141: 'drunkenness attacks the *anima* directly (483) - which in turn affects the body' (the last phrase is omitted in the 1984 edition) and West (1975), 105: 'bodily afflictions affect the soul.' The latter perhaps makes more sense in terms of Lucretius' overall argument (in delirium, coma and epilepsy bodily afflictions seem to affect *anima*). These arguments, though, are awkward and we should consider that body and soul suffer mutual and simultaneous effects because their natures are physically entangled. Lucretius may distinguish subtly between cause and effect if only for the sake of argument (Epicurus also has a tendency to separate intellectually imperceptible causes and effects).

⁴⁰⁷ *nant oculi* is interpreted as 'wetness of the eyes,' West (1975), 103. But see Bailey (1947), vol ii. 1077-1078: 'cf. Virg. *Georg.* 4.496: *conditque natantia lumina somnus*; *Aen.* 5.856 *natantia lumina silvit*.' i.e. the state of the eyes just before sleep. This could be compared with one of the traditional symptoms of madness: 'rolling eyes,' cf. Nonnus *Dionys.* ὀφθαλμούς μεθύοντας ἀπειλητῆρας ἐλίσιων, see Ainsworth O'Brien-Moore, "Madness in Ancient Literature" (Ph.D Thesis, Weimar: 1924), 144 n1: 'On rolling eyes as a sign of madness, compare Aeschylus *P. V.* 882 (10): Euripides *HF* 868, 932; *Orestes* 253 (ἄμμα σὸν παράσσεται); Virgil *Aen.* 7.399 (*Amata*); Seneca *Aga.* 714 (*Cassandra*); Nonnus *Dionys.* 10.21 (*Athamas*); ὀφθαλμούς μεθύοντας ἀπειλητῆρας ἐλίσιων.'

and he can infer only the disturbance of the *anima* from outward symptoms.⁴⁰⁸ Wine is sharp (*vini vis penetravit | acris*, 3.476-7), it brings heat (*in venas discessit diditus ardor*, 3.477),⁴⁰⁹ but its effects on the mind are not caused by its effect on the *anima*. The mind is drenched (*madet*)⁴¹⁰ and this indicates a direct physical action of the wine. The violent forces of the wine (*vini vis penetravit | acris*, 3.476-7; *vehemens violentia vini*, 3.482) share in the language of the violent forces that rend the body and soul (both *animus* and *anima*) in death and throw the whole soul into disarray in sleep.⁴¹¹ Inebriation is less profound than either of these states but clearly involves complications of the *anima* and the *animus*. Although the mind and the *anima* are each affected *directly* by intoxication, the example of love and Epicurean theories of mental development suggest that there will nevertheless be an on-going rapid exchange between the *anima* and the *animus* which results in *gradual* mental differentiation. In the example of love this process takes days to become a profoundly abnormal development (*inque dies gliscit furor*, 4.1069). We should expect transient delusional mental effects to begin to emerge from perceptual disarray, especially if both the *anima* and the *animus* are temporarily compromised, and the passage indicates this might begin to happen: *clamor singultus iurgia gliscunt* (3.480).⁴¹² There is confusion as to whether this phrase presents simply the effect of wine on the soul (i.e. *gliscunt* from wine) or whether Lucretius intends to show a progression within the drunken

⁴⁰⁸ See West (1975), 104 and cf. Kenney (1971), 141.

⁴⁰⁹ See Kenney (1971), 141: 'Epicurus himself held that wine might be either heating or cooling according to circumstances.' This depends on the temperature of the body, see 58-60 Us.

⁴¹⁰ This is a common word to describe drunken states, see Kenney (1971), 142. Cf. Bailey (1947), vol ii. 1077: 'cf. Plaut. *Truc.* 855 *si alia membra vina madeant, cor sit saltem sobrium.*'

⁴¹¹ Cf. West (1975), 104.

⁴¹² Cf. West (1975), 104: '*Singultus* are presumably the sighs of self-pity or maudlin sex; *clamor* and *iurgia* are shouting and quarrelling.'

state (i.e. *gliscunt* from on-going psychic interactions aided by inebriation).⁴¹³ I suggest both: clearly wine affects the soul, but sensory impacts through the *anima*, in this case a deranged one (cf. *nant oculi*, 3.480), *can* affect the mind although this is neither a necessary condition nor an *immediate* danger in the transient example of intoxication. The example of love's cure shows that we are capable of differentiating our general mental state from our specific sensational state.

Drunkness was a popular subject for ancient philosophers and near the end of his extant treatise *On Anger* Philodemus compares the susceptibility of the Epicurean sage to anger and to drunkenness (*De ira* cols. 48-49).⁴¹⁴ In his discussion of natural anger, Philodemus cautions that we should not confuse ὀργή with θυμός⁴¹⁵ they are different kinds of things, it is not quite the difference between moderate and excessive, it is different in intensity *and* quality (δῆλον δ'ὅτι καὶ καθὸ μεγέθει καὶ καθὸ ποιότητι διαφέρει τῆς ὀργῆς οὐδὲ φυσικός ἐστὶν ὁ θυμός, col. 45.33-37).⁴¹⁶ θυμός (*furor*) entails proleptic derangement (i.e. in the *animus*), ὀργή (*ira*) is associated with natural feelings (πάθη) (i.e. in the *anima*).⁴¹⁷ The Stoic objection is that if there are *stimuli* which can make the sage angry, then surely increased *stimuli* will make him furious (if anger is proportionate to *stimulus*) and so even the sage would be susceptible to θυμός.⁴¹⁸

Philodemus responds to arguments that the wise man will become enraged no less than the

⁴¹³ See Kenney (1971), 141: 'mounting loss of self control' and Bailey (1947), vol. ii. 1078: 'it is noted that these are the expressions of three stages of drunkenness' but see West (1975), 104: '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.'

⁴¹⁴ Indelli's text has been updated and emended in Daniel Delattre, "Le Sage épicurien face à la colère et à l'ivresse: une lecture renouvelée du *De ira* de Philodème," *CronErc* 39 (2009), 71-88.

⁴¹⁵ *De ira* 45.37-46.5; though these terms seem fluid to some (e.g. the Peripatetics and the Stoics).

⁴¹⁶ Excessive ὀργή is not equivalent to θυμός, it sometimes lead to θυμός; the distinction is between natural and empty desires... Cf. Procopé (1998), 173.

⁴¹⁷ See Sen. *Ep.* 85. and Konstan (2008), 23-4. Cf. Fowler (1997), 23.

⁴¹⁸ See Fowler (1997), 26.

common man (τινὲς δὲ καὶ θυμωθήσεσθαι τὸν σοφὸν οὐχ ἢ τὸν κοινόν, col. 46.12) and one of these arguments (*De ira* cols. 48-49) is that ‘people of good company’⁴¹⁹ and wise men get drunk alike, as do fools, and therefore if fools are liable to intentional anger then so are the wise. The implication is that wine as a *stimulus* is like anger. Philodemus objects with common sense, saying that if ‘people of good company’ and wise men are taken to be Epicurus and his circle then this is absurd (φλυαροῦσιν col. 49.1-2) because the critic is making observations about the wise on the basis of people in general and the logical conclusion of this argument will be that the wise man is not Epicurean: he will strive for glory (φιλοδοξήσειν col. 49.7), will fall in love and be plagued by many other ‘feelings’ (μυρίοις ἄλλοις συσχεθήσεσθαι τὸν σοφὸν πάθεισιν col. 49.8-10) if they hold that (ὁμολογοῦνται col. 49.13) all people of good company (τῶν πάνυ χαριέντων col. 49.11-12) experience continuous ‘empty suppositions’ in succession (συνεχῶς κενούς στοχασμούς ἔχειν col. 49.12-13). If we argue that wise men are so ruled by feelings (this is inferred as there is a lacuna in the text) then he will be inclined to anger (εἰς τὰς ὀργὰς ὑπάρχειν col. 49.22) as much as those without reason (ἐνίων ἀλογίστῳ col. 49.21) are since alcohol affects him in the same way as it does them (καὶ τὸ μὴ τῶν ἀφρόνων ἦττον τοῦτο πάσχειν, ἐπειδήπερ οὐχ ἦττον αὐτῶν μεθύσκειται col. 49.22-26). Philodemus implies that the critics’ mistake may be with the way they define ‘drunk’ (καθὸ λέγεται μεθύειν col. 49.26). Wine seems to affect the non-rational part of the soul like a πάθος and, as in the case of natural anger, this does not amount to proleptic derangement and seems to show that the sage will have proleptic security against any effects being consolidated. This is compatible with the development of erotic madness which is a possibility but not an entailed effect of love’s

⁴¹⁹ *De ira* 49: τοὺς χαριέντας; Delattre (2009), ‘les gens de bonne compagnie aussi.’

wound. Inebriation is a transient state and Philodemus implies that the wise man retains his *ratio* or λόγος. Even if we do interpret Lucretius' *madet* as indicative of profound mental derangement, then the example of wine is like the example of sleep, only weaker in its effect: the *anima* and the *animus* are coaffected but not, from the outset, because of any mutual influence.⁴²⁰ This is consistent with Philodemus' argument. Once in this state we might hallucinate, but this is not the result of our developments; differential influence may result however: e.g. we may form mental *prolepseis* of large anthropomorphic gods during sleep⁴²¹ because of the impairment of our senses and these are the origins of our superstitions which may feed significant cognitive fears.

Those things which affect the *anima* and the *animus* transiently are not sufficient causes of mental disarray because we have proleptic discrimination to some extent, and as Philodemus appears to confirm when he says that emotions are not *involuntarily* aroused (δραστικὸν αἴτιον col. 50.6-7)⁴²² even by true impressions (e.g. τὴν ὑπόληψιν τῆς βλάβης col. 50.7-8). In more profound distress, such as delirium and coma, the effects are longer lasting (3.463-73). The passage speaks about the effects of disease (*morbis in corporis*, 3.463): the *animus* is deranged,⁴²³ the mind strays (*avius errat | saepe animus*, 3.463-4) and is demented and brought into delirium (*dementit enim deliraque fatur*, 3.464). A few lines earlier Lucretius mentioned the delirium of

⁴²⁰ *Contra* West (1975), 102: 'When body suffers disease, intoxication, or epilepsy, mind too suffers (and from those bodily afflictions).'

⁴²¹ E.g. *Lucr.* 5.1169-1171 and 353 *Us*.

⁴²² *De ira* col. 50, i.e. it is an 'efficient cause' and not a 'sufficient cause.' Cf. e.g. Aristotle *De part. an.* 1.1.

⁴²³ See Bailey (1947), vol. ii. 1076: '*animus* is again rightly used in preference to *anima*, since *Lucr.* is again treating of the mind.' See West (1975), 96: '*Animus* and its synonym *mens* (3.94) appear in statements which would not normally apply to the other part of the soul.'

old age (*claudicat ingenium, delirat lingua labat mens*, 3.453) and in Book 5 Lucretius mentions that men frequently speak in dreams and rave deliriously in disease (*per somnia saepe loquentes | aut morbo delirantes*, 5.1158-5.1159). In each case (*delerium senilis* and *delirium morbi*) *delirare* is used of raving speech.⁴²⁴ The tongue is *animi interpres* (6.1149) and *delirat lingua* is indicative of disturbance and deviation⁴²⁵ of the *animus* and this is much stronger than *tardescit lingua* (in the case of intoxication, 3.479). Sleep-talking and raving in disease are paired in Book 5 implying that the states are analogous, and so we might infer the same of *delira fatur* in Book 3. In sleep the *animus* and the *anima* are affected and the same seems to be true of the example of delirium here: the body is clearly affected in disease (*morbis in corporis*) and this should be taken as indicative of the involvement of the *anima*. In disease this comorbid state (i.e. simultaneous but independent affectedness of the *animus* and *anima*) lasts longer than in sleep or in wine drinking and, if both the *animus* and the *anima* are affected over a long period, we should expect abnormal proleptic developments to emerge as the senses can no longer guarantee that mental or visual images are interpreted correctly. In the case of delirium we see that the *anima* is affected (even though this is not stated) because sometimes as the mind withdraws⁴²⁶ into deep coma (*interdumque gravi lethargo fertur*, 3.465), the eyes and head droop (*oculis nutuque cadenti*, 3.466) and this is once again compared to sleep (*in altum | aeternumque soporem*, 3.465-6).⁴²⁷ Again the cause of mental derangements here is not in any deviant or differential cognitive

⁴²⁴ Cf. 2.985: *delira haec furiosaque* for the only other example.

⁴²⁵ The literal sense of *delirare*, 'to wander from the straight in ploughing.' See West (1975), 100.

⁴²⁶ For the 'withdrawal' of the mind, note *unde, exaudit* and *revocantes* (3.467-468), see West (1975), 102.

⁴²⁷ Cf. 3.907, 3.911 i.e. a long time, see Bailey (1947), vol. ii. 1076 and Kenney (1971), 140 'unbroken sleep' and cf. 3.921: '*aeternum . . . soporem*' as death. See also West (1975), 102-3 that this makes Lucretius' argument 'more persuasive' because coma is like a long sleep but can also lead to death, see Lucr. 3.472: *nam dolor ac morbus leti fabricator uterquest*. Disease destroys the body, therefore the mind also dies. See also Kenney (1971), 140 on the description of mourners (*circumstant lacrimis*

development (though this could emerge from a protracted comorbidity of *animus* and *anima*) but from disease and this is the point of Lucretius' argument: *quare animum quoque dissolui fateare necessest, | quandoquidem penetrant in eum contagia morbi* (3.470-1). The state, like sleep, clearly emulates cognitive madness and does so more emphatically than in the case of intoxication, the mind is caused to 'deviate' and the condition involves delirious raving and would, if sleep is any analogy, entail psychotic hallucinations with the concomitant impairment of the *anima* and the failing of the senses. Because this state is often protracted (it sometimes results in death) it could produce abnormal differential cognitive developments.

The epileptic is assaulted suddenly and very violently (*subito vi morbi saepe coactus*, 3.487), as if struck by a thunderbolt (*ut fulminis ictu*, 3.488); he foams at the mouth (*spumas agit*, 3.489), moans (*ingemit*, 3.489), his limbs tremble (*tremunt artus*, 3.489), he raves irrationally (*desipit*, 3.490), his tendons are strained (*extentat nervos*, 3.490), he twists (*torquetur*, 3.490), pants irregularly (*anhelat inconstanter*, 3.490-1) and wears himself out with his flailing (*in iactando membra fatigat*, 3.491). Lucretius endeavours to explain the cause of these physiological symptoms. The epileptic foams at the mouth: the *anima* is thrown into disorder and foams because it is torn apart throughout the body (*nimirum quia vi morbi distracta per artus | turbat agens anima spumas*, 3.492-3) by the violence of the disease (*vi morbi*, 3.492), it is like the surface of the salty sea (*aequore salso*, 3.493) boiling under the strong force of the winds (*ventorum validis fervere viribus undae*, 3.494). He moans because the atoms of voice are

rorantes ora genasque, 3.469), this 'seems to show that L. has in mind rather the week-long mourning ritual of the *conclamatio*: only when this has been faithfully performed was the corpse judged to be securely dead (Serv. *Ad Virg. A.* 218; Schol. Ter. P. 59.10-13 Schlee).'

ejected from his mouth *en masse* (*quod semina vocis | eiiciuntur et ore foras glomerata feruntur*, 3.496-7). He raves irrationally because the powers of the *animus* and the *anima* are deranged (*quia vis animi atque animai | conturbatur*, 3.499-500) and divided apart and flung in different directions (*divisa seorsum | disiectatur*, 3.500-1) by the poison (*illo veneno*, 3.501). When disease has retreated (*ubi iam morbi reflexit*, 3.502) and the sharp *umor*⁴²⁸ of the afflicted body has returned to its lair (*reditque in latebras acer corrupti corporis umor*, 3.502-3), then, little by little he returns to his senses (*paulatim redit in sensus*, 3.505) and recovers his *anima* (*receptat*, 3.505).⁴²⁹ The violent symptoms indicate the involvement of the *anima* which is distributed throughout the body (*per totum dissita corpus*, 3.143), intermingled with the tendons (*nervi* 3.217, 3.567, 3.691, 3.789) and responsible for moving the body (3.158-60).⁴³⁰ For Lucretius the *anima* (and the *animus*) is made up of air and wind atoms and Lucretius is using this to explain the foaming at the mouth which is caused by the windy turbulence of the *anima* which creates foam.⁴³¹ The reason that the epileptic groans as the *semina vocis* are ejected is that the particles are located inside the body and forced out (cf. *hasce igitur penitus voces cum copore nostro | exprimimus*, 4.549-50).⁴³² The sea is salty (*salso*) and I think this should be taken as more than ‘a purely ornamental epithet on the Homeric model;’⁴³³ Lucretius explains that the saliva of the

⁴²⁸ See Charles Segal, "Lucretius, Epilepsy, and the Hippocratic *On Breaths*," *CPh* 65 (1970), 180 n 2. 'The Hippocratic *On the Sacred Disease* stresses the role of phlegm and bile.'

⁴²⁹ Bailey (1947), vol. ii. 1078 demonstrates the correspondence between this description and descriptions found in Pseudo-Galen (*Medicus* 14.739) and Celsus (3.23).

⁴³⁰ See West (1975), 105.

⁴³¹ See West (1975), 106: 'Lucretius is again exploiting the range of meaning of *anima*--wind, breath, soul.'

⁴³² West (1975), 105 argues that this is the release of the *anima* since the *anima* is associated with breath at 3.432 (I'm not sure of any connection here) and breath is relevant in the description of the production of sound in book 5.

⁴³³ Kenney (1971), 144. Kenney also calls the sea-simile 'emphatic, picturesque and 'literary.'

angry man is salty, and both Galen⁴³⁴ and the Hippocratic *On Breaths*⁴³⁵ use the image of a storm to describe the epileptic.⁴³⁶ The implication is that ‘salty’ atoms come from the foaming *anima* in the angry who also foam at the mouth.

Lucretius tends to group his arguments together to demonstrate a point and all of these (intoxication, delirium and coma, epilepsy) deal with the malfunctioning of the soul and epilepsy is another example of transient comorbid disturbances of the *animus* and the *anima*. In the case of intoxication, delirium and coma the cause is external. In the case of epilepsy the cause is internal, some *umor* residing in the body. Though this is clearly tied to medical theory, I think Lucretius makes his point by demonstrating that this is *like* an external attack. He describes it as being struck by lightning (*ut fulminis ictu*),⁴³⁷ a blow from without. Philodemus uses exactly this image directly after the statement of the critics’ argument about the drunkenness of the sage: just as the sage can get drunk naturally (μεθύσκεσθαι κατὰ φύσιν, col. 47.15), so anger must happen to him for the same cause (διὰ τὴν αὐτὴν αἰτίαν ὀργὴν αὐτῷ προσάπτεσθαι, col. 47.16-18). He says: ‘nor is it because lightning struck the fool’⁴³⁸ (ὁ μάταιος γενόμενος κεραυνόπληκτος, col. 47.20) that he is prone to empty anger (συνέχεταιί ... ταις ματαίοις ὀργαῖς, col. 47.19) rather it is the case that this (i.e. empty anger) is brought about by beliefs (ἀλλὰ κατὰ τὰς ὑπολήψεις τὰς προηγουμένας, col. 47.20-1).

The general argument is taken to be that it is not from such external blows (and intoxication is

⁴³⁴ *Comm. in Hippocr. Aphor.* 17.2,554 K.

⁴³⁵ 252.55 Jones (Cf. 252.63).

⁴³⁶ Segal (1970), 181.

⁴³⁷ Cf. Hershkowitz (1998), 221 on the comparison between Caesar’s *furor* and lightning in Lucan’s *Bellum Civile* and cf. Seneca who compares (*De ira* 3.1.4) the intensification of anger to lightning.

⁴³⁸ The word for fool here is μάταιος. Philodemus is linking the foolish person to the emotion of empty anger which he here chooses to describe as μάταιος ὀργή.

clearly similar by implication, and the other examples by further implication) that empty anger emerges but from false beliefs, and some will be *driven crazy* (ἐπι δὲ τούτοις ἐξίσταθ', col. 47.29)⁴³⁹ by these in the right circumstances.

Lucretius uses the word *ictu* in epilepsy (3.488). These states resemble, in the vocabulary of Lucretius, the arrival and impact of *simulacra* on the soul:⁴⁴⁰ the selection and attendance on these requires proleptic engagement, but the impacts do not entail cognitive psychological disorders such as extreme anger, if we follow Philodemus' argument; he says (col. 47) that the sage will be angered if he is harmed (πάντως μὲν ὀργισθήσεται, col. 47.36), inasmuch as anger is said to depend on thoughts like 'I am injured' (βεβλάφθαι δοκῶν, col. 47.22-3). Philodemus is intentionally sarcastic here since 'empty anger' (i.e. the kind the critics are arguing about) is not a mere result of such images but a deviant psychological apprehension of these and their consolidation into our minds. The sage can have a true understanding that he is intentionally harmed (ὁ σοφὸς ὑπὸ τινος ἐκουσίως ὑπολαμβάνει βλάπτεσθαι, col. 47.32-3) but just to the extent he has actually been harmed (τηλικούτο δὲ μόνον ὅσον βέβλαπται, col. 47.34-5). So this sort of anger (i.e. φυσικὴ ὀργή) is transient (βραχέως, col. 47.37) and the sage never receives a presentation of being greatly harmed (διὰ τὸ μηδέποτε μεγάλης ἔμφασιν βλάβης λαμβάνειν, col. 47.36-8) since he never takes such external things to be very important (οὐδὲν εἶναι παρὰ μέγα τῶν ἔξωθεν ἡγούμενος, col. 47.40-1). Lucretius uses *ictu* to describe the first blow of love and the progression of love is like the progression of disease or

⁴³⁹ ἐξίστημι refers to change or alteration and is often used of psychological disturbance (cf. or to depart from one's nature. Cf. e.g. Plato *Republic* 380 d: 'ἐξίστασθαι τῆς αὐτοῦ ιδέας.'

⁴⁴⁰ Cf. Philodemus 'συνεχῶς κενούς στοχασμούς ἔχειν' for the fallacious explanation of the sage who is susceptible to drink just as we would be to 'empty suppositions.'

injury, progressing from *saucia amore* (4.1048), *ictu* (4.1050) and *vulnus* (4.1049) to a developing sore (*ulcus enim vivescit*, 4.1068) but it is not a disease, rather a psychological psychosis: love feeds on *images* or beliefs (*simulacra et pabula amoris*, 4.1063) and madness *can* result (*gliscit furor*, 4.1069). Physiologically the conditions of comorbid diseased states and sleep resemble the symptoms of extreme emotional states like anger or love. The angry person foams at the mouth, his saliva is salty, his sinews are stretched and his eyes flash: all of these point to physical turbulence in the *anima* and fiery atoms and ‘salty’ atoms are brought forth from there. Extreme (i.e. empty) anger also requires a disproportionate response to a perceived harm in the form of an empty desire for revenge: this indicates proleptic derangement of the *animus*; the constitution of the sage is not susceptible to this. Love also has a physiological effect: Lucretius uses the language of blinding (4.1113, 1146-49) and debilitation (4.1114, 1121) and this indicates that the *anima* is involved.⁴⁴¹ But whereas intoxication, disease and epilepsy come as if from without, extreme emotions (e.g. empty anger and love) come from within and, as we have seen, are the result of abnormal psychological development.

It is important that Lucretius never uses the word *furor* to describe any of the states of disease or intoxication in Book 3. He only uses it later for a *furor* which he says is ‘peculiar to the mind’ (*adde furorem animi proprium*, 3.828); this does not have to do with bodily disease (*praeter enim quam quod morbis cum corporis aegret*, 3.824), it is rather associated with fully fledged cognitive emotions: something often comes that torments the mind about the future (*advenit id quod eam de rebus saepe futuris | macerat*, 3.825-6), holds it in fear (*inque metu male habet*, 3.826) and

⁴⁴¹ See Brown (1987), 42.

wearies it with anxiety (*curisque fatigat*, 3.826). These kinds of prudential cognitive concepts are the sort which Hermarchus denies non-rational animals and which are located in the *animus*. Lucretius also uses *furor* in Book 4 to describe the madness of love but the animals who copulate under the directions of Venus in Book 1 do not suffer the *furor* of the lovers in Book 4 despite the violence of their attacks of passion (e.g. *omnibus incutiens blandum per pectora amorem*, 1.19).⁴⁴² It is only once Lucretius has tracked differential psychological development from the first appearances of things (*species*) in Book 1 to their inner workings (*ratio*) in Book 3 that a deviant development called love becomes associated with abnormal mental development and a madness special to rational human beings emerges. Lucretius also uses the word *rabies* alongside *furor* to describe the madness of the lover in Book 4: *rabies*, ‘beastlike fury’ is sometimes used in the context of war, but usually applies to animals.⁴⁴³ The implication here is that we are in a state of cognitive madness which is like the state of some animals, but the animals are not mad (since they are incapable of reason) whereas we have developed ‘along the lines of our original constitution.’ One needs to be capable of reason to be truly insane.

So sometimes, as in the case of love, images are transmitted to the *animus* pathologically, i.e. with sufficient frequency to cause profound proleptic derangement, but this is possible for us to avoid if caught in time. Lucretius shows that sometimes extreme emotions (examples of

⁴⁴² See Brown (1987), 191.

⁴⁴³ See Timothy A. Joseph, "Tacitus and Epic," in *A Companion to Tacitus*, ed. Victoria Emma Pagán, (Oxford: 2012), 377-83 for a comparison of *furor* and *rabies*. Both Tacitus (*Hist.* 1.63.1: *furore et rabie*) and Lucan (*BC* 4.240: *redeunt rabiesque furorque*; *BC* 7.551, 10.72) use these words in combination to ‘convey a type of compounded, redoubling “super” madness’ (380), ‘*rabies* is a condition appropriate for beasts (*OLD* 1), not humans, and certainly not Roman citizens’ (378). Cf. Ernout (1949), 154-6.

proleptic derangement), even though these are peculiar to the *animus* once formed,⁴⁴⁴ can affect the *anima* – and this is particularly interesting. That the *anima* is affected is evident by the outward symptoms of the man whose mind is afflicted by tremendous fear:

*...ubi vementi magis est commota metu mens
consentire animam totam per membra videmus
sudoresque ita palloremque existere toto
corpore et infringi linguam vocem aboriri,
caligare oculos, sonere auris, succidere artus,
denique concidere ex animi terrore videmus
saepe homines; facile ut quivis hinc noscere possit
esse animam cum animo coniunctam, quae cum animi vi
percussast, exim corpus propellit et icit.* (3.152-160)

In this state both the *animus* and *anima* are affected just as in sleep and this is, as we have seen, the condition that changes our perceptions of reality to the extent to which we may suffer hallucinations in the form of synaesthesia between the mental and the visual. Extreme fear is already a sign of proleptic disarray in the *animus* (Philodemus says that the sage simply does not get this worked up about such things, and implies that to do so requires false beliefs), and the *anima* shares in this feeling (*consentire animam*, 3.153) because of its connection to the mind (*ut quivis hinc noscere possit esse animam*, 3.158-9). Here the *anima* is not struck by an external blow but by the internal force of the *animus* (*animi vi | percussast*, 3.159-60) and this affects the senses

⁴⁴⁴ *Hic exultat enim pavor ac metus, haec loca circum | laetitiae mulcent*, 3.141-2. Cf. 3.828 *animi proprium*.

(*caligare oculos*, 3.156). This means that our false cognitive beliefs can cross the synaesthetic barrier and become real in our subjective perceptual realities.

Extreme anger also implies disturbance of the *animus* and produces disruption of the *anima*: anger makes the eyes flash, the mouth foam, turns the saliva salty and strains the victim's tendons. These are conventional symptoms of madness,⁴⁴⁵ and Lucetius explains flashing eyes in terms of the fire atoms of the *anima* (*est etiam calor ille animo, quem sumit, in ira | cum fervescit et ex oculis micat acrius ardor*, 3.288-9).⁴⁴⁶ Profound proleptic derangement, the kind reached gradually and differentially through sensory exposure and applications of incrementally false beliefs (which take shape as empty desires and empty emotions), entails disruption of the *anima* and therefore compromises the senses, resulting in fully fledged delusional and hallucinogenic madness. Transient derangement of the *anima* by initial delusional perceptions (i.e. the vision of love) or disease (a large part of these are unavoidable effects of our initial constitution) need not entail or develop incrementally into mental derangement, provided our characters are so constituted by appropriate developments which maintain proleptic security, because this is a differential process. Initial constitutions vary and some, like Epicurus, may have an innate constitutional capacity (or a constitution that has, through external factors, been properly directed from birth) for safeguarding against the differential developments which might

⁴⁴⁵ Euripides seems to make foaming at the mouth a conventional symptom, see O'Brien-Moore (1924), 191 n2: 'Heracles (*HF* 934) and Agave (*Bacchae* 1122) both foam at the mouth, and Heracles bellows (*HF* 869-70). In a fragment of the *Aithiopsis* it seems to be Ajax' flashing eyes that attract attention: Podaleirius the physician notes: ὄμματά τ' ἀστράπτοντα βαρυνόμενον τε νόημα (Fr. 2 West = Edelstein T 141 & 142), however, in the *Aithiopsis* these flashing eyes are more probably intended to indicate wrath than madness.' Cf. Indelli (2004), 108 on Turnus' flashing eyes during *furor* in Virgil's *Aeneid* (12.101-2).

⁴⁴⁶ See Hershkowitz (1998), 92-3.

otherwise derive from troubling appearances, but others, like the Lucretian reader, will need help along the way to combat even the smallest of their superstitions.

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Conclusions

For the mad or the sleeper the defective mental instrument grasps a defective object and the phenomenal world becomes internalised as a subjective reality from the information received by the defective mind as all three criteria for knowing external reality (sensations, feelings and preconceptions) are disordered. In the formation of preconceptions, atomic arrangements in the *animus*, the rational mind mirrors the macrocosmic world and the accuracy of these is ensured by repeated exposure and consensus among the impressions received by the mind. A perfect constitution delimited by nature is not, however, guaranteed and is troubled by genetic defects and environmental anomalies from the beginning. The status of preconceptions is a difficult concept and I have tried, perhaps rather reductively, to locate their truth value inside the perceptual minimum when working in combination with the senses. This seems to show that the rational (or truthful) application of *prolepseis* depends both on the successful organisation of the *animus* (which mirrors, through exposure and imprint, the order found in nature) and the present, evident, information of the senses which depend on a healthy *anima*.

In transient states of psychic disarray the *anima* and the *animus* respond as if to an external *stimulus* and this is like the *stimulus* of arriving images (the *anima* and *animus* are co-affected). Sensory impairment is most common in transient somatic trauma of some kind but examples from Philodemus and Lucretius show that extreme emotional states (i.e. cognitive states) affect our bodies and vision through disturbance of the *anima*. A transient comorbid state resembles

irrational behaviour because of temporary psychic derangement, but it is not enough to qualify as *furor* proper because it does not entail permanent psychosis as it is only an efficient cause. To further the analogy theoretically: we shouldn't attach blame to intoxication because it doesn't constitute a moral or intellectual development and even the sage is susceptible to it (unless the person becomes an alcoholic) just as blame is not attached to an episode of proportionate or natural anger to which the sage is also susceptible (unless the person becomes irascible).⁴⁴⁷ If we adopt causal determinism in Epicureanism,⁴⁴⁸ then praise and blame (as 'appearances' in themselves, like philosophical maxims) are only useful for character reform not for retribution and need not necessarily be tied to responsibility, only to therapy. This is a pragmatic way of approaching empty anger: it is an empty retribution not a therapeutic contribution and so the sage might give the appearance of being angry as reported by Philodemus). These transient states on their own are not long enough to generate new proleptic information during the disorder (e.g. the madness, *furor*, of love takes 'days' to develop and become mentally consolidated in Lucretius). Developments require and entail repeated behaviour which, when deviant, is translated into a psychotic condition. Philodemus uses intoxication to show that, even though this disrupts the *animus* and the *anima* (also clear from Lucretius' *madet mens*), the fact that the sage, like fools, can be drunk does not prove he is susceptible to extreme (empty) anger since the difference between natural and empty emotion is qualitative and empty emotion requires false belief. Ordinarily sensory information is relayed from the *anima* to the *animus*; in co-morbid states and intoxication this is a 'top down' effect on both and the disorder of either is

⁴⁴⁷ Cf. The distinction made between getting drunk (*vino gravis*) and the habitual drunkard (*solet ebrius fieri et huic obnoxius vitio*) in Seneca (*Ep.* 83.10) = Posidonius F 175 Edelstein and Kidd.

⁴⁴⁸ E.g. Bobzien (2006), 206-229.

not caused by disorder in the other. In extreme fear, however, Lucretius says that the *anima* is affected by the *animus* (because of their substantial connection) and the fearful person's senses are occluded. My general argument is that this state constitutes *furor* proper (the word is not used by Lucretius in examples of disease which on Philodemus' analogy must more resemble affective impact). The cognitive derangement of extreme emotion which scrambles the *anima* would lead, from the analogy of dreams, to hallucination. The idea is that this would bridge a gap which Graver identifies in the Stoics between cognitive madness (i.e. in the fool's paradox) and *melancholia* (which produces hallucination and afflicts Orestes). The interlocking between the defective instrument and the defective object is ensnaring and self-reinforcing (compare Lucretius' description of Venus' snares, 4.1058-1072).

It is tempting to separate completely the affective feelings of the *anima* and the cognitive emotions of the *animus* and show that feelings and sensation operate automatically without the involvement of the mind. This may be true of animals, but for rational developing beings this is a dangerous logic. Basic feelings like pain or pleasure attend our deepest emotions of grief or joy and our mental sensations, or most basic thoughts, are selected by their compatibility with the proleptic arrangement of our *animus* and only form complete and therefore intelligible impressions or presentations once they have been subjected to sensory evidence. As children we have only our polymorphous genetic dispositions of character and irrational memory with which to inform our awareness, but our mind is pluripotent in its capacity for further developments. In this way our intellectual and moral development consists in our capacity to form mental

preconceptions from basic sensory evidence which in turn is responsible for filtering that evidence. This compound process which results in an increasingly complex mind shows that our mental development could be understood as a graded differential abstraction from the outer appearance of reality which results, depending in its course, in inferential or abstract reason (*ratio*) which is compatible with reality, can see its inner workings, and results in *ataraxia* or in delusion or false belief which deviates progressively from nature and results in madness.

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