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Atomism in the *Aeneid*: Physics, Politics, and Cosmological Disorder

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**Abstract**

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This dissertation examines the role of philosophical allegory in the *Aeneid*, focusing on tendentious allusions to Epicurean atomism as it is presented in Lucretius. I argue that Virgil, drawing upon a popular strain of anti-materialist and anti-Epicurean arguments in Greek philosophy, deploys atomic imagery as a symbol of cosmic and political disorder. The first chapter of this study investigates the development of metaphors and analogies in philosophical texts ranging from Plato to Cicero that equate atomism with cosmological caprice. The remaining three chapters track how Virgil applies this interpretation of Epicurean physics to the *Aeneid*, wherein chaotic atomism serves as a challenge to the dominant narrative of divine order and Roman power in the *Aeneid*. For Aeneas, the specter of atomic disorder arises at moments of distress and hesitation, while the association of various non-Trojan characters with atomism

characterizes them as forces of disorder to be contained or vanquished. Instead of subordinating philosophical concerns to literary agendas, or vice versa, I show how Virgilian allusion to Lucretius conflates poetic, political, and cosmological narratives and blurs the boundaries between their respective modes of discourse.

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*Sunt autem et alii multi qui si scribantur per singulos nec ipsum arbitror mundum capere eas quae illis agenda sunt gratias...*

## **DEDICATION**

To the Goreys and the Lanphiers:

for the best dinner table debates this side of Plato's *Symposium*

## Abbreviations

Here follows a list of abbreviations used in this dissertation.

C-N *The Works of Virgil*, J. Conington and H. Nettleship. London (1883-1898)

KRS *The Presocratic Philosophers* (2<sup>nd</sup> ed.) G. Kirk, J. Raven, and M. Schofield. Cambridge. (1983)

OLD *Oxford Latin Dictionary*. P. Glare. Oxford (1996)

PHI *Packard Humanities Institute* <<http://latin.packhum.org/browse>>

RE *Realencyclopädie der classischen Altertumswissenschaft*. A. Pauly, G. Wissowa, and W. Kroll. (1893-1980)

TLG *Thesaurus Linguae Graecae*. <<http://www.tlg.uci.edu/index.prev.php>>

## INTRODUCTION

*Non verba autem sola, sed versus prope totos et locos quoque Lucreti plurimos sectatum esse Vergilium videmus.* (Gell. NA 1.21.6-7)

Moreover, we see that Virgil has imitated not only individual words of Lucretius, but also almost entire verses and a great many passages. (Aulus Gellius)<sup>1</sup>

*Dumtaxat rerum magnarum parva potest res exemplare dare et vestigia notitiae.* (Lucretius 2.123-4)

As far as this matter is concerned, something small can offer a model of great things and trace the outlines of an idea. (Lucretius)

What is the overarching purpose and nature of intertextual references to Lucretius in Virgil's *Aeneid*? Does there exist a 'program' of Lucretian allusion in Virgil's epic? And if so, what are the common characteristics of these varied intertextual moments, which are woven into the fabric of so many important scenes? Although legions of scholars since Aulus Gellius have remarked upon Virgil's profound literary debt to Lucretius—a debt second only, perhaps, to the debt to Homer when measured by the volume of identifiable verbal parallels—there have been surprisingly few accounts of Lucretian allusion in the *Aeneid* that are both comprehensive and compelling.<sup>2</sup> Of course, many insightful studies already exist that shed light on particular aspects of Lucretian intertextuality in Virgil's poetry, but in the gaps between these works lie a significant number of overlooked passages that engage with Lucretius' Epicurean philosophy.

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<sup>1</sup> Unless otherwise specified, all translations are my own. For Latin quotations of Virgil and Lucretius, I follow the text of Mynors' OCT (1969) and Bailey (1947), except where noted.

<sup>2</sup> The loss of most of Ennius' *Annales* makes it hard to rank the relative importance of Lucretius vs. Ennius, but Lucretius was undoubtedly one of the most important Latin models for Virgil's epic style in the *Aeneid*. For a rough measure of the sheer volume of references to Lucretius in Virgil, see Merrill 1918: "Parallels & Coincidences in Lucretius and Vergil," which offers a Knauer-like table of parallels running 83 pages long. Although this table contains many errors and dubious attributions, it nevertheless attests the remarkable level of detailed engagement with Lucretian idiom that one finds throughout Virgil's poetry. A less comprehensive, but more judicious, tabulation of Virgil's allusive debts to Lucretius in the *Aeneid* can be found in the *Index Locorum* of Hardie's *Cosmos and Imperium* (1986: 387-8).

Broadly speaking, therefore, this dissertation is concerned with providing a global framework for understanding the many echoes of Lucretian words and verses in the *Aeneid*—one that synthesizes much of the existing scholarship while filling in a crucial gap in our understanding of Virgilian allusions pertaining to Epicurean physics and cosmology.

My objective in pursuing this global account of Lucretian intertextuality in the *Aeneid* is twofold. First, I wish to identify and analyze allusions in the *Aeneid* that evoke the philosophy of Epicurean atomism, and in doing so, to illustrate the great extent to which Virgil engages with Lucretius' poem as a *philosophical text*. Second, from this jumbled crowd of allusions, which spans the entire length of the poem, I shall endeavor to draw some general conclusions about the dominant political and cosmological worldview of the *Aeneid*. I believe that careful attention to atomic details in the *Aeneid*, however minor, may help us to form a better understanding of the poem's overall orientation towards teleology and order, as illustrated by the negative example of atomic *disorder*. In particular, I am concerned with demonstrating the interdependence of the poem's mythological, political, and cosmological narratives, all of which share a common teleological understanding of order and progress that is starkly opposed to Epicurean atomism. By investigating how and why Virgil employs atomic imagery and ideas in the poem, I hope to show that the dichotomy between philosophical reference and literary allusion is a false one, and that many intertextual references to Lucretius in the *Aeneid* participate in an allegorical conflict between order and disorder that is neither exclusively literary nor philosophical, but simultaneously and inextricably both.

As a prelude to this task, I devote the rest of this Introduction to the consideration of two important subjects: 1) a review of the main threads of scholarship that deal with Virgil's Lucretian intertexts, and 2) the use of philosophical allegory (both ancient and modern) as a

method of interpreting the *Aeneid*. The chapter that follows (Ch. 1: ‘Characterizations of Epicurean Atomism’) assesses pre-Virgilian attitudes towards atomism, arguing that Virgil adopts his tendentious understanding of atomism in the *Aeneid* as a system of disorder from the hostile critiques of earlier non-atomist philosophers. Chapter 2 (‘Trojans under the Influence of Atomism’) examines scenes in which the poem’s Trojan protagonists are faced with obstacles that are associated with atomic disorder, while Chapter 3 (‘Non-Trojans under the Influence of Atomism’) analyzes the atomic characterization of prominent non-Trojan antagonists. Lastly, Chapter 4 (‘Turnus and the End of the Epicurean World’) investigates the dense cluster of Lucretian intertexts present in the final duel between Aeneas and Turnus, whose defeat represents the ultimate failure of atomism and the triumph of teleological order.

#### GLOBAL APPROACHES TO VIRGIL’S LUCRETIAN INTERTEXTS

As noted above, Lucretius’ pervasive influence upon Virgil’s poetic language has been widely acknowledged since ancient times, yet scholars and critics have nevertheless disagreed sharply about what sort of meaning (if any) to attribute to such intertexts. In addition, scholarship on Virgil’s allusive relationship to Lucretius has tended to favor investigation of the *Georgics*, with the *Aeneid* generally receiving less attention.<sup>3</sup> While there are numerous studies devoted to the analysis of discrete Lucretian allusions or episodes in the *Aeneid* at a local level, few works since Philip Hardie’s 1986 *Cosmos and Imperium* have attempted to provide a larger framework

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<sup>3</sup> A number of studies have outlined programs of Lucretian (or generally philosophical) allusion in the *Georgics*. While an exhaustive list is beyond the scope of this dissertation, important works for the study of Lucretian physics in the *Georgics* include Gale (2000) *Virgil on the Nature of Things: The Georgics, Lucretius and the Didactic Tradition*, Farrell (1991) *Virgil’s Georgics and the Traditions of Ancient Epic*; pace Ross (1987) *Virgil’s Elements: Physics and Poetry in the Georgics*, which pointedly denies Lucretius any role as an intertextual model for Virgil’s didactic poetry.

for understanding the many Lucretian intertexts scattered throughout the poem—that is, to articulate a systematic program of Lucretian allusion.<sup>4</sup>

All the same, most of the studies that examine individual Lucretian allusions in the *Aeneid* subscribe to some existing framework or methodology of interpretation (explicit or otherwise) that guides how they make sense of local details. In the following review of previous works of scholarship, I identify three main camps of interpretation: one that interprets correspondences between Lucretius and Virgil primarily as a stylistic (and less meaningful) function of their writing in the same epic genre; a second that interprets Lucretian intertextuality as evidence of the supposedly pro-Epicurean sentiments of the poem or its author; and a third focused upon an adversarial style of intertextuality that Benjamin Farrington has labeled ‘polemical allusion,’ in which Virgil adopts the language of *De Rerum Natura* while displacing or inverting its philosophical content. Of course, these are not hard and fast categories, and there is in practice a certain amount of overlap among them. Yet they will suffice for a useful (if perhaps overly schematic) sketch of the current trends in Virgilian and Lucretian scholarship, while giving a sense of certain persistent interpretive shortfalls that this dissertation aims to address.

### *Genre, Style, and Tone*

One popular response to the presence of Lucretian intertexts in Virgil has been to interpret them as markers of generic or authorial style that are largely devoid of specific

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<sup>4</sup> By ‘program’ I have in mind studies along the lines of Knauer’s *Die Aeneis und Homer* (1964), Nelis’ *Vergil’s Aeneid and the Argonautica of Apollonius Rhodius* (2001), and Farrell’s *Vergil’s Georgics and the Traditions of Ancient Epic* (1991) all of which go beyond investigation of local meanings to posit comprehensive interpretations of how and why Virgil alludes to a particular author or genre; what Nelis calls “a consistent, structured pattern of imitation” from “the *Aeneid*’s first line to its closing scene” (2001: 7).

philosophical reference or meaning.<sup>5</sup> Although this attitude is most evident in older, more philologically conservative scholarship on the *Georgics*, it nevertheless continues to influence contemporary analyses of the *Aeneid*, at both the local and global levels of interpretation.

Richard Thomas, in his typology of poetic reference articulated in *Reading Virgil and His Texts* (1999), defines this style of verbal recall as ‘casual reference’:

Casual reference will not concern us for long. It is quite simply the use of language that recalls a specific antecedent, but only in a general sense, where the existence of that antecedent is only minimally important to the new context, where, one could say, an atmosphere, but little more, is invoked. This occurs most frequently in the *Georgics* with reference to Lucretius. (Thomas 1999: 117-18)

Interestingly, like Thomas, many of the scholars who espouse this minimalist attitude towards certain kinds of intertextuality (typically contrasted with a more elevated type of ‘conscious’ or ‘meaningful’ allusion) cite Virgil’s use of Lucretius as the paradigm for such generic or stylistic signaling. For instance, David Ross, in the introduction of his 1987 book on natural philosophical allusion in the *Georgics*, states that Virgil evokes Lucretian lines “only to convey some required tone (e.g., of philosophical cosmogony), not to contrast contexts or recall the idea” (Ross 1987: 27-8). Similarly, in his survey of intertextual engagement with early Latin poetry, Wigodsky argues that Virgil alluded to Lucretius mainly for reasons of style, rather than specific reference.<sup>6</sup>

While classical scholarship in recent decades has generally shifted away from this model of conscious vs. incidental allusion, which too often relies upon an overly subjective assessment of authorial intention, the tendency to dismiss Lucretian intertexts as stylistic background noise or as ornamental markers of genre-affiliation continues to influence contemporary scholarship on

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<sup>5</sup> See, e.g., Tarrant 2012 ad 12.887-918; Thomas 1999: 117-18, 1988: 4 (vol. 1); Ross 1987: 27-8; Innes 1979: 169; and Wigodsky 1972: 139.

<sup>6</sup> See Wigodsky 1972: 139: “Formulaic expressions and casual verbal reminiscences greatly predominate over specific imitations.”

the *Aeneid*. Joseph Farrell, for instance, in a 2014 survey titled “Philosophy in Vergil,” argues that most Virgilian references to philosophy in the *Aeneid* are simply generic “gestures” towards philosophical discourse. That is, they are meant to evoke the genre of philosophical writing, “in order to acknowledge the place of philosophy in the Roman epic tradition, not to articulate a coherent philosophy, and still less to assert his own, personal beliefs” (2014: 84).<sup>7</sup> Similar assumptions undergird many observations and analyses in Richard Tarrant’s 2012 commentary on *Aeneid* 12. While Tarrant demonstrates a keen sense for the literary qualities of Virgil’s Lucretian intertexts, he regularly dismisses the possibility that such borrowings may convey philosophical meanings.<sup>8</sup> The essential shortcoming of this approach is that, even when scholars identify significant Lucretian intertexts, they often pass over philosophically meaningful words and phrases, thus missing a crucial component of Virgil’s allusive relationship to Lucretius.

### *The ‘Epicurean Aeneid’*

In contrast, there is a small but noteworthy body of scholarship from the last century that takes the issue of philosophical meaning to the opposite extreme, inferring a hidden pro-Epicurean agenda from the many Lucretian references in the *Aeneid*.<sup>9</sup> As a countercurrent to more traditional pro-Stoic readings of Virgil’s epic, this view has always been something of a

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<sup>7</sup> See Farrell 2014: 81 on philosophical reference in the *Aeneid*: “In contrast with other intertextual relationships, specific verbal indices (other than words like *ira* and *rex*) are generally scarce.” Cf. similar remarks on the *Georgics*: “Virgil wished not to pass on to his readers any specific philosophical truth, but simply to combine certain characteristic topics of philosophical speculation with characteristic tropes of philosophical argument as components of an essentially poetic, not philosophical, discourse” (74).

<sup>8</sup> See, e.g., Tarrant 2012 ad 12.354: “*inane* as a noun can evoke Lucretian descriptions of the void (as in *Ecl.* 6.31-2 *magnum per inane coacta | semina*), but here it is a loftier equivalent of *aer*.” Even when allowing for the possibility of a complementary philosophical interpretation, Tarrant often hedges: “Language recalling Lucretius is also frequent, clustering around the simile in 908-12... Using Lucretian language is a means of elevating the tone, but *it also seems possible* that Lucretius was associated in V.’s mind with a certain area of experience or type of emotion, as was Catullus. *A possible specific factor* is the prominence of the fear of death in the portrayal of T. in this final section” (ad 12.887-918; *emphasis added*). Further examples can be found in Ch. 4 of this dissertation, where I discuss Lucretian allusions in book 12 of the *Aeneid*.

<sup>9</sup> For a critique of various attempts to ‘claim’ Virgil for a particular philosophy, see Braund 1997: 205-7, 220-1.

minority opinion, and is only sparsely attested in earlier scholarship.<sup>10</sup> Of more modern attempts at a universal Epicurean reading of the *Aeneid*, the two most ambitious are Viviane Mellinghoff-Bourgerie's *Les incertitudes de Virgile: Contributions épicuriennes à la théologie de l'Énéide* (1990), and Eve Adler's *Vergil's Empire: Political Thought in the Aeneid* (2003), each of which argues for a reading of the poem that endorses Epicurean philosophy in some way. Mellinghoff-Bourgerie, for instance, argues that Aeneas represents the Epicurean *idéal du sage* (228), who is knowledgeable about the world and takes responsibility for his own actions.<sup>11</sup> In a similar vein, Adler interprets the *Aeneid* as a crypto-Epicurean poem caught in the tension between the depressing reality of a godless atomic cosmos and the need to protect people from that truth with the pleasant fictions of mythology.<sup>12</sup>

While both studies deserve praise for their detailed and thorough cataloguing of possible Lucretian intertexts in the *Aeneid*, their core arguments are vitiated by assumptions about Virgil's philosophical beliefs and intentions that are both unknowable and unlikely. This methodological bias leads to a skewed interpretation of many passages that privileges possible Epicurean connections at the expense of structurally important references to epic models such as Homer, Apollonius, and Ennius.<sup>13</sup> At the same time, however, a number of studies with more limited scope, such as Kronenberg (2005) and Erler (1992), have more fruitfully investigated the

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<sup>10</sup> For earlier attempts at reading the *Aeneid* as a pro-Epicurean poem, see Hermann (1938) and Frank (1920). While both of these articles are brief and focused on local details, they articulate a global reading that anticipates those of Mellinghoff-Bourgerie and Adler.

<sup>11</sup> See Mellinghoff-Bourgerie 1990: 226: "Le héros est pourvu d'une qualité qui manque à tous ceux-là: le courage de ne pas s'abandonner aveuglément au surnaturel, mas d'affronter, au contraire, la réalité en se sachant seul et abandonné à ses propres forces, responsable de son destin, prêt à construire et à assumer ses *fata*."

<sup>12</sup> See Adler 2003: x: "Vergil is indeed persuaded by Lucretius' argument that we live in a godless world, but is also persuaded by other things that the propagation of this truth is harmful to human life."

<sup>13</sup> See Monica Gale's critical review of Adler's book in *The Classical Review* 54: 376-8 (2004b) for further discussion of problems.

application of Epicurean theory to individual scenes or topics, suggesting the possibility of a muted dissenting Epicurean voice in the *Aeneid*.<sup>14</sup>

### *Polemical Allusion*

A third approach to Lucretian intertextuality in the *Aeneid*, and arguably the most influential in scholarship of the last three decades, is to interpret Lucretian references as instances of what Benjamin Farrington calls ‘polemical allusion.’ A number of compelling studies favor the idea that Virgil’s use of Lucretian source-material is fundamentally tendentious and philosophically adversarial, characterized by the use of Lucretian language to express distinctly anti-Lucretian sentiments.<sup>15</sup> Much good work has been done in this vein to elucidate systematically the nature of Virgil’s program of Lucretian allusion, and my present work builds upon these studies.<sup>16</sup> Philip Hardie, whose lengthy chapter on Virgilian ‘remythologizing’ of Lucretian physics and cosmology represents the most comprehensive effort to date at applying this approach to the *Aeneid*, defines the strategy as “a very close and detailed dependence on the *De Rerum Natura* combined frequently with a total transformation of the content of Lucretius” (1986: 233).<sup>17</sup> In general, studies of this type focus on Virgilian allusions that appropriate the language of *De Rerum Natura* while pointedly excluding its philosophy.

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<sup>14</sup> Kronenberg (2005) investigates Mezentius’ impiety through the lens of Lucretian teachings, while Erler (1992) argues for Virgil’s engagement with Epicurean emotional theory, particularly that of Philodemus, in constructing Aeneas’ anger.

<sup>15</sup> See Farrington’s pithy formulation of this concept: “To reverse the religious and moral contents of the Lucretian world-picture while retaining the Lucretian vocabulary is Vergil’s plan” (Farrington 1963/1999: 22).

<sup>16</sup> Though not an exhaustive list, examples of ‘polemical allusion’ readings can be found in Farrell (2014), Gordon (2012), Hardie (2009), Gale (2000), Giesecke (2000), Gordon (1998), Dyson (1997) and (1996), Weber (1995), Farrell (1991), Hardie (1986), Wigodsky (1972), and Farrington (1963/1999).

<sup>17</sup> Cf. Hardie 2009: 178: “[The *Aeneid*] ends by realizing the ‘epic’ plot of Epicurus’ career in the final victory of Aeneas, but at a point at which the hero of rational exploration has been turned back into a representative of the *religio* defeated by Epicurus.” For a helpful summary of earlier approaches focused on polemical allusion, including the differing terminology of various scholars for what is essentially the same phenomenon, see Hardie 1986: 233, (esp. footnotes): “Jackson Knight speaks of *inversion* [1944: 91]; Farrington of *polemical allusions*; Heinze, Büchner, and Guillemin all see in Virgil the embodiment of an anti-Lucretius originally defined as an internal aspect of Lucretius himself; Buchheit uses the concept of *Kontrastimitation*.”

The shared framework of polemical allusion and remythologization is particularly useful because it accounts for the possibility of both literary and philosophical meanings in Virgil's Lucretian borrowings, while also positing a fairly consistent and comprehensive program of allusion. Tendentious allusions to Lucretius are frequent in the *Aeneid*, which suggests that Virgil's Lucretian intertexts are indeed part of a bigger picture of "global inversions," as Hardie puts it, and not simply a random collection of incidental references (1986: 234). Furthermore, Hardie links this style of hostile allusion to the way that philosophers themselves argued, thus providing a meta-literary dimension to Virgil's relationship to Lucretius—not only does Virgil invert and remythologize Lucretian doctrine at the local level, but in doing so, he defeats the Epicurean philosopher with a variation of his own (Lucretius') polemical tactic adopted from philosophical discourse.<sup>18</sup>

Among the various works that adhere to this anti-Epicurean interpretive framework, one particularly important group has focused on the ways in which Dido can be considered Epicurean.<sup>19</sup> In these studies, the focus is not so much on the inversion of individual details in order to displace their original philosophical content, but on moments in which Virgil preserves Epicurean ethical teaching in a way that shows it to be impossible or undesirable. Julia Dyson summarizes this interpretation as follows:

The Dido episode belongs to a larger pattern in which Virgil employs Lucretian language and imagery to contradict Lucretian doctrine: the words of the queen herself, of the narrator, and of other characters continually remind us of the Epicurean ideal even as they show it to be unattainable. (Dyson 1996: 204)

Even while allowing for the presence of certain philosophically meaningful details, such studies nevertheless conform to the overall pattern suggested by Farrington, Hardie, and others, in which

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<sup>18</sup> See Hardie 1986: 235 on the polemics of Greek philosophy: "One of the tactics of this polemic was to adopt the terms of reference of the opponent but to invert them so that the opposite message emerges."

<sup>19</sup> See especially Gordon 2012, 1998 and Dyson 1997, 1996. For a helpful summary of earlier treatments of Dido's Epicureanism, see Pease 1935: 36-7.

Lucretian language is used to refute Lucretian doctrine. The key difference is that Dyson and Gordon give more consideration to the tendentious *presence* of Epicurean philosophy in certain Lucretian intertexts in the *Aeneid*, while Hardie and others privilege passages in which doctrinal details are *absent* from Lucretian intertexts.

*Polemical Allusion: a Synthesis*

My own approach follows the consensus of ‘polemical allusion’ scholarship that the *Aeneid* is profoundly hostile to Epicurean philosophy, while attempting to offer a more philosophically sensitive assessment of that hostility as *philosophical*, and not exclusively or predominantly literary. To do so, I combine Hardie’s emphasis on close reading of precise verbal details with the interpretive focus of Dyson and Gordon, who investigate passages in which Epicurean doctrines are alluded to without inversion, albeit still with a negative or tendentious purpose. Although many of the studies cited in this introduction illustrate allusions in which references to Lucretian physics and cosmology are emptied of their original Epicurean content, no one has yet done a comprehensive study of allusions to physics and cosmology that *preserve* that content in some way. This is the shortfall that this dissertation aims to address. Although scholars have pointed out isolated details here and there—mostly pertaining to Epicurean ethics—where the original philosophical content of the Lucretian passage is preserved, I mean to show that there are actually quite a few such allusions. I also mean to fit these details into a coherent whole that can tell us something about Virgil’s reception of Epicurean natural philosophy.

This emphasis on atomic physics springs from two sources. First, physics was a popular topic for Homeric critics interested in philosophical allegory, and the exegeses of these early literary scholars exerted considerable influence upon Virgil’s own use of allegorizing details in

the *Aeneid*.<sup>20</sup> Secondly, although critics ancient and modern have tended to focus upon the hedonistic ethics of Epicureanism as its defining characteristic, physics was foundational to Epicurean philosophy in a way that is perhaps unique among Hellenistic philosophies. According to Cicero, beyond being highly idiosyncratic when compared with other systems of cosmology, atomic physics was a source of special pride among Epicurean philosophers: *principio, inquam, in physicis, quibus maxime gloriatur [Epicurus], primum totus est alienus* (“First, I said, in physics, in which Epicurus most greatly gloried, he is completely strange,” Cic. *Fin.* 1.6.17). Although it is uncertain whether Cicero’s judgment reflects the real self-image of Roman Epicureans or an unfair stereotype of them, Lucretius’ *De Rerum Natura* provides a rough quantitative measure of the importance of atomic physics for the Epicurean system of philosophy as a whole: of six books, the first four focus almost entirely upon minute atomic interactions, which are used as the principal evidence for why one should believe the ethical teachings of the sect about pleasure, fear, love, and death.

In following this natural-philosophical thread, I seek to answer the question of what happens when Virgil alludes to Epicurean physics *without* inverting or displacing its philosophical content. Ultimately, this is a question about the worldview of the *Aeneid* (the text, not Virgil’s unknowable personal opinion).<sup>21</sup> It is my contention that such allusions do not endorse Epicureanism, but actually serve the larger polemical purpose of recasting the atomic world of Lucretius’ poem as a threat needing to be defeated by the teleological cosmos of Virgil’s *Aeneid*.

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<sup>20</sup> See Hardie 1986: 26: “the physical universe bulks large in the interests of allegorizers; the earliest preserved reports of Homeric allegorization are largely on cosmological matters.” For more detailed discussion of the Greek allegorical interpretations of epic poetry and Virgil’s reception of this tradition, see below.

<sup>21</sup> I occasionally use biographical information about Virgil to argue for or against his being familiar with a particular text or philosophical argument, insofar as that has any bearing on the text of the *Aeneid*. However, I am not interested in what Virgil’s (unknowable) personal beliefs were, but what the text itself says.

## PHILOSOPHICAL ALLEGORY IN THE *AENEID*

The fundamental argument of this dissertation is that Virgil uses images of atomic motion in the *Aeneid* as a metaphor for disorder, part of a larger allegorical narrative that assimilates Aeneas' personal struggles against various enemies into a cosmic conflict between order and disorder. Within this allegorical conflict, atomism functions as a sort of philosophical antagonist, an anarchic vision of natural philosophy over which Aeneas, who is aligned with natural, theological, and political forces of order, must ultimately triumph.

### *Why Epicureanism?*

Although the idea that the world follows a divine teleology claims adherents in many philosophical schools, atomism is one of the few ancient cosmologies that is systematic and system-building, but embraces a non-purposive vision of nature. Thus, the triumph of Aeneas and Rome's future *imperium* may be interpreted through the lenses of any number of teleological philosophies, whereas disorder is typically cast as a specifically Epicurean phenomenon (philosophically speaking). To paraphrase John F. Kennedy, one might say that Cosmic Order in the *Aeneid* has a hundred fathers, while Cosmic Disorder is an Epicurean orphan. Granted, there are isolated moments of destruction in the poem that tap into other apocalyptic eschatologies, such as the Stoic *ekpyrosis*.<sup>22</sup> But even these details are typically harnessed to Epicureanism through a layer of intervening Lucretian intertexts, with the effect that virtually every philosophical vision of disorder and turmoil in the *Aeneid* becomes 'Epicureanized' at some level.<sup>23</sup>

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<sup>22</sup> See Hardie 1986: 191-3, which documents references to apocalyptic floods and fires (in the spirit of *ekpyrosis*), especially in the burning of Troy.

<sup>23</sup> See Hardie 1986: 193, which lists Lucretian parallels in Virgil's descriptions of Troy burning.

The notion of interpreting parts of the *Aeneid* or the poem as a whole in terms of philosophical allegory goes back to its earliest commentators.<sup>24</sup> As Hardie notes, natural philosophy and cosmology figured prominently in the early readings of Classical and Hellenistic critics, with whom Virgil was familiar by virtue of his familiarity with Alexandrian and Pergamene scholarship.<sup>25</sup> By Virgil's own time, educated readers had access to a variety of allegorical interpretations of epic poetry, and even readers lacking expertise in the Greek tradition could find discussions of philosophical allegory in the more recent works of Roman authors such as Cicero (*De natura deorum*) and Varro (*Antiquitates rerum humanarum et divinarum*).<sup>26</sup> In the centuries following the publication of the *Aeneid*, ancient commentators repeatedly affirmed the importance of philosophical allegory in both the composition and early reception of ancient epic poems, including the *Aeneid*.<sup>27</sup>

While Virgilian scholars interested in systematic studies of allegory have tended to focus their attention on Book 6, where Stoic, Pythagorean, and Platonic models dominate, commentators since Servius have acknowledged the possibility of latent Epicurean meanings throughout the poem, either in isolated local details or underlying the work as a whole.<sup>28</sup> In the

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<sup>24</sup> See Obbink 2010: 15: "It is surely the case that among the Greeks evidence for reading allegorically... is as old as any evidence we have for reading poetry." On the origins and development of allegoresis in Homeric criticism, see Feeney 1991: 8-11, 34-40, and Dawson 1992: 23-52. For the role of the Stoics in particular, see Zeller 1962: 354-69.

<sup>25</sup> See Hardie 1986: 26-8. For Virgil's use of the Hellenistic Homeric scholia in composing the *Aeneid*, see Schlunk (1974): *The Homeric Scholia and the Aeneid*.

<sup>26</sup> For a useful discussion of pre-Virgilian allegoresis in Roman criticism, including the possibility of Roman audiences' familiarity with such interpretations, see Wlosok 1987/1999: 394ff.

<sup>27</sup> See especially Serv. ad *Aen.* 6.719: *miscet philosophiae figmenta poetica et ostendit tam quod est vulgare, quam quod continet veritas et ratio naturalis*. Cf. similar comments at Serv. *Praef.* ad *Aen.* 6 and at 10.467; Sen. *Ep.* 88.5; and Macrob. *In Somn.* 1.9.8: *geminae doctrinae observatione praestiterit et poeticae figmentum et philosophiae veritatem*.

<sup>28</sup> See Norden 1984: 20-3 for an overview of sources in Book 6. For early attempts to record Epicurean readings of local details, see, e.g., Serv. ad 4.210: *latenter secundum Epicureos locutus est*. Servius' commentary on the *Aeneid* contains at least 33 similar notes, often phrased in a manner that implicitly argues against the proposed Epicurean reading, as in the comment ad 4.548: *aut secundum Epicureos, qui stulte solem de atomis dicunt constare et cum die nasci, cum die perire*. Cf. Serv. ad 1.11, 227, 331, 743; 2.405, 515, 646, 689; 3.138, 587; 4.34, 210, 379, 548, 654; 5.81, 527; 6.11, 127, 239, 264, 272, 376, 596, 885; 7.4, 37; 8.187; 10.467, 487; 12.87, 794. Of modern attempts at a universal Epicurean reading of the *Aeneid*, see discussion above of Adler (2003) and Mellinshoff-Bourgerie (1990).

realm of natural philosophy, much has been written on Virgil's allegorizing of Epicurean cosmology and physics, with Hardie (1986) providing the most comprehensive study of such material in the *Aeneid*. Much of Hardie's work on 'remythologizing' allusions is essentially allegorical, inasmuch as it demonstrates Virgil's interest in refuting Epicurean cosmology through veiled allusions and through metaphorical language that is suggestive of natural philosophy. Yet while Hardie advances an allegorical interpretation of the *Aeneid*'s narrative as a triumph of order over cosmic and political chaos, he deals only with those instances in which Lucretian details have been recruited to the cause of order in a way that directly contradicts their original intent and meaning. While acknowledging the strength and validity of Hardie's analysis of intertextual moments that invert or displace Epicurean philosophy, I want to supplement that understanding of polemical allusion by also considering allusions to Lucretius in which that philosophical content remains intact and serves as the central focus of the allusive reference.

#### *Static vs. Dynamic Allegory*

I believe that the methodology of 'polemical allusion' is fundamentally correct, and that Virgil's *Aeneid* consistently rejects Epicurean philosophy, both as a model of the universe and as a way of conducting one's life. To the extent that the narrative of the *Aeneid* can be interpreted as an allegory for competing cosmologies, that allegory is utterly opposed to Epicurean atomism. Yet one can think of this allegorical agenda as having two levels, one static and one dynamic, each of which employs Lucretian intertexts in different ways. The remythologizing allusions investigated by Hardie and others are essentially static, in that they presuppose a world of divine intention and order that gives no space to the possibility of an Epicurean understanding of the cosmos. Through the tactics of inversion and remythologizing, atomism is defeated, in a sense, before the poem even begins.

Yet what is missing from these studies is attention to the philosophical allegory as a dynamic process—a story. Against a backdrop of polemical allusions, which firmly establish the world of the *Aeneid* as one in which divine mythological figures direct nature and influence human affairs, Virgil also depicts an ongoing struggle throughout the poem’s narrative, in which the stable cosmology of divine teleology and national purpose must face and overcome various forces of disorder. This struggle can be mapped onto Aeneas’ journey from the ruins of Troy to the settlement of the Trojans in Latium, during which the possibility of cosmic and political anarchy is treated as a real threat, despite oracular assurances of Rome’s glorious fate.<sup>29</sup> I am interested in bridging the gap between Virgil’s static polemical allusions, already well documented, and the more dynamic allegorical narrative just described.

My purpose, therefore, is not to refute Hardie’s thesis of remythologization, but to supplement it by showing how allusive inversion works in concert with other often-overlooked allusions that temporarily import atomism into the poem without displacing it. While advocates of polemical allusion tend to identify all Lucretian allusion as instances of inversion or remythologizing, I think that the picture is more complicated. For instance, there are certain details in the *Aeneid* that seem to demand a didactic or philosophical understanding of the source text (e.g., when Virgil uses the Lucretian didactic tagline *quippe* to conclude a description of stormy weather—see p. 71-2 below), and in such cases one should consider the philosophical background when assessing how the allusion works in the *Aeneid*. But often, the choice of how much or how little of Epicurean philosophy to read into Virgil’s Lucretian intertexts cannot be dictated by anything within the poem itself, but falls to our own subjective considerations of what makes for a stronger, more consistent reading of the poem. In this dissertation, I argue that

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<sup>29</sup> For further discussion of this aspect of dynamic narrative in ancient allegory, see Dawson 1992: 4-5, 11-17. Cf. the idea that even Lucretius’ philosophical epic contains a narrative of sorts, discussed at Gale 2004a: 52-7.

we can achieve a better understanding of allegory in the *Aeneid* by allowing atomism into certain passages of the poem where it has previously been excluded by the scholarly consensus.

Ultimately, this approach will allow readers to synthesize elements of all three interpretive approaches to Lucretian intertextuality in the *Aeneid* outlined above. One way of thinking about this coordination of different intertextual methodologies is through the analogy of a theatrical performance. At the level of style and tone, Lucretian language performs an essential function simply by identifying the genre of the performance. In the same way that playbills, marquees, and the presence of actors on stage tell you that ‘this is theater,’ the ubiquitous presence of Lucretian language in the *Aeneid* indicates in a very basic way that ‘this is an epic poem on a cosmic scale.’ Within this genre, remythologizing allusions of the static Hardian variety construct a sort of backdrop or stage decoration that indicates what sort of world the characters of the drama inhabit—specifically, a stable mythological world in which, contrary to Lucretian teaching, the gods control the universe and direct the affairs of individuals and peoples alike. However, the allegorical drama that takes place on that stage—the narrative of the poem—conveys a dynamic conflict between Order and Disorder. By consistently associating atomic imagery with doubt, hesitation, violence, and disorder, Virgil casts Epicurean physics in the role of an allegorical antagonist, opposed to the representatives of Roman order and progress, which include Aeneas, Augustus, Roman *imperium*, and the Homeric gods, along with various teleological philosophies and Roman religious cults.

Ultimately, I hope to blur some of the sharp lines that separate philosophical and poetic arguments in contemporary literary scholarship, and to push back against the idea that philosophy in Virgil is always subordinated to poetic concerns. By showing the interdependency between philosophical doctrine and poetic context in many of Virgil’s Lucretian borrowings, this

dissertation advances an understanding of philosophy and poetry in the *Aeneid* as being deeply complementary, rather than dichotomous. As Don Fowler has argued in the context of the *De Rerum Natura*, this dichotomy is an artificial one that reflects the purposes and biases of scholars more than poets, and never more so than in the ancient world:<sup>30</sup>

The celebrated opposition between philosophy and poetry in the *De rerum natura* can to an extent be rephrased in terms of an opposition between the differing reading practices of two interpretative communities. The frontier between the ‘philosophical’ and ‘literary’ traditions is not itself, of course, timeless, and how close or distant they are from each other will depend on the nature of the philosophical or literary-critical positions adopted by readers as well as on the general intellectual climate. (Fowler 2000: 138)

If we attend to the moments in the *Aeneid* that engage with philosophy *as philosophy*, then we will discover that the text advances a vision of cosmology and society that thoroughly rejects Epicurean physics in favor of top-down models of order and authority. In the chapter that follows, I begin by tracing the history of atomic physics, in order to better understand the cultural and philosophical sources for Virgil’s tendentious portrayal of atomism. For in light of ancient evidence that Virgil studied under Epicurean philosophers in the Bay of Naples, we must first ask from what sources this anti-atomist orientation stems—since it is conspicuously not that of the Epicureans themselves.

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<sup>30</sup> Compare the similarly perceptive comment by Feeney about the dismissive attitude of earlier religion-studies scholars towards literary evidence in their assessments of Roman practice: “The challenge is to put the right adverb in front of the word ‘literary’: not ‘merely’, but ‘distinctively’” (1998: 41). When considering Lucretian intertexts in the *Aeneid*, one could substitute ‘philosophical’ where Feeney says ‘literary.’

## Chapter 1. CHARACTERIZATIONS OF EPICUREAN ATOMISM

*Tandis que les autres philosophes admirent l'ordre de l'univers au point de ne pouvoir attribuer un si bel arrangement qu'à une intelligence souveraine pleine de sollicitude pour l'homme, le poète épicurien ne voit partout qu'une incurie désordonnée dont il fait un argument contre la croyance à une création divine... Ainsi le désordre règne dans le monde. (Martha 1869: 339-40, 341)*

While the other philosophers so admire the order of the universe that they are unable to attribute such a beautiful arrangement to anything but a sovereign intelligence that cares for humanity, the Epicurean poet everywhere sees nothing but disorderly neglect, from which he argues against belief in a divine creation... And so disorder reigns in the world. (Benjamin-Constant Martha)

Before considering Virgil's deployment of atomic imagery in the *Aeneid*, it will be helpful first to examine how atomism is portrayed across a variety of philosophical texts prior to the time of the poem's composition in the late first century BCE. For, while Lucretius' didactic epic provides virtually all of the intertextual raw material for the allusions to atomism in the *Aeneid*, there existed in Greco-Roman philosophy an opposing tradition of anti-materialist and anti-atomist arguments that deeply influenced Virgil's tendentious reception of Epicurean physics. It is my argument that, although Virgil does not explicitly reference these critiques when alluding to atomism, they nonetheless shaped his use of atomism as a symbol of cosmic and political disorder.<sup>31</sup>

The focus upon explicitly *philosophical* texts in this chapter, as opposed to 'literary' and critical texts, is not incidental. One key point that differentiates Virgil's allegorical engagement with Epicureanism from his engagement with other philosophies is the relative dearth of possible source texts from other genres. While Virgil had access to a vast body of Homeric exegesis that posited Stoic, Pythagorean, Heraclitean, Empedoclean, and various other interpretations of epic

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<sup>31</sup> Cf. Hardie 1986: 235-7, which makes a similar claim about Virgil deriving his polemical attitude toward Lucretius from Lucretius' own tendentious treatment of other philosophers, and therefore, from philosophy more generally.

poetry, there existed no comparable tradition of allegorizing Epicurean literary criticism upon which to draw.<sup>32</sup> Consequently, it is likely that the Epicurean allegorical material in the *Aeneid* is not mediated through a literary-critical or scholiastic tradition, but derives principally from direct engagement with philosophical texts.<sup>33</sup>

In addition, there is a long tradition, attested in a variety of sources since the 30s BCE, connecting Virgil to a circle of Epicurean philosophers in the Bay of Naples, including Philodemus and Siro.<sup>34</sup> According to two poems in the *Appendix Vergiliana* (*Catal.* 5 & 8), Virgil studied philosophy under Siro, and therefore would have enjoyed exposure to a range of philosophical texts, both Epicurean and otherwise.<sup>35</sup> Based on the wide variety of philosophical works attested in the ruins of the Villa dei Papiri at Herculaneum, once a center of Roman Epicurean life on the Bay of Naples and the principal repository for the library of Philodemus, one can reasonably conclude that Virgil read widely in philosophy in much the same way that he did with poetry from diverse genres. Thus an important legacy of Virgil's association with the Greek culture of Naples was not only literary, but philosophical as well.

At the beginning of this chapter, I offer a concise history of ancient atomism, followed by a more exhaustive review of its varying reception, detailing wherever possible the metaphors and

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<sup>32</sup> On this point, see Gale 1994: 26.

<sup>33</sup> An important exception is the comparison between the Phaeacians of Homer's *Odyssey* and Epicureans, detailed at Gordon 2012: 38-46. However, as Gordon acknowledges, the early sources for this comparison are scant, and it is difficult to determine if the Phaeacian allegory arose as an endorsement of Epicurean ideals or as a criticism adopted later under the early empire. For further reading on Virgil's access to the philosophical readings of non-Epicurean schools of philosophy through scholia and commentaries, see Feeney 1991: 34-40, Wlosok (1987/1999), Hardie 1986: 5-32, and Schlunk (1974).

<sup>34</sup> See Armstrong 2004: 1-3. Evidence can be found in the *Catalepton*, Servius' comments on Eclogue 6.31ff. and late-antique Virgilian *Vitae*. Some form of acquaintance between Virgil and Philodemus is confirmed by a fragment of Philodemus (*P. Herc. Paris.* 2, *piece 279 A*), which records Virgil's name alongside that of Plotius and Quintilius Varus; see Gigante 1995: 47 n. 125.

<sup>35</sup> See Verg. *Catal.* 5.8-10 and 8.1-6. The papyri fragments found in the Epicurean library at the Villa dei Papiri in Herculaneum, destroyed in 79 CE by the eruption of Mt. Vesuvius, contain works by non-Epicurean philosophers in addition to those of Epicurus, Philodemus, and other Epicurean writers. See Gigante 1995: 3-4. Although this collection dates a century after Virgil and Philodemus, there are strong reasons for supposing that it contains Philodemus' own library collection as its core. For more on the question of Philodemus' role in the collection of texts at the Villa dei Papiri, see Gigante 1995: 17-28.

analogies used to support or attack pro-atomic arguments. For each philosopher, I consider which arguments, analogies, and images they use to characterize atomism, as well as how such images are deployed and to what purpose.<sup>36</sup> The reason for my focus on metaphorical language is twofold. First, the use of comparison or analogy is a foundational methodology shared by both epic poetry and philosophical discourse in the Greco-Roman tradition, and both of these genres make regular use of explicit comparisons (similes and analogies) as well as implicit ones (metaphors and figurative language). By the same token, much of early Greek philosophy was written in a format and style resembling epic poetry, and subsequent poets and philosophers writing in this tradition regularly adopted images from each other's works. In the later chapters of this dissertation, by continuing to trace the overlap in how epic poetry and philosophy use metaphorical language to discuss cosmology, I hope to resist a persistent tendency in Virgilian scholarship to subordinate philosophical arguments to literary aims, and to show instead the interdependence of philosophical and literary agendas in Virgil's Lucretian borrowings.

By documenting the tendentious metaphors employed by philosophers in the debate about atomism, I hope to show the philosophical precedents for Virgil's own tendentious allegorizing of atomism as a force of disorder, which mirrors a popular strain of anti-materialist thought in Greco-Roman philosophy. While I believe that Virgil was likely familiar with most, if not all, of the texts discussed in this chapter (both Greek and Latin), it is not my goal to prove this familiarity definitively with respect to every author. Indeed, Virgil need not have been familiar with any one particular philosopher to absorb the anti-atomist attitude evident in the *Aeneid*. Rather, by showing the long pedigree of anti-atomist arguments that associate atomic

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<sup>36</sup> I have adapted this approach from Lloyd 2015, Chapter 3: "Analogies, images and models in ethics: some first-order and second-order observations on their use and evaluation in ancient Greece and China" (43-57). Although Lloyd is specifically interested in the use of analogy and metaphor in *ethics*, he touches on a number of cosmological examples as well.

physics with disorder, I mean to show that Virgil might have encountered this attitude from his exposure to any number of popular philosophers, since the anti-atomist position was shared by widely differing sects and individuals.

The second reason for focusing on metaphors is that, in a cosmological context, figurative language reflects implicit assumptions about one's worldview that are often as revealing—if not more—than the formal arguments they accompany. Consciously or not, clusters of related metaphors powerfully influence how one conceptualizes the world, and it is a mistake to entirely separate this type of analogizing from more 'formal' argumentation in philosophy.<sup>37</sup> It is frequently the case in discussions of atomism that the terms of a formal argument are limited in some way by the adoption of a particular analogy or mental image, and so it is worth the effort to investigate those images and probe them for their assumptions. Analogical reasoning is a common tactic in anti-materialist arguments, and in many cases such images or analogies point to deeply held assumptions about the need for some form of authoritative cosmic oversight to ensure purpose and stability in the natural world.

In the sections that follow, I begin by outlining the doctrines of the early atomists, along with two consequential emendations introduced by Epicurus. I then proceed to consider the anti-atomist attitudes of Plato and Aristotle, as well as Cicero, who preserves evidence of how Stoics and Skeptics responded to atomism in the 1<sup>st</sup> century BCE. While the sections on the early atomists, Epicurus, Aristotle, and Cicero largely reiterate the existing scholarly consensus on their philosophical doctrines, in my discussion of Plato's *Timaeus* I propose a novel reading of the dialogue as engaging directly with atomism. Lastly, I discuss Lucretius' embrace of the epic

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<sup>37</sup> The great extent to which our conceptual understanding relies upon metaphorical frameworks is extensively documented and persuasively argued in Lakoff and Johnson (1980). Their paradigmatic example of this tendency, which is relevant to the discussions below of atoms being metaphorically depicted as warlike or violent in Lucretius and Cicero, is the widespread use of the 'argument as war' metaphor in western cultures (3-6).

genre in *De Rerum Natura*, which opened up Epicurean physics to a host of new metaphors and analogies imported from Homer and Ennius. I conclude by arguing that the ideas and metaphors of the various anti-atomist philosophers exerted a powerful influence on Virgil's reception of Lucretius in the *Aeneid*, providing a theoretical framework by which to understand the many allusions to atomism scattered throughout the poem.

### 1.1 EARLY ATOMISM: DEMOCRITEAN ORIGINS AND EPICUREAN CONTRIBUTIONS

Atomism originated with Leucippus and Democritus in the late 5<sup>th</sup> century BCE, emerging from a Greek tradition of natural philosophy that sought to rationally explain the nature of the universe, its composition, and how it functioned.<sup>38</sup> Although direct evidence about atomism from the works of Leucippus and Democritus is extremely limited, later philosophers and doxographers provide abundant testimonies, from which it is possible to outline the major tenets of the system.<sup>39</sup> According to this doxographical tradition, Leucippus invented atomism, which Democritus then systematized into a coherent doctrine built upon a core set of materialist principles: that the universe is composed entirely of atoms and void; that atoms move through the void and come into contact with each other according to universal laws; that natural phenomena, such as birth, death, and cognition, can be explained as mechanistic consequences of atomic motion and collision; and that there exist an infinite number of discrete and perishable worlds within the universe, which is itself eternal in duration and infinite in size.<sup>40</sup> In this original formulation of atomism, Democritus explained all causation as a result of the

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<sup>38</sup> See Taylor 1999: 158-9. For discussion of probable dates for Democritus, see Sedley 2007: 134-5.

<sup>39</sup> See Taylor 1999: xi: "the evidence for the atomists presents the peculiar feature that, while the number of purported fragments is large, very few fragments deal with the atomists' central doctrines, for which we are almost wholly reliant on doxographical evidence."

<sup>40</sup> For detailed accounts of the development of early atomism, along with explanations of its major doctrines, see Taylor (1999) and Bailey (1928).

mechanical interactions between atoms governed by immutable laws of motion, thus yielding a thoroughly deterministic and materialist cosmology.<sup>41</sup>

While Leucippus and Democritus were evidently motivated by a desire to respond to the daunting arguments for monism articulated by Parmenides in the early 5<sup>th</sup> century, their mechanistic theory also represented a striking conceptual innovation by formulating the first coherent challenge to the notion of divine intelligence as a causal principle in the material world. As David Sedley points out, divine causation was widely assumed in pre-atomic philosophy, and philosophers from Anaxagoras to Empedocles either asserted or assumed divine intelligence (*νοῦς*) as an organizing principle of the world.<sup>42</sup> Even early material monists like Thales, Anaximander, and Anaximenes appear to have assumed the agency of some pantheistic divine power or intellect in the natural world, although explanations of that agency could vary substantially from philosopher to philosopher.<sup>43</sup>

In contrast, atomism was the first wholly materialist explanation of the universe, subordinating the existence and action of divine entities to the same material basis of atoms and void shared by the rest of the universe.<sup>44</sup> While Democritus did not deny the existence of gods, his mechanical theory of atomic motion obviated the need to appeal to them as the cause of natural phenomena. However, even within this materialist framework, Democritus allowed the

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<sup>41</sup> See Taylor 1999: 188-95.

<sup>42</sup> Sedley 2007: 2 “That the world is governed by a divine power is pervasive assumption of Presocratic thought.” For a detailed defense of this position by Sedley, see chapters 1 on Anaxagoras (1-30) and 2 on Empedocles (31-74), as well as the section on Diogenes of Apollonia (75-8).

<sup>43</sup> So Sedley 2007: 6-7, which states: “most other early thinkers tended to characterize the world’s underlying matter as if it were itself divine, if not indeed identifiable with god.” In a footnote to that passage (fn 19), Sedley collects evidence of this attitude regarding Thales (Arist. *De an.* 411a7-8), Anaximander (Arist. *Ph.* 203b11-15), and Anaximenes (Aetius 1.7.13; Cic. *Nat. D.* 1.10.26).

<sup>44</sup> Sedley 2007: 133-4. Taylor 1999: 188-95 summarizes Democritus’ positions on determinism and the denial of providence.

gods some influence in the world, attributing prophetic abilities to them.<sup>45</sup> Later, when Epicurus modified Democritus' doctrines, he took this materialist theology to its logical conclusion and entirely excluded gods from participation in the human world—a shift that led certain detractors to accuse him of hidden or de facto atheism.<sup>46</sup>

In formulating his own version of atomism about a century later, Epicurus hewed closely to the core tenets of Democritean atomism that denied divine oversight of the world, while introducing a few notable changes, including finite variability in the shapes of atoms, and the spontaneous atomic swerve.<sup>47</sup> The first innovation, which limited the number of possible atomic shapes, served to rescue atomism from the extreme unlikelihood of a complex, orderly world forming from the arbitrary collisions of differently shaped particles. According to Democritus, atoms existed in an infinite variety of shapes, which, colliding and re-colliding over an infinite span of time, led to the formation and dissolution of an infinite variety of worlds, including our own.<sup>48</sup> However, as Sedley points out, this infinite variety of shapes does not *guarantee* that our world, or any world like ours, would form, nor does it even ensure its likelihood. On the contrary, it remains overwhelmingly unlikely that seemingly ordered worlds would arise from a chaotic maelstrom of wandering atoms.<sup>49</sup> While the fortuitous formation of our world along such lines is still technically possible, its improbability considerably diminishes the attraction of the Democritean model.

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<sup>45</sup> Cicero, Plutarch, and Sextus Empiricus all report that Democritus conceived of the gods as atomic *eidola*, and that these *eidola* could be harmful or beneficial to humans, although there is disagreement about whether these effects were the natural effects of atomic interactions or of the intentions of the gods themselves. For sources and further discussion, see Taylor 1999: 211-16.

<sup>46</sup> See Cic. *Nat. D.* 2.30.76; Plut. *Adv. Col.* 1119e-f, and *Non posse* 1101b.

<sup>47</sup> See Taylor 1999: 159-60. See also the section titled “Democritus and the Epicurean Tradition” for a fuller collection of relevant testimonia about continuity and change in Epicurus' reception of Democritus (Taylor 1999: 150-6).

<sup>48</sup> On the infinite variety of shapes in Democritean atomism, see Arist. *Gen. corr.* 315b6-15; *Simpl. in Phys.* 28.4-27. On the infinity of worlds, see *Simpl. in Phys.* 1121.5-9; Philoponus *in Arist. Phys.* 405.23-7. These passages, along with further testimonia, can be found in English translation in Taylor 1999: 69-90, 94-8.

<sup>49</sup> For a fuller treatment of the statistical basis of this unlikelihood, see Sedley 2007: 160-61.

In response to this problem, Epicurus abandoned the infinite variety of atomic shapes, instead positing a vast, but ultimately finite, number of variations.<sup>50</sup> As a consequence of this shift, Epicurus strengthened the argument that all possible worlds would eventually form by atomic collision, provided that such collisions operated over an infinite span of time. If one accepts the premise of an atomic universe, then Epicurus, by bringing an infinite span of time to bear on a large—but still finite—set of atomic variations, secured not just the likelihood, but also the inevitability of our world forming on a purely fortuitous, mechanical basis.<sup>51</sup>

By making these small yet consequential changes to the atomic theory, Epicurus was responding primarily to skeptics who doubted the possibility or probability of organized and purposive structures in our world occurring by chance collisions. As the sections below on the later reception of atomism demonstrate, such doubts about the compatibility of atomic physics with cosmic order loom large in critiques of Epicureanism. Indeed, the effort devoted by Epicurus to anticipating or refuting those criticisms bears witness to the centrality of randomness and chance in the larger debate about materialism and divine intelligence in the natural world.<sup>52</sup> However, Epicurus' emendations left the issue far from settled, and while the shift to a finite number of atomic shapes effectively defended Epicurean physics against the impossibility of atomic collisions producing our structured world, criticisms about the implausibility of that order arising from random collisions continued to be a centerpiece of anti-atomist arguments for centuries.

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<sup>50</sup> See Epicurus *Ep. Hdt.* 42.10-12: καὶ καθ' ἐκάστην δὲ σχημάτισιν ἀπλῶς ἄπειροι εἰσιν αἱ ὁμοίαι, ταῖς δὲ διαφοραῖς οὐχ ἀπλῶς ἄπειροι ἀλλὰ μόνον ἀπερίληπτοι. For the technical arguments underlying this claim, which rely upon the assumption of a mathematically indivisible smallest magnitude (τὸ ἐλάχιστον), see Long and Sedley 1987: 39-44. For an account of how this change responds to certain Aristotelian critiques of Democritean atoms, see Furley 1967: 111-29.

<sup>51</sup> See Sedley 2007: 161-6, which explains the probabilistic consequences of Epicurus' decision to limit the variety of atomic shapes.

<sup>52</sup> A point stressed throughout Sedley 2007, particularly in the chapter title 'The Atomists' (133-6), which investigates their conflict with philosophers who posited a divine creation or explicitly teleological cosmologies.

The second major change by Epicurus, which had a lasting impact on the reception of atomism as a cosmology of illogicality and disorder, was the introduction of the atomic ‘swerve’ (παρέγκλισις or *clinamen*), an occasional spontaneous alteration of an atom’s trajectory by the smallest possible magnitude.<sup>53</sup> Although no explanations of the swerve in Epicurus’ own words remain, it is one of the most widely reported—and criticized—features of his philosophy.<sup>54</sup> According to Lucretius (2.251-93), the swerve was supposed to allow for the exercise of free will, and a passage by Diogenes of Oenanda shows that Epicurus formulated the idea specifically as a response to the strict determinism of Democritean atomism.<sup>55</sup> In practice, however, this innovation to the mechanics of atomic motion did little to sway skeptics, instead provoking some of the harshest criticisms of Epicurean physics in the ancient world. Above all, opponents of atomism found the swerve problematic because it lacked any discernible cause, thus violating one of the principal tenets of Epicurean physics that ‘nothing comes from nothing’ (*nullam rem e nihilo gigni divinitus umquam*, Lucr. 1.150).<sup>56</sup> In the eyes of detractors, Epicurus’ swerve rescued atomism from one extreme of determinism, only to plunge it into the opposite extreme of illogical randomness and caprice.<sup>57</sup>

Epicurus refined Democritus’ atomic theory in other minor respects, but it was primarily his explanation of the way seemingly purposive worlds form through fortuitous atomic

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<sup>53</sup> Evidence that the swerve was thought to move only one ‘minimum’ is found in Lucr. 2.244, Phld. *de Signis* 36.54.12-13 (p. 79 in De Lacy and De Lacy (1978)); Cic. *Fat.* 22. See Long and Sedley 1987: 52.

<sup>54</sup> So Bailey 1928: 317 states: “The most scathing criticism has been directed against this notion of the ‘tiny swerve’ both by ancient and by modern writers.” Sources for the swerve include Lucr. 2.216-93; Cic. *Fat.* 21-5; *Fin.* 1.6.19; Plut. *Mor.* 964c-d; and Diogenes of Oenanda 32.1.14-3.14. For commentary, see Long and Sedley: 1987: 52, 107-12.

<sup>55</sup> Diogenes of Oenanda 32.1.14-3.14.

<sup>56</sup> See Bailey 1928: 317: “This is indeed the line of attack which has been most usually adopted: this ‘swerve’ of the atoms is a contradiction of the ‘laws of nature’ (*foedera naturai*) on which Epicurus’ system is based: it is a breach of his own first principle that ‘nothing is created out of nothing,’ for it is a force absolutely without a cause.”

<sup>57</sup> For more on this criticism, see the section below titled “Stoics and Skeptics: the Ciceronian Evidence.” Cicero highlights this shortcoming in a number of his dialogues: *Nat. D.* 1.25.69-70; *Fat.* 22-3, 46-8; and *Fin.* 1.6.19-20, even referring to the swerve once as a “childish fiction” of Epicurus’ (*res ficta pueriliter*, *Fin.* 1.6.19).

collisions, coupled with his insistence upon the spontaneous swerve, that provoked the greatest opposition to Epicurean physics. It is equally important to note that, in arguing for these changes, Epicurus evinced little interest in figurative language, in stark contrast to later critics who frequently used ironic or tendentious metaphors to press their point against atomism. On the contrary, Epicurus was famously suspicious of poetry and rhetorical adornment, and his extant writings bear little evidence of colorful metaphorical language.<sup>58</sup>

In fact, until Lucretius' *De Rerum Natura*, Epicureans writing after the death of Epicurus seem to have closely followed their founder in eschewing figurative language to describe natural philosophy. Although Usener's collection of *Epicurea* preserves hundreds of fragments that attest dozens of prose works by later Greek Epicurean writers, the extant descriptions of atomism remain quite conservative in their use of metaphor and personification.<sup>59</sup> Among the early Epicureans, this caution makes sense both for doctrinal and for methodological reasons. First of all, as a non-teleological thinker who denied that the gods took an active role in the human world, Epicurus was keen to separate the notion of intelligence from the primary elements of atoms and void, preferring to explain consciousness and intention as secondary qualities arising from atomic collisions in the soul. Early followers of Epicurus may have been reluctant to

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<sup>58</sup> See Diog Laert. 10.121; Epicurus fr. 33 to Pythocles, and fr. 24 to Apelles. For the scarcity of political metaphors in Epicurus' writing, which were widespread among the pre-Socratics, see Reinhardt 2005: 171. For a similar lack of military metaphors in Epicurus, see Gale 2000: 232, especially fn. 2. For a general discussion of the available evidence concerning Epicurus' attitude toward poetry, see Clay 1995: 3-14. While some of the vocabulary that Epicurus uses to describe atomic impacts can connote human violence (such as ἐκθλίβω), he largely avoids similes and extended metaphors.

<sup>59</sup> Although the extant fragments skew overwhelmingly toward discussions of ethics, Usener still collects over 90 pages of fragments and doxographical commentary concerning Epicurean atomism under the heading of '*Physica*' (1887: 191-262). Of these varied sources, many of which date from much later periods, the direct quotations and paraphrases of pre-Lucretian Epicurean writers uniformly attest a striking absence of extended metaphor or allegory. A major problem, of course, is the scarcity of available evidence. Among Latin-speaking Epicureans (with the obvious exception of Lucretius), the record is even sparser: although Cicero states that Italian Epicureans were some of the earliest figures to write philosophy in Latin, we are left with the names of only a few Latin Epicurean authors, Amafinius, Rabirius (Cic. *Acad. Post.* 2.6; *Tusc.* 4.3.6-7), and Catius (*Fam.* 15.16.1), along with 12 lines from a poem titled *De morte* by the Augustan-era Epicurean poet Varius, which does not deal explicitly with atoms (Hollis 2007: 254-5, 263-73).

compare atoms to people in order to avoid the danger of others improperly projecting human traits, like intelligence or emotion, back upon the unfeeling atoms and thereby muddling the distinction between primary and secondary qualities.<sup>60</sup>

A second factor that likely influenced the early Epicurean tendency to avoid figurative language in discussions of physics is that, for the Epicureans, analogy and comparison were fundamental methodologies for philosophical investigation and, as such, were subject to strict standards of rigor. Epicurean physics and epistemology essentially posit two worlds, a sensory world encountered through the secondary qualities that arise from atomic collisions, and the primary world of atoms and void, which can only be rationally apprehended. As Andrew Pyle explains, this division assigns immense importance to the correct use of analogy as a means for grasping the truth about the atomic world:

Enquiry about the nature of this second ‘world’ must pursue an *analogical* method: we have no choice but to characterise it in terms of concepts derived from the more familiar world of the senses. A judicious and careful use of analogy is therefore essential to Epicurean scientific method: one cannot begin to understand Lucretius in particular until one has grasped the rôle played by analogical reasoning in *De Rerum Natura*. (Pyle 1997: 129)

Of course, any conclusions about early Epicurean tendencies must be tempered by the paucity of extant texts, but the ‘judicious and careful use of analogy,’ as Pyle puts it, provides a plausible basis for Epicurean conservatism in the realm of metaphor, particularly when describing the rationally apprehended world of atoms and void.

Even in the late-Hellenistic works of Philodemus, who wrote his own poetry and sought to expand Epicurean philosophy into the realm of aesthetics, we find the same semantic caution applied to the use of figurative language in philosophical prose. Unfortunately, due to the lacunose state of the evidence and to Philodemus’ own apparent preference for subjects other

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<sup>60</sup> Cf. Philodemus’ criticism of the Stoics, discussed below.

than physics, we possess few descriptions of atomic motion in the many fragments of Philodemus from Herculaneum.<sup>61</sup> However, as noted above, the few descriptions of atoms that we do possess exhibit no figurative language, let alone the type of colorful metaphors that one finds regularly in Lucretius, or in the anti-atomist passages of Cicero. Thus, when Philodemus touches upon the atomic composition of divine bodies in the doxographical section of *De pietate* (esp. cols. 1-18), or briefly mentions the swerve at *De signis* 36.54.7-17, he does so in a dry, technical fashion, often paraphrasing Epicurus or excerpting from earlier works.<sup>62</sup>

While Philodemus' fragmentary texts generally reveal a strong bias toward ethics and aesthetics, there are a few brief discussions of word usage from which it is possible to better understand the philosopher's attitude toward metaphor. First, in a passage of *De oeconomia*, Philodemus sharply criticizes Socrates in Xenophon's *Oeconomicus* for twisting the meanings of words beyond their customary usage, especially in extended metaphors (e.g., when he portrays property owners as 'slaves' to their vices, which are in turn 'masters' over the owners).<sup>63</sup> As Voula Tsouna points out in a comment on this passage, Philodemus may have inherited this wariness about stretching the meanings of words beyond their ordinary usage from his Epicurean teacher, Zeno of Sidon, who had similar concerns about multivalent language.<sup>64</sup>

A similarly illuminating example of Philodemus' cautious attitude toward metaphorical analogy is preserved in *De signis*, a treatise that deals in part with logical inference. There,

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<sup>61</sup> For Philodemus' focus on ethics and aesthetics, see Tsouna 2013: xi-xii. The full list of titles of Philodemus' philosophical works reveals a strong preference for topics other than physics; for which, see the introduction to Delattre 2007: xlvi-ii.

<sup>62</sup> See Obbink 1996: 281-3.

<sup>63</sup> *De oec.* I.19-21; IV.1-16, 29-34; V.2-4; VI.16-18.

<sup>64</sup> For Zeno's concern with the ambiguity of words, see Tsouna 2013: 86, n. 19. For a similar discussion critiquing the Stoics' applications of the term 'softness' to physical bodies, see Philodemus *De mus.* IV col. 61 (=Delattre 2007: 122).

Philodemus records a Stoic critique of Epicurean physics presented in the form of two syllogisms:<sup>65</sup>

[Ἔτι δὲ κατὰ τὴν ὁμοιότητα μεταβατέον·] ἐπεὶ πάντα τὰ παρ' ἡμῖν σώματα χροῶν ἔχει, σώματα δ' εἰσὶ καὶ αἱ [ἄτ]ομοι, κάκειναι χροῶν ἔχουσιν· ἐπεὶ πάντα τὰ [παρ' ἡ]μῖν σώματα φθαρτὰ ἔτ['] ἐστίν, σώμ]ατα δ' εἰσὶ καὶ αἱ ἄτομοι, φθαρτὰς εἶναι ῥητέον {α} καὶ τὰ[ς ἄ]τόμο[υ]ς. (*De sign.* 5.7.1-7)

[7] [The Stoics suppose that one ought to infer by analogy as follows:]  
 ‘Since all bodies in our experience have color,  
 and atoms too are bodies,  
 Atoms too have color;  
 Since all bodies in our experience are destructible,  
 and atoms too are bodies,  
 Atoms must be said to be destructible.’

When Philodemus rebuts this argument in a later section, he attributes the error of the Stoics to their sloppy use of analogy, by which they apply irrelevant qualities of the perceptible living ‘bodies’ of everyday experience to imperceptible atomic ones:

Οὐχ ὕγ[ι]ης δὲ λόγος ἐστὶν οὐδ' ὁ παρακε[ί]μενος. οὐ γὰρ εἰ ἐπὶ τινῶν ἰκν[ού]μενός ἐστ[ι]ν ὁ κατὰ τὴν ὁμο[ι]ότητα τρόπος περιοδευόντ[ων] ἡμῶν τῶι ἐπιλογισμῶι δεό[ν]τω[ς τ]ὰς ὁμοιότητας, διὰ τοῦ[το] καὶ ἀφ' ὧν ἔτυχε κοινοτήτω[ν] σημειωτέον περὶ ὧν ἔτυχε[ν]. εὐθέως γὰρ [τ]ὰ παρ' ἡμῖν σώματα [ο]ὐχ ἢ σώματ' ἐστὶν φθαρτὰ ἐστὶν ἀλλ' ἢ φύσεως ἠναντιωμένης τῇ σωματικῇ καὶ εἰκτικῇ μετείληφεν. ὁμοίως δὲ χρώματ' ἔχει τὰ παρ' ἡμῖν σώματα οὐχ ἢ σώματ' ἐστίν. (*De sign.* 17.25.28-18.25.5)

[25] [This] argument also is not valid. It is not the case that if the method of analogy reaches to some things when by empirical inquiry we make a comprehensive search for the similarities in the way that we should, for that reason inference should be made from any chance common qualities about any chance objects. The simple truth is that bodies in our experience are destructible not insofar as they are bodies, but insofar as they partake of a nature opposed to the corporeal and non-resistant. Similarly, bodies in our experience have color, but not insofar as they are bodies.

Like the criticism about Socrates in Xenophon's *Oeconomicus*, Philodemus' complaint against the Stoics here rests upon their improper extension of attributes in a metaphorical comparison.<sup>66</sup>

<sup>65</sup> Translations of *De Signis* are taken from De Lacy and De Lacy 1978. Cicero records a similar argument against the Epicureans' use of analogy at *Nat. D.* 1.35.97-8, spoken by Cotta.

This skepticism towards metaphor is entirely consistent with the available evidence for Epicurus' own style of philosophical writing, and with the doctrinal and methodological considerations concerning analogy mentioned above. Although any effort to generalize about Epicureanism prior to Lucretius is hampered by the loss of the great majority of texts from the Hellenistic period, all available evidence supports the idea that early Epicureans made limited use of figurative language and metaphors in explaining atomic physics, and that it was not until Lucretius that such comparisons were used in any systematic fashion.

To conclude the section on the development of early atomism and Epicurean physics, I offer three observations that seem to be of the greatest relevance in explaining the subsequent reception of atomism: 1) Aside from Epicurus' addition of the swerve and of atomic minima, Epicurean reception of Democritean atomism is doctrinally conservative, and thus subject to many of the same theoretical criticisms. 2) The greatest points of contention concerning atomism arise from its non-teleological cosmology and from Epicurus' doctrine of the swerve. 3) Early Epicureans are cautious in their use of figurative language to describe atomism, and make infrequent use of metaphors to describe atoms. Based on this last observation, it seems safe to say that Virgil, whose allusions to atomism in the *Aeneid* are thoroughly metaphorical (e.g. conflating the motion of soldiers on the battlefield with the collisions of atoms), did not look to the pre-Lucretian Epicureans for his poetic interpretation of atomism. At the same time, however, Virgil did not simply glean his attitude toward atomic metaphor directly from Lucretius, whose metaphorical usage favors positive representations of atoms as political actors.<sup>67</sup> Instead, as I demonstrate in the following sections of this chapter, Virgil's tendentious

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<sup>66</sup> Cf. Lucr. 1.1021-8, where Lucretius cautions against imagining some intelligent designer (by means of *consilio* or *sagaci mente*) at work in the atomic universe. Fowler 1989: 146-7 interprets this passage a warning not to take the social metaphors about atomic *concilia* and *foedera* too literally.

<sup>67</sup> See the section on Lucretius, below (p. 58ff.)

use of atomic imagery is best understood from the critical viewpoint of other, non-Epicurean sources, which provide a wealth of arguments and metaphors equating atomism with disorder, confusion, and violence. In order to better understand the broader intellectual context for Virgil's attitude toward atomism, I now consider the extant writings of the major philosophers in antiquity that opposed atomism, favoring more teleological explanations of the cosmos.

## 1.2 PLATO

The written record of atomism's polemical reception begins with the *Timaeus*, an influential Platonic dialogue written by Plato in the mid 4<sup>th</sup> century about the nature and origins of the cosmos.<sup>68</sup> As a teleological thinker who favored the rational over the sensory, Plato thoroughly opposed all forms of materialism, an attitude that informs virtually every dialogue and constitutes an essential feature of what many scholars understand to be Plato's own philosophy. However, when attempting to assess Plato's response to early atomism, we are faced with a quandary: in contrast to Plato's penchant for citing and rebutting specific philosophers and schools by name, not once in all of his extant writings does he directly address Democritus or atomism—a surprising omission given the profound impact that Democritus apparently had upon philosophy of the late 5<sup>th</sup> century.<sup>69</sup> Yet despite this omission, there is still ample evidence

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<sup>68</sup> For the profound influence of this dialogue upon later cosmology, especially among the Stoics, see Sedley 2007: 96, 205-6, & 209 (esp. fn. 12).

<sup>69</sup> Diogenes Laertius notes the omission, which he attributes to Plato's reluctance to disagree with such an eminent philosopher: Ἀριστόξενος δ' ἐν τοῖς ἱστορικοῖς ὑπομνήμασι φησι Πλάτωνα θελήσει συμφλέξει τὰ Δημοκρίτου συγγράμματα, ὅποσα ἠδυνήθη συναγαγεῖν, Ἀμύκλαν δὲ καὶ Κλεινίαν τοὺς Πυθαγορικοὺς κωλύσαι αὐτόν, ὡς οὐδὲν ὄφελος· παρὰ πολλοῖς γὰρ εἶναι ἤδη τὰ βιβλία. καὶ δῆλον δέ· πάντων γὰρ σχεδὸν τῶν ἀρχαίων μεμνημένος ὁ Πλάτων οὐδαμοῦ Δημοκρίτου διαμνημονεύει, ἀλλ' οὐδ' ἐνθ' ἀντειπεῖν τι αὐτῷ δεοί, δῆλον ὅτι εἰδῶς ὡς πρὸς τὸν ἄριστον αὐτῷ τῶν φιλοσόφων (ὁ ἀγὼν) ἔσοιτο ("Aristoxenus in his historical writings says that Plato wished to burn all the writings of Democritus that he could collect, but that Amyclas and Clinias the Pythagoreans prevented him, saying that there was no advantage in doing so, for the books were already widely circulated. And there is clear evidence for this in the fact that Plato, who mentions almost all the early philosophers, never once alludes to Democritus, not even where it would be necessary to controvert him, obviously because he knew that he would have to match

outside of Plato's dialogues that suggests his familiarity with the work of Democritus, and many of Plato's general critiques of non-teleological materialism can be interpreted as responding to atomism, even when they do not specifically mention Democritus, Leucippus, or atoms.<sup>70</sup> In the *Timaeus* in particular, it is my contention that Plato constructs the scenario of what a fully materialist cosmology would look like by evoking Democritean atomism. By using atomism as the paradigm for this state of materialist anarchy, Plato laid the groundwork for subsequent characterizations of atomism as inherently chaotic and disorderly.<sup>71</sup>

The main witness for Plato's characterization of atomism occurs in a section of the *Timaeus* in which the titular character speculates about the state of the universe before the divine creation (*Tim.* 52d-53b), when some form of matter existed within the confines of a cosmic Receptacle (δεξαμενή), from which geometrically balanced elements arose at a later time. As with so much else in the *Timaeus*, interpretations of this passage vary widely, and while many perceive it as depicting the actual condition of matter prior to a chronologically discrete moment of creation, Proclus believed that it does not refer to a real period of time that actually existed, but instead functions only as a counterfactual description of what the world *would be* like if god were absent (which he never is).<sup>72</sup> Yet despite disagreements over the thorny issue of chronology

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himself against the prince of philosophers." Diog. Laert. 9.40; translation adapted from Hicks). Setting aside questions about the source or likelihood of this anecdote, the fact that Diogenes feels he must account for Plato's lack of engagement with Democritus is telling, as is his (or Aristoxenus') assumption that Plato must have been acquainted with Democritus' writings.

<sup>70</sup> For a survey of possible points of engagement with Democritus in the writings of Plato, as well as all ancient testimony about their relationship, see Ferwerda 1972: 359: "There is no certain indication that Plato knew Democritus or that he used or combated his ideas in his dialogues. There are however so many texts, especially in the later dialogues, which could refer to atomist theories, that acquaintance with Democritus' books must be deemed very likely."

<sup>71</sup> As subsequent citations of existing scholarship will make clear, my argument here (both philosophical and historiographical) goes against the current consensus concerning Plato's *Timaeus*, which generally rejects the idea of specific engagement with atomism in the dialogue.

<sup>72</sup> According to Sedley 2007: 104-5, most ancient philosophers in the Hellenistic period favored a literally chronological reading of *Tim.* 52d-53b and the subsequent creation story (cf. Sorabji 1983: 270-1, 274). For the opposing view, see Procl. *In Ti.* 2.382.25-34 (commenting on *Tim.* 30a3-6). See also Broadie 2012: 245-6 for a

in the *Timaeus*, commentators broadly agree that Plato’s description of the Receptacle, whether literal or allegorical, is meant to provide an image of how matter behaves in the absence of divine oversight, or how secondary material causes, gathered under the banner of Necessity (ἀνάγκη), function in the absence of primary divine causation (νοῦς).<sup>73</sup>

According to the pre-cosmic scenario envisioned by Timaeus, the four material elements, fire, water, earth, and air, initially existed as unbalanced proto-versions<sup>74</sup> of themselves, haphazardly shifting about in a state of disorder like grains tossed in a winnowing basket:<sup>75</sup>

οὗτος μὲν οὖν δὴ παρὰ τῆς ἐμῆς ψήφου λογισθεὶς ἐν κεφαλαίῳ δεδόσθω λόγος, ὃν τε καὶ χώραν καὶ γένεσιν εἶναι, τρία τριχῆ, καὶ πρὶν οὐρανὸν γενέσθαι: τὴν δὲ δὴ γενέσεως τιθήνην ὑγραινόμενην καὶ πυρρουμενὴν καὶ τὰς γῆς τε καὶ ἀέρος μορφὰς δεχομένην, καὶ ὅσα ἄλλα τούτοις πάθη συνέπεται [52ε] πάσχουσαν, παντοδαπὴν μὲν ἰδεῖν φαίνεσθαι, διὰ δὲ τὸ μήθ’ ὁμοίων δυνάμεων μήτε ἰσορρόπων ἐμπίπλασθαι κατ’ οὐδὲν αὐτῆς ἰσορροπεῖν, ἀλλ’ ἀνωμάλως πάντη ταλαντούμενην σειέσθαι μὲν ὑπ’ ἐκείνων αὐτήν, κινουμένην δ’ αὖ πάλιν ἐκεῖνα σειεῖν: τὰ δὲ κινούμενα ἄλλα ἄλλοσε ἀεὶ φέρεσθαι διακρινόμενα, ὥσπερ τὰ ὑπὸ τῶν πλοκάνων τε καὶ ὀργάνων τῶν περὶ τὴν τοῦ σίτου κάθαρσιν σειόμενα καὶ [53α] ἀνικνόμενα τὰ μὲν πυκνὰ καὶ βαρέα ἄλλη, τὰ δὲ ματὰ καὶ κοῦφα εἰς ἑτέραν ἴζει φερόμενα ἔδραν: τότε οὕτω τὰ τέτταρα γένη σειόμενα ὑπὸ τῆς δεξαμενῆς, κινουμένης αὐτῆς οἷον ὀργάνου σεισμὸν παρέχοντος, τὰ μὲν ἀνομοιότατα πλεῖστον αὐτὰ ἀφ’ αὐτῶν ὀρίζειν, τὰ δὲ ὁμοιότατα μάλιστα εἰς ταῦτόν συνωθεῖν, διὸ δὴ καὶ χώραν ταῦτα ἄλλα ἄλλην ἴσχειν, πρὶν καὶ τὸ πᾶν ἐξ αὐτῶν διακοσμηθὲν γενέσθαι. καὶ τὸ μὲν δὴ πρὸ τούτου πάντα ταῦτ’ εἶχεν ἀλόγως καὶ ἀμέτρως: [53β] ὅτε δ’ ἐπεχειρεῖτο κοσμεῖσθαι τὸ πᾶν πῦρ πρῶτον καὶ ὕδωρ καὶ γῆν καὶ ἀέρα, ἴχνη μὲν ἔχοντα αὐτῶν ἄττα, παντάπασί γε μὴν διακείμενα ὥσπερ εἰκὸς ἔχειν ἅπαν ὅταν ἀπῆ τινοσ θεός. (*Tim.* 52d-53b)

Let this, then, be given as the tale summed according to my judgment: that there are Being, Space, Becoming—three distinct things—even before the Heaven came into being. Now the nurse of Becoming, being made watery and fiery and

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discussion of the Aristotelian evidence concerning the historicity of the *Timaeus*’ cosmogony, along with Baltes 1976: 5-22.

<sup>73</sup> See Broadie 2012: 242, who sidesteps the issue of literalism in summarizing the significance of the Receptacle to the larger teleological agenda of Plato’s text: “The Receptacle and its contents are whatever they need to be, in order to ensure that the elements are free of any metaphysically primordial self-sufficient agenda that could interfere with their subservience to the Intelligence that made the cosmos.” For more on the hierarchical relationship between divine and ‘necessary’ or material causation in the *Timaeus*, see Ruben 2016: 207 (esp. n.182)

<sup>74</sup> There is also considerable disagreement among commentators as to the precise status and materiality of these unbalanced proto-elements, which are said vaguely to have “some vestiges of their own nature” (ἴχνη μὲν ἔχοντα αὐτῶν ἄττα, *Tim.* 53b). For more details, see the discussion below.

<sup>75</sup> Translation adapted from Cornford 1937: 197-8.

receiving the characters of earth and air, and qualified by all the other affections that go with these, had every [52e] sort of diverse appearance to the sight; but because it was filled with powers that were neither alike nor evenly balanced, there was no equipoise in any region of it; but it was everywhere swayed unevenly and shaken by these things, and by its motion shook them in turn. And they, being thus moved, were perpetually being separated and carried in different directions; **just as when things are shaken and winnowed by means of winnowing-baskets and other instruments for [53a] cleaning corn, the dense and heavy things go one way, while the rare and light are carried to another place and settle there.** In the same way at that time the four kinds were shaken by the Receptacle, **which itself was in motion like an instrument for shaking,** and it separated the most unlike kinds farthest apart from one another, and thrust the most alike closest together; whereby the different kinds came to have different regions, even before the ordered whole consisting of them came to be. Before that, all these [53b] kinds were without proportion or measure. Fire, water, earth, and air possessed indeed some vestiges of their own nature, but were altogether in such a condition as we should expect for anything when deity is absent from it.

While the rest of the dialogue focuses on demonstrating the positive role of divine intelligence in structuring the physical world, here Timaeus briefly explores the inverse notion that matter is fundamentally chaotic (πάντα ταῦτ' εἶχεν ἀλόγως καὶ ἀμέτρως) in the absence of god (ὅταν ἀπῆτινος θεός). Yet even in this state of chaos, the proto-elements do not simply move capriciously in all directions; rather, they sort themselves according to the mechanical principle that like qualities attract, as illustrated by the simile of the winnowing basket.<sup>76</sup> So, although the proto-elements lack equilibrium and cannot form greater purposive structures, they still obey certain local chains of cause and effect.

The idea that the material elements in this pre-creation state move randomly while remaining subject to deterministic mechanical principles is further supported by Plato's peculiar classification of necessity (ἀνάγκη) earlier in the dialogue as the "wandering cause" (ἡ πλανωμένη αἰτία, *Tim.* 48a). Modern scholars generally agree that this term refers to the

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<sup>76</sup> For conflicting interpretations of this simile, see Taylor 1928: 351ff; Cornford 1937: 202; and Pyle 1997: 147-8.

purposelessness of matter when subject to cause and effect in the absence of divine direction, but as Johansen explains, the idea of ‘wandering’ is even more specific in its reference:<sup>77</sup>

One implication of the Greek verb *planōmai*, as of the English ‘to wander’, is to be aimless. In other words, the wandering cause wanders in that it is not directed towards the aims set by the intelligent cause. However, a cause may be wandering in this sense whilst still necessitating its effects. In other words, a wandering cause may very well be deterministic. The key point in so far as the cause is called wandering is that it is not teleological. (2004: 93)

As Johansen’s distinction makes clear, even in the absence of divine intelligence matter would continue to move according to certain deterministic physical laws. The real problem with the purely materialist scenario envisioned at *Tim.* 52d-53b is that, for Plato, mechanical principles alone cannot account for levels of complexity or balance in the natural world beyond the simple sorting of like by like, because such complexity requires divine intelligence.<sup>78</sup>

In order to fully appreciate the polemical nature of *Tim.* 52d-53b, it is essential to recognize that Plato constructs this negative vision of materialism in distinctly Democritean (and perhaps Leucippean) terms.<sup>79</sup> To begin, Democritus, as mentioned above, conceived of the cosmos as the product of deterministic, mechanical interactions between particles of matter, and so his worldview provides a plausible analogue to the conditions described in *Tim.* 52d-53b, where god is absent and matter (or some proto-version of it) moves solely at the whim of

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<sup>77</sup> Johansen 2004: 93. See also Ruben 2016: 206; Sedley 2007: 118; Taylor 1928: 299-303; and Cornford 1937: 163-4, all of whom refer to the mechanism and contingency of strictly material causes.

<sup>78</sup> See Broadie 2012: 238: “This means not that [the proto-elements] are a wholly irregular chaos, but that by themselves they would not say on a steady track of development leading to the production of organisms (and indeed of the body of the cosmos itself). To understand how such developments reliably take place, we must see the wandering cause as subservient to directive Intelligence.” Plato does admit material causes, but these remain accidental and disorganized until they fall under the influence of an intelligent cause: *λεκτέα μὲν ἀμφοτέρα τὰ τῶν αἰτιῶν γένη, χωρὶς δὲ ὅσαι μετὰ νοῦ καλῶν καὶ ἀγαθῶν δημιουργοὶ καὶ ὅσαι μονωθεῖσαι φρονήσεως τὸ τυχὸν ἄτακτον ἐκάστοτε ἐξεργάζονται* (*Tim.* 46e5-6). See also Sedley 2007: 118 and Johansen 2004: 94.

<sup>79</sup> Taylor 1928: 351-6 and Cornford 1937: 199-202 discuss Democritean echoes in the *Timaeus* passage at length, although both ultimately argue against accepting Democritus as a model for Timaeus’ description of the pre-creation ‘receptacle’ (*δεξαμενή*), with Taylor favoring an Empedoclean interpretation. There are, however, strong reasons for interpreting the Platonic passage as an evocation of Democritean atomism, which I discuss in detail below.

physical cause and effect.<sup>80</sup> But even more telling is Plato's use of the winnowing basket simile (πλόκανον) to describe the separation of proto-elements by similar qualities. As many commentators have pointed out, this simile echoes an earlier sieve simile (κόσκινον) deployed by Democritus in a cosmological context to describe the tendency of similar things to cluster together:<sup>81</sup>

καὶ γὰρ ζῷα ὁμογενέσι ζῷοις συναγελάζεται, ὡς περιστεραι περιστεραῖς καὶ γέρανοι γεράνοις, καὶ ἐπὶ τὸν ἄλλων ἀλόγων· ὡσαύτως δὲ καὶ ἐπὶ τῶν ἀψύχων, **καθάπερ ὄραν πάρεστιν ἐπὶ τε τῶν κεκοσκινουμένων σπερμάτων καὶ ἐπὶ τῶν παρὰ ταῖς κυματοῦγαῖς ψηφίδων· ὅπου μὲν γὰρ κατὰ τὸν τοῦ κοσκίνου δῖνον διακριτικῶς φακοὶ μετὰ φακῶν τάσσονται καὶ κριθαὶ μετὰ κριθῶν καὶ πυροὶ μετὰ πυρῶν**, ὅπου δὲ κατὰ τὴν τοῦ κύματος κίνησιν αἱ μὲν ἐπιμήκεις ψηφίδες εἰς τὸν αὐτὸν τόπον ταῖς ἐπιμήκεσιν ὠθοῦνται, αἱ δὲ περιφερεῖς ταῖς περφερέσιν, ὡς ἂν συναγωγόν τι ἐχούσης τῶν πραγμάτων τῆς ἐν τοῦτοις ὁμοιότητος. (Taylor D6 [=Sext. Emp. *Math.* 7.117-18])

Animals flock together with animals of the same kind, doves with doves and cranes with cranes and similarly with the other irrational creatures, and so with non-living things too, **as one can see in the case of seeds in a sieve and pebbles on a beach. In the one lentils are sorted out by the swirl of the sieve to lie together with lentils, barley with barley, and wheat with wheat**, and in the other oblong pebbles are pushed by the motion of the waves into the same place as oblong and round into the same place as round, as if that sort of similarity in things had a kind of attractive force.

Taylor (1999) argues that Democritus used this simile to explain how a cosmos could begin to form by means of the natural sorting of particles within a whirling vortex (δίνη or δίνον) of atoms, and his description closely matches the report of Leucippus' cosmogony found in Diogenes Laertius.<sup>82</sup> Although no additional fragments or ancient commentaries remain to explain the exact process by which this separation by like qualities occurs, it is reasonable to assume based upon other sources that Democritus understood this as the result of mechanical

<sup>80</sup> Aristotle echoes this classification of atomism as an absurd infinite regress of physical causes, explicitly comparing Democritean cosmology to the Timaeian pre-cosmogony envisioned by Plato. See Arist. *Cael.* 3.2 300b9ff., discussed in the 'Aristotle' section below.

<sup>81</sup> See, e.g., Cornford 1937: 200. Translation taken from Taylor 1999: 5.

<sup>82</sup> Diog. Laert. 9.30-3. See Taylor 1999: 193. Although Diogenes' description of the Leucippean cosmogony doesn't mention a sieve, it does echo the sorting language from the *Timaeus* passage and from Democritus.

forces like atomic collision and motion, as opposed to divine intelligence.<sup>83</sup> In light of the striking similarities in both context and purpose between the state of pre-creation matter imagined by Timaeus and the atomists' account of cosmogony, Plato's grain-sorting simile lends his description a conspicuously atomic hue.

Due to the allegorical or otherwise ambiguous nature of many of the terms that Plato uses in the *Timaeus*, scholars disagree over the degree to which the contents of the pre-creation universe described at *Tim.* 52d-53b should be understood as 'material,' and consequently, whether Plato meant to evoke materialist cosmology.<sup>84</sup> However, terms denoting physical motion are ubiquitous in the *Timaeus* passage: outside of the winnowing basket simile, the four kinds of elements or qualities (τὰ τέτταρα γένη) shake (σειεῖν) and are shaken (σειέσθαι), while being moved (κινούμενα) or carried (φέρεισθαι) to and fro (αὖ πάλιν). Likewise, the Receptacle, which is also in motion (κινουμένης), forces the proto-elements together (συνωθεῖν) into their groups of similar qualities. Regardless of whether one chooses to view the proto-elements as literal particles or as insubstantial qualities, the metaphorical terms of the description are overwhelmingly physical.

Similarly, despite arguments to the contrary by A.E. Taylor (1928) and Cornford (1937), there are good reasons to interpret the winnowing basket simile as tapping directly into the atomist model for cosmogony expressed in Democritus' sieve simile. Above all, the sieve and the winnowing basket share the same basic function: both employ a rocking or shaking motion to

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<sup>83</sup> Such is the opinion of Taylor 1928: 355-6. The other conjecture, that atoms are subject to some non-physical force of attraction in addition to the familiar mechanical ones, is explored at Taylor 1999: 192-3. In either case, the takeaway remains the same: the elemental particles follow deterministic natural laws, as opposed to the plan of a divine intelligence.

<sup>84</sup> The two ends of the spectrum are represented by A.E. Taylor, who conceives of the proto-elements as Empedoclean 'corpuscles' (1928: 351), and Cornford, who translates μορφαί at *Tim.* 52e not as 'shapes,' but as 'characters,' and so interprets the shifting contents of the Receptacle as incorporeal 'qualities' (1937: 198 fn.1, 200). A recent commentator, Tanja Ruben (2016: 212 n.198), cautions against interpreting the elemental ἕχη too literally as "oligo-éléments", but nevertheless attributes to them *densité et poids spécifiques*.

separate particles of different sizes or shapes, the main difference being that the sieve separates different varieties of grains, while the winnowing basket uses a back-and-forth rocking or tossing motion that allows the wind to then separate chaff from grain.<sup>85</sup> Plato does not specifically mention the action of the wind, but its presence is necessarily implied by the terms of his simile (since wind is what effects the separation of the lighter chaff from the heavier grain). In an atomic context, this wind serves a function similar to the whirling vortex (δίνων) in Leucippus' cosmogony, which also separates particles according to their weight.<sup>86</sup> Both in its general sense and in its specific reference to Democritus, the Platonic description at *Tim.* 52d-53b closely resembles the early stages of an atomic cosmogony. In the Platonic scene, however, this materialist sorting never progresses past the whirling stage of the vortex, and thus remains an unstable chaos until the intervention of divine intelligence.

Ultimately, it is impossible to know whether Greek and Roman philosophers after Plato interpreted the pre-creation scenario of *Tim.* 52d-53b as a specifically atomic one, as I have argued, or as representing materialism more generally. Yet in either case, the immense popularity of the *Timaeus* among the Stoics secured it an important place in Hellenistic discussions of

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<sup>85</sup> For an overview of how ancient winnowing worked, with reference to literary and material evidence, see Harrison (1903, 1904). Cornford 1937: 202 argues against conflating the winnowing basket with the sieve on the grounds that the winnowing basket does not employ a circular motion, and that it separates chaff by weight rather than the size of the particles, as the sieve does: “The contrast [in the winnowing simile] is between the density and heaviness of the corn and the lightness and fine texture of the chaff. It is to these qualities that the separation of like to like is due, not to differences of shape or size. In the application, it is things of like quality that come together.” This makes too fine a distinction, however, since, according to the atomists, qualities like weight or density in an object are ultimately reducible to the sizes and shapes of its constituent atoms. Furthermore, Cornford's objection that the winnowing basket moves back and forth, rather than in a circle like the sieve, fails to take account of the second part of Democritus' simile: ὅπου δὲ κατὰ τὴν τοῦ κύματος κίνησιν αἱ μὲν ἐπιμήκεις ψηφίδες εἰς τὸν αὐτὸν τόπον ταῖς ἐπιμήκεσιν ὠθοῦνται, αἱ δὲ περιφερεῖς ταῖς περὶ περιφερέσιν “oblong pebbles are pushed by the motion of the waves into the same place as oblong and round into the same place as round” (Taylor D6: 6-8). A more plausible interpretation, I believe, is that Plato's use of the winnowing basket simile actually combines elements of both parts of Democritus' simile: the mechanical separation of the sieve with the back and forth motion of the waves raking the beach.

<sup>86</sup> For the role of the wind, cf. Homeric descriptions of winnowing in the simile at *Il.* 5.499-500: ὡς δ' ἄνεμος ἄχνας φορέει ἱερὰς κατ' ἄλωας / ἀνδρῶν λικμώντων, and at *Il.* 13.588-90: ὡς δ' ὅτ' ἀπὸ πλατέος πτυόφιν μεγάλην κατ' ἀλώην / θρόσκωσιν κύαμοι μελανόχροες ἢ ἐρέβινθοι / πνοιῇ ὑπο λιγυρῇ καὶ λικμητῆρος ἐρωῆ. Evidently, the process did not evolve greatly over time, as Lucian in the 2<sup>nd</sup> century CE still describes winnowing as wind-powered (*Bis accusatus* 1.27).

cosmology and, as we shall see below, subsequent arguments against atomism largely echo Plato's characterization of non-teleological materialism as a state of disordered chaos. Directly or indirectly, Plato's *Timaeus* provided a conceptual framework for later critics to interpret atomism, the standard bearer for materialism in the ancient world, as a paradigm for disorder.

### 1.3 ARISTOTLE

The next major figure in the polemical reception of atomism is Aristotle, who wrote in the decades following Plato's *Timaeus*, from around the mid 4<sup>th</sup> century until his death in 322 BCE.<sup>87</sup> In contrast to Plato, who never addressed Democritus or atomism by name, Aristotle incorporated numerous detailed criticisms of the early atomists into his treatises, which together form the earliest record of *explicitly* anti-atomist arguments in ancient philosophy. Because Aristotle wrote primarily in response to Democritus, and because Epicurus later modified minor aspects of the atomic theory in order to rebut Aristotle, certain of his technical objections to atomism do not apply to Epicurean physics, and therefore fall outside the scope of the present study.<sup>88</sup> However, Aristotle presented a number of arguments against atomism based upon the implausibility of order in nature arising due to chance, and his corresponding characterization of atomism as a kind of chaos deeply influenced later criticisms of Epicurean physics. Building upon Plato's *Timaeus*, Aristotle further developed the negative portrayal of non-teleological materialism by characterizing atomism as a physics of 'chance,' and by equating the fortuitous nature of atomic motion with disorder. Although controversial metaphors are largely absent from

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<sup>87</sup> For dates concerning Aristotle's life and career, see Barnes 1995: 3-6. However, see also the cautionary note on the methodological pitfalls of attempting to provide exact (or even relative) dates for individual works (*ibid*: 18-22).

<sup>88</sup> For detailed discussion of such objections, see Pyle 1997: 25-30, 49-64. One Aristotelian criticism, centered upon the impossibility of motion for bodies without parts, was ostensibly answered by Epicurus' adoption of theoretically—but not physically—divisible *minimae partes* within each atom.

Aristotle's arguments, his conflation of atomic mechanism, chance, and disorder deeply influenced later philosophers—most importantly, Cicero—who elaborated upon this tendentious characterization of atomism by means of increasingly provocative metaphors.

In key respects, Aristotle's characterization of atomism echoes that of Plato in the *Timaeus*, in the sense that Plato's materialist pre-cosmogony (52d-53b) and Democritean atomism both amount to an infinite regress of efficient (or material) causes that are unable to account for the order that is evident in the cosmos. In fact, in an interesting passage from *De Caelo* that has largely escaped notice in commentaries on the *Timaeus*, Aristotle directly compares the conditions of Plato's pre-cosmogony to those of a hypothetical atomic cosmos:<sup>89</sup>

διὸ καὶ Λευκίππῳ καὶ Δημοκρίτῳ, τοῖς λέγουσιν ἀεὶ κινεῖσθαι τὰ πρῶτα σώματα ἐν τῷ κενῷ καὶ τῷ ἀπείρῳ, λεκτέον τίνα κίνησιν καὶ τίς ἢ κατὰ φύσιν αὐτῶν κίνησις. εἰ γὰρ ἄλλο ὑπ' ἄλλου κινεῖται βία τῶν στοιχείων, ἀλλὰ καὶ κατὰ φύσιν ἀνάγκη τινὰ εἶναι κίνησιν ἐκάστου, παρ' ἣν ἢ βίαιός ἐστιν· καὶ δεῖ τὴν πρώτην κινουῦσαν μὴ βία κινεῖν, ἀλλὰ κατὰ φύσιν· εἰς ἄπειρον γὰρ εἴσιν, εἰ μὴ τι ἔσται κατὰ φύσιν κινουῦν πρῶτον, ἀλλ' ἀεὶ τὸ πρότερον βία κινούμενον κινήσει. τὸ αὐτὸ δὲ τοῦτο συμβαίνει ἀναγκαῖον ἂν εἰ καθάπερ ἐν τῷ Τιμαίῳ γέγραπται, πρὶν γενέσθαι τὸν κόσμον ἐκινεῖτο τὰ στοιχεῖα ἀτάκτως. ἀνάγκη γὰρ ἢ βίαιον εἶναι τὴν κίνησιν ἢ κατὰ φύσιν. (*Cael.* 3.2 300b8-19)

Thus Leucippus and Democritus, who say that the first bodies are in constant motion in the infinite void, must explain what kind of motion is this motion of the first bodies, as well as which motion is their natural motion, for, if an element is forced to move by another, there must also be some natural motion of each of them, counter to which is its forced motion; also, the first motion necessarily causes forced motion by being not forced itself but natural, for there will result an infinite regress if no first mover which moves naturally exists but motion is always imposed by a prior mover whose motion is itself forced. The same difficulty must arise if, as is written in the *Timaeus*, the elements moved in a disorderly manner prior to the cosmogony, for this motion must have been either forced or natural.

Aristotle's account of teleology differs from Plato's, particularly in its use of idiosyncratic vocabulary—'efficient' and 'final' causes instead of 'wandering' material causes and 'divine

<sup>89</sup> All translations of *De Caelo* are taken from Kouremenos (2013). Taylor 1928: 354 fn.1 quotes the beginning of this passage to clarify a point about atomic motion, but cuts off before the mention of the *Timaeus* and makes no comment on Aristotle's linking of its pre-cosmogony with atomism.

intellect’—but both share the notion that matter is disorderly in the absence of some teleological guidance or purpose.<sup>90</sup> Although Aristotle does not explicitly identify the *Timaeus*’ pre-cosmogony as an atomic scenario, his comparison nonetheless casts it as such, as far as final causation and movement are concerned.<sup>91</sup>

Furthermore, although Aristotle’s comparison to Plato’s *Timaeus* occurs within a difficult and highly technical discussion of types of motion that is unique to the Aristotelian conception of nature, it reveals an important assumption that permeates virtually all of his comments upon atomism. As many commentators have noticed, Aristotle bases his speculation about ‘natural’ atomic motion in this passage upon the unspoken premise that individual atoms must move in a way that is intrinsically disordered.<sup>92</sup> This assumption is most evident in the lines immediately following the section of *De Caelo* quoted above, where Aristotle rules out the hypothesis of a single natural motion for atoms (as opposed to a plurality of causes):<sup>93</sup>

τοῖς δ’ ἄπειρα ἐν ἀπείρῳ τὰ κινούμενα ποιούσιν, εἰ μὲν ἐν τὸ κινούν, ἀνάγκη μίαν φέρεσθαι φοράν, ὥστ’ οὐκ ἀτάκτως κινηθήσεται, εἰ δ’ ἄπειρα τὰ [301a] κινούντα, καὶ τὰς φορὰς ἀναγκαῖον ἀπείρους εἶναι· εἰ γὰρ πεπερασμένοι, τάξις τις ἔσται· οὐ γὰρ τῷ μὴ φέρεσθαι εἰς τὸ αὐτὸ ἢ ἀταξία συμβαίνει· οὐδὲ γὰρ νῦν εἰς τὸ αὐτὸ φέρεται πάντα, ἀλλὰ τὰ συγγενῆ μόνον. (*Cael.* 3.2 300b31-301a4)

As for those who posit infinitely many elements, which move in the infinite void, if there is a single cause of motion for the elements, they must move with a single motion, and thus will not move in a disorderly manner, but if there are infinitely many [301a1] causes of motion for the elements, infinitely many must also be the

<sup>90</sup> For Aristotle’s own definitions of material, formal, efficient, and final causes, see *Ph.* 2.3 194b16-195b30. Plato’s ‘Necessity’ and material ‘wandering cause’ in the *Timaeus* correspond roughly to efficient and material causes in Aristotle.

<sup>91</sup> Elsewhere Aristotle criticizes Plato for lack of clarity in this section of the *Timaeus*; see *Gen. corr.* 2.1 329a13-24: οὐδένα ἔχει διορισμόν. For discussion of that passage, see Baltes 1976: 10 (esp. fn. 22), who points out that Aristotle and most other philosophers in the 4<sup>th</sup> century interpreted the Timaeian pre-cosmogony as a literal, scientific description, as opposed to a mythological or allegorical explanation.

<sup>92</sup> See Kouremenos 2013: 64: “The disorderliness of atomic motion is taken for granted, probably as an axiom of atomist physics. If a natural atomic motion exists, therefore, it will be disorderly. The hypothesis, however, that all atoms have the same internal cause of natural motion conflicts with the postulated disorderliness of atomic motion, and is thus rejected. . . It is clear from what comes next in 301a1-2 that only an infinity of natural atomic motions is compatible with the postulated disorderliness of atomic motion.” See also Elders 1966: 286: “The conclusion, not expressed, is that the view of Democritus cannot explain the formation of the world as it actually is.”

<sup>93</sup> For the attribution of this opinion to the atomists, see *Simpl. in Cael.* 588.10.

motions with which the elements move; for, if there are finitely many, they will exhibit some order, and disorderliness cannot result from motion to different places, since in the actual universe, too, not all quantities of elemental matter move towards the same place but only quantities of the same element.

Tellingly, Aristotle's argument relies upon the premise that any atomic hypothesis that yields order is necessarily self-contradictory. In a surprising *reductio ad ordinem*, Aristotle assumes that atomism is disorderly and that, therefore, if the assumption of a single natural motion yields a version of atomism that appears orderly, then that assumption must be incorrect. For Aristotle, the disorderliness of atomism is self-evident.

After considering various alternatives for the nature of atomic motion, Aristotle concludes this section of *De Caelo* with a harsh indictment of atomic physics as the very inverse of natural order. Exceeding earlier implied critiques of atomism as disorderly, Aristotle flatly equates atomic motion with absurdity by arguing that the doctrines of the atomists amount to an acceptance of disorder as the natural state of things:

ἔτι τὸ ἀτάκτως οὐθέν ἐστὶν ἕτερον ἢ τὸ παρὰ φύσιν· ἡ γὰρ τάξις ἢ οἰκεία τῶν αἰσθητῶν φύσις ἐστίν· ἀλλὰ μὴν καὶ τοῦτο ἄτοπον καὶ ἀδύνατον, τὸ ἄπειρον ἄτακτον ἔχειν κίνησιν· ἔστι γὰρ ἡ φύσις ἐκείνη τῶν πραγμάτων οἷαν ἔχει τὰ πλείω καὶ τὸν πλείω χρόνον· συμβαίνει οὖν αὐτοῖς τὸναντίον τὴν μὲν ἀταξίαν εἶναι κατὰ φύσιν, τὴν δὲ τάξιν καὶ τὸν κόσμον παρὰ φύσιν· καίτοι οὐδὲν ὡς ἔτυχε γίγνεται τῶν κατὰ φύσιν. (*Cael.* 3.2 301a4-11)

What is disorderly, moreover, is nothing but counter-natural, for the nature of sensible things is their proper order. As it is, that the infinitely many elements move without order is another absurd impossibility: the nature of things is that which most of them have most of the time, so our opponents [the atomists] happen to regard, contrary to the facts, disorder as natural and orderly arrangement as counter-natural, although nothing natural results from chance.

Here Aristotle constructs a dichotomy that anticipates Virgil's allegorical deployment of atomism in the *Aeneid* as an enemy of order, by placing atomism in direct conflict with a common-sense understanding of natural order. According to this view, atomism is not simply insufficient to account for a purposive and structured cosmos, but actually embodies its

conceptual opposite: “our opponents happen to regard, contrary to the facts, disorder as natural and orderly arrangement as counter-natural, although nothing natural results from chance” (τὴν μὲν ἀταξίαν εἶναι κατὰ φύσιν, τὴν δὲ τάξιν καὶ τὸν κόσμον παρὰ φύσιν· καίτοι οὐδὲν ὡς ἔτυχε γίγνεται τῶν κατὰ φύσιν). Interestingly, this designation as a physics of disorder is unique to atomism in the works of Aristotle; elevated above the status of being merely incorrect about the nature of the cosmos, as other formulations of materialism are, atomism is disorderly by definition.

As hinted at in the conclusion of the passage quoted above, this polemical analysis of atomism relies in large part upon a particular understanding of ‘chance’ (αὐτόματον) or ‘luck’ (τύχη; cf. ‘ἔτυχε’ *Cael.* 3.2 301a11) as the underlying cause of atomic motion.<sup>94</sup> That Aristotle should characterize a mechanistic, deterministic system such as atomism as fundamentally fortuitous is, perhaps, surprising, given that Leucippus and Democritus ascribed all things in nature to necessity.<sup>95</sup> However, like Plato in the *Timaeus*, Aristotle carefully distinguishes between teleological and non-teleological causes, with the result that any event possessing material and efficient (non-teleological) causes, but lacking a final (teleological) cause is classified as fortuitous. In applying this logic to the motion of atoms, Aristotle recasts the atomists’ cosmology in terms of chance, rather than necessity:<sup>96</sup>

εἰσὶ δὲ τινες οἳ καὶ τοῦρανοῦ τοῦδε καὶ τῶν κόσμων πάντων αἰτιῶνται τὸ αὐτόματον· ἀπὸ ταῦτομάτου γὰρ γενέσθαι τὴν δίνην καὶ τὴν κίνησιν τὴν διακρίνασαν καὶ καταστήσασαν εἰς ταύτην τὴν τάξιν τὸ πᾶν. (*Ph.* 2.4 196a24-8)

There are some who attribute the cause of the universe and all the worlds to accident; for they say that the cosmic whirl and the motion that separates and joins the universe into its arrangement arises spontaneously.

<sup>94</sup> For the most detailed explanation of luck and chance in the Aristotelian corpus, see *Ph.* 2.4 195b31-2.6 198a13.

<sup>95</sup> See Leucippus fr. 1 (Taylor 1999: 2).

<sup>96</sup> Translation mine. For the identification of the τινες as Democriteans, see Ross 1936: 515, who cites Simplicius ad loc.

This redefinition of atomic necessity as accident, or chance, which builds upon the Platonic discussion of material ἀνάγκη in the *Timaeus*, marks both an important conceptual and rhetorical shift in the characterization of atomism.<sup>97</sup> While Democritus' necessity (ἀνάγκη) evokes a stable, implacable cosmological principle, a foundational order stronger even than the gods, Aristotle's emphasis upon chance imbues atomic physics with an air of capriciousness and instability that is absent from its original formulation.<sup>98</sup> Furthermore, as his proposed etymology for αὐτόματον (derived from μάτην, 'in vain') demonstrates, Aristotle's concept of chance is equally suggestive of futility—not just the absence of purpose, but frustrated purpose.<sup>99</sup>

At the heart of this interpretation of atomism lies profound skepticism about the ability of chance alone to generate order in any meaningful way. According to the Aristotelian conception of nature (φύσις), all events that happen consistently or predictably are natural, and since nature is inherently teleological, such occurrences cannot be due to chance. Therefore when Aristotle explains atomism as a physics of chance, he is effectively arguing that atomic cosmology cannot account for large-scale regularity or purpose in the cosmos.<sup>100</sup> Elsewhere, Aristotle ridicules the notion that the regular motion of heavenly bodies could be due to chance, on the same grounds that the whole notion of regularity is antithetical to chance.<sup>101</sup> Even at the local level, Aristotle

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<sup>97</sup> On the compatibility of attributing the atomic δίνη to 'chance' while still assigning all things to 'necessity,' see Dudley 2012: 144-55, as well as Bailey 1928: 139-43.

<sup>98</sup> The image of Ἀνάγκη as stronger even than the gods can be found in Archaic Greek poetry. See Simonides (cited at Pl. *Prt.* 345d): ἀνάγκη δ' οὐδὲ θεοὶ μάχονται. See also Hes. *Theog.* 517-18: Ἄτλας δ' οὐρανὸν εὐρὺν ἔχει κρατερῆς ὑπ' ἀνάγκης / πείρασιν ἐν γαίης.

<sup>99</sup> See Arist. *Ph.* 2.6 197b22-32.

<sup>100</sup> See *Cael.* 1.12 283a30-283b1. Aristotle defines chance as an exception to that which is regular or eternal, and therefore unable to account for the eternal and imperishable world. See also *Cael.* 2.8 289b25-7: Ἄμα δὲ καὶ οὐκ ἔστιν ἐν τοῖς φύσει τὸ ὡς ἔτυχεν, οὐδὲ τὸ πανταχοῦ καὶ πᾶσιν ὑπάρχον τὸ ἀπὸ τύχης.

<sup>101</sup> See *Cael.* 2.8 289b21-7, where Aristotle describes any attempt to attribute the orderly rotation of heavenly bodies to chance as a "mere fiction": τὸ μὲν γὰρ ἐν ἡ δύο τούτων τὸν τρόπον ἔχειν οὐθὲν ἄτοπον, τὸ δὲ πάνθ' ὁμοίως πλάσματι ἔοικεν. Ἄμα δὲ καὶ οὐκ ἔστιν ἐν τοῖς φύσει τὸ ὡς ἔτυχεν, οὐδὲ τὸ πανταχοῦ καὶ πᾶσιν ὑπάρχον τὸ ἀπὸ τύχης.

denies that regular, purposive structures can occur fortuitously, using one of Democritus' own examples, teeth, to illustrate his point.<sup>102</sup>

The final example of this skepticism about the possibility of order in an atomic universe, which most clearly shows Aristotle's systematic conflation of chance with disorder in discussions of cosmology, occurs in a passage of *De Partibus Animalium*. Here Aristotle criticizes the atomists for attributing the growth of animals to nature, while leaving the structure of the heavens to chance.<sup>103</sup>

Οἱ δὲ τῶν μὲν ζῴων ἕκαστον φύσει φασὶν εἶναι καὶ γενέσθαι, τὸν δ' οὐρανὸν ἀπὸ τύχης καὶ τοῦ αὐτομάτου τοιοῦτον συστήναι, ἐν ᾧ ἀπὸ τύχης καὶ ἀταξίας οὐδ' ὅτιοῦν φαίνεται. (*Part. an.* 1.1 641b20-3)

Some [atomists] say that although each animal is and comes to be by nature, the heaven has been formed in the way it is from luck and accident. Yet nothing whatsoever in the heaven appears **the result of luck and disorder**.

Although the substance of this criticism is no different from many of the other passages in which Aristotle rejects the possibility of order arising by chance, it is noteworthy for the direct equivalence it establishes between luck (τύχη), accident (αὐτόματον), and disorder (ἀταξία), which appear as interchangeable synonyms for the underlying cause of a non-teleological cosmos. As we have seen in the examples cited above, this conflation of atomic motion with chance is a cornerstone of Aristotle's characterization of atomism as a physics of disorder, and would exert a powerful influence upon the imagination of subsequent philosophers who opposed atomism. In particular, the extreme position that atomism represents the very inverse of cosmic

<sup>102</sup> See Arist. *Ph.* 2.8 198b 34-36. Cf. Aristotle's summary of the Democritean theory at *Gen. an.* 788b10-789b8.

<sup>103</sup> Translation taken from Sedley 2007: 194-5. Although this passage is assumed to refer to Democritus by Ross 1936: 515, Charlton 1970: 105, and Balme 1972: 87, Lennox disagrees, on the grounds that Aristotle doesn't attribute 'spontaneity' as a cause to Democritus elsewhere (Lennox 2001: 136). But if we are to believe Simplicius, Aristotle does just that at *Ph.* 2.4 196a24-8. In light of Aristotle's consistent conflation of atomism with chance and disorder elsewhere, it makes sense to take this, with Ross and others, as referring to Democritus. Cf. *Ph.* 195b36-196b5.

order evidently influenced Cicero, who further developed that characterization with the addition of colorful and tendentious metaphors depicting atoms as disordered, lawless, and violent.

#### 1.4 STOICS AND SKEPTICS: THE CICERONIAN EVIDENCE

The final antagonist in the reception of atomism is Cicero, whose corpus of philosophical dialogues, composed in a flurry of literary activity between 45 and 44 BCE, provides a wealth of insights into Hellenistic and Roman attitudes towards Epicurean philosophy in the decades before the *Aeneid*.<sup>104</sup> Regrettably, this jump from the fourth century to the first passes over a crucial period of Greek philosophy, in which the major philosophical schools engaged in fierce debates with the atomists and their Epicurean successors. However, this leap is necessitated by the extremely fragmentary and lacunose state of textual evidence for that period. While we do possess many quotations and paraphrases of Hellenistic philosophers preserved in later writers, such testimonia, as evidenced by the organization of modern editions of the fragments, almost exclusively focus on explaining the positive doctrines of a particular philosopher or school, providing scant detailed evidence of how they argued *against* the doctrines of their Epicurean opponents.<sup>105</sup>

In light of this dearth of primary texts, Cicero represents our best evidence for the anti-atomist attitudes of Hellenistic philosophers, particularly Stoics and Academic Skeptics, whose

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<sup>104</sup> For Cicero's own (partial) catalogue and description of these works, see *Div.* 2.1.1-4, with discussion at Schofield 2013: 75ff.

<sup>105</sup> The major exception, of course, is Philodemus, whose papyri record certain arguments of his Stoic opponents in detail. More representative, however, is the *Stoicorum Veterum Fragmenta* (von Arnim 1921-4, 3 vols.), which organizes the extant fragments of each Stoic philosopher by subject matter. While sections titled *Physica* provide details about the positive doctrines of the Stoics, they offer little insight into how they criticized Epicurean atomism. It is likely that imperial authors such as Plutarch, as well as later Christian polemicists like Augustine and Lactantius, have preserved certain Hellenistic arguments against atomism in their own critiques of Epicurean physics, but it is very difficult to distinguish which arguments are Hellenistic and which are contemporary. If they are contemporary to the time of the author, then they will not help us to understand the intellectual climate around atomism that Virgil experienced when writing the *Aeneid*.

works he made liberal use of in composing his own texts.<sup>106</sup> While it is likely that some of the rhetorical flourishes attributed to Stoic or Academic characters in the dialogues are original to Cicero himself (therefore making it difficult to parse whether a particular attitude belongs to Cicero or to his source texts), his dialogues nonetheless provide an excellent survey of the various arguments against atomism in circulation during Virgil's youth and early adulthood. Furthermore, the tremendous literary influence of Cicero's dialogues after his death, evident in Virgil's engagement with *De Re Publica* in *Aeneid* 6, makes it highly likely that Cicero's tendentious portrayal of atomism did much to shape the hostile reception of Epicurean physics in the years during which Virgil composed his epic.<sup>107</sup>

Before getting into specific texts, it will be helpful to make a few general observations about Cicero's approach to Epicurean physics. First, few of the substantive arguments against atomic physics in Cicero's dialogues are original to Cicero himself. In fact, all of the arguments presented by both Stoic and Skeptic interlocutors are anticipated in some form in the works of Aristotle, or in doxographical accounts of earlier Stoic doctrines. Cicero's main contribution to anti-atomist polemic is limited to the manner in which he metaphorically characterizes atoms; while the substance of his critiques is identical to Aristotle, centering mostly on chance and disorder, his use of imaginative imagery associates that fortuitousness with human violence and political disorder.

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<sup>106</sup> See *Fin.* 1.3.7, where Cicero discusses his use of Greek sources in composing his philosophical dialogues. Cf. Dyck 2003: 7-11, whose discussion of sources for the first book of *De Natura Deorum* reveals engagement with a wide variety of texts. This variety conforms to Cicero's own stated method of 'Academic' discussion, in which one puts forth the best arguments for all sides and then decides for oneself (cf. *Div.* 2.150; *Tusc.* 5.29.83). See Gorman 2005: 11-15.

<sup>107</sup> For Cicero's formative influence on Latin philosophical vocabulary, see Laurand 1928: 78-80 (vol. 1): *En effet, inventeur ou non, Cicéron a certainement contribué à répandre des termes latins peu usuels mais aptes à exprimer des idées philosophiques* (80).

Secondly, Cicero treats Epicurean physics as essentially interchangeable with Democritean atomism.<sup>108</sup> The only substantive difference mentioned in the dialogues is the swerve, which Cicero ridicules as a detrimental addition to the atomic theory. Despite the fact that Epicurus made technical changes to the doctrine of atomism in an attempt to answer Aristotelian criticisms, Cicero largely ignores these changes, indicating broad continuity in anti-atomist critiques from Aristotle to the 1<sup>st</sup> century BCE.<sup>109</sup> Similarly, although there is evidence that Cicero was familiar with some, if not all, of Lucretius' *De Rerum Natura*, he does not name the Roman Epicurean as a source in any of his philosophical works, and does not generally distinguish between earlier and later forms of atomism.<sup>110</sup>

In the sections that follow, I examine the Ciceronian evidence, first for Stoic attitudes towards atomism, and then for Skeptical ones, with which I include all characterizations of atomism voiced by Cicero (the interlocutor). Because it is not the purpose of this chapter to identify precisely the origin of all strains of anti-atomist thought, but rather to trace the pedigree and development of such arguments so as to see how they reasonably might have influenced Virgil's reception of Epicurean physics in the *Aeneid*, I will leave aside the thorny problem of whether or not one can attribute arguments to Cicero personally, or to his source texts. For the purposes of this dissertation, it will suffice to take Cicero at his word as an Academic Skeptic, and to see his rhetoric as belonging more generally to a broad tradition of anti-atomist arguments shared by a variety of philosophical schools in the 1<sup>st</sup> century.

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<sup>108</sup> See especially *Acad. post.* 2.6 and *Nat. D.* 1.26.73. Pease 1955/1968: 363 also notes *Nat. D.* 1.69, 1.73, 1.93, 1.107, 1.120; *Fin.* 4.13.

<sup>109</sup> For questions concerning the possibility of an earlier loss and 'rediscovery' of the Aristotelian corpus during the 60s BCE, see Hatzimichali 2013: 11ff.

<sup>110</sup> Cicero famously mentions *Lucreti poemata* in a letter to his brother Quintus from 54 BCE (Cic. *Q. Fr.* 2.10.3). For Cicero's reception of Lucretius, particularly in the *De Re Publica* (54 BCE), see Gatzemeier 2013: 31-42. Gatzemeier identifies Lucretian verbiage in the *Somnium Scipionis* as the earliest evidence of Lucretius' reception in Latin prose.

### 1.4.1 *Stoic Critiques of Atomism in Cicero*

As the first philosophical school to systematically embrace and elaborate the Argument from Design—an argument for the existence of an intelligent creator god based upon the appearance of intentional design in the natural world—the Stoics were diametrically opposed to the non-teleological cosmology espoused by the Epicurean atomists.<sup>111</sup> The longest version of this argument that is specifically directed against atomism in Cicero’s dialogues occurs in the *De Natura Deorum*. In a colorful critique that echoes Aristotelian arguments about the incompatibility of chance and regular order in nature, Balbus, the dialogue’s Stoic interlocutor, compares the likelihood of fortuitous atomic world-formation to that of a jumble of letters poured out onto the floor miraculously arranging themselves into Ennius’ *Annales*.<sup>112</sup>

Hic ego non mirer esse quemquam, qui sibi persuadeat corpora quaedam solida atque individua vi et gravitate ferri mundumque effici ornatissimum et pulcherrimum ex eorum corporum **concursione fortuita**? hoc qui existimat fieri potuisse, non intellego, cur non idem putet, si innumberabiles unius et viginti formae litterarum vel aureae vel qualeslibet aliquo coiciantur, posse ex is in terram excussis *Annales* Enni, ut deinceps legi possint, effici; quod nescio an ne in uno quidem versu possit tantum valere **fortuna**. (*Nat. D.* 2.37.93)

Here should I not marvel that there is anyone who may persuade himself that certain solid and indivisible atoms are moved by force and weight and that a most splendid and beautiful world is formed by the **fortuitous collision** of those atoms? And as for whoever reckons that it was possible for this to have occurred, I do not understand why they do not also think the following: that if a countless number of copies of the twenty one letters (made of gold or whatever else) were gathered together someplace, when they were shaken out onto the ground it would be possible for one to read there the *Annales* of Ennius. I do not know whether **fortune** could have the power to do that with even one verse.

Using the analogy of authors and their work, Balbus argues that the apparent complexity and design of the world (*mundum ornatissimum et pulcherrimum*) are evidence that it is the product

<sup>111</sup> Sedley 2007: 205-38. Although the basic idea is anticipated by Xenophon’s Socrates (*Mem.* 1.4), and by the teleological arguments of Aristotle, the Stoics were the first to champion the Argument from Design with an array of formal arguments (78-86).

<sup>112</sup> For the special role of the Stoics in developing and articulating this critique, see Sedley 2007: 205-38. For the link with Aristotle, cf. Balbus’ citation at *Nat. D.* 2.37.95.

of an intelligent creator, and not the product of chance. As we have already seen, this characterization of atomism as a physics of chance (*concurisione fortuita; fortuna*) and, therefore, disorder, is inherently tendentious, contradicting the emphasis of the atomists themselves upon the fixed order (ἀνάγκη) and regularity (*ratio*) of atomic cosmology.<sup>113</sup>

However, Balbus goes a step beyond the earlier Aristotelian critiques regarding chance and regularity by characterizing the motion of atoms as not just random, but reckless: *isti autem quemadmodum adseverant ex corpusculis... concurrentibus temere atque casu mundum esse perfectum* (“Moreover, [the atomists] insist that the world has been fashioned from atoms colliding **recklessly** and by chance” *Nat. D.* 2.37.94). While *fortuitus* and *casu* simply denote chance or accident, *temere* may also connote rashness and thoughtlessness, imputing a sort of mob mentality to the heedless flight of atoms.<sup>114</sup> In his study of political language in the late Republic, Alfons Weische argues that *temeritas* (along with *temere* and *temerarius*) in post-Sullan political discourse is closely associated with the rashness of mobs and demagogues at Rome, which Cicero in his political speeches repeatedly contrasts with the prudent judgment of the senatorial aristocracy: *non multitudinis temeritate, sed optimatum consilio* (“not by the rashness of the crowd, but by the counsel of the *optimates*” *Cic. Flac.* 58).<sup>115</sup> This politically charged language has the effect of comparing chaotic atomic interactions to mob violence and

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<sup>113</sup> Cf. Lucretius’ *foedera naturai* (1.586; 2.302) and the use of *ratio* to describe the order and limits of atomic reality (1.75-77). For more detailed analysis of the *foedus* metaphor in Lucretius, see the chapter titled ‘Atomizing ritual alliance’ in Gladhill 2016: 69-96.

<sup>114</sup> *OLD* s.v. *temere* (esp. 1-3); cf. *temeritas*. While *temere* can simply mean ‘by chance’ (cf. Greek ἀπὸ τοῦτομάτου, εἰκῆ; Weische 1966: 31), unlike *casu*, it lies on a spectrum of connotation that includes rashness, heedlessness, and brashness. See, e.g., *Cic. Off.* 1.29.103, where the phrase *temere ac fortuito* is set in apposition to *inconsiderate neglegenterque*, and in opposition to *animadversio* and *diligentia*. A fragment of Pacuvius cited at *Rhet. Her.* 2.23.36 identifies *temeritas* as the negative version of *fortuna*—‘bad luck.’

<sup>115</sup> See Weische 1966: 28-33, who cites over a dozen Ciceronian passages, as well as examples from the *Rhetorica ad Herennium* and Caesar: “Wie die angeführten Stellen zeigen, wird mit “temeritas” besonders die Vorstellung der Unüberlegtheit und Unbegründetheit von Entschlüssen und Handlungen verbunden” (30). This attitude is best illustrated by a comment of Cicero’s at *Marcell.* 7: *numquam enim temeritas cum sapientia commiscetur nec ad consilium casus admittitur.*

the very real political friction of the late Republican period, a theme which Cicero expands upon to great effect elsewhere in his dialogues, and which I discuss in greater detail below.

When Balbus reiterates the same phrase later on, he associates the temerity of atoms with the haphazardness of their motion: *ex corporibus huc et illuc casu et temere cursantibus* (“from atoms rushing here and there at random and recklessly” *Nat. D.* 2.44.115). This negative characterization, which occurs as a contrast to the ‘real’ world of self-evident purpose and structure, is a natural outgrowth of the Stoic belief in intelligent design and the associated metaphor of God as craftsman; if there is no divine planner, then the natural world must fall victim not just to chance in the Aristotelian sense, but to a more personalized and political brand of rashness and lack of thought. In advancing this characterization of atomism, Balbus implies a moral criticism of atoms—that by moving without any overarching divine guidance, they act the way that foolish or bad people do in large crowds

#### 1.4.2 *Academic Critiques of Atomism in Cicero*

Like the Stoics, the representatives of Academic Skepticism in Cicero’s dialogues also criticize the fortuitous basis of atomic cosmology. Cicero’s own character echoes Balbus’ description of atomic impacts as “random collisions” (*concursione fortuita*, *Nat. D.* 2.37.93), once in the *Academica* (1.2.6), and twice in the *Tusculan Disputations* (1.18.42, 1.11.22), and it is repeated again by the Skeptic C. Cotta in *Nat. D.* 1.24.66 (*concursu quodam fortuito*). Later in the same passage, Cotta echoes Balbus’ skepticism about a seemingly purposive world (*opus*) forming from random collisions: *Sed ubi est veritas? ...in individuīs corpusculis tam praeclara opera nulla moderante natura, nulla ratione fingentibus?* (“But where is the truth? Is it in individual atoms forming such splendid works, without any nature or reason moderating?” *Nat.*

D. 1.29.67). Without embracing the Stoic vision of an intelligent creator God, Cicero's Sceptics nonetheless mirror Stoic doubts about the atomic account of cosmic order and structure.

The main way that Cicero elaborates upon this criticism of atomic fortuitousness is through the use of metaphors that compare the behavior of atoms to people. In one such metaphor, directed at the illogicality of the Epicurean swerve, he imagines atoms "going astray and swerving (or 'deviating') from their path" (*atomis errantibus et de via declinantibus*, *Fat.* 46), as if lost in the course of their otherwise predictable downward motion.<sup>116</sup> Aside from the obvious metaphorical criticism that the atoms are somehow hapless or lost, the phrase *de via declinantibus* likely contains a subtle moral rebuke as well. Although both Cicero and Lucretius use the verb *declinare* as a technical term for the atomic swerve, the phrase *de via declinare* is itself a distinct idiom, independent of ancient physics, which can indicate a straying from ethical or moral norms.<sup>117</sup> Earlier in *de Fato*, Cicero uses a similar expression, lambasting Epicurus for "leading the atoms astray from their path" (*Epicurus... eas [atomos] de via deducat*, *Fat.* 18), which cleverly associates the technical language of atomic *declinatio* with an overall error in judgment introduced by Epicurus, who is pictured here as turning his atoms away from both the literally straight path of Democritean atoms and from the metaphorical path of common sense. By employing the phrase again in conjunction with *atomis errantibus* ('wandering atoms') at *Fat.* 46, Cicero almost certainly means to evoke both the literal and ethical sense of the idiom in a disapproving fashion.

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<sup>116</sup> For other criticisms of the illogicality of swerve, cf. *Cic. Nat. D.* 1.25.69-70; *Fat.* 22-3, 46-8; and *Fin.* 1.6.19-20.

<sup>117</sup> See *OLD* s.v. *via* (7c), "a way or path of life," along with *declino* (2b), "to deviate from a norm of behaviour." For the moral force of this idiom, which can be felt in the English word 'deviant,' see Reinhardt 2005: 175, as well as Seyffert 1876: 398: "*Declinare, decedere de via* sind gewöhnliche Tropen für *honestatem, virtutem, officium deserere*. So pro Cael. 16.38 *Huic tristi seni responderet Caelius, se nulla cupiditate inductum de via decessisse*. Dass in diesen und ähnlichen Phrasen *via* "der rechte Weg" sei." Cf. *Cic. Lael.* 17.61 and *Rep.* 1.67. Cicero uses the verb *declinare* in this sense with *de statu* at *Clu.* 106 and *Prov. cons.* 41, and with *ab religione* at *Verr.* 2.3.2.

While such quips about atomic wandering and fortuitous collisions seem fairly benign, they are often paired with more explicitly negative characterizations of atomism as disordered or violent in a political or military sense, and it is in this regard that Cicero's dialogues make their most substantive contribution to the debate surrounding atomism. Taken together, they portray atomism as an anti-cosmology identified with the warfare and political chaos of the late Republic.

One metaphorical comparison that Cicero employs in this fashion, albeit to a limited extent, is between atomic collisions and combat. Reinhardt notes in a passage of the *De Natura Deorum* that Cotta, the Skeptical interlocutor, likens the continual bombardment of atoms upon the bodies of the gods to soldiers making an attack:<sup>118</sup>

Nec tamen video, quo modo non vereatur iste deus beatus, ne intereat, cum sine ulla intermissione pulsetur agiteturque atomorum **incursione** sempiterna, cumque ex ipso imagines semper afluant (*Nat. D.* 1.41.114).

Nor do I see how that blessed god could not be afraid of death, since he is battered without ceasing and assailed by an eternal **assault** of atoms, while images are constantly flowing away from him.

While the verbs *pulsare* ('batter') and *agitare* ('assail') may convey a general sense of force or violence, the word *incursio* ('assault') is typically restricted to military contexts and here is almost certainly meant to evoke the idea of an assault by soldiers or a hostile inroad.<sup>119</sup> Cotta does not elaborate further upon the metaphor, but its position within his overall argument against Epicurean theology is significant. Immediately after criticizing the *atomorum incurisio*, Cotta concludes that Epicureanism threatens the very foundations of religion: *sustulerit omnem funditus religionem nec manibus ut Xerxes sed rationibus deorum immortalium templa et aras*

<sup>118</sup> Reinhardt 2005: 172.

<sup>119</sup> *OLD* s.v. 1 "esp. mil." Cicero uses *incursio* one other time in reference to atomic *imagines*, although the military valence of the word is less pronounced: *ita qua [Epicurus] mutat, ea corrumpit, quae sequitur sunt tota Democriti, atomi, inane, imagines, quae εἰδωλα nominant, quorum **incursione** non solum videamus, sed etiam cogitemus* (*Fin.* 1.6.21).

*everterit* (“[Epicurus] abolished all of religion to its very foundations; and not with his hands, like Xerxes, but by his arguments he overturned the temples and the altars of the immortal gods” *Nat. D.* 1.41.115). The implications of the ‘assault’ of the atoms upon the gods are, therefore, potentially quite disturbing: like a Gigantomachy in miniature, the atoms seek to overthrow gods who are the traditional guarantors of cosmic order.

The principal metaphor, however, that Cicero uses to associate atoms with disorder is political, comparing atoms to the urban mob at Rome. As we saw above, Balbus’ characterization of atoms as rash (*temere*) already evokes late Republican political discourse, and Cicero strengthens this association when he separately refers to the “crowd of atoms” (*atomorum turba*; *Tusc.* 1.11.22) and their “turbulent collision” (*turbulenta concursio*; *Fin.* 1.6.20). As Joseph Hellegouarc’h has argued, citing widely from late Republican and Augustan literature, both *turba* and *turbulentus* possess strong connotations of mob violence and populist political disorder—a persistent feature of public politics in the final decades of the Republic—and it follows that this would have been keenly felt during the period of 45-44 BCE when Cicero composed the majority of his philosophical works.<sup>120</sup> Even for Lucretius, a bona fide atomist writing in the 50s, the metaphor of the atomic *turba* applies specifically to *disordered* groups of atoms, which he contrasts with the positive political metaphor of a *coetus* (‘gathering’) or *concilium* (‘assembly’) when those atoms successfully combine to form a larger, ordered

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<sup>120</sup> See Hellegouarc’h 1963: 515: “*Turba* qui, au sens propre, signifie ‘le désordre,’ exprime aussi dan un sens plus concret la notion d’une foule désordonnée et en révolte; il s’applique aux Catiliniens chez Cicéron, à la *factio forensis* d’Ap. Claudius chez Tite-Live.” For similar comments on *turbulentus*, see *ibid.*: 531-2. The association of *turba* with *turbulentus* was likely a familiar one, judging by a witticism of Varro’s, recorded by Gellius (*NA* 13.11.3), concerning the appropriate number of guests for a dinner: *nam multos, inquit, esse non convenit, quod turba plerumque est turbulenta et Romae quidem stat, sedet Athenis, nusquam autem cubat*. From a philosophical perspective, Cicero’s *turba* may also have been intended to evoke *turbo*, a Latin translation of Democritus’ δίνη, and the proposed (albeit unlikely) emendation of Gustafsson for *turba*. See Gustafsson 1882: 169.

whole.<sup>121</sup> Cicero's *turba atomorum*, therefore, is not just a crowd by virtue of its numbers, but by its lack of effective guidance and its supposed propensity to disorder and violent collision.

In many of the political metaphors employed by Cicero, Epicurean atoms are not only anarchic in the literal sense of lacking an intelligent leader, but also behaviorally anarchic in the sense of being chaotic and self-destructive, as a human city becomes in the absence of stable governance.<sup>122</sup> A telling example occurs in *De Natura Deorum*, when Cotta criticizes the Epicureans with an intriguing metaphor, castigating them for reducing all explanations of phenomena to the "tyranny and licentiousness of atoms" (*abuteris ad omnia atomorum regno et licentia*, Cic. *Nat. D.* 1.23.65). In a strictly philosophical sense, this dual attribution of tyranny and licentiousness, which in Roman political parlance refers to unrestrained liberty and lack of discipline, complements Cotta's arguments in two ways. First, the metaphor of political tyranny (*regnum*) ridicules the absolute authority given to atoms in Epicurus' reductionist explanations of natural phenomena, while the atoms' licentiousness (*licentia*), here a form of lawlessness, reminds the reader of the uncaused swerve that reduces that reductionism to an absurdity.

More importantly, however, Cotta's metaphor contains a strong moral dimension that ties the behavior of atoms to odious (from the perspective of Cicero) developments in contemporary politics. In a passage of Cicero's *De Re Publica*, written in the late 50s, Scipio Aemilianus attributes the rise of tyranny in a republic to the growth of unbridled *licentia* among the people:<sup>123</sup>

ex hac infinita, inquit, licentia haec summa cogitur, ut ita fastidiosae mollesque mentes evadant civium, ut si minima vis adhibeatur imperii, irascantur et perferre

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<sup>121</sup> See Cabisius 1984-5: 111, 114-15, who documents the dichotomy in Lucretius between *vulgus/turba* and *coetus/concilium* to describe disorderly and orderly groups of atoms. Cf. *Lucr.* 2.549-51, 919-22.

<sup>122</sup> See Reinhardt 2005: 171-5. As Reinhardt has carefully documented, political metaphors equating atomism with anarchy form a major component of Cicero's presentation of Epicurean physics.

<sup>123</sup> See Weische 1966: 37-8 and Hellegouarc'h 1963: 558-9, 560-1, both of whom offer insightful commentary upon the perceived connection between popular *licentia* and personal *regnum* in the late Republic.

nequeant; ex quo leges quoque incipiunt nelegere, ut plane sine ullo domino sint... ex hac nimia licentia, quam illi solam libertatem putant, ait ille, ut ex stirpe quadam existere et quasi nasci tyrannum. (*Rep.* 1.67-8)

This infinite licentiousness brings about a final result: the minds of the citizens become so disdainful and soft, that if the slightest force of governmental power is applied, they become angry and are unable to tolerate it; and from this point they begin to neglect the laws as well, since they are so clearly without any master... It is out of this excessive licentiousness--which they think is only liberty—that the tyrant arises as if from some root or stalk and is, in a fashion, begotten.

As we can see, the various attributions of *turba*, *licentia*, and *regnum* to atomism in Cicero's later philosophical works evoke an established model of republican decline, with obvious parallels in contemporary Rome. In further confirmation of this point, as Hellegouarc'h notes, *licentia* and *regnum*, both terms of political rebuke in the late Republic, are applied mostly to descriptions of *populares* who owed much of their power to influence with the urban crowd at Rome.<sup>124</sup> When Cicero applies these political catchwords and metaphors to atomism, it has the effect of repeatedly comparing Epicurean physics to exactly the sort of mob violence, demagoguery, and eventual tyranny that ended republican government at Rome and forced Cicero himself out of politics and into philosophical writing.<sup>125</sup>

Having surveyed Cicero's use of metaphor in characterizing Epicurean atomism, I now offer some conclusions. First, that Cicero presents a consistent image of atoms across many dialogues as capricious, anarchic, and threatening to the natural order—in other words, as fundamentally *disorderly*. It is difficult to know exactly to whom these characterizations can be attributed, because Stoic and Skeptic interlocutors repeat many of the same criticisms, and it is not often clear when Cicero is speaking *as a skeptic* or not. However, even without knowing the

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<sup>124</sup> See Weische 1966: 38: *Licentia und libido konnte allen denen vorgeworfen werden, die nach Ansicht der Optimaten die bestehende Ordnung der römischen Republik gefährdeten*. See also Hellegouarc'h 1963: 560: *c'est d'ordinaire aux populares que le désir de regnum est imputé*.

<sup>125</sup> For the direct link between Cicero's exclusion from politics and his decision to write philosophical works, see *Fam.* 9.2.

exact origin of every detail, Cicero's dialogues are invaluable as a survey of non-Epicurean perceptions of atomism in the mid-first century BCE, providing strong evidence that characterizations of atomism as disorderly were widespread in the generation before Virgil.

However, it is the political dimension of Cicero's metaphors that likely had the greatest impact upon Virgil's reception of atomism in the *Aeneid*. Given the immediate and far-reaching influence of Cicero's dialogues upon the subsequent development of Latin philosophy, and given Virgil's detailed engagement with *De Re Publica* in *Aeneid*, 6 it is extremely likely that the poet was familiar with Cicero's other philosophical works.<sup>126</sup> And in those works, Virgil would have found a thoroughly contentious presentation of Epicurean philosophy that associates atomism with the same forces of political disorder that tore apart the Roman Republic. In the *Aeneid*, Virgil reverses the direction of the comparison, but to similar effect; instead of describing atoms in negative political terms, as Cicero does, Virgil describes moments from the mythology and history of the Romans in atomic terminology, particularly in situations and contexts that present some obstruction to the establishment of Roman *imperium* and cosmic order.

## 1.5 LUCRETIAN ATOMISM

Although the discussion thus far has focused on the arguments and metaphors of anti-atomist philosophers, any account of figurative language in post-Democritean descriptions of atomism would be incomplete without mention of Lucretius, whose sweeping incorporation of metaphors in *De Rerum Natura* marked a radical shift (compared with Epicurus and Philodemus) in the Epicurean characterization of atoms. For, as we shall see, Lucretius' embrace of the epic

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<sup>126</sup> In fact, Virgil was almost certainly acquainted with this characterization, either directly from Cicero's dialogues or from the Hellenistic Greek texts that he would have encountered in his studies among the Epicureans on the Bay of Naples. See above.

genre opened Epicurean atomism to a host of new metaphors and explanatory analogies.

Although it lies beyond the scope of this dissertation to offer any comprehensive assessment of metaphorical characterization in *De Rerum Natura*, a few illustrative examples should suffice to draw out the essential threads of similarity and difference in how Lucretius and the anti-atomists characterize atoms. With regard to the *Aeneid*, written within a Homeric tradition steeped in philosophical allegory, the rhetorical shift in *De Rerum Natura* would have far-reaching implications for Virgil's allusive use of Lucretian material, particularly atomic physics.

The systematic use of analogy between atomic and human levels of existence is a fundamental feature of *De Rerum Natura*, and scholars have commented on the artistic and philosophical importance of this strategy.<sup>127</sup> Gail Cabisius, in a study of social metaphors in the poem, provides a characteristic statement of this relationship, describing how “metaphors force the reader to see the atoms in terms of human life and to view human life as a reflection of the creative and destructive cycle of atomic activity” (1984-5: 110). Although many of these Lucretian metaphors correspond to the subjects of comparisons also made by Cicero, such as politics and warfare, Lucretius differs fundamentally in using such metaphors to present a balanced picture of atoms as both creative and destructive, contributing sometimes to order and at other times to disorder in an eternal cycle.<sup>128</sup>

As with Cicero's characterization of atomism in his philosophical dialogues, the most common point of analogy in *De Rerum Natura* is political activity, from which Lucretius derives a wide array of individual metaphors to describe atomic motion.<sup>129</sup> One example, mentioned briefly above, is the dichotomy between *turba* or *volgus* to describe disorderly groups of atoms,

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<sup>127</sup> Such is the argument of Schiesaro's (1990) *Simulacrum et imago: Gli argomenti analogici nel De rerum natura*, summarized at 9-10. See also Fowler 1989: 145-50.

<sup>128</sup> Cf. the remark by Velleius, Cicero's Epicurean interlocutor, expressing the principle of isonomia at *Nat. D.* 1.19.50: *si quae interimant innumerabilia sint, etiam ea quae conservent infinita esse debere.*

<sup>129</sup> See Cabisius 1984-5: 109-110.

and *coetus* or *concilium* to describe atoms that have combined to form a stable whole.<sup>130</sup> In addition to these, Cabisius notes metaphorical or multivalent uses of *ordo* (2.899), *fines* (1.670-1, 792-3, 3.519-20), *foedera* (1.586; 2.302; 5.310, 924; 6.906-7), *res gerere* (*passim*), *tumultus* (2.956), and *motus* (2.127, 958), among others.<sup>131</sup> Throughout the poem, such metaphors portray atoms in varied states of political concordance or disagreement, corresponding to the cyclical growth and destruction observable in the natural world.<sup>132</sup>

The other pervasive set of metaphors found in Lucretius compares atomic motion with warfare. Although Lucretius did not significantly modify the atomism that he inherited from Epicurus, his widespread use of metaphorical comparisons between atomic collisions and human conflict differentiates him from his Epicurean predecessors. Monica Gale, in her study of Lucretian intertextuality in the *Georgics*, argues that the metaphorical conflicts of atoms in Lucretius are meant to sway war-weary Roman readers to accept Epicureanism, by implying that if one accepts the atomic conflicts of nature, then one may free him or herself from the conflicts of human society.<sup>133</sup> This interpretation finds support in a number of passages, including the prologue of the *De Rerum Natura*, which positions Lucretius' didactic poem as a tool for peace amid the internecine political violence and foreign campaigning that wracked the late Roman Republic.<sup>134</sup>

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<sup>130</sup> See *ibid*: 111, 114-16, who cites *Lucr.* 2.549-51, 2.919-22, 2.116-28. To this one may add the *turba materiai* that is ejected from the dying cosmos at 1.1111-13.

<sup>131</sup> See *ibid*: 110-16. Cabisius also briefly mentions non-political comparisons to weavers, craftsmen, architects, builders, and generals. For an extensive bibliography on metaphor in Lucretius prior to 1984, see 110, fn. 9.

<sup>132</sup> Fowler 1989: 147 remarks that the overall 'republicanism' of Lucretius' atomic metaphors generally casts atomism in a favorable light.

<sup>133</sup> See Cabisius 1984-5: 109-110

<sup>134</sup> Gale 2000: 232, "Lucretius holds out to his reader the promise of peace and tranquility, but also depicts the cosmos as the setting for a perpetual war waged between the atoms and natural forces. He asks us to reject the wars and violence which have dominated human history, while accepting the reality of atomic 'warfare.'" Cf. Fowler 1989: 148: "No pact is truly eternal. From this point of view the atoms in a compound are also at war, a civil war."

<sup>134</sup> *Lucr.* 1.40-2. See McConnell (2012) for a related discussion of civil strife as an ethical (though not strictly historical) concern among Epicureans.

In addition, scholars have also looked to historical and generic considerations to explain the abundance of martial metaphors in *De Rerum Natura*. Clyde Murley (1947), David West (1969), and Gale (1994) have documented the poem's deep generic affiliations with Homeric epic, arguing that this entailed a widespread and consequential adoption of the comparison between warfare and atomic physics.<sup>135</sup> Furthermore, Bailey and West note the influence of Ennian epic, which provides a likely point of contact between the epic genre and Roman history in Lucretius' poem.<sup>136</sup> Gale points out that this type of martial imagery is found nowhere in the extant fragments of Epicurus, but instead appears to be the original contribution of Lucretius, who was responding to Roman cultural norms and attitudes, as well as to the prevalence of warfare metaphors in pre-Socratic philosophy.<sup>137</sup> Whatever the reasons for the widespread adoption of these metaphors, they are an integral component of Lucretius' portrayal of atoms—perhaps even their defining characteristic.<sup>138</sup>

## 1.6 CONCLUSION

It is clear, I hope, from the preceding discussion that Virgil, when formulating his reception of atomism in the *Aeneid*, had access not only to Lucretius' imaginative descriptions of growth and decay in *De Rerum Natura*, but also to a long and prominent tradition of opposing texts that presented atomic physics as random, violent, and fundamentally unstable. While it is impossible to prove beyond the shadow of a doubt Virgil's familiarity with many of the individual philosophical texts discussed above, or to prove direct lines of transmission between

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<sup>135</sup> See Gale 1994: 106-28; West 1969: 23-24; Murley 1947: 339-40, 344.

<sup>136</sup> See West 1969: 23-34, 30-33; Bailey 1947: 29-30 (vol. 1).

<sup>137</sup> See Gale 2000: 232: "Lucretius' use of military imagery seems not to derive from his Epicurean sources." Cf fn. 2. For importance of war to Roman culture and literature, see *ibid*: 240-3, and for prevalence of the warfare metaphor in pre-Socratic philosophy, see *ibid*: 233-4, as well as Hardie 1986: 235.

<sup>138</sup> For lists of atomic 'conflicts' and 'wars' in Lucretius see Gale 2000: 234 fn.8-9 and Murley 1947: 343-5.

various anti-atomist philosophers, the ubiquity of images and arguments equating atomic physics with disorder indicates that Virgil could have encountered this negative characterization in any number of philosophical sources. As I demonstrate in the following chapters, while all of the allusions to atomism in the *Aeneid* are crafted from Lucretian intertexts, Virgil filters them through the conceptual framework of these anti-atomists, whose characterization of atomism as disorderly he adopts throughout his epic.

One important consequence of this move is reflected in Virgil's choice of Lucretian intertexts, which gravitate towards moments in the poem that emphasize the destructive aspect of atoms. While the early atomists and Epicureans presented their account of cosmology as rational and ordered according to clear mechanical principles of material motion, Plato, Aristotle, and Cicero all advanced characterizations of atomism as profoundly disordered and irrational, often by using contentious metaphors to support their arguments. However, when Lucretius opened atomism to the social metaphors and martial analogies of epic poetry and Roman culture, he subordinated these images of natural violence and dissolution to a vision of the cosmos as balanced, eternally alternating between cycles of growth and dissolution at both the micro and macro levels. What ultimately makes Virgil's reception of atomism so 'polemical' is that, in the case of the *Aeneid*, when presenting images that evoke atomic motion without any sort of philosophical inversion or Hardian 'remythologizing,' he exclusively recalls the destructive aspect of the Lucretian worldview, without acknowledging the corresponding component of growth and order. In this way, Virgil follows Plato, Aristotle, and Cicero (and likely the Stoics and Academic skeptics of the Hellenistic period more generally) in making atomic physics a stand-in for, or symbol of, disorder.

Lastly, I believe it is essential to recognize that this move is not just a literary ploy meant to assert Virgil's supersession of Lucretius in the poetic tradition, but has undeniable philosophical implications for the worldview of the *Aeneid*. By applying a consistently anti-atomist framework to Lucretian atomic allusions, the poem advances a partisan view of Epicurean physics that coheres with its overall orientation towards the trajectory of Roman imperial conquest, the rule of Augustus, and the proper orientation of humanity to nature and the gods. Instead of seeking to separate these threads or subordinate one to another, we will gain a richer understanding of philosophical and political allegory in the *Aeneid* by asking how these different areas contribute to a unified concept of the relationship between order and authority in the poem. In the next chapter I begin by examining the political and historical dimension of this picture, focusing on scenes in which Aeneas and other epic 'winners' confront atomic obstacles on the path to progress.

## Chapter 2. TROJANS UNDER THE INFLUENCE OF ATOMISM (EPIC WINNERS)

*Tunc omnia rebar  
consilio firmata dei...  
...rursus labefacta cadebat  
religio causaeque viam non sponte sequebar  
alterius, vacuo quae currere semina motu  
adfirmat magnumque novas per inane figuras  
fortuna non arte regi, quae numina sensu  
ambiguo vel nulla putat vel nescia nostri.* (Claud. *Ruf.* 1.6-7, 15-19)

I used to think that all things were fixed by divine design... But my reverence for the gods wavered and began to slip back, and reluctantly I followed a different way of thinking. It declared that there are atoms that speed along with purposeless motion and strange bodies moving through a great void; that the world is ruled not by art but by chance; and it believed that deities exist in a dubious sense—either that there are really none at all, or that they are unaware of us. (Claudian)

Having concluded the review of atomism's hostile reception in philosophical literature up to the time of Cicero, we may now turn our attention to the *Aeneid* itself, in order to see how Virgil's text responds to many of the same themes concerning chance, purpose, and disorder in its handling of Lucretian intertexts. I begin by investigating allusions to Epicurean atomism that occur in contexts specifically affecting Aeneas and the Trojans. In each of these scenes, Virgil's Lucretian intertexts evoke images of atomic disorder, either when some obstacle threatens the progress of the Trojans' divinely ordained mission to found the Roman people, or when Aeneas shrinks from fulfilling Rome's historical destiny.<sup>139</sup> In keeping with the philosophical critiques

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<sup>139</sup> A founding mission ordained not only by divine fate, but also by Homer. See Poseidon's prophecy concerning Aeneas at *Il.* 20.302-8.

of Greek and Roman detractors who rejected the possibility of cosmic order without divine regulation, atomism serves in this capacity as a foil to the principles of divine authority and national purpose that guide Aeneas on his journey.

## 2.1 THE ATOMIC OPENING (NATURE *SINE NUMINE*)

After a brief prologue and explanation of Juno's antipathy towards the Trojans, the narrative proper of the *Aeneid* begins with a plot by the queen of the gods to unleash a deadly storm upon Aeneas' fleet, at that time traveling near Sicily. This storm, long recognized as an event of great thematic importance to the poem as a whole, functions in many ways as a thesis statement for Virgil's allegorical handling of politics and cosmology, in which Epicurean atomism plays the role of a disruptive antagonist.<sup>140</sup> In the brief interval between when Aeolus unleashes the winds and Neptune restores order, the chaotic and destructive storm provides a snapshot of natural elements operating without divine oversight. When acting in this way, nature is portrayed as atomic in a manner that is intertextually Lucretian, yet consistent with non-Epicurean critiques of atomism that insist upon the presence of divine intelligence in the cosmos. The profusion of Lucretian allusions in the description of the storm, coupled with its concluding simile (the first of the poem), which compares Neptune to a Roman statesman quieting the riotous winds, sets divine order—associated positively with Roman rule and Augustan governance—in opposition to non-teleological disorder—associated negatively with atomic physics and civic disunity—for the duration of the poem.

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<sup>140</sup> See Feeney 2014: 216, commenting on the programmatic significance of this opening simile as it relates to Epicureanism: "[Virgil's] reworking of Homer has been blended with his reworking of Lucretius, whose patterns of natural chaos are so threatening to the order he wishes to establish in his poem." Scholarship on the storm is extensive; for the foundational importance of the storm for Virgil's engagement with Augustan political culture, with Homeric mythology, and with cosmological allegory, see Galinsky 1996: 20-4, Feeney 1991: 134-7, and Hardie 1986: 90-7, respectively.

As far back as Servius, commentators have identified the Aeolus episode as a touchstone for Virgil's engagement with traditions of philosophical allegoresis in Homeric criticism.<sup>141</sup> Due to their importance within this allegorical interpretive framework, the Homeric poems provide the primary allusive model for the character of Aeolus (cf. *Od.* 10.1ff.), along with a great many intertextual details in the storm.<sup>142</sup> Yet after Homer, the next most important intertextual source for this scene is Lucretius' *De Rerum Natura*. Lucretian intertexts, many of which precisely recall passages explaining the atomic workings of wind, thunder, and lightning, as well as descriptions of the birth and death of atomic worlds, suffuse the Aeolus episode with natural-philosophical undertones that work in concert with the general allegorizing spirit of the scene.<sup>143</sup> Such details are not, I contend, simply cosmological or epicizing window-dressing intended to acknowledge an important poetic predecessor or a literary topos; rather, they meaningfully engage with the philosophy of Lucretius' poem, evoking its atomism as a negative model of how cosmological and political structures fail in the absence of authoritative and intelligent guidance.

The first echo of Lucretian storm-imagery occurs just before the Aeolus episode, when Juno bemoans the fact that other goddesses have been allowed to avenge themselves against mortal enemies, while she alone is prevented from punishing the Trojans. As a contrast to her own situation, Juno cites Athena's punishment of the Greek fleet on account of the Locrian Ajax:

ipsa, Iovis rapidum iaculata e nubibus ignem,  
disiecitque rates evertitque aequora ventis,  
illum expirantem transfixo pectore flammis  
turbine corripuit scopuloque infixit acuto (*Aen.* 1.42-5).

<sup>141</sup> See Serv. ad *Aen.* 1.78, alluding to the etymological connection between *aera* and ἄρα: *TU MIHI QUODCUMQUE HOC REGNI rediit ad physicam rationem. nam motus aeris, id est Iunonis, ventos creat, quibus Aeolus praeest.* Cf. similar notes ad 1.47, 52, 133, and 142. For the programmatic importance of the storm and its concluding simile to allegorical interpretation in the *Aeneid*, see Cowan 2015: 105, Beck 2014: 67, Feeney 2014: 209-221, Feeney 1991: 132-6; Hardie 1986: 90-7, 180-3; and Phillips 1980: 24.

<sup>142</sup> See Knauer 1964: 175, who argues that Virgil's storm is a composite of the Laistrygonian episode (*Od.* 10.1-132) and the storm in book 5 (*Od.* 5.282-387). For the view that Virgil's winds may also be mediated through an instance of *physica ratio* in Apollonius (4.766-7), see Phillips 1980: 21.

<sup>143</sup> For the interpretation of the Virgilian scene as a synthesis of Homer and Lucretius, see Hardie 1986: 91.

Pallas cast the swift fire of Jupiter down from the clouds, scattering the ships and agitating the sea with winds; and she seized Ajax in a whirling storm while he exhaled flames from his pierced chest, and fixed him upon a sharp rock.

As a number of commentators have noted, Juno's complaint recalls a passage in the sixth book of *De Rerum Natura*, from a discussion of the atomic causes of lightning. At the end of that passage, Lucretius criticizes traditional mythological explanations for thunderbolts, especially the notion that the gods use lightning to punish wrongdoers:<sup>144</sup>

cur quibus incautum scelus aversabile cumquest  
 non faciunt icti flammas ut fulguris halent  
pectore perfixo, documen mortalibus acre,  
 et potius nulla sibi turpi conscius in re  
 volvitur in flammis innoxius inque peditur  
turbine caelesti subito correptus et igni? (Lucr. 6.390-5)

Why do the gods not punish those who have not guarded against some abominable crime, so that they are struck and exhale flames of lightning from their pierced chest, providing a bitter lesson to mortals? Why, instead, is someone who is not an accomplice to any wicked act engulfed in flames and, although guiltless, seized suddenly by a whirling storm of heavenly fire?

In addition to the close verbal correspondence in the descriptions of pierced chests exhaling flame and being seized by a whirlwind, the two passages are linked thematically. In the context of his rationalizing explanations for meteorological phenomena, Lucretius uses the example of a guiltless person (*innoxius* 6.394) being struck by lightning to argue that the gods do not employ lightning for the purposes of divine justice; but in the *Aeneid*, Pallas does just that, using a thunderbolt to punish a mortal crime (*unius ob noxam* 1.41). Along these lines, Hardie identifies this allusion as an example *par excellence* of Virgilian 'remythologization': Virgil has taken a passage from Lucretius that seeks to rationalize (or 'demythologize') a natural phenomenon, and has restored the divine explanation, all the while hewing closely to the language of the

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<sup>144</sup> See C-N ad *Aen.* 1.45 and Bailey ad Lucr. 6.392. See also Serv. ad *Aen.* 1.42: *E NUBIBUS secundum physicos qui dicunt conlisione nubium fulmen creari.*

original.<sup>145</sup> In this particular case, then, the allusion is thoroughly ‘polemical’ and ‘inverted,’ retaining Lucretian verbiage while dispelling Lucretian physics.

However, Juno’s complaint is that this is precisely how divinity in nature is *supposed* to work, with natural elements subordinated to divine purposes, and that she has been wronged for not being allowed the same opportunity as Pallas. By intervening with Aeolus, Juno temporarily subverts the normal divine order. Therefore, her normative picture of divinely controlled lightning at *Aeneid* 1.42-5 marks a point of departure for the storm that follows, the chaos and disorder of which is portrayed as simultaneously elemental and cosmic in scale. This turn from order to disorder in the storm is mirrored by a shift in how Virgil deploys his Lucretian intertexts; instead of remythologization and the suppression of philosophical content, we instead see allusions that preserve the spirit of atomism, importing Epicurean physics into the poem in a manner that allegorizes the storm-winds as symbols for the non-teleological disarray of atomism.

The first hint of this shift occurs in Virgil’s depiction of the cave of the winds, which represents an intermediary stage between Hardie’s remythologizing and the type of polemical importation for which I am arguing.<sup>146</sup> In a memorable description composed from varied poetic and mythological sources, Virgil describes how Aeolus reigns over the winds in a great mountain cave, where the chaotic winds are held like prisoners:<sup>147</sup>

illi indignantes magno cum murmure montis  
circum claustra fremunt (*Aen.* 1.55-6)

The winds howl resentfully around the bars of the mountain with a great roar.

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<sup>145</sup> See Hardie 1986: 179-80.

<sup>146</sup> For a detailed list of Lucretian parallels in Virgil’s description of the cave of the winds, see Hardie 1986: 237-40.

<sup>147</sup> See Hardie 1986: 90-97 for discussion of Hesiodic models of gigantomachy in the Aeolus episode.

At the level of individual words, these two lines are overwhelmingly indebted to an earlier section of the Lucretian passage mentioned above, where the poet explains the formation of lightning within clouds by means of a cave simile.<sup>148</sup>

tum poteris magnas moles cognoscere eorum  
speluncasque vel ut saxis pendentibus structas  
cernere, quas venti cum tempestate coorta  
conplerunt, magno indignantur murmure clausi  
nubibus in caveisque ferarum more minantur,  
nunc hinc nunc illinc fremitus per nubila mittunt (Lucr. 6.194-9)

Then you will be able to recognize the clouds' great mass, and to see their caves built up as if from hanging rocks. And when a storm has arisen and the winds have filled the clouds up, locked within the clouds they chafe with a great roaring sound, menacing like beasts in their hollows; now here, now there, they send their howling through the clouds.

Hardie cites this intertext as another example of remythologizing, and to an extent this can be said of the entire Aeolus episode, since here Virgil introduces rationalizing atomic descriptions of wind to a narrative world populated by Homeric and Roman gods, beneath whose authority they must eventually yield.<sup>149</sup> Yet I would like to complicate this straightforward picture by suggesting that, within the dominant Homeric framework of divine authority, episodes occur in which demythologized atomic images are imported *without inversion* in order to present a challenge to the established order. In such cases, allusions of the remythologizing variety act as a backdrop of poetic convention and cosmic stability against which the demythologizing sort may perform their antagonistic function. While all of these challenges are ultimately defeated (in the case of the storm, by Neptune), they add dynamism to the allegorical conflicts of the poem,

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<sup>148</sup> See Phillips 1980: 20, who suggests that “Lucretius’ simile may well have been suggested by an older belief that the violent winds are cave dwellers, if not prisoners there,” citing *Il.* 23.200 and Callim. *Hymn* 4.65. Hardie 1986: 181 also links the *fremunt* of *Aen.* 1.56 to a description of earthquake-causing winds at *Lucr.* 6.581: *speluncas inter magnas fremit ante tumultu.*

<sup>149</sup> See Hardie 1986: 180.

suggesting a movement in the cosmological narrative from disorder to order that parallels the journey of Aeneas from the ruins of Troy to the fields of Latium.

In the case of the winds trapped in Aeolus' cave, we may thus reinterpret the image not as one of total remythologization, but as one in which chaotic atomic forces are constrained (however tenuously) by a mythological figure that is suggestive of both divine and human political authority.<sup>150</sup> While the interpretive frame for the cave and its warden is both literally (within the world of the poem) and literarily (by Homeric convention) mythological and divine, its prisoners remain Lucretian and Epicurean, albeit according to the uncharitable interpretation of atomic physics discussed in the previous chapter.

The cosmic scale of this threat becomes clear in the lines immediately following, when Virgil describes what would occur if Aeolus did not keep the Lucretian winds confined to their mountain prison.

celsa sedet Aeolus arce  
sceptra tenens, mollitque animos et temperat iras.  
ni faciat, maria ac terras caelumque profundum  
quippe ferant rapidi secum verrantque per auras. (*Aen.* 1.56-9)

Aeolus sits upon the lofty citadel with his scepter, softening the winds' spirits and restraining their anger. If he did not do this, then of course the swift winds would carry away the seas and lands and the vast sky, and would sweep them away through the air.

As Hardie and others note, Homeric and Hesiodic descriptions of gigantomachy provide structural models for this scene, along with certain linguistic details, while the “seas, earth, and sky” expression (*maria ac terras caelumque*) reflects a tripartite conception of the world that is prevalent in archaic Greek poetry.<sup>151</sup> Yet once again, the preponderance of intertextual raw

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<sup>150</sup> Aeolus is a *rex* (1.52), and rules over the winds with *imperio* (1.54). For further discussion of Aeolus as a political figure, see Cowan 2015: 110-113.

<sup>151</sup> See Hardie 1986: 90-97, 313-25, along with Schmidt (1981).

material for the Virgilian lines derives from a noteworthy passage of Lucretius, through which the earlier Greek models are filtered.<sup>152</sup>

sunt igitur venti nimirum corpora caeca  
 quae mare, quae terras, quae denique nubila caeli  
verrunt ac subito vexantia turbine raptant (Lucr. 1.277-9)

There are, therefore, blind atoms of wind that sweep across the sea, the lands, and the clouds of the sky, violently tossing and snatching them up with a sudden whirlwind.

As the underlined parallels make clear (*mare, terras, caeli, verrunt*), Virgil borrowed heavily from the vocabulary of the Lucretian passage. In addition to these direct verbal correspondences, Virgil's *quippe* ('of course'), an adverb used to introduce obvious conclusions, picks up on the didactic tone of the Lucretian passage, which uses the equivalent *igitur nimirum*. While *quippe* is a relatively unusual word in Virgil, appearing 5 times in the *Aeneid* and 4 times in the *Georgics*, it is a mainstay of Lucretian didactic style, occurring 46 times in *De Rerum Natura*.<sup>153</sup> In isolation, Virgil's use of *quippe* would not be remarkable, but the accompanying presence of so many Lucretian intertexts brings the didactic force of that word to the fore.

*Quippe*, therefore, invites us to recall the Lucretian intertext as a specifically didactic and philosophical allusion, and the context of its source passage provides clues for how to interpret it. In *De Rerum Natura*, the lines about wind rushing over sea, earth, and sky occur in a passage where Lucretius argues for the existence of atoms (even when we can't see them) by appealing to meteorological phenomena that lack visible causes. Therefore, *as a didactic explanation*, the Lucretian passage offers a memorable model of weather that reduces the awesome power of wind to the mechanical action of atoms (*corpora caeca*). When reading the Virgilian allusion

<sup>152</sup> See Hardie 1986: 92-3, along with C-N ad 1.59. C-N go even further, arguing that Virgil's *per auras* is equivalent to *per inane*, a Lucretian phrase for the void.

<sup>153</sup> *Quippe* also occurs twice in the fragments of Ennius' *Annales*, although the context in each case is uncertain.

through this didactic lens, one may infer the latent power of Lucretius' atomic explanation, which, like his *corpora caeca*, is unseen but still felt.

Likewise, Virgil's contrast between the atomic threat of the winds and the divine oversight of Aeolus echoes the popular characterization of atomism (or any non-teleological materialism) in philosophical literature as a sort of chaos that must be given order by divine intelligence. In classic allegorical fashion, Virgil's image of Aeolus presiding over the disorderly forces of nature makes the point emphatically that nature, like a political organization, requires intelligent leadership to function successfully and to avoid cataclysmic disorder. And, as we will see with the simile of the Roman statesman at the end of the storm, this allegorical point is not only cosmological and political, but also historical and even contemporary to Virgil's time.

When Juno solicits Aeolus' cooperation in unleashing a storm on the Trojan fleet a few lines later, her command to the god of winds again evokes Lucretian vocabulary in a philosophically suggestive manner:

**incute vim ventis**<sup>154</sup> submersasque obrue puppes  
aut age diversos et disiice corpora ponto (*Aen.* 1.69-70).

**Drive force into the winds**; sink the ships and strike them down, or drive them apart and cast aside the bodies into the sea.

Although the notion of wind possessing *vis* ('force') is not unprecedented in Latin literature, it is sparsely attested in authors prior to Virgil outside of Lucretius, and occurs nowhere else in Virgil.<sup>155</sup> Similarly, although ἄνεμοι ('winds') in Homeric poetry are regularly paired in genitive constructions with wind-specific words like ἄελλα, θύελλα, ἀήτης, ἀὔτημή, the phrase βία ἀνέμων occurs only twice in Homer, in similes describing a wall that resists the "forces of the winds"

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<sup>154</sup> There is some debate over the correct meaning of this dative. Servius offers two possibilities, while Usener 1865: 125 proposes emending it to *vis venti*. Although Usener does not mention Lucretius, his proposed emendation would make the Virgilian phrase conform exactly to Lucretian usage.

<sup>155</sup> Cf. Cic. *Inv. rhet.* 2.98 *vis ventorum*.

(βίας ἀνέμων ἀλεείνων, *Il.* 16.213, 23.713). In contrast, Lucretius uses the phrase *venti vis* repeatedly.<sup>156</sup> Tellingly, all of these uses occur in explanations that stress the atomic causes of wind phenomena and, as a result, the phrase comes to function as formulaic shorthand for the underlying atomic causes of wind.<sup>157</sup> Indeed, the phrase appears prominently at the beginning of the Lucretian passage discussed above, where the Epicurean poet offers storm winds as an example of a physical phenomenon with an invisible atomic cause: *principio venti vis verberat incita pontum* (“first, the force of the wind is stirred up and strikes the sea”, *Lucr.* 1.271).<sup>158</sup> Because Lucretian usage suggests itself as a likely source for Virgil’s *incute vim ventis*, and because the *vis venti* is always an explicitly *atomic* force in Lucretius, Juno’s command provides us with yet another intertextual data point in support of a philosophically sensitive reading of this passage, especially given the saturation of Lucretian intertexts in the episode as a whole.

If we accept this allegorical and intertextual identification of Aeolus’ winds with Epicurean atoms, then the moment in which the winds are finally let loose from their mountain prison acquires an additional philosophical twist. In lines that continue to draw upon the Lucretian description of winds for tone and vocabulary, Virgil depicts the unruly winds as soldiers sallying forth from a camp:<sup>159</sup>

ac venti, velut agmine facto  
qua data porta, ruunt et terras turbine perflant (*Aen.* 1.82-3)

And the winds, like when a formation of soldiers sallies forth from an open gate,  
rush out and blow through the land in a whirlwind.

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<sup>156</sup> 9 times in total: 1.271, 6.281, 6.300, 6.431-2, 6.436-7, 6.510, 6.518, 6.560, and 6.592.

<sup>157</sup> In the passage leading up to the description of winds, Lucretius repeatedly describes atomic collisions as a *vis* (1.219, 238, 243, 247), with the effect that the *vis venti* that follows evokes the atomic *vis* just described. This strategy is replicated in the description of rushing water within the same passage: *venientis aquai / vim* (1.285-6).

<sup>158</sup> Given the similarity in both sound and theme, Juno’s *incute* at 1.69 may even subtly pick up *incita* at *Lucr.* 1.271.

<sup>159</sup> Lucretian touches include *turbine perflant* (cf. *Lucr.* 1.277: *turbine raptant*) and *incubere mari* in the following line (cf. *Lucr.* 1.291: *validum cum flumen procubere*).

As Servius notes, the word *agmen* is polyvalent in this context, identifying the winds not only as a line or multitude, but also as an attacking military formation.<sup>160</sup> Furthermore, the phrase *qua data porta* (“from an open gate”) suggests a sally from the gates of a walled city or camp.<sup>161</sup> Hardie, drawing a connection to the ‘sallies’ of subterranean winds in Lucretius, classifies this detail as another instance of remythologizing, and through this interpretive lens views all of the Lucretian intertexts in the storm scene as participating in “a conscious revision of Lucretian theology,” whereby atoms are banished in favor of mythological explanations (1986: 180).

Yet it is important to point out, as I have shown in the previous chapter, that Lucretius and the dichotomy of demythologizing vs. remythologizing is not the only interpretive model available for making sense of atomic material in the *Aeneid*. While Virgil surely was aware of Lucretius’ creative anthropomorphizing of wind atoms, he also had access to an anti-atomist philosophical tradition (best captured in Cicero’s dialogues) that militarized atoms for other purposes. In the Ciceronian metaphor of an atomic *incursio* (‘assault’) against the gods, the purpose of militarizing Epicurean physics is not to remove atoms from the picture entirely, but to retain them as a negative *exemplum*, showing how they present an undesirable and chaotic alternative to divine providence.<sup>162</sup> In the case of the winds sallying forth from Aeolus’ cave, I would argue that something similar is happening: although the winds are not literally composed of atoms, they are presented in distinctly atomic terms as enemies of the established divine order, and thus we may interpret their attack upon the Trojan fleet as an allegorical conflict between an atomic, non-teleological conception of nature and the ‘traditional’ Homeric understanding of divine authority.

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<sup>160</sup> See Serv. ad 1.82. For the use of this phrase in martial contexts, cf. *Aen.* 8.595-6: *armati tendunt; it clamor, et agmine facto / quadripedante putrem sonitu quatit ungula campum.*

<sup>161</sup> See Hardie 1986: 181, as well as Serv. ad 1.83: *aut ideo ‘porta’, quia ‘agmine’ dixerat; nam porta proprie aut urbis aut castrorum est.*

<sup>162</sup> *Nat. D.* 1.41.114.

I would like to stress at this point that my interpretation is not wholly incompatible with the notion of remythologizing. Indeed, Hardie's own analysis of certain Lucretian moments in the storm at the beginning of Book 1 largely supports the notion that we are meant to feel its 'atomic' nature on some level. It is a matter, rather, of how literally or allegorically we choose to interpret the various intertextual importations of atomic descriptions from Lucretius. For example, in Virgil's description of men and material scattered and floating helplessly in the stormy waters of the Mediterranean, Hardie perceives a glimpse of Lucretius' material world without remythologization: *Adparent rari nantes in gurgite vasto, / arma virum, tabulaeque, et Troia gaza per undas* ("The Trojans appear scattered, swimming in the vast whirlpool; the arms of the men, wooden planks, and Trojan riches spread through the waves", *Aen.* 118-19).<sup>163</sup> In a similar moment when Neptune finally notices the disturbance on the surface above, the sea god perceives the Trojans "overwhelmed by the waves and the destruction of the sky" (*fluctibus oppressos Troas caelique ruina*; *Aen.* 1.129), with *caelique ruina* picking up on another passage in which Lucretius imagines the disastrous consequences of applying some incorrect rival theory to an atomic world:<sup>164</sup>

terraque se pedibus raptim subducat et omnis  
inter permixtas rerum caelique ruinas  
corpora solventis abeat per inane profundum,  
temporis ut puncto nil exstet reliquiarum  
desertum praeter spatium et primordia caeca. (Lucretius 1.1106-10)

[Lest] the earth suddenly pull away from beneath our feet and pass away through the deep void, among all the mixed-up ruins of the sky and of things that release their atoms; so that in a single moment of time nothing remains except desolate space and the blind first-atoms.

<sup>163</sup> See Hardie 2009: 160, comparing the scenario imagined at Lucretius 2.547-59 of what would happen to an atomic world that did not have an infinite number of atoms: "The dispassionate gaze as from above on the configuration of the swimmers as isolated specks in a vast expanse suggests a Lucretian vision of the texture of the material world."

<sup>164</sup> Exactly which rival theory is uncertain, as the passage follows a considerable lacuna in the text; see Bailey ad 1.1083. Although the Lucretian intertext cited comes from a hypothetical situation in which Lucretius describes an *incorrect* notion about matter or space, it is still imagined in *atomic* terms.

In the Lucretian passage, *caelique ruinas* refers specifically to the collapse of the shell of atoms (*moenia mundi* in Lucretian parlance) that enclose and protect every cosmos, and the subsequent spilling of the world's contents into the inter-cosmic void. Although the world of the *Aeneid* is decidedly not atomic, the storm in many ways is a departure from the normal state of affairs in nature. A significant element of this departure, I contend, is a temporary shift in Virgil's Lucretian allusions from the Hardian remythologizing variety to a mode in which the atomism of the source material is imported without inversion to serve as a symbol of disorder.

But the question remains: why did Virgil enlist Epicurean atomism for this purpose, and not some other philosophy? Or, put another way: what reasons do we have for supposing that Virgil's polemical use of atomism in the storm is a philosophically meaningful component of the poem's allegorical structure, and not an incidental consequence of what is a more fundamentally poetic or 'literary' rivalry with Lucretius? The strongest evidence for preferring the more philosophically sensitive interpretation occurs at the end of the storm, when Neptune restrains the unharnessed winds and restores order to the sea and sky. In a moment that cleverly signals the allegorical spirit of the scene as a whole, the sea god rebukes the winds for defying his authority:

iam caelum terramque **meo sine numine**, venti,  
miscere, et tantas audetis tollere moles?  
quos ego—sed motos praestat componere fluctus. (*Aen.* 1.133-5)

Now you dare, you winds, to raise such disturbances and mix up the sky and earth **without my divine consent**? Which I—but I should compose the waves that have been stirred.

As Hardie points out, the beginning of Neptune's speech casts the storm in Lucretian terms by echoing a passage of *De Rerum Natura* that uses similar language, comparing the atomic

formation of new worlds to a storm.<sup>165</sup> Yet the tip-off for understanding the intentionally allegorical character of these lines is not found in the Lucretian intertexts, but in Neptune's self-interruption, one of the most celebrated instances of aposiopesis in ancient poetry: *quos ego—sed motos praestat componere fluctus* ("Which I—but I should compose these stirred up waves"). When Neptune, who is "deeply troubled" (*graviter commotus*, 1.126) by the renegade storm, enjoins himself to calm the stirring waves, his choice of idiom allows for two simultaneous interpretations: 1) that he should cease rebuking the winds in order to calm the storm waves on the surface of the sea, and 2) that he should calm his own disturbed emotions (cf. the ambivalence of *commotus* at 1.126) and return to the task at hand of restoring order.<sup>166</sup> As Servius and others note, the rhetorical device of aposiopesis indicates great agitation in the speaker, while *fluctus* is used elsewhere in the *Aeneid* as a striking metaphor for emotional disturbance.<sup>167</sup> The *fluctus* metaphor, therefore, works in the opposite direction from that assumed by Hardie's remythologizing thesis; instead of casting materialistic atomic images in mythological terms, the ambiguous phrasing allows for the workings of the god's mind to be interpreted in physical terms corresponding to the water over which he rules. By conflating divine, emotional, and material disturbances, the god's own language suggests a mode of interpretation that is both allegorical and materialist.

The core of Neptune's complaint, however, centers upon the issue of divine authority—since the winds acted without his permission—and it is here that the philosophical importance of the Lucretian intertexts comes into the sharpest focus. Interpreted literally, Neptune reproaches

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<sup>165</sup> Cf. Lucr. 5.432-9. See Hardie 1986: 190-91. In his reworking of that passage, Virgil reverses the direction of the comparison, while making the atomic element of the analogy suggestive rather than explicit.

<sup>166</sup> See Hardie 1986: 227-9, who discusses Lucretian antecedents for conflating mental processes with natural phenomena.

<sup>167</sup> Serv. ad 1.135 describes Neptune's state of mind as *quasi irati et turbatae mentis*. See also de la Cerda ad loc. For other examples of emotional *fluctus* in the *Aeneid*, cf. 12.831: *irarum tantos volvis sub pectore fluctus*; and 12.526: *fluctuat ira intus*.

the winds for acting without his guiding organization, *meo sine numine*, with *numen* evoking its etymological roots as the *nutus* ('nod') of divine assent. Like many seemingly innocuous phrases in Virgil, the phrase has Homeric antecedents, potentially evoking ἀέκητι θεῶν or its antonym, οὐκ ἄνευθε θεῶν.<sup>168</sup> Yet *numen* is also frequently used in both poetry and prose to denote specific divinities, or the notion of divinity itself, primarily conceived of in its role as *rector* of nature and human affairs. It is not just some insensate force or inert entity, but a necessarily *intelligent* power.<sup>169</sup> Accordingly, Neptune does not simply fault the winds for acting without his assent, but for operating without his divine, ordering intelligence.

This timely evocation of divine intelligence, at the moment when a divinity reasserts its control over blind elemental forces that have been portrayed in overwhelmingly Lucretian and atomic terms, taps directly into the anti-atomist philosophical tradition discussed in the previous chapter. As we saw there, prominent teleological philosophers such as Plato, Aristotle, and the Stoics saw cosmic intelligence as a precondition for order, while, conversely, the lack of such intelligence reduced atomic physics to a cosmology of disorder. In light of the many Lucretian allusions to atomic motion, Neptune's *sine numine* complaint opens up the storm to interpretation as a materialist event—a mythological portrayal of what an atomic world would look like in the absence of divine organization.<sup>170</sup> In crucial ways, Neptune's rebuke of the winds and subsequent restoration of divine control identifies the cosmological leanings of the poem as

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<sup>168</sup> See C-N ad 1.133 for further comment on the meaning and antecedents of *sine numine*.

<sup>169</sup> This relies on the conflation of multiple meanings for *numen*: 'divine power as controlling events or activities' (*OLD* s.v. 3), 'divinity' (s.v. 4) and 'a deity, god' (s.v. 6). Cf. Cicero's usage *Fin.* 3.64 (*mundum... censent regi numine deorum*) and *Div.* 2.124 (*visa somniorum profiscisci a numine deorum*).

<sup>170</sup> As I argue in Ch. 1, this is essentially what Plato does in the *Timaeus* through his description of the Receptacle prior to the organizing action of divine intelligence.

anti-atomist, favoring a hierarchy of divine intelligence and human (as well as elemental) submission as its model of order.<sup>171</sup>

Although thus far I have focused on the cosmological and philosophical dimensions of Virgil's allegorizing, Neptune's intervention also relates atomism and the storm to a model of civic relations that is thoroughly grounded in the recent Augustan revolution in Rome's political order. From the outset of the storm, Virgil foregrounds this political element by describing Aeolus as a *rex* (1.52) whose relationship to the unruly winds is defined in terms of *regnum* (1.78) and *imperium* (1.54). As Robert Cowan argues, Aeolus is depicted as a weak leader according to Hellenistic theories of kingship, and his failure to restrain the winds results in a condition comparable to stasis or civil war.<sup>172</sup> By contrast, Neptune provides a more positive (and specifically Roman) model of authoritative leadership at the end of the storm, when he restores the seditious winds to order.<sup>173</sup>

Ac veluti magno in populo cum saepe coorta est  
 seditio, saevitque animis ignobile volgus,  
 iamque faces et saxa volant—furor arma ministrat;  
 tum, pietate gravem ac meritis si forte virum quem  
 conspexere, silent, arrectisque auribus adstant;  
 ille regit dictis animos, et pectora mulcet,—  
 sic cunctus pelagi cecidit fragor, aequora postquam

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<sup>171</sup> For the relationship between divinity, humanity, and nature in the *Aeneid*, see Hardie 1986: 199 “The progress of Aeneas can also be understood as one towards the control or conquest of nature; but the emphases are not those of Lucretius. The success of Aeneas (and of Rome) is very much a physical mastering of the universe; the process of expansion is achieved not through the flight of the soul, but through the physical extension of Rome's power until it fills the universe.”

<sup>172</sup> For discussion of Aeolus's weakness in light of Hellenistic king theory, see Cowan 2015: 110-13. Cowan discusses the intersection of Hellenistic theory and Roman practice at 103-4.

<sup>173</sup> For the programmatic importance of this simile in mapping out the role of allegory in the poem, see Beck (2014) and Feeney 2014: 209-221. As Beck notes: “The first simile of the *Aeneid* introduces readers to ideas about allusion, theme, plot, and interpretation that map out for readers the contours of their roles as interpreters of the *Aeneid*... Perhaps most striking of all, the simile resonates both with the main story of the *Aeneid* and with its political or allegorical interpretation to create a complex narrative that conveys meaning as a narrative on multiple levels” (2014: 67). Beck also helpfully summarizes previous approaches to interpreting the simile at 68-9. Cf. Feeney 2014: 211, who compares this simile with the first one of the *Georgics*, which also alludes to Lucretius: “The first simile of the *Georgics*... serves to focus the poem's concerns about the limits of human ability to impose order on the world of nature and of politics. These concerns return in the first simile of the *Aeneid*.”

prospiciens genitor caeloque invectus aperto  
flectit equos, curruque volans dat lora secundo. (*Aen.* 1.148-56)

And just like when civil discord has arisen among a great people and the ignoble crowd rages in its mind, and now torches and rocks fly, since fury provides weapons; then, if they happen to have spied some authoritative man who is distinguished by his sense of devotion and his worthy deeds, they fall silent, standing there with their ears turned up; and that man directs their minds with his words and calms their hearts—in the same fashion, all the crashing of the sea has subsided after Father Neptune looks over the waters and, carried through the open sky, turns his horses and flies, giving rein to the responsive chariot.

This image of the statesman, the first simile of the poem, evokes a variety of possible models.

While scholars disagree over the identity of the ‘primary’ literary model, many point to a simile near the beginning of the *Iliad*, when Agamemnon’s duplicitous order to abandon the siege and return home to Greece unintentionally stirs up disorder in the assembly like a rising storm (2.142-9).<sup>174</sup> As Beck and Feeney note, Virgil reverses the Iliadic simile in two ways: first, by making nature the subject of the comparison, rather than its object, and secondly by presenting an image of order being *restored*, rather than disorder breaking out.<sup>175</sup>

Just as importantly, Beck notes that the metaphor of the populace-as-storm was common in Roman discourse by the time of Cicero, and that, along with the figure of the statesman, Virgil’s simile synthesizes Homeric and Roman models of leadership.<sup>176</sup> In this vein, scholars have proposed numerous specific historical models for the identity of the statesman, ranging from Cato the Younger to Aeneas to Augustus.<sup>177</sup> While an exact identity is difficult to pin down, a number of details in the simile suggest that the statesman embodies a particularly

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<sup>174</sup> See Beck 2014: 69-73, who notes that this interpretation goes at least as far back as Servius. Beck also identifies the idealized description of kingship at Hes. *Theog.* 81-92 as a popular candidate for being Virgil’s principal model.

<sup>175</sup> See Beck 2014: 70-71 and Feeney 2014: 213-14. In contrast, the simile at *Aen.* 7.585-600, which occurs when war breaks out in Latium, restores the populace-as-storm comparison to its original Homeric settings. See Cowan 2015: 98 and Feeney 2014: 218-20.

<sup>176</sup> Beck 2014: 74-5. Cf. Feeney 2014: 215-16, which connects Cicero’s use of storm imagery to his prioritization of oratory over military violence in the proper governing of the state. The most discussed Roman comparison in modern scholarship is Cic. *Clu.* 49, while Serv. ad 1.148 cites Cic. *Mil.* 5.

<sup>177</sup> For a roundup of historical interpretations, see Cowan 2015: 106 n.23.

Augustan ideal of leadership, which connects historical, divine, and contemporary sources of Roman authority in the figures of Aeneas, Neptune, and Augustus.<sup>178</sup> Karl Galinsky, who discusses this simile as the paradigmatic example of ‘Augustan’ literary fashioning, argues that the image of the statesman reflects core themes of Augustus’ self-representation as expressed later on in the *Res Gestae*: “The man’s *auctoritas* rests on his *gravitas*, on his devotion to country and gods (*pietas*), his abilities as a speaker, and his actions and achievements (*meritis*)” (1996: 21).<sup>179</sup> In support of this reading, Galinsky points out three points of similarity between Aeneas, Neptune, and Augustus. First, Virgil’s description of the statesman as “a man serious by virtue of his sense of duty” (*pietate gravem virum*, 1.151) echoes the programmatic description of Aeneas in the proem as “a man distinguished by his sense of duty” (*insignem pietate virum*, 1.10), implicitly comparing Aeneas to the more modern image of Roman leadership (1996: 23). Second, Galinsky cites non-Virgilian examples of Neptune-imagery from coins and engravings of the 40s and 30s BCE, including an engraved depiction of Augustus holding a trident and driving the sea-god’s chariot over foaming waves from the late 30s BCE, as evidence that the god was associated in that period with the triumph of political order over chaos.<sup>180</sup>

Lastly, recent historical events in the 30s as well as later developments in Book 7 of the *Aeneid* make it likely that Virgil’s contemporaries would have perceived in the statesman a reminder of Augustus’ leading role in putting an end to civil strife at Rome.<sup>181</sup> In particular, as

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<sup>178</sup> For the interpretive (and complementary) polyvalence of the storm episode more generally, compare the comment at Phillips 1980: 24: “To look back, in the Aeolus narrative Vergil expresses three points of view: the traditional myth of Greek epic, the nature allegory of physical speculation, and preëminently the new Augustan order with its stabilizing subordination of all things to Caesar, a functioning in which the state not only imitated but participated in the divine order.”

<sup>179</sup> By ‘Augustan’ literary fashioning, I mean not only the princeps’ self-representation, but also his favorable portrayal by other writers of the period. See also Galinsky’s discussion of *auctoritas* as a defining theme of Augustus’ political career, as well as of the literature and culture of the period as a whole (1996: 10-20).

<sup>180</sup> See Galinsky 1996: 21-3, as well as Zanker 1988: 102-3. Hardie 1986: 205 adds a further point of non-Virgilian comparison in Propertius 4.6.61ff., where various sea-gods celebrate the victory at Actium.

<sup>181</sup> See Galinsky 1996: 21-3; Cairns 1989: 94-5; Hardie 1986: 204-5.

Francis Cairns argues in *Virgil's Augustan Epic*, the figuring of the storm in Book 1 as a Roman *seditio* anticipates the outbreak of civil war in Book 7, which in turn evokes the historical reality of Roman civil wars in Italy.<sup>182</sup> This connection between the generically late-Republican political disturbance of the simile in Book 1 and the Italian war in the second half of the *Aeneid* is further reinforced by a repetition and reversal of that simile in Book 7, where literal rioting outside of King Latinus' palace is compared to a sea-storm (*Aen.* 7.585-600).<sup>183</sup> Thus, as a remedy to the cosmological disorder caused by Aeolus' atomic winds, Virgil's description of Neptune suggests a conflation of divine power with Augustan political authority.

In summary, the simile of the statesman suggests that an authoritative Roman leader stands in the same relationship to the *populus* as a god does to the natural elements over which he presides. Such imagery is a characteristic feature of Augustan representation, which has the effect of dressing the regal reality of Augustus' god-like power in the garb of Rome's monarchical and republican traditions. Coming as it does at the end of a storm that is figured in various ways as atomic, the statesman simile ties together threads of cosmological and political allegory, establishing allusive associations between Augustus and Neptune, Augustus and Aeneas, the urban mob and sea-storms, and sea-storms and atoms. These overlapping webs of mythological, political, and cosmological associations conflate order with divine teleology and Augustan rule, while conflating disorder of all types with atomism and mob rule.

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<sup>182</sup> See Cairns 1989: 94-5.

<sup>183</sup> See Cowan 2015: 98 (esp. n.4).

## 2.2 ATOMIC DISASTERS

For the remainder of the poem, Aeneas and the Trojans are haunted by similar delays and disasters that are presented as atomistic in some respect. These setbacks occur conspicuously at moments that pit atomism against the unity and success of the Trojan people, thereby reprising the allegorical conflict between Roman order and atomic disorder established in the opening storm. A prominent example of this pattern occurs in Book 2, during Aeneas' narration of the sack of Troy. In the midst of the Greek onslaught, Virgil offers a snapshot of Troy as a city abandoned by its tutelary gods, and in descriptions of the ensuing destruction the poet draws upon Lucretian scenes of cosmic and societal unraveling to figure city's fall as an atomic catastrophe.

When the Greeks first breach Troy's defenses from within, securing the walls and gates, Aeneas quickly realizes that the city cannot hold. Following Panthus (2.324-7) in acknowledging the ultimate futility of their situation, the Trojan leader enjoins his comrades to join him in a suicidal counterattack:

excessere omnes adytis arisque relictis  
 di quibus imperium hoc steterat; succurritis urbi  
 incensae. moriamur et in media arma ruamus (*Aen.* 2.351-3).

“The gods have departed and left behind their temples and altars—all the gods on whom our sovereign power depended. You rush to assist a city already put to the flame. Let us die and throw ourselves into the midst of the fighting.”

By framing Troy's destruction as the consequence of abandonment by its gods, Virgil reproduces an important dynamic from the opening storm, in which the temporary absence of divine oversight gives rise to a maelstrom of chaotic violence.<sup>184</sup> As with the earlier storm, this divine

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<sup>184</sup> One may argue that the gods are not *really* absent, since Venus reveals them to Aeneas around line 604. To be sure, this later revelation closes the door on an atomic reading of Book 2 as a whole. However, the revelation scene at 604ff., which shows the gods wreaking havoc around the city, is reminiscent of allegorical interpretations of the theomachia at the start of *Iliad* 20, which Theagenes famously interpreted as representing the conflict of physical

absence, which is matched by a cluster of thematically relevant Lucretian intertexts, offers a brief picture of what the world looks like in the absence of cosmological teleology and its associated political order. And, as before, this picture is decidedly atomic, comparing Troy's fall to the unraveling of an atomic cosmos and to the plague-driven societal collapse depicted at the end of *De Rerum Natura*.

The specifically atomic character of this collapse is evident just a few lines after Aeneas and his companions rush to join the battle, when Virgil pauses from linear narration to give a panoramic view of the destruction engulfing the city:

urbs antiqua ruit multos dominata per annos;  
 plurima perque vias sternuntur inertia passim  
 corpora perque domos et religiosa deorum  
 limina (*Aen.* 2.363-6).

The ancient city falls, which had ruled for so many years. Great numbers of lifeless bodies are strewn all about through the streets, through homes, and through the revered thresholds of the gods.

In his commentary on Book 2, Nicholas Horsfall notes the relatively high frequency of Lucretian details in this passage, which stands out for being composed almost entirely from Lucretian intertexts.<sup>185</sup> First, as Hardie argues in some detail, the description of Troy falling abruptly (*ruit*) after “having ruled through many years” (*multos dominata per annos*) evokes a Lucretian description of the atomic unraveling of a cosmos that, like Troy, dissolves in the course of a single day: *una dies dabit exitio, multosque per annos / sustentata ruet moles et machina mundi* (“a single day will accomplish its destruction, and after having been sustained through many years, the great mass and machine of the world will fall,” *Lucr.* 5.95-6).<sup>186</sup> While Hardie focuses

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qualities like wet and dry in nature (see Feeney 1991: 8-11). As with many portrayals of the gods in the *Aeneid*, a strict literal/allegorical dichotomy does not do justice to the complexity of the text.

<sup>185</sup> See Horsfall 2008: ad loc.

<sup>186</sup> See Hardie 1986: 190 n.85. The phrasing in both passages is remarkably similar, with the verb *ruere* and *multos per annos* accompanied by a feminine passive participle.

on the element of gigantomachic exaggeration in this allusion (since Virgil conflates the devastation of Troy with the obliteration of an entire world), there is also a certain philosophical relevance to the comparison. As Aeneas' dire assessment makes plain, Troy is a city abandoned by its tutelary deities, and thus serves as the functional equivalent to an Epicurean atomic cosmos, which also notably lacks divine organization or protection. Therefore, the allusion to cosmic dissolution in Lucretius figures Troy in this moment as an atomic cosmos writ small—a local example of the type of global chaos that results when the physical world loses its divine patronage and teleological guidance.

In addition to this cosmic model, the subsequent lines of the Virgilian passage also engage closely with the urban plague at the end of Book 6 of *De Rerum Natura*:<sup>187</sup>

plurima perque vias sternuntur inertia passim  
corpora perque domos et religiosa deorum  
limina (*Aen.* 2.364-6).

Great numbers of lifeless bodies are strewn all about through the streets, through  
homes, and through the revered thresholds of the gods.

Virgil's image of bodies strewn about the streets and temples of Troy draws from a long and pitiful Lucretian description of those who died as a result of the plague that devastated Athens during the Peloponnesian War:

multa siti prostrata viam per proque voluta  
corpora silanos ad aquarum strata iacebant  
interclusa anima nimia ab dulcedine aquarum,  
multaque per populi passim loca prompta viasque  
languida semanimo cum corpore membra videres  
horrida paedore et pannis cooperta perire  
corporis inlue, pelli super ossibus una,  
ulceribus taetris prope iam sordeque sepulta.  
omnia denique sancta deum delubra repleat  
corporibus mors exanimis onerataque passim

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<sup>187</sup> As Horsfall states in his commentary ad 2.365: close reading of Lucr. interacts with the common narrative/tragic detail of the ineffectiveness of the right of sanctuary on such occasions." In noting the profusion of Lucretian details at this point of the narrative, Horsfall also comments that "Lucr. is much in V.'s mind hereabouts" (ad 2.363).

cuncta cadaveribus caelestum templa manebant,  
hospitibus loca quae complerant aedituentes. (Lucretius, 6.1264-75)

Many bodies twisted by thirst lay strewn throughout the streets and before fountains of water, their breath of life cut off by the excessive sweetness of the water. And you would see many in plain sight all about the public places and through the streets, lying with sluggish limbs and a half-dead body, caked with filth and covered with rags, dying from the foulness of their bodies. They had only skin on their bones, already nearly buried in foul ulcers and dirt. Finally, death filled all the sacred sanctuaries of the gods with lifeless bodies, and all the temples of the heavenly gods remained weighed down with corpses all about—places which the temple attendants had filled with guests.

Beyond the numerous similarities in vocabulary, which are themselves striking, Virgil's allusion taps into a powerful thematic link between the two passages: both describe dying cities that lack divine protection. Although this absence of divine beneficence is merely temporary in the case of Virgil's Trojans, the intertextual and thematic connections to the Lucretian plague portray the sack of the city as a kind of lapse into atomic conditions of haphazard destruction.

Collectively, the details culled from Lucretian descriptions of cosmic and societal collapse provide a warning about how the world of the *Aeneid* operates—or fails to operate—without divine governance. Furthermore, as an interlude in Aeneas' narration that offers a wide-frame view of apocalyptic destruction, this otherwise short description has the important effect of framing the overall chaos of Troy's fall as having atomic characteristics. By allusively comparing Troy to both an atomic *mundus* and an atomic city in the throes of dissolution, Virgil presents atomism as the default philosophical setting of cosmological and social disorder, and as a wholly negative force that the Trojans must escape in order to survive.

The next existential atomic threat that the Trojans face takes place on Crete, in Book 3. Anchises, having misinterpreted Apollo's oracular instructions concerning the location of their future homeland, convinces the Trojans to found their new city on Crete. However, shortly after

making landfall and beginning work on a settlement, the Trojans are struck by a debilitating illness:

Iamque fere sicco subductae litore puppes,  
 conubiis arvisque novis operata iuventus,  
 iura domosque dabam, subito cum tabida membris  
 corrupto caeli tractu miserandaque venit  
 arboribusque satisque lues et letifer annus.  
 linquebant dulcis animas aut aegra trahebant  
 corpora; tum sterilis exurere Sirius agros,  
 arebant herbae et victum seges aegra negabat (*Aen.* 3.135-42).

And now, the ships were just brought up onto the dry shore, the youth were busy with weddings and new fields, and I was assigning laws and homes, when suddenly from a corrupted tract of the sky came a wretched plague consuming limbs, trees, and crops—a deadly season. The Trojans were breathing their sweet final breaths, or dragging their weary bodies along, and Sirius dried up the barren fields; plants were parched and the exhausted crop refused its nourishment.

Of particular interest in this description is the airborne etiology of the disease, which engages simultaneously with mythological and natural-philosophical (what we might call ‘scientific’) models of pestilence. On the one hand, the overarching Homeric framing of this episode provides a straightforward explanation for why the disease should originate in the sky: the Trojans have misunderstood Apollo’s instructions and, just as in Book 1 of the *Iliad*, the god sends down a plague from above in order to register his displeasure until the mistake is remedied.<sup>188</sup> Indeed, although Virgil does not initially identify the god as the source of the plague, Apollo says as much only a dozen or so lines later when, speaking through the Trojan Penates, he informs Aeneas of his mistake and directs him to sail for Italy (*Aen.* 3.154-71).

Within this mythological frame, however, Virgil’s description of the plague closely resembles the Lucretian model of disease transmission outlined in the conclusion to Book 6 of *De Rerum Natura* (Lucretius 6.1090-1137). The affinities between the Cretan plague and Lucretius’

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<sup>188</sup> Cf. Serv. ad 3.138: *notandum sane Apolline offenso pestilentiam semper creari: quod etiam Homerus ostendit, cum eum armatum inducit sagittis: unde et Apollo dicitur secundum aliquos ἀπὸ τοῦ ἀπολλύειν.*

atomic explanation for the plague at Athens become especially clear when examined alongside Virgil's other (more famous) "Lucretian" plague that occurs at the end of Book 3 of the *Georgics* (3.478ff.).<sup>189</sup> Diverse commentaries on both the *Georgics* and the *Aeneid* point out that the Cretan plague and its agricultural counterpart in the *Georgics* both follow Lucretius in identifying corrupted air as the source of plague.<sup>190</sup> In a clear reference to Lucretius' "diseased air" (*morbida aer*; Lucr. 6.1097, cf. 6.1090-1137), Virgil previously attributed the agricultural plague in the *Georgics* to a "sickness of the sky" (*morbo caeli*; *Geo.* 3.478), which he then echoes in the *Aeneid* by attributing the Cretan plague to a "corrupted section of the sky" (*corrupto caeli tractu*; *Aen.* 3.138). In addition, Nettleship argues that the end of the following line, *letifer annus* ("deadly season", *Aen.* 3.379), evokes the ending of a Lucretian line, *haec ratio quondam morborum et mortifer aestus...* ("this was the cause of that plague, a deathly heat...", Lucr. 6.1138), which Virgil had already famously alluded to in the *Georgics*: *Hic quondam morbo caeli miseranda coorta est / tempestas totoque autumnu incanduit aestu* ("here a wretched storm once arose from a sickness of the sky and grew strong in the full heat of late summer", *Geo.* 3.478-9).<sup>191</sup> Through this knotty cluster of detailed associations linking the Cretan plague in the *Aeneid* to Virgil's earlier Lucretian plague in the *Georgics* and to the actual Lucretian plague in *De Rerum Natura*, we can see a robust engagement with the idea of plague as a Lucretian—as well as atomic—phenomenon.<sup>192</sup>

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<sup>189</sup> For the layered allusion to both the Lucretian plague and the Virgilian one in the *Georgics*, see Horsfall ad 3.135-46.

<sup>190</sup> See Serv. ad *Aen.* 3.138: *hic est ordo pestilentiae, ut Lucretius docet...* In a later note on *Geo.* 3.478, Servius explicitly compares the plague in the *Georgics* with both Lucretius and the Cretan plague in *Aeneid* 3. Cf. comments by Thomas ad *Geo.* 3.478, 481, as well as Williams 1967 ad *Aen.* 3.137-9.

<sup>191</sup> See C-N ad *Aen.* 3.379 and Williams 1967 ad loc. Williams ad 3.140-2 also sees a potential Lucretian connection in *linquebant dulcis animas*: "*anima* here has the sense of *vita*, and Virgil is typically making a variation on a more usual phrase such as Lucr. 5.989 *dulcia linquebant lamentis lumina vitae*."

<sup>192</sup> Horsfall ad loc. notes further connections to Lucretius in *dulcis animas* (*Aen.* 3.140) as well as *aegra... corpora* (3.140-41).

So then what does it mean for the Cretan plague in Book 3 to be, in a limited and local sense, atomic? Like the storm in Book 1 of the *Aeneid*, this episode occurs within a thoroughly mythological framework, but the details of the plague's transmission and its effects strongly suggest an atomic mechanism. Apollo's absence from the initial description, for instance, lends the scene a conspicuously rationalizing feel that is only later remythologized when the god speaks to Aeneas via the Penates. As with earlier episodes of atomic disruption, the plague figures yet another obstacle to Trojan (and by extension, Roman) success in distinctly atomic terms. Even though this plague ultimately serves as a tool of divine guidance by forcing the Trojans to continue on their destined journey to Italy, its intertextual associations with the Lucretian plague reinforce the impression that atomism is opposed to the immediate health and power of the Trojan people. In fact, this impression grows stronger over the course of the poem, as 'outbreaks' of atomic disorder continue to occur at points when Aeneas ignores or delays Rome's divinely appointed fate.

### 2.3 ATOMIC INDECISION

In addition to being associated with episodes of violence and disease that actively harm the Trojans, atomism is also evoked at key moments of indecision when Aeneas contemplates abandoning his divine mission. In three episodes of personal and communal crisis—first, when Mercury compels Aeneas to leave Dido and the comforts of Carthage (4.285-6); second, when Iris induces the Trojan women to burn their ships on the coast of Sicily and Aeneas considers abandoning the quest for Latium (5.701-3); and third, when war breaks out and the cities of Latium unite against the Trojan interlopers (8.20-5)—Virgil describes Aeneas' indecision in distinctly atomic terms, modeling his troubled thoughts upon a formulaic phrase in Lucretius for

the random, flitting motion of individual atoms and their larger compounds. While these descriptions also evoke a variety of other Greek and Latin models, the Lucretian passages offer the closest verbal parallels and serve, I argue, an important thematic function, connecting Aeneas' indecision to Epicurean cosmology in a way that emphasizes both its randomness and its incompatibility with Rome's imperial destiny.

The first of these episodes of 'atomic' hesitation occurs in Book 4, after Mercury visits Aeneas in a dream urging him to depart from Carthage and to resume his voyage to Italy. Although the Trojan leader is awestruck and wishes to depart immediately, he vacillates at first, unsure of how to deal with Dido:

heu quid agat? quo nunc reginam ambire furentem  
 audeat adfatu? quae prima exordia sumat?  
 atque animum nunc huc celerem nunc dividit illuc  
in partisque rapit varias perque omnia versat. (*Aen.* 4.283-6)

Alas, what should he do? How should he now dare to solicit help from the furious queen? He splits his swift mind, now here, now there; snatches it in various directions and twists it through everything.

This memorable moment of split-minded indecision recalls a number of possible models. First, as virtually all commentators note, the "division" of Aeneas' mind evokes the Homeric διάνδιχα μεμῆριξεν ("his mind was split in two ways"), a phrase found three times in the *Iliad* (1.189, 8.167, 13.455). In addition, certain scholars argue that a similar passage from the *Odyssey* provides a more precise model for the "now here, now there" expression in Virgil: ὦς ἔμοι δίχα θυμὸς ὀρόρεται ἔνθα καὶ ἔνθα ("thus my mind was stirred up here and there in two ways," *Od.* 19.524).<sup>193</sup> Lastly, Walter Moskalaw notes that the line from the *Odyssey* may also be filtered

<sup>193</sup> See Moskalaw 1982: 97 n.52, as well as Williams ad 5.701. Pease 1967 ad 4.285 also compares *Od.* 14.20-21: δαιζόμενος κατὰ θυμόν / διχθάδι. The phrase ἔνθα καὶ ἔνθα is not in itself unusual in Homer, occurring 15 times in the *Iliad*, and 13 times in the *Odyssey*, in descriptions of sea travel (*Od.* 2.213), storms (5.327, 330), shiny surfaces (7.86, 95), the digging of a trench (10.516, 11.25), sleeplessness (20.24, 28), curling smoke (20.26), and the

through a related passage in Apollonius' *Argonautica* (3.755-60), which describes Medea's distracted mind with a similar ἔνθα καὶ ἔνθα phrase.<sup>194</sup> In the absence of other determinative factors, such as narrative context or close verbal parallels, any and all of these Greek antecedents may operate as signposts of the *Aeneid's* generic affiliation with Homeric and Apollonian epic through the trope of heroic indecision.

However, as is so often the case with Virgil's Homeric allusions, the general Greek idea of the divided mind is mediated through a more specific Latin model. In particular, Aeneas' indecision evokes a formulaic phrase from Lucretius that occurs in a description of dust motes darting through the sunlight, which is used as an analogy for the motion and collision of atoms.<sup>195</sup>

multa videbis enim plagis ibi percita caecis  
 commutare viam retroque repulsa reverti  
nunc huc nunc illuc in cunctas undique partis. (Lucr. 2.129-31)

There (in the sunlight) you will see many specks stirred up by invisible blows changing their path and, having been driven back, they turn, now here, now there, everywhere in all directions.

If we compare the final line of this passage to the description of Aeneas' indecision, it is clear that Virgil has reduplicated the first half of Lucr. 2.131 within *Aen.* 4.285, while glossing the second half of the Lucretian phrase in the following line:

*animum nunc huc celerem nunc dividit illuc* (*Aen.* 4.285) < *nunc huc nunc illuc* (Lucr. 2.131a)  
*in partisque rapit varias perque omnia* (*Aen.* 4.286) < *in cunctas undique partis* (Lucr. 2.131b)

Furthermore, the atomic resonance of this borrowing is reinforced by the fact the two Lucretian hemistichs occur separately in various descriptions of atomic phenomena throughout *De Rerum*

stretching of bows (21.246, 394, 400). Similarly, Apollonius uses the phrase frequently in a variety of contexts. There is also the phrase ἔνθ' ἢ ἔνθα, which occurs less frequently in Homer.

<sup>194</sup> See Moskalew 1982: 97 n.52, along with Nelis 2001: 331-5. Interestingly, although Dido offers a closer narrative parallel to Medea than Aeneas, Virgil shifts the description of mental confusion from the abandoned woman to the abandoning man. For more details on the function of this Apollonian model, see Moskalew 1982: 173-5.

<sup>195</sup> Moskalew 1982: 97 suggests that the Lucretian intertext was particularly influential for *Aen.* 8.19-20.

*Natura*. The first half of the expression, *nunc huc nunc illuc* (“now here, now there”), occurs with minor variations three other times in Lucretius, always emphasizing the haphazard motion of individual atoms or larger atomic clusters, while elsewhere the Epicurean poet regularly highlights the random, ricocheting quality of atomic collisions with the phrase *in cunctas undique partis* (“everywhere in all directions”).<sup>196</sup> While the appearance of either one of these phrases in isolation in the *Aeneid* might reasonably be labeled ‘incidental,’ the fact that they occur together, with identical or similar wording and in the same order as the Lucretian description of dust motes at 2.131, strongly suggests a direct recall of Lucretius.<sup>197</sup>

However, the Lucretian phrase *nunc huc nunc illuc* is also similar to a common Latin expression for haphazard or hurried movement attested in the works of other late-republican writers, and so it is necessary to address this idiomatic background in order to clarify the relationship of Aeneas’ confusion to its atomic model in Lucretius. As early as Ennius, there is a tendency in Latin literature to express the idea of confused or arbitrary motion through the stylized pairing of correlative directional adverbs, as seen in the tragedy *Iphigenia*.<sup>198</sup>

animus nescit quid uelit.  
hoc idem est: em neque domi nunc nos nec militiae sumus.  
imus **huc**, **hinc illuc**; cum **illuc** uentum est, ire **illinc** lubet.  
**incerte errat animus**, praeter propter uitam uiuitur.

The mind doesn’t know what it wants. This is the same: you see, now we are neither at home nor on campaign. We go **here**, **then from here to there**; when we’ve arrived **there**, we leave **from there** as we please. **The mind wanders uncertainly**; one lives, but only more or less.

<sup>196</sup> For the expression *nunc huc nunc illuc*, cf. *nunc hic nunc illic* at Lucr. 2.575 (atoms), as well as *nunc hinc nunc illinc* at 2.214 (lightning) and at 6.199 (thunder and wind). For *in cunctas undique partis* and its variants, cf. Lucr. 1.1007; 2.93, 2.131, 2.1048, 2.1134; 4.226, 4.240, 4.603, 4.725; 6.648, 6.932, 6.1017. See Fowler 2002: 175 (ad 2.93), who identifies the Lucretian formula as a translation of πανταχοῖ or πανταχόσε.

<sup>197</sup> As Pease 1935 ad loc. notes, there is also a faint echo of Lucretius in the line ending *omnia versat*; cf. Lucr. 2.882, along with *Ecl.* 9.5.

<sup>198</sup> See Jocelyn 1967: fr. xcix (=Gell. *NA* 19.10.12). Jocelyn 1967: 335 identifies the soldiers here as Achilles’ Myrmidons, known for their proverbial restlessness; cf. *Il.* 2.778-9.

Due to the sparse evidence for early Latin literature, it is unclear whether this use of paired adverbs is an adaptation of the Greek ἔνθα καὶ ἔνθα, or whether it is native to Latin, but by Lucretius' time the usage appears to have coalesced into a distinct expression for arbitrary movement: *modo huc modo illuc* ("now here, now there"). For example, Catullus uses the phrase in a fairly literal sense to describe the flitting motion of his beloved's sparrow, as well as to mock the daily bustle of busy Romans hurrying to and fro in the streets.<sup>199</sup>

*Modo huc modo illuc* is also attested four times in the prose writings of Cicero, who extends the notion of confused motion to metaphorical scenarios. Interestingly, Cicero uses the phrase all four times in explicitly philosophical contexts, where to-and-fro motion is synonymous with caprice and indecision. In *de Divinatione*, he criticizes the lax standards that govern divination among the Stoics, who make "now one conjecture, now another," while in a letter to Atticus he playfully mocks the intellectual volatility of the Platonic Academy, doctrinally shifting "now here now there."<sup>200</sup> Similarly, in the *Paradoxa Stoicorum* Cicero takes Epicureans to task for denying that fleeting material objects, "which are carried around now here, now there" (*quae modo huc, modo illuc transferuntur, Parad. 1.14*), count as philosophical goods, while still clinging to pleasure as the grounding of their ethics. Lastly, Cicero introduces the Latin idiom into his adaptation of a passage from Plato's *Timaeus*, in which immortal deities fashion individual souls for mortal beings (Cic. *Tim. 47.18-48.8*; cf. Pl. *Tim. 42e-43b*). In a description that slightly embellishes the Platonic text, the newly minted souls move erratically in all six directions, now here, now there: *et ante et pone et ad laevam et ad dextram et sursum et deorsum, modo huc modo illuc* ("back and forth and to the right and left and up and down, now

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<sup>199</sup> See Catull. 3.9, 15.7.

<sup>200</sup> For the Stoics, see Cic. *Div. 2.145*: *An ea quae dixi et innumerabilia quae conlecta habent Stoici quicquam significant nisi acumen hominum ex similitudine aliqua coniecturam modo huc, modo illuc ducentium?* For the Academy, see *Att. 13.25.3*: *O Academiam volaticam et sui similem! modo huc, modo illuc.*

here, now there,” Cic. *Tim.* 48.6-8).<sup>201</sup> In all of these examples, *modo huc modo illuc* expresses the idea of haphazard motion, and is associated with confusion. As both Catullus and Cicero attest, the use of this phrase is largely negative, functioning as a criticism of others for being too flighty, too busy, too erratic, or too indecisive. We may reasonably assume, therefore, that due to its fixed lexical form and consistent meaning, even in a variety of different contexts, that *modo huc modo illuc* was a regular idiom in late republican literature.

On the other hand, *nunc huc nunc illuc* is attested nowhere outside of Lucretius prior to *Aeneid* 4, and appears to be the invention of the Epicurean poet.<sup>202</sup> In terms of its connotations, the ‘*nunc huc*’ phrase in Lucretius also differs by presenting a neutral interpretation of random motion as an essential and constructive feature of atomic nature, rather than as a symptom of confusion or disorder. Therefore, while the switch from *modo* to *nunc* does not appreciably change the meaning of the expression, it has the effect of distinguishing itself as a specifically Lucretian variation on an otherwise common phrase.<sup>203</sup> Furthermore, Lucretius uses the phrase exclusively in descriptions of atoms or atomic phenomena, as a sort of tagline for the fortuitous collisions that underpin Epicurean physics. Assuming a level of philosophical sensitivity that is well attested in many of Virgil’s other Lucretian intertexts, this gives the ‘*nunc huc*’ variation in

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<sup>201</sup> Interestingly, although Cicero otherwise closely translates Plato in this section, *modo huc modo illuc* has no parallel in the Greek text, which caps the enumeration of the six directions with a more specific summary: πάντη κατὰ τοὺς ἕξ τόπους πλανώμενα προήειν (*Tim.* 43b). The Ciceronian text breaks off after *illuc*, but it seems likely that Cicero wished to render the notion of wandering through a familiar Latin idiom.

<sup>202</sup> See Fowler 2002: 207 (ad 2.131), who quotes Wölfflin 1885: 242: “*Nunc... nunc...* hat Lukrez in die poetische Sprache eingeführt.”

<sup>203</sup> The post-Virgilian reception of this phrase sheds partial light on the Lucretian identity of *nunc huc nunc illuc*. See, e.g., the description of a sea-storm at Livy 28.6.10, in which the historian pairs the *nunc huc nunc illuc* with another Virgilian image adopted from Lucretius, the simile of the mountain stream (*Aen.* 12.521-6 < *Lucr.* 1.277-89). Although the exact date of book 28 of Livy is uncertain, it is plausible that it was published near or shortly after Virgil’s death. For likely dates of Books 1-15, from which I have extrapolated, see Luce 1965: 238.

the *Aeneid* not only a Lucretian character (in the literary or ‘poetic’ sense), but an atomic one as well.<sup>204</sup>

Let us now examine the second half of the Lucretian intertext, *in cunctas undique partis* (“everywhere in all directions,” *Lucr.* 2.131b), which Virgil paraphrases at *Aen.* 4.286: *in partisque... varias perque omnia* (“in various directions... and through everything”). First, it is important to acknowledge that *in partem* is a common expression for indicating directionality, and is therefore unexceptional in isolation. Nevertheless, there are a number of factors that support an interpretation of the Virgilian line as engaging meaningfully with the Lucretian model, rather than simply rehashing a general idiom. First of all, as mentioned above, Virgil’s ‘*in partis*’ phrase does not occur in isolation, but as part of a description of mental indecision that closely follows both the wording and order of Lucretius’ description of dust-motes clashing in the sunlight. The strong intertextuality of the ‘*nunc huc*’ half of the expression establishes a Lucretian tone for the description as a whole, and should therefore make us more attentive to further Lucretian engagement, even in the absence of exact verbal borrowing.

Secondly, the wording of Virgil’s paraphrase for “everywhere in all directions” is itself peculiar, replicating a distinct feature of the Lucretian hemistich that is uncommon in other occurrences of the phrase outside of Lucretius. In *De Rerum Natura*, the addition of the adverb *undique* (literally: ‘on all sides’) to *in cunctas partis* (‘in all directions’) is essentially pleonastic, piling on an additional term for multi-directionality that produces a rhetorical effect without altering the fundamental meaning of the sentence. While Virgil substitutes the adjective *varias* (‘various’) for *cunctas* (‘all’), the addition of *per omnia* (‘through everything’) produces a

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<sup>204</sup> By contrast, when Virgil uses a different variation of the “now here, now there” phrase with the adverb *iam*, instead of *nunc*, he does so without implying any negative sense of atomic disorder. This is evident in the playful description of Ascanius in Book 4, when the Trojans and Carthaginians go on a hunt in the countryside: *at puer Ascanius mediis in vallibus acri / gaudet equo iamque hos cursu, iam praeterit illos...* (*Aen.* 4.156-7).

similar effect to *undique* in the Lucretian original, expressing the idea of motion in all directions by joining two interchangeable phrases. Even without replicating the Lucretian phrase word for word, the Virgilian line expresses the same meaning in a similar fashion.<sup>205</sup>

Moreover, Virgil's use of *varias* in place of *cunctas* is not without potential philosophical (and polemical) significance. Beyond the neutral associations of its familiar English cognate, 'various,' the Latin adjective *varius* possesses additional moral connotations of fickleness and inconstancy when discussing character.<sup>206</sup> By introducing a term that denotes variety of direction while also potentially connoting inconstancy, Virgil presents Lucretian atomic imagery in a distinctly negative light. Along with the overall context of the passage, which appropriates atomic imagery to describe an instance of patently undesirable hesitation on Aeneas' part, this tendentious alteration to the Lucretian phrasing follows Cicero's practice of associating atomism with negative moral and political traits. In effect, Virgil takes an atomic idea of motion in which randomness is value-neutral, and makes it injurious when applied to Aeneas' mental process.

Now that we have investigated the intertextual antecedents for Aeneas' split mind and documented its engagement with a Lucretian description of atomic motion, it remains to explain how this relatively small detail functions within a larger allegorical context in the *Aeneid*. By using the randomness of atomic motion to describe the instability and indecision of Aeneas' mind as he agonizes over how to deal with Dido, Virgil continues the pattern established in the storm at the beginning of Book 1, whereby atomism and atomic imagery are set in opposition to Roman progress and cosmic order. Furthermore, this moment of atomic indecision occurs at a

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<sup>205</sup> The same cannot be said of Dido's indecision at *Aen.* 4.630, which varies the phrasing: *haec ait, et partis animum versabat in omnis*. I would argue that this variety supports my choice to interpret the *nunc huc* phrase as engaging allegorically with Lucretius, while not doing so for other scenes in which mental conflict is conveyed through a different version of the phrase.

<sup>206</sup> *OLD* s.v. *varius* (6). Compare Mercury's misogynistic criticism later in Book 4: *varium et mutabile semper / femina* (*Aen.* 4.569-70).

thematically important point in the narrative: as Mercury makes clear in his dream-warning to Aeneas, the decision between staying with Dido or following divine fate is a choice between personal pleasure (*otia*, 2.271) and national power (*regnum Italiae Romanaque tellus*, 2.275). As we shall see, this pattern repeats itself two more times in the poem, each at crucial moments when Aeneas wavers in his determination to follow divine direction and continue on his mission to settle the Trojans in Latium.

The second of these episodes occurs in Book 5 on the coast of Sicily after Iris, at Juno's behest, provokes the Trojan women into burning their own ships. Despite the timely intervention of Jupiter, who responds to Aeneas' prayer by sending rain to put out the fires, all but four of the ships are lost. In a moment of personal crisis even more severe than the last, Aeneas considers abandoning his divine mission entirely and simply staying in Sicily:

At pater Aeneas casu concussus acerbo  
nunc huc ingentis, nunc illuc pectore curas  
 mutabat versans, Siculisne resideret arvis  
 oblitus fatorum, Italiasne capesseret oras. (*Aen.* 5.700-3)

But father Aeneas, struck by this bitter event, was revolving great cares in his chest, turning them now here, now there; he considered whether to stay in the Sicilian lands, forgetting the fates, or to lay hold of the Italian shores.

As with the earlier moment of indecision concerning Dido, Virgil repeats the Lucretian phrase for random atomic motion, *nunc huc nunc illuc*, again slightly altering it by the placement of an intervening word. Although this passage lacks the additional reference to directional *partis* present at *Aen.* 4.286, the dichotomy of choices offered here to Aeneas makes the opposition between atom-like indecision and the alternative of a Roman future even clearer than before: Aeneas may either accept divine fate and continue on to Italy, or forget that destiny and yield to an atomic despair that embodies the opposite of divine cosmological structure and Roman political order.

The third such episode of indecision occurs at the beginning of Book 8, and it is in this scene that Virgil engages most closely with the specifically atomic nature of his Lucretian intertext. When war first breaks out between the Trojans and Italians in Latium, Aeneas is again temporarily overcome with anxiety and indecision. In this description of Aeneas' hesitation, Virgil repeats two lines from the first 'divided-mind' scene (*Aen.* 8.20-1=4.285-6), while elaborating upon the idea of a scattered mind through the use of a colorful simile:

Talia per Latium. quae Laomedontius heros  
 cuncta videns magno curarum fluctuat aestu,  
 atque animum nunc huc celerem nunc dividit illuc  
in partisque rapit varias perque omnia versat,  
 sicut aquae tremulum labris ubi lumen aenis  
 sole repercussum aut radiantis imagine lunae  
 omnia pervolitat late loca, iamque sub auras  
 erigitur summique ferit laquearia tecti. (*Aen.* 8.18-25)

Such were the things happening throughout Latium. And seeing all of this Aeneas, the heroic descendant of Laomedon, wavers under a great swell of anxieties; he splits his swift mind, now here, now there, snatches it into various directions and twists it through everything, like when light shimmers on brazen vessels of water, reflected from the sun or the image of the beaming moon, and flits about far and wide through every place, and then it is raised up through the air and strikes the panels of the ceiling above.

Although there are a number of details that suggest Lucretian influence in the first half of this passage, such as the *nunc huc* phrasing discussed above, most scholarly attention has focused on the simile in the second half.<sup>207</sup> As many commentators have noted, this simile alludes to a famous description in Apollonius' *Argonautica*, where the poet compares Medea's lovesick indecision to shimmering light bouncing off of reflective surfaces:<sup>208</sup>

πυκνὰ δέ οἱ κραδίῃ στηθέων ἔντοσθεν ἔθυιεν,  
 ἠελίου ὧς τίς τε δόμοις ἐνιπάλλεται αἴγλη

<sup>207</sup> In addition to *nunc huc*, there are other Lucretian notes. Moskalew 1982: 174 connects *fluctuat* at 8.19 to Lucr. 6.34: *et genus humanum frustra plerumque probavit / volvere curarum tristis in pectore fluctus* and to Lucr. 6.74, noting Catull. 64.62 as a further point of comparison.

<sup>208</sup> See especially the discussion at Nelis 2001: 331-5 and Clausen 1987: 62-4. Clausen also notes Lucretian touches, such as Virgil's use of *pervolitare* and *alutium* (1987: 150 n.2).

ὕδατος ἔξανιοῦσα, τὸ δὴ νέον ἠὲ λέβητι  
 ἠέ που ἐν γαυλῶ κέχυται: ἢ δ' ἔνθα καὶ ἔνθα  
 ὠκεῖη στροφάλιγγι τινάσσεται αἰσσοῦσα:  
 ὣς δὲ καὶ ἐν στήθεσσι κέαρ ἐλελίζετο κούρης. (*Argon.* 3.755-60)

Medea's heart seethed continuously within her chest. As a beam of sunlight glimmers throughout the house, bouncing off water freshly poured in a kettle, or perhaps a bucket; and it shakes and darts, now here, now there, on the swift whirl of water—just so did the maiden's heart twist in her chest.

Due to close similarities of phrasing and context, this passage offers an obvious and attractive model for Virgil's description of Aeneas.<sup>209</sup> Yet an interpretive dilemma remains: why should Virgil wish to compare Aeneas to Medea at this crucial moment in the narrative, when the Trojans have ostensibly left behind Odyssean love and wandering in the first half of the poem for the “grander subjects” (*maiora*) of cultural foundation and warfare? One solution, suggested by Moskalew, is to see Aeneas' indecision at 8.18ff as partaking in a web of associations that includes the earlier moment of indecision concerning Dido at 4.285-6. According to this view, there is nothing inherently ‘Medean’ about Aeneas at the beginning of Book 8, but the association of Aeneas' indecision with Dido in Book 4 causes Virgil to think of a similar distraught heroine later in the poem when he repeats the phrase.<sup>210</sup>

However, Moskalew also notes the presence of Lucretian material within this web of association, and I believe that careful attention to this fact may provide us with a more satisfactory account of the simile, as well as the passage as a whole. In addition to the description of dust motes at *Lucret.* 2.131 flying “now here, now there”, noted by Moskalew and discussed above, there is a separate Lucretian passage that may have served as a supplementary model for

<sup>209</sup> Especially the Homeric phrase ἔνθα καὶ ἔνθα (3.758), which seems to function in Greek epic as an idiomatic equivalent to the Latin phrase *modo huc modo illuc*. Although Nelis 2001: 334 sees Virgil's *sub auras* (8.24) as an elaboration upon Apollonius' vague ἔνθα καὶ ἔνθα, he omits any mention of *nunc huc nunc illuc* (8.20) as an additional parallel.

<sup>210</sup> See Moskalew 1982: 175. Cf. similar comments at Nelis 2001: 334: “The distribution of the Apollonian model creates a network of associations within the *Aeneid* linking Dido, Turnus and Aeneas.”

Virgil's Apollonian light simile.<sup>211</sup> In Book 4 of *De Rerum Natura*, Lucretius argues that atomic images or effluences travel at near-instantaneous speeds by appealing to the example of light, which moves and bounces off surfaces with incredible swiftness.<sup>212</sup>

Hoc etiam in primis specimen verum esse videtur,  
quam celeri motu rerum simulacra ferantur,  
quod simul ac primum sub diu splendor aquai  
ponitur, extemplo caelo stellante serena  
sidera respondent in aqua radiantia mundi. (Lucretius 4.209-13)

The following seems to be a true example of this tendency: how the images of things are borne along with a swift motion, so that as soon as the brightness of water appears, if the sky is starry, then suddenly the serene stars of the cosmos reflect back, shining in the water.

If we compare this passage with Lucretius' description of dust-mote at 2.129-31 and with Apollonius' scattered-light simile at *Argon.* 3.755-60, it is clear that the common element uniting these otherwise disparate sources is an interest in the reflective qualities of light (or in the case of dust-motes, the reflective qualities of colliding particles illumined by light). And, in fact, one may interpret Virgil's simile as filtering the Apollonian simile through Lucretius' description of starlight reflected upon water.<sup>213</sup>

This unifying thread should, therefore, make us more attentive to the original context of the '*nunc huc nunc illuc*' Lucretian intertext as well—even more so than when it occurs in Books 4 and 5, due to the addition of the simile. With this heightened sensitivity to philosophical context, we will see that Virgil's allusive manipulation engages specifically with the atomic lineage of the dust-mote analogy, going all the way back to the early atomists. As discussed above, the '*nunc huc*' phrase originated in a description of dust motes floating through a sunbeam, which Lucretius uses as an analogy for atomic collisions. Yet the Epicurean poet

<sup>211</sup> Moskalew 1982: 97 n.52 describes Lucretius 129-131 as "particularly influential" for Aeneid 8.20-1.

<sup>212</sup> The parallel between this passage and the Virgilian description is noted by C-N ad loc.

<sup>213</sup> In a similar vein, Frank 1919: 104 suggests that the prefix *re-* in the phrase *sole repercussum* at Aeneid 8.23 refers to the Epicurean theory of vision.

seems to have borrowed the dust-mote example from one of the founders of atomism, Democritus.<sup>214</sup> As Aristotle explains in *De Anima*, Democritus used the analogy of dust-motes not simply for atoms in general, as Lucretius does, but for the specific type of atoms that make up the soul.<sup>215</sup>

ὅθεν Δημόκριτος μὲν πῦρ τι καὶ θερμόν φησιν αὐτὴν εἶναι· ἀπείρων γὰρ ὄντων σχημάτων καὶ ἀτόμων τὰ σφαιροειδῆ πῦρ καὶ ψυχὴν λέγει (οἷον ἐν τῷ ἀέρι τὰ καλούμενα ξύσματα, ἃ φαίνεται ἐν ταῖς διὰ τῶν θυρίδων ἀκτῖσιν), ὧν τὴν μὲν πανσπερμίαν στοιχεῖα λέγει τῆς ὅλης φύσεως (ὁμοίως δὲ καὶ Λεύκιππος), τούτων δὲ τὰ σφαιροειδῆ ψυχὴν, διὰ τὸ μάλιστα διὰ παντὸς δύνασθαι διαδύνειν τοὺς τοιούτους ῥυθμοὺς καὶ κινεῖν τὰ λοιπά, κινούμενα καὶ αὐτά, ὑπολαμβάνοντες τὴν ψυχὴν εἶναι τὸ παρέχον τοῖς ζώοις τὴν κίνησιν. (Arist. *De an.* 1.403b31-404a9)

This is why Democritus says it is fire, or hot substance; of the infinite number of figures or atoms, those that are spherical (like the motes seen in rays coming through windows) are fire or soul, and the mixture of all the seeds constitutes the elements of the whole of nature (here Leucippus agrees with him); and the spherical shapes are soul, because such shapes are most able to penetrate everywhere and set other things in motion, being in motion themselves. These thinkers think soul is what gives animals their movement.

Looking back at Aeneas' indecision at the start of Book 8, we can see that Virgil has subtly corrected his Lucretian source material. By using distinctive language from the Lucretian dust-mote passage to describe Aeneas' conflicted *mind*, Virgil restores the original spiritual (i.e. mental) emphasis of the Democritean example, which had dropped out of the intervening Lucretian passage. Furthermore, this interpretation provides an answer to the question of how readers are supposed to interpret the relationship between the Apollonian simile and the scene as a whole. The reference to Apollonius' simile does not occur in isolation, but as an intermediary between Lucretius and Democritus. As demonstrated above in the discussion of Aeolus' cave and the storm in Book 1, this intermixing of epic and philosophical (or 'scientific') intertexts is a

<sup>214</sup> For a summary of all available evidence concerning Democritus' use of the dust-mote example, see Fowler 2002: 193-5.

<sup>215</sup> Translation taken from Ross (1961). Cf. Lactantius' description at *De Ira Dei* 10.9.

characteristic feature of Virgil's allusive engagement with Lucretius, and occurs throughout the *Aeneid* at important points in the narrative.

## 2.4 CONCLUSION

To conclude the discussion of atomic indecision, I would argue that Virgil's attentiveness to the philosophical pedigree of the Lucretian intertext at *Aen.* 8.20-1 signifies more than just a clever annotating of literary sources. By hinting at the Democritean origins of the dust-mote analogy, Virgil evokes the Lucretian imagery of haphazard motion as an implicitly atomic phenomenon. As with Aeneas' two previous moments of indecision (*Aen.* 4.283-6; 5.700-3), this has the effect of portraying indecision and doubt as fundamentally atomic—perhaps not literally, but certainly in an allegorical or metaphorical sense. In this way, atomism acts as an obstacle that blocks Aeneas and the Trojans from obeying the divine hierarchy and founding their new settlement in Latium. The narrative context of all three moments of 'atomic' indecision for Aeneas suggests that atomism, like the Italian rebels led by Turnus who swarm the countryside at the beginning of Book 8, is a hostile force that must be overcome to restore political and cosmological order. In the next chapter, I will examine the other side of this equation, showing how Virgil associates prominent non-Trojans with disorderly atomism as they repeatedly—though ultimately unsuccessfully—attempt to prevent Aeneas from settling in Latium.

### Chapter 3. NON-TROJANS UNDER THE INFLUENCE OF ATOMISM (EPIC LOSERS)

οἱ δὲ τὰς ἀτρέπτους καὶ ἀσυμπαθεῖς ἀτόμους εἰς τὸ αὐτὸ συνελάνοντες ἐξ αὐτῶν μὲν οὐδέν, αὐτῶν δὲ πολλὰς ποιοῦσι καὶ συνεχεῖς πληγὰς. ἢ γὰρ περιπλοκὴ κωλύουσα τὴν διάλυσιν μᾶλλον ἐπιτείνει τὴν σύγκρουσιν, ὥστε μηδὲ μῖξιν εἶναι μηδὲ κόλλησιν ἀλλὰ ταραχὴν καὶ μάχην κατ' αὐτοὺς τὴν λεγομένην γένεσιν.  
(Plut. *Adv. Col.* 1112b1-7)

Those who force together immutable and unresponsive atoms make nothing out of them, except for a great deal of continual blows. For the interlacing that supposedly retards their dissolution instead increases the clashing, so that what they call ‘coming-to-be’ is not a mixing or binding, but *disorder* and *conflict*.  
(Plutarch *Against Colotes*)

Shifting from the last chapter, which examined scenes in which Aeneas and the Trojans encounter atomism as an obstacle to divine order and Roman teleology, I now turn to atomic moments in the characterization of the poem’s non-Trojan antagonists. Here I argue that Virgil uses Lucretian intertexts to associate Epicurean atomism with the failures and deaths of prominent non-Trojans. The atomic characterization of these various non-Trojan figures makes them part of the broader allegorical conflict between teleological visions of cosmological authority in the *Aeneid* (variously presented as Homeric, Augustan, Stoic, etc.) and non-teleological cosmology, typically represented by Epicurean atomism. By presenting these non-Trojan deaths and failures as atomic in some sense, Virgil associates their personal defeats with the poem’s final rejection of atomic cosmology—an allegorical struggle that culminates in Turnus’ death at the end of Book 12.

It is important to note from the outset that I will not be arguing that any Carthaginian or Italian characters are themselves adherents of Epicureanism.<sup>216</sup> Rather, I believe that the association of these characters with certain features of atomism casts them as representatives or avatars of a stereotyped atomic worldview, whose non-teleological materialism is consistently set in opposition to the political, moral, and cosmological order of the Trojans and their gods. Therefore, this chapter will begin by reviewing Epicurean interpretations of Dido's character, focusing upon atomic details in the description of her death. While my discussion of Dido's death scene largely summarizes an existing scholarly consensus without advancing any new interpretations, I adopt key themes from that discussion in order to offer a fresh allegorical interpretation of later episodes of Italian frustration or death in Book 10—especially those of Turnus and Mezentius. I conclude by arguing that the atomic failures of Dido, Turnus, and Mezentius all conform to a larger allegorical pattern foreshadowing the defeat of atomism in the climactic final scene of the poem.

### 3.1 ATOMISTIC DIDO

Among the various philosophical readings advanced by Virgilian critics, by far the most popular and enduring allegorical interpretation of the *Aeneid* has been pro-Stoic. According to this tradition, which sees the poem as tacitly confirming Stoic ethics and cosmology, Aeneas embodies the exemplary Stoic sage navigating a world of divine providence.<sup>217</sup> As a corollary to this interpretation, many scholars have also perceived moments in the narrative when Aeneas' allegorical Stoicism comes into conflict with Epicureanism, represented by certain antagonistic,

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<sup>216</sup> Cf. the note of caution at Dyson 1996: 204: "That is not to say that Dido *is* an Epicurean, but rather that her shifting relationship to Epicureanism is an important aspect of her character."

<sup>217</sup> The idea of Aeneas as a Stoic has an extensive pedigree; see Dyson 1996: 204 n.5, as well as Dyson 1997: 450 n.3. and Erler 1992: 105 n.11.

non-Trojan characters. While such interpretations are by no means new, scholarship in the last twenty years has done an especially thorough job of documenting Virgil's characterization of Dido as an allegorical Epicurean whose lifestyle and ethics offer a foil to the *pietas* and political virtue of Aeneas.<sup>218</sup> These studies, particularly those of Dyson (1996) and Gordon (2012, 1998), identify a number of Epicurean details in the *Aeneid* that engage with philosophical doctrines attested in the fragments of Epicurus, in Philodemus' ethical treatises, and in the Hellenistic allegorizing tradition of interpreting Homer's Phaeacians as proto-Epicureans. Yet in terms of identifiable verbal echoes, Lucretius' *De Rerum Natura* remains the most important source for Dido's Epicureanism.<sup>219</sup>

In keeping with the general trend in recent decades of scholarship on Lucretian intertextuality in Virgil, most studies of Dido's allegorical Epicureanism adhere to the interpretive framework of 'polemical allusion' (whether consciously or implicitly) as a way to explain Virgil's often-hostile reception of Lucretian philosophy. One of the clearest articulations of this position is offered by Dyson, who summarizes the implications of this stance for the poem as a whole:

In the *Aeneid*, *religio* wins. The Dido episode belongs to a larger pattern in which Virgil employs Lucretian language and imagery to contradict Lucretian doctrine: the words of the queen herself, of the narrator, and of other characters continually remind us of the Epicurean ideal even as they show it to be unattainable. I shall argue that Virgil portrays Dido's fall partly as a clash between Epicureanism and the supernatural machinery of the *Aeneid*. (Dyson 1996: 204)

As with Farrington's 'polemical allusion' and Hardie's 'remythologization', Dyson views the contrast between Virgil's widespread adoption of Lucretian language and his corresponding rejection of Lucretian ideology as an essential feature of the *Aeneid*'s allusive program.

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<sup>218</sup> See Gordon 2012: 60-71, Adler 2003: 9ff., Dyson 1996: 204-5, and Lyne 1994: 193-6. For a detailed bibliography of earlier claims about Dido's Epicureanism, see Pease 1935: 36 n.285.

<sup>219</sup> For further discussion of non-Lucretian sources for Epicureanism in the *Aeneid* (not just Dido's), see Gordon 2012: 38-60 and Erler 1992: 106ff.

However, certain modern works on Dido's Epicureanism (including Dyson's), differ by focusing not only on instances of inverted or displaced Epicureanism—such as when Virgil uses Lucretian verbiage to describe distinctly un-Epicurean moments of divine intervention in the affairs of mortals—but on moments in which the poet presents this allegorical Epicureanism *without* inversion, albeit tendentiously so, in order to show its undesirability, its impracticability, or both. In this latter style of intertextual engagement, Virgil's Lucretian language retains its original Epicurean connotations, but does so in a way that reflects negatively upon the philosophy of the source text. As Dyson and Gordon have amply demonstrated, this approach is still quite polemical even without the sort of inversion and displacement emphasized by Hardie, since it relies upon an unflattering characterization of Epicurean philosophy culled largely from the stereotypes of its detractors.<sup>220</sup>

While existing treatments of Dido's allegorical Epicureanism skew heavily towards consideration of Epicurean ethics, scholars have also identified important intertextual moments in Virgil's characterization of Dido and the Carthaginians that specifically evoke atomic physics. One such moment occurs in the final lines of Book 4, where Virgil's description of Dido's dissipating soul engages with the Epicureans' materialist model of death. As Dyson notes, Dido's sister Anna first hints at a materialist understanding of death near the beginning of the book, when she dismisses the notion that Dido's dead husband would object to her attraction to Aeneas: *id cinerem aut manis credis curare sepultos?* ("Do you think that ashes or buried spirits are concerned with this?") *Aen.* 4.34).<sup>221</sup> However, as Dyson rightly points out, the appearance of

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<sup>220</sup> See Gordon 2012: 60-8, 1998: 189, 199, 203; Dyson 1996: 207-8; Feeney 1991: 172-3. Despite allowing for the limited presence of Epicureanism in the text as what Dyson calls an *exemplum malum* (1996: 204), these authors still devote significant attention to further instances of philosophical inversion in Virgil's Lucretian borrowings. See, e.g. Dyson (1997).

<sup>221</sup> See Serv. ad loc: *dicit autem secundum Epicureos, qui animam cum corpore dicunt perire.*

Dido's spirit later on in the underworld in Book 6 ultimately disproves any literal notion of the soul's mortality as an enduring feature of the poetic world of the *Aeneid*.<sup>222</sup>

Nevertheless, as I have attempted to emphasize in my discussion of other atomic moments in the poem, Virgil sometimes imports atomism into explicitly supernatural or mythological settings as a sort of excluded alternative, allowing atomism to exist briefly at the local level without successfully overturning the poem's divine machinery. In scenes involving the Trojans, these moments function largely as challenges that must be overcome, but in Dido's case, these atomic details conflate her self-destruction with the eventual failure of non-teleological atomic physics as a model for Roman culture. Indeed, this is the interpretation of Dido's Epicureanism endorsed by Oliver Lyne and Dyson, who both draw attention to Lucretian intertexts at the moment of Dido's death.<sup>223</sup>

sic ait et dextra crinem secat, omnis et una  
dilapsus calor atque in ventos vita recessit. (Aen. 4.704-5)

Thus Iris spoke, and with her right hand she cuts the lock. At the same time,  
Dido's warmth slipped away and her life receded into the winds.

On one level, this departure of the soul can be compared with the Homeric notion of the soul physically leaving the body to live on in the underworld. Yet, as both scholars note, the dissipation of Dido's bodily heat and life-force *back* (*recessit*) into the winds also evokes a Lucretian model of death that stresses the importance of atomic heat and wind in both the preservation and loss of life:<sup>224</sup>

noscere ut hinc possis non aequas omnia partis  
corpora habere neque ex aequo fulcire salutem,

<sup>222</sup> See Dyson 1996: 215: "The questions of both Anna and Iarbas point up the Epicurean position in a way that demonstrates its falsity", along with 219: "The epilogue (6.459-76) leaves no doubt where Dido's spirit has gone. Her resentful Shade undermines her Epicureanism as clearly as Aeneas' fiery wrath (12.946-47) undermines his Stoicism."

<sup>223</sup> See Lyne 1994: 195 and Dyson 1996: 218.

<sup>224</sup> Cf. discussion of this passage at Dyson 1996: 218-19. Lyne 1994: 195 also draws attention to Lucr. 3.214-15, 3.400-1, and 3.455-6.

sed magis haec, venti quae sunt calidique vaporis  
semina, curare in membris ut vita moretur.  
est igitur calor ac ventus vitalis in ipso  
corpore qui nobis moribundos deserit artus. (Lucretius 3.124-9)

From this you may be able to understand that not all atoms have an equal part [in sustaining life], nor do they support health equally. Rather, the atoms that are the seeds of wind and burning heat ensure that life lingers in the limbs. There is, therefore, heat and life-sustaining wind in the body itself, elements that desert our limbs when we are dying.

Lyne points out that, beyond simply evoking atomic descriptions of the soul in his description of Dido's death, Virgil also passes up an opportunity to 'correct' a moment of demythologization in his Lucretian source text.<sup>225</sup> When Lucretius describes the dissipation of the soul, he alludes to the death of Patroclus, imagined as a wailing spirit fleeing to the underworld: ψυχὴ δὲ κατὰ χθονὸς ἥϊτε καπνὸς / ὄχετο τετριγυῖα ("his soul went down into the earth, like smoke, with a hissing cry" *Il.* 23.100-1). However, although Lucretius repeats the smoke simile, he excises the mournful cry, indicating the absence of the disembodied spirit, which, according to atomic principles, has fully dissolved back into its component atoms:

ergo dissolui quoque convenit omnem animai  
naturam, ceu fumus, in altas aeris auras. (Lucretius 3.455-6)

Therefore it is fitting that the entire nature of the spirit be dissolved as well, like smoke, into the lofty breezes of the air.

Virgil's decision to preserve the Lucretian model of death in his own description, without reintroducing any details that suggest an immortal, non-atomic soul, marks Dido's death as a moment conspicuously lacking in remythologization. As Lyne and Dyson conclude, the absence of a disembodied spirit at the moment of death—a detail that Virgil mentions explicitly in the deaths of Lausus, Turnus, and others—creates the fleeting yet powerful impression that Dido's

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<sup>225</sup> See Lyne 1994: 195-6. Although Lyne does not use Hardie's language of 'demythologizing' and 'remythologizing', he articulates the same concept.

soul really has suffered an atomic dissolution.<sup>226</sup> Even though this impression is eventually corrected by Dido's appearance in the underworld, her death strikes a jarring note within the poem that points to an as-yet unresolved conflict between fortuitous materialism and pro-Trojan teleology.<sup>227</sup>

While most of the Epicureanizing details in Virgil's characterization of Dido and Carthage focus on ethical stereotypes, it is fitting that the queen's climactic death is presented in atomic terms. In addition to foreshadowing Rome's historical rejection and defeat of Carthaginian power, the atomic nature of Dido's death serves as an ironic rejection of Epicureanism, whereby the failure of Epicurean ethics is conveyed through the image of Dido being literally annihilated by Epicurean physics. This self-destruction establishes a pattern for the rest of the poem, in which Virgil associates prominent enemies of Aeneas with the chaotic worldview of atomism, portraying their deaths as atomic phenomena and thus conflating the failures of non-Trojans with the self-defeating failure of atomic cosmology.

### 3.2 ITALIANS AND THE ATOMIC BATTLEFIELD

After Dido's suicide, the next significant cluster of non-Trojan activity associated with atomism takes place in the back-and-forth fighting between the Trojans and Italians in Book 10. The cosmological and allegorical stakes of this contest are established early in the fighting by a weather simile that skillfully combines traditional descriptions of epic combat with scientific language culled from Lucretius:

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<sup>226</sup> See Dyson 1996: 219 and Lyne 1994: 196.

<sup>227</sup> Cf. Lyne 1994: 196: "This is one of those many occasions where the text of the *Aeneid* is in dialogue, one might say in conflict, with itself... So what is the truth? Does Dido continue to exist, and to exist virulently, after death? Or does she suffer obliteration, are the implications of 4.704f. right, and are we the readers the victim of an illusion in, say, Book 6? We make up our own mind."

expellere tendunt  
 nunc hi, nunc illi: certatur limine in ipso  
 Ausoniae. **magno discordes aethere venti**  
**proelia ceu tollunt** animis et viribus aequis;  
 non ipsi inter se, non nubila, non mare cedit;  
 anceps pugna diu, stant obnixa omnia contra:  
 haud aliter Troianae acies aciesque Latinae  
**concurrunt**, haeret pede pes densusque viro vir. (*Aen.* 10.354-61)

Now this side strives to drive back that side, now that side this, and the struggle occupies the very doorstep of Italy. Just as when **discordant winds do battle in the great sky**, equal in spirit and strength; neither yields to the other, nor cloud, nor sea, and the fight remains long undecided, with all things striving against each other—no differently do the Trojan and Latin battle lines **rush together**, foot clinging to foot and man to man in the thick press.

Like the famous double polyptoton at the end of this passage (*pede pes... viro vir*), the comparison between combat and discordant winds has a distinguished pedigree in Greek and Roman epic, with commentators as early as Macrobius tracing the lineage of Virgil's wind similes back to specific passages in both Ennius and Homer.<sup>228</sup> However, as Conington and Nettleship note, key details and emphases in Virgil's wind simile differ from the Homeric model, and it seems that Ennius' *Annales* had the greater influence upon Virgil's choice of words when he adapted the Iliadic model into Latin.<sup>229</sup>

*concurrunt* veluti *venti*, quom spiritus Austri  
 imbricitor Aquiloque suo cum flamine *contra*  
 indu mari magno fluctus extollere certant. (*Enn. Ann.* 432-4)

Just as *the winds rush together*, when the blowing of the rain-bringing South Wind and the North Wind with its gust strive against each other to stir up waves in the great sea.

<sup>228</sup> The most commonly cited Homeric model is *Il.* 16.765-71. For the Latin tradition, see Macrobius *Sat.* 5.13.14 and 6.2.28. See also discussion of the relationship between these Greek and Latin epic models at Skutsch 1985: 592-4, as well as comments by Harrison ad loc. For the Greek and Roman antecedents of Virgil's double polyptoton, see Harrison ad loc. If one wishes to press the Lucretian feel of this passage even further, one might also interpret the *pede pes... viro vir* as being 'atomic' in a verbal sense, due to the suggestive pairings of similar word elements. This verbal atomism, based on the atomists' own analogy between the letters of words and the atoms of compounds, is the subject of more extensive study in Friedländer's "Pattern of Sound and Atomistic Theory in Lucretius" (1941), as well as Snyder's *Puns and Poetry in Lucretius' De Rerum Natura* (1980) and, more recently, Shearin's *The Language of Atoms* (2015).

<sup>229</sup> See C-N ad loc.

To further complicate matters, Virgil's simile also evokes a passage of Lucretius that describes how thunder results from atomic interactions between winds and clouds:<sup>230</sup>

principio tonitru quatiuntur caerulea caeli  
 propterea quia **concurrunt** sublime volantes  
**aetheriae nubes contra pugnantibus ventis.** (Lucretius 6.96-8)

First the blue sky is shaken by thunder because the airy **clouds** flying **high in the sky** **rush together** on account of the **battling winds**.

Untangling this knotty cluster of Greek and Latin intertextual relationships is a daunting task, and while one may feel that each author is evoking specific models from earlier poetry (and not simply referencing a stale literary *topos* for its own sake), the accumulation of borrowing, translation, and rephrasing on display in the Virgilian passage defies a straightforward 'genealogical' account.

However, if we limit our focus to the Latin models, the striking similarities of vocabulary and rhetorical effect between the texts of Ennius, Lucretius, and Virgil strongly suggest that Virgil was drawing upon *both* Ennius and Lucretius in a detailed and significant fashion. Indeed, while it is difficult to identify any lexical 'smoking gun' that irrefutably proves the intertextual relationship vis-à-vis Lucretius, modern commentators have generally agreed that Virgil's *magno discordes aethere venti / proelia ceu tollunt* ("discordant winds do battle in the great sky," *Aen.* 10.356-7) engages in some way with Lucretius' *aetheriae nubes contra pugnantibus ventis* ("airy clouds flying high in the sky... on account of the battling winds," *Lucretius* 6.98).<sup>231</sup> In particular, the *aethere* ('upper air') in the Virgilian passage cannot be explained with reference to the Homeric or Ennian passages, but seems to evoke Lucretius' *aetheriae nubes* ("airy clouds"),

<sup>230</sup> Lucretius reinforces the military aspect of this simile with the metaphor of clouds moving in *denso agmine* two lines later (*Lucretius* 6.100).

<sup>231</sup> See Harrison, Williams, and C-N ad loc. Bailey ad *Lucretius* 6.97 also compares Lucretius' clashing winds to *Geo.* 1.318: *omnia ventorum concurrere proelia vidi*.

with the shift from the adjectival to the nominal form of *aether* simultaneously obscuring and highlighting Virgil's borrowing in typical allusive fashion.<sup>232</sup>

This Lucretian element in the Virgilian simile is further reinforced by other details that evoke Epicurean natural philosophy alongside Homeric and Ennian combat. First is the word *concurrunt* ('they run together'), which appears as the main verb in the Ennian and Virgilian similes, as well as the Lucretian explanation of thunder. While commentators working within the Iliadic epic tradition tend to identify Homer's description of soldiers "rushing together" (ἐπ' ἀλλήλοισι θορόντες, 16.770) as the inspiration for Virgil's *concurrunt*, Bailey attributes Lucretius' use of *concurrunt* to the language of Epicurean natural philosophy, wherein lightning is caused by the "crashing-together of clouds" (σύγκρουσιν νεφῶν, Epicurus *Ep. Pyth.* 101).<sup>233</sup> Of course, these two explanations need not be mutually exclusive, since we have already seen that Lucretius and Cicero repeatedly compared atomic motion with human combat in the generation before Virgil, both for better and for worse.<sup>234</sup> In fact, given the overwhelmingly negative reception of atomism throughout the rest of the *Aeneid* as a symbol of violence and disorder, I would suggest that Virgil's conflation of Epicurean natural science and the brutal combat between the Trojans and Italians is entirely fitting in the wind simile, as it anticipates a similar allusive pairing in the poem's finale.

Another detail in the Virgilian passage that recalls Lucretian descriptions of atomic motion is the back and forth striving of the Trojans and Italians on the battlefield: *nunc hi, nunc*

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<sup>232</sup> I refer here to the productive tension between "revelation and concealment" that is so characteristic of ancient allusion; see Hinds 1998: 23. Serv. ad loc. further confirms the strangeness of *aether* in the Virgilian line, noting that one would expect to see *aer*.

<sup>233</sup> Epicurus also uses the word σύγκρουσις to refer to the collision of individual atoms (*Ep. Hdt.* 44; cf. Plut. *Adv. Col.* 1112b).

<sup>234</sup> See, e.g., Lucretius' description of atomic 'battle lines' contending on the surfaces of hard objects at 2.447-50:

*in quo iam genere in primis adamantina saxa  
prima acie constant ictus contemnere sueta  
et validi silices ac duri robora ferri  
aeraque quae claustris restantia vociferantur.*

*illi* (“Now this side strives to drive back that side, now that side this,” *Aen.* 10.355). In his commentary on this line, Harrison argues that the *nunc hi* anaphora is “characteristically Virgilian,” citing a number of other lines with similar phrasing that evince no particular connection with atomism.<sup>235</sup> However, while it is true that Virgil uses the phrase in some contexts that are not identifiably atomic, we saw in the previous chapter that Virgil’s use of the phrase *nunc huc nunc illuc* (especially in combination with other Lucretian details) evoked Epicurean descriptions of fortuitous atomic motion. Therefore, when determining whether to interpret *nunc hi, nunc illi* as an unremarkable Virgilian idiom or as a meaningful poetic intertext, the Lucretian wording and context of the simile as a whole should prime us for a more sensitive reading that takes account of the phrase’s philosophical connotations.

How, then, do these atomic details function within the broader context of the battlefield in Book 10? First of all, given the dizzying variety of allusive models at play in the Virgilian simile, it is important to remember that the primary allusive source for the scene is Homer’s *Iliad*, which furnishes exemplary similes comparing combat to weather. The allusion to Lucretian thunderclouds in Virgil’s simile supplements this epic model by evoking a particular Epicurean concept of physics for that weather, which is replete with its own set of negative connotations in Virgil’s time concerning cosmic order and teleology. From the perspective of the poem’s Trojan protagonists, the brutal stalemate described near the middle of Book 10 is patently undesirable, since the apparent uncertainty of its outcome threatens their nascent colonization of central Italy. The fact that this anxious impasse on the battlefield is described partly in the language of atomic equilibrium associates two major forces of disorder in the poem—Turnus’ rebellious Italians and violently discordant winds—with Epicurean atomism.

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<sup>235</sup> Cf. the description of boxing at *Aen.* 5.441: *nunc hos, nunc illos aditus*, as well as the dead souls at 6.315: *navita sed tristis nunc hos nunc accipit illos*.

### 3.3 TURNUS AND THE PHANTOM AENEAS

Against this backdrop of conflict and uncertainty, Juno diverts Turnus from his impending confrontation with Aeneas and leads him away from the battlefield in a fashion that further reinforces the thematic connections between native Italian rebels, atomism, and cosmological disorder. After the death of Pallas (10.486ff.), Aeneas pursues Turnus, wreaking havoc across the battlefield and prompting Juno to intervene on behalf of the Italian chieftain. In a clear reworking of a similar ploy by Apollo in Book 5 of the *Iliad*, Juno creates a phantom Aeneas that tricks Turnus into pursuing him off of the battlefield and onto a waiting ship:

tum dea **nube cava** tenuem sine viribus umbram  
 in faciem Aeneae (visu mirabile monstrum)  
 Dardaniis ornat telis, clipeumque iubasque  
 divini adsimulat capitis, dat inania verba,  
 dat sine mente sonum gressumque effingit euntis,  
 morte obita qualis fama est volitare figuras  
 aut quae sopitos deludunt somnia sensus. (*Aen.* 10.636-42)

Then the goddess fashions a wispy, strengthless phantom out of **hollow cloud** in the image of Aeneas (an amazing sight to see). She adorns it with Dardan spears, and counterfeits the shield and crest of the divine leader, and she gives it empty words, thoughtless sounds, and the gait of a walking man; like the images that fly about (so it is said) when people have met their deaths, or the dreams that trick one's senses while asleep.

Although most details of this passage hew closely to the Homeric model, a few significant differences stand out. First, in the Iliadic passage (*Il.* 5.449-53), Apollo creates his phantom in order to protect the wounded Aineias from Diomedes, while Virgil modifies the scene in order to make Aeneas the aggressor and Turnus the potential victim. In addition, the Homeric description does not specify what material the phantom—described simply as an εἶδωλον—is made of.

Instead, it appears that Virgil took inspiration for the material of his phantom from two other sources. The first is an entirely separate rescue scene from Book 20 of the *Iliad*, in which Poseidon saves Aineias from an imminent death at the hands of Achilles (*Il.* 20.259ff.). In that scene, the god casts a mist (ἀχλύς) over Achilles' eyes before whisking Aineias away from the battlefield: αὐτίκα τῷ μὲν ἔπειτα κατ' ὀφθαλμῶν χέεν ἀχλὺν / Πηλεΐδῃ Ἀχιλῆϊ (“Then he immediately poured out a mist over the eyes of Achilles, son of Peleus,” *Il.* 20.321-2). Although Homer does not specify what material the mist is made out of, and mentions no cloud or mist in conjunction with Aineias' own body, Virgil conflates the mist over Achilles' eyes with his own phantom Aeneas, when Neptune in Book 5 recounts his Iliadic rescue of Aeneas (cf. *Il.* 20.259ff.) by means of a *nube cava* (“hollow cloud”): *Aenean...* / *nube caua rapui* (“I snatched away Aeneas in a hollow cloud,” *Aen.* 5.809-10). This detail concerning Aeneas is mentioned nowhere in the Homeric description, and appears to be an innovation on Virgil's part.

The second, more straightforward source for the cloud-material of Virgil's phantom Aeneas is Euripides' *Helen*, in which Hera created her phantom Helen out of clouds.<sup>236</sup> One detail, however, that is accounted for in neither the Homeric nor the Euripidean model is the *hollowness* of the cloud (*nube cava*, *Aen.* 10.642) out of which Juno fashions her phantom Aeneas.<sup>237</sup> While the notion of clouds or phantoms being hollow may seem a trivial feature of the Virgilian passage, it is one that is never explicitly stated in the Homeric poems, which describe clouds almost exclusively as ‘dark,’ ‘thick,’ or ‘black,’ even when they are used to disguise or enfold a body.<sup>238</sup> In fact, I am unable to find a single use of κοῖλος or any equivalent

<sup>236</sup> See Euripides' description at *Hel.* 34: εἶδωλον ἔμπουν οὐράνου ζυνθεῖσ' ἄπο. The phantom is twice elsewhere referred to as a νεφέλης ἄγαλμα (705, 1219).

<sup>237</sup> Interestingly, in Euripides' play Hermes temporarily hides the real Helen “in the folds of a cloud” (ἐν πτυχαῖσιν αἰθέρος / νεφέλη καλύψας, 44-5), but this detail is never connected to the phantom image.

<sup>238</sup> Thus the cloud used to rescue Aineias is a κυανέη νεφέλη (*Il.* 5.345); the Olympian cloud-gate is a πικινὸν νέφος (5.751); and the black cloud of death is a μέλαν νέφος (16.350). One outlier occurs at *Il.* 17.551, when Athena

term to describe clouds anywhere in the extant texts of Greek epic, lyric, or tragedy prior to the 1<sup>st</sup> century. By contrast, Virgil stresses the feature of emptiness multiple times in the *Aeneid*, using the adjective *cavus* to describe the deceptive cloud that Venus casts around Achates and his fellow Trojans (1.516), Neptune’s rescue of Aeneas from Achilles in *Iliad* 20 (5.810), the shades of the dead in the underworld (6.293), storm clouds in a combat simile (9.671), and the divine cloud with which Diana promises to transport Camilla’s dead body from the battlefield for safe burial (11.593).<sup>239</sup>

Yet while the hollowness of clouds is absent from epic poets like Homer, Apollonius, and Ennius, it does feature prominently as a subject of Greek natural philosophy from the 6<sup>th</sup> century onwards, when the traditional attribution of lightning to Zeus seems to have attracted many early attempts at providing alternative rationalizing explanations. I shall argue that Virgil’s hollow cloud at 10.642, particularly when viewed in context with certain Lucretian intertexts only a few lines later, evokes clouds precisely in their capacity as a popular subject of philosophical speculation. One of the earliest recorded non-mythological theories about the nature of clouds is that of Anaximander, who posited that air trapped within clouds caused thunder and lightning when it burst out into the open sky.<sup>240</sup> Later natural philosophers such as Anaximenes and Democritus elaborated this theory according to their own conceptions about material nature, and it seems that the idea caught on widely among various philosophical schools, to judge by references in Aristotle and Epicurus to the “hollows” of clouds.<sup>241</sup> Additional evidence for the widespread popularity of clouds as a topic for rationalizing speculation comes from

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disguises herself with a πορφύρεη νεφέλη. By far the most common Homeric descriptor for clouds is ‘black’ or ‘dark,’ some version of which occurs 8 times in the *Iliad* and 5 times in the *Odyssey*.

<sup>239</sup> Word-search for κοῖλος and equivalents performed using *TLG* database. Similarly, a *TLL* search for *cavus* and its variants in the *PHI* database turns up no results outside of Lucretius prior to Virgil.

<sup>240</sup> For the relevant ancient testimonia, see *KRS* 129, 130.

<sup>241</sup> See Arist. *Mete.* 2.9 369b1-4 and Epicurus *Pyth.* 100.5-6, which speak of τῶν νεφῶν τὰς μεταξὺ κοιλίας and τοῖς κοιλώμασι τῶν νεφῶν, respectively. The Epicurean passage is quoted in full below. For Anaximenes and Democritus, see *KRS* 158 and Taylor 1999: 94, 100.

Aristophanes' *Clouds*, whose very title singles out meteorology as the paradigmatic subject of natural philosophy. Of particular interest is the scientific hypothesis attributed to Socrates concerning thunderbolts, which recalls the theories of Anaximander and Anaximenes:<sup>242</sup>

ὅταν ἐς ταύτας ἄνεμος ξηρὸς μετεωρισθεὶς κατακλησθῆ,  
 ἔνδοθεν αὐτὰς ὥσπερ κύστιν φυσᾷ, κάπειθ' ὑπ' ἀνάγκης  
 ῥήξας αὐτὰς ἔξω φέρεται σοβαρὸς διὰ τὴν πυκνότητα,  
 ὑπὸ τοῦ ροίβδου καὶ τῆς ῥύμης αὐτὸς ἑαυτὸν κατακάων. (Ar. *Nub.* 404-7)

When an arid wind arises and has been shut within these clouds, it inflates their insides like a bladder. Then, having been compelled to break these clouds apart, the wind rushes out violently because of its density, lighting itself on fire due to its rushing force.

While Aristophanes characteristically lampoons this explanation by comparing it to the process of farting, the fact that the playwright bothered to spoof it in such philosophically precise detail suggests that this materialist notion of hollow clouds was already well established as a natural philosophical explanation for thunder and lightning in Greek literature.

Shifting now to the Latin philosophical tradition, one may find derivative descriptions of clouds sparsely attested in philosophical prose before the time of Virgil, but it is Lucretius' *De Rerum Natura* that offers the clearest and best attested articulation of a hollow-cloud theory in Latin.<sup>243</sup> Of special relevance to the Virgilian phantom passage is the fact that *De Rerum Natura* provides the earliest attestation for the use of the adjective *cavus* (or any of its related nominal or verbal forms) to describe clouds.<sup>244</sup> Furthermore, unlike earlier accounts by non-atomists, Lucretius describes a meteorological scenario in which clouds become entirely hollowed out with air, thickening around the perimeter so as to form a sort of container or vessel:

subito validi venti collecta procella  
 nubibus intorsit sese conclusaque ibidem

<sup>242</sup> See Dover 1968 ad loc.

<sup>243</sup> Cicero records Stoic doctrines about clouds at *Div.* 2.19.44 and *Nat. D.* 2.39.101, but only the first passage discusses the action of trapped air: *ventos esse; cum autem se in nubem induerint...* etc.

<sup>244</sup> See Lucr. 6.127, 176, 194-203, and 272.

turbine versanti magis ac magis undique nubem  
cogit uti fiat spisso **cava** corpore circum. (Lucr. 6.124-7)

[Thunder may occur when] the gale of a strong wind has suddenly gathered and twisted itself into the clouds where, having been shut within, it compels the cloud with its whirling force more and more in every direction to **hollow out**, thickening the outside of its body.

Although the evidence for Hellenistic meteorology is extremely fragmentary, necessarily rendering any conclusions tentative, the hypothesis of clouds becoming entirely hollow—as opposed to having only the occasional bubbles or pockets, as suggested by Aristotle—seems to be a particular doctrine of Epicurus, who includes it in the epitome of Epicurean meteorology in his letter to Pythocles.<sup>245</sup> It would be unwise to identify Virgil’s hollow cloud as an *exclusively* Epicurean detail based solely on the strength of one fragment amongst so many lost works of Hellenistic literature, but the collective evidence from various schools of philosophy strongly supports the notion that Virgil’s *nubes cava* evokes a *generally* philosophical idea of clouds that is otherwise unattested in the epic tradition before the *Aeneid*.

This subtle evocation of materialist natural philosophy is magnified only a few lines later, when Virgil describes the phantom Aeneas with two phrases taken verbatim from Lucretius:

morte obita qualis fama est volitare figuras  
aut quae sopitos deludunt somnia sensus. (*Aen.* 10.641-2)

[The phantom was] like the images that fly about (so it is said) when people have met their deaths, or the dreams that trick one’s senses while asleep.

The phrase *morte obita* (“having met their deaths”) is rare in Latin verse, and commentators since Macrobius have linked Virgil’s usage to Lucretius, who employs it twice.<sup>246</sup> The first

<sup>245</sup> Epicurus *Pyth.* 100.5-6: βροντὰς ἐνδέχεται γίνεσθαι καὶ κατὰ πνεύματος ἐν τοῖς κοιλώμασι τῶν νεφῶν ἀνείλησιν, καθάπερ ἐν τοῖς ἡμετέροις ἀγγείοις.

<sup>246</sup> See Macrob. *Sat.* 6.1.48; cf. Mellinghoff-Bourgerie 1990: 212-13, Lyne 1989: 110-11, and Harrison ad loc. The phrase occurs once in literary prose before Virgil, at Cic. *Sest.* 83.7, and is attested in three inscriptions dating from later periods. For more on the epigraphic evidence, see Hartman 2016: 65 n.66. I am grateful to Dr. Hartman for sharing with me an early draft of his 2016 dissertation, and whose examination of the intertextual lineage of *morte obita* in connection with Ausonius’ *Professores* provided stimulating points of comparison for my own analysis.

instance occurs in a passage critiquing the mythological notion of disembodied spirits (1.135), which Lucretius later paraphrases in Book 4 when providing the ‘correct’ atomic explanation for why we occasionally see images of the dead in our dreams (4.734):<sup>247</sup>

Centauros itaque et Scyllarum membra videmus  
Cerbereasque canum facies simulacraque eorum  
quorum morte obita tellus amplectitur ossa. (Lucr. 4.732-4)

Thus we see Centaurs and the limbs of Scyllas, the faces of Cerberus and the *eidola* (atomic images) of those who have met death and whose bones the earth holds in its embrace.

While the prosaic version of this phrase, *mortem obire*, does not exhibit any atomic connotations prior to Lucretius, certain factors support the notion that Virgil treats the intertext as having specific philosophical (and not just stylistic) reference. Lucretius uses the phrase in two passages, first to describe an inaccurate mythological explanation for dream visions of the dead, and then when offering the correct atomic account. By recycling some of the language from the incorrect mythological account in his later atomic explanation (4.732-4), Lucretius deploys the otherwise neutral *morte obita* in a conspicuously rationalizing context. As we will see shortly, when Virgil borrows this phrase in the *Aeneid*, he also borrows some of the rationalizing spirit of the source passage, even while carefully distancing himself from its authority.

In a similar fashion, Virgil borrows the end of that same line, *volitare figuras* (“images fly about,” *Aen.* 10.641), from a Lucretian passage arguing for the variability of atomic shapes:

natura quoniam constant neque facta manu sunt  
unius ad certam formam primordia rerum,  
dissimili inter se quaedam volitare figura (Lucr. 2.378-80).

Because the atomic first-beginnings are made by nature, not by hand according to the fixed form of one model, they fly about with differing shapes.

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<sup>247</sup> Cf. Lucr. 1.134-5: *cernere uti videamur eos audireque coram, / morte obita quorum tellus amplectitur ossa.*

Although *figura* in the Lucretian passage refers to the shapes of different atoms, and therefore does not correspond exactly to Virgil's spectral *figuras*, the word itself is interesting, as Lucretius uses it elsewhere to describe the atomic images (*simulacra* or εἰδωλα) shed from the surface of objects that render them visible: *dico igitur rerum effigias tenuisque figuras / mittier ab rebus summo de cortice eorum* ("therefore I state that the images and the **fine impressions** of things are emitted from their surfaces."<sup>248</sup> Such images are, of course, how Lucretius accounts for the appearance of dead people in visions and dreams—atomic *simulacra* that were emitted when the person was alive, and which may ricochet back and impinge upon someone's dreaming mind at a later point in time.<sup>249</sup> Yet *figura* also served as a traditional word for deceased shades, similar to *umbra*, an ambiguity that Lucretius exploits adroitly in his rationalizing attempt to explain ghostly *figurae* as the result of atomic *figurae*.<sup>250</sup> Therefore, by first describing Aeneas' phantom as an *umbra* (10.636) and then comparing it to *figurae* in a markedly Lucretian formulation (10.641), Virgil plays upon both the ghostly and the atomic associations of the word *figura*.

All the same, one might still plausibly classify lines 10.641-2 as an instance of remythologizing, in which the point is to appropriate a rationalizing, atomic moment from Lucretius and reintroduce mythological gods as causes of natural phenomena, were it not for Virgil's use of a literary citation device, *fama est* ("so it is said," *Aen.* 10.641), which tips the balance in favor of a more philosophically sensitive interpretation. According to Harrison, the

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<sup>248</sup> Cf. Quintilian's use of *figura* to denote *simulacra* at Quint. 10.2.15: *illas Epicuri figuras quas e summis corporibus dicit effluere*. In a note ad Lucr. 4.30, Bailey suggests that Lucretius' *figura* may translate Democritus' and Epicurus' τύπος, a technical term for the 'impression' made upon the viewer by the atomic image (cf. Theophr. *Sens.* 52; Epicurus *Ep. Hdt.* 46a). Cicero also attests the use of the word *spectrum* as a translation for atomic εἰδωλα, attributing it to Catus Insaber, an Epicurean writer who was a contemporary of Cicero (*nuper est mortuus*); see Cic. *Fam.* 15.16.1 and 15.19.1.

<sup>249</sup> See Lucr. 4.722ff.

<sup>250</sup> Compare the description of shades seen in dreams at Lucr 4.30-5, which uses the same language (*volitant*, 4.32; *figuras*, 4.34), and the disapproving description of ghosts at 4.37-8: *ne forte reamur / effugere aut umbras inter vivos volitare*. See also *Insc. Orell.* 4847: *cum vita functus iungar tis umbra figuris*.

phrase *fama est* is cautionary, meant to distance the author from the comparison even as he provides it: “a ‘reporting’ device, here carefully not vouching for events beyond the grave.” I believe that Harrison is correct in attributing some distance or reluctance to Virgil’s citation, yet it is strange that Virgil should not “vouch for events beyond the grave” when he does just that for nearly the entirety of Book 6. Rather, I think that it makes more sense to view *fama est* as an instance of ‘Alexandrian footnoting,’ a widely attested practice among Roman poets of the 1<sup>st</sup> century BCE that Stephen Hinds paraphrases as “the signalling of specific allusion by a poet through seemingly general appeals to tradition and report.”<sup>251</sup> In effect, Virgil’s attribution to common report (*fama*) of the comparison at 10.641-2 marks the presence of a citation, while the thoroughly Lucretian vocabulary, content, and phrasing of the lines specify the source of that citation without naming him outright. To modify Harrison’s formulation, I believe it is more appropriate to say that Virgil’s *fama est* indicates the author’s refusal to vouch for his comparison *precisely because* it is Lucretian and atomic, and has not been subjected to the sort of remythologizing that characterizes so many other Lucretian intertexts in the *Aeneid*.

In order to understand the purpose of this comparison between the phantom Aeneas and atomic physics, let us step back slightly and look again at the passage as a whole. At the beginning of the phantom’s description, Virgil alludes to the idea of natural philosophy in general with the detail of the hollow cloud (10.636); then, he evokes a specifically Epicurean model by comparing the phantom to Lucretian dream images, a reference that is strongly marked by the device of the Alexandrian footnote, *fama est* (“so it is said,” 10.641). In doing so, Virgil metaphorically recasts mythological *umbrae* (‘shades’) as more scientific *figurae*, a word which

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<sup>251</sup> For further discussion of the phrase, which originates with David Ross (1975), as well as of the practice itself, see Hinds 1998: 1-5.

may also denote shades in a funerary context, but which in its Lucretian sense can be understood to mean visible atomic images.

However, it is important to note that Virgil only performs this Epicureanizing of cloud-material in this one limited, local context, at a point when the phantom image is used to rescue Turnus.<sup>252</sup> Furthermore, Virgil does not suggest that the cloudy phantom is literally composed of atoms, but simply compares the two as being alike. To make sense of this Lucretian comparison, which I argue is far more than a trivial stylistic homage, I propose that we interpret it in light of the many other moments of atomic allusion already discussed in which Virgil links atomic cosmology with Rome's enemies. By evoking atomism in connection with the phantom Aeneas, Virgil raises the specter of chaotic atomic physics at a moment of temporary setback for the Trojans, when Turnus is allowed to escape what should have been certain defeat. This has the effect of delaying the progress of Roman power, while further deepening the allegorical association between atomism and the various enemies of political and cosmic order in the poem.

This philosophical association crops up once more near the end of the phantom chase-scene, after Turnus has been lured away from the battlefield and onto the ship that carries him back to his father's homeland. Distressed and ashamed at his removal from the fight, Turnus contemplates suicide in a moment of despair, the language of which closely mirrors earlier episodes of indecision by Aeneas:

haec memorans animo nunc huc, nunc fluctuat illuc,  
 an sese mucrone ob tantum dedecus amens  
 induat et crudum per costas exigat ensem,  
 fluctibus an iaciat mediis et litora nando  
 curva petat Teucrumque iterum se reddat in arma (10.680-4).

While relating these things he wavers in his mind, now here, now there, unsure of whether he should madly throw himself upon a sword after suffering such a

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<sup>252</sup> By comparison, when Venus fashions a protective shield out of *nube cava* for the Trojans in Book 1 (516), there is no conspicuous Lucretian intertext that follows.

disgrace, driving the cruel point through his ribs, or whether he should toss himself into the waves and swim to the crooked coast to seek the Trojan arms once more.

As I have already argued at length in the previous chapter, the phrasing of *nunc huc, nunc illuc* (“now here, now there”) evokes Lucretian descriptions of haphazard atomic motion in three earlier episodes of indecision in the *Aeneid* (4.283-6, 5.700-3, 8.18-25), and here too the effect is to portray Turnus’ uncertainty as being turbulent and undesirable in the same way that atoms are. However, unlike Aeneas, whose momentary atomic wavering yields to divine persuasion and good sense, Turnus attempts both to kill himself and to swim to shore three times in a row (*ter conatus utramque uiam*, 10.685), and is restrained only by Juno’s interference. We may say that for Aeneas, atomic indecision represents a surmountable obstacle to Roman destiny, while for Turnus, the association with atomism is both inescapable and wholly negative, offering only continued frustration and failure. As we will see in the next chapter, which examines the finale of Book 12, this pattern of association reaches its climax when Aeneas kills Turnus, a personal defeat laced with references to the self-destruction and failure of atomic worlds predicted by atomic physics.

### 3.4 ATOMISTIC MEZENTIUS

The final episode of atomic imagery in Book 10 concerns Mezentius, whose defeat and death foreshadow the looming defeat of Epicurean cosmology at the end of the poem. Although Mezentius has not received nearly as much scrutiny as Dido as an object of philosophical allegory, Leah Kronenberg (2005) has proposed a detailed interpretation of the Italian chieftain as an allegorical Epicurean, whose words and actions offer a dissenting voice, as well as a

microcosm for how one might interpret the rest of the poem in Epicurean terms.<sup>253</sup> While I hesitate to endorse certain conclusions of Kronenberg’s argument, which focuses largely on identifying Epicurean ethical values, rather than natural philosophy or cosmology, I agree with her basic premise that Mezentius is connected with Epicureanism.<sup>254</sup> In my own interpretation of Mezentius, I focus on intertextual connections to Epicurean physics, in order to determine how certain Lucretian facets of his character connect to larger themes in the poem concerning cosmology. I argue that, as with the description of Dido’s death, which contains details that evoke the dissipation of an atomic soul, the allusions to Lucretius’ materialist psychology at the conclusion of Book 10 associate Mezentius’ death with the overall disorder and instability of atomic physics.

The first detail hinting at this association occurs in a short, mocking speech delivered by Aeneas as he stands over the downed Etruscan warrior, still dazed after falling from his horse: *ubi nunc Mezentius acer et illa / effera vis animi?* (“Where now are fierce Mezentius and that wild strength of spirit?” *Aen.* 10.897-8). As Harrison notes, the phrase *vis animi* (“strength of spirit”) has a distinctive Lucretian ring, occurring 9 times in *De Rerum Natura*.<sup>255</sup> Yet the speech as a whole seems to be modeled upon a quip made by Sarpedon to Hector in Book 5 of the *Iliad*, by which Sarpedon tries to goad the Trojan prince back into the fighting: Ἐκτωρ, πῆ δὴ τοι μένος οἴχεται, ὃ πρὶν ἔχεσκες; (“Where, then, has your strength gone, which you formerly possessed?” *Il.* 5.472). Therefore, in the Virgilian adaptation, *vis animi* functions as a Lucretian elaboration upon Homer’s straightforward μένος (‘strength’). As noted in the discussion of *vis*

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<sup>253</sup> See Kronenberg 2005: 404: “Mezentius, even more than Dido, evokes Epicurean philosophy, and in a manner that similarly allows for an Epicurean reading of the poem’s action.”

<sup>254</sup> While I find many of Kronenberg’s proposed allusions compelling and convincingly argued, I think that the possibility of an Epicurean reading of the *Aeneid* as a whole is rendered unlikely by the poem’s systematic rejection of non-teleological cosmology. It has been one of the aims of this dissertation to show that ‘dissenting’ Epicurean interpretations are inevitably limited to local contexts, where they are frequently characterized as chaotic or otherwise undesirable.

<sup>255</sup> See Harrison ad loc., as well as Kronenberg 2005: 420.

*venti* (‘strength of the wind’) in the previous chapter, Lucretius uses the *vis* + genitive construction in many contexts to emphasize the physical *force* of moving atoms that causes natural or psychological phenomena, and so the phrase potentially evokes not just a stylistic quirk of Lucretius’, but the atomic doctrine that this quirk is supposed to illustrate.<sup>256</sup> In its most philosophically sensitive interpretation, Aeneas’ derisive rebuke could represent a criticism of Mezentius’ atomic *animus*—thus tying his violence and cruelty to the Epicurean model of materialist psychology.

A skeptical reader may hesitate at this point to attribute philosophical meaning to so slight a parallel, but the case for interpreting Mezentius’ mind and soul as atomic finds additional support in the lines that follow. When Mezentius, having been jarred by the fall from his horse, recovers his senses, Virgil describes this mental process with evocative Lucretian wording: *hausit caelum mentemque recepit* (“He gulped in air and recovered his mind,” 10.899). Harrison points to two allusive models for this line, one Greek and one Latin.<sup>257</sup> First is the Iliadic description of Andromache regaining consciousness after the initial shock of hearing about Hector’s death: ἡ δ’ ἐπεὶ οὖν ἔμπνυτο<sup>258</sup> καὶ ἐξ φρένα θυμὸς ἀγέρθη (“then she recovered her breath and her spirit was gathered into her chest,” *Il.* 22.475). While Homer’s ἔμπνυτο (“recovered her breath”) accounts for the gulping of air (*hausit caelum*) in the first half of the Virgilian line, the second half more closely resembles a line-ending in Lucretius that describes the process by which epileptics regain their senses after a seizure: *paulatim redit in sensus animamque recepat* (“gradually he returns to his senses and regains his soul,” *Lucr.* 3.505).<sup>259</sup>

<sup>256</sup> Cf. discussion of *vis venti* above at pp. 72ff.

<sup>257</sup> See Harrison ad loc.

<sup>258</sup> This is Aristarchus’ correction of the vulgate reading: ἔμπνυτο. For a more detailed discussion of whether or not this should be linked to verbs of breathing, such as ἀναπνέω, see Kirk 1990: 129, commenting on the merits of ἐμπνύθη vs. ἀμπνύθη at *Il.* 5.697.

<sup>259</sup> For the connection between Virgil’s *mentemque recipit* and Lucretius’ *animamque recepat*, see Harrison ad loc. Harrison also links *caelum haurire* to the somewhat common Greek phrase ἀέρα ἔλκειν. Although Harrison follows

Granted, variations of the phrase *animus recipere* ('to regain one's mind') are attested sporadically in non-atomic contexts outside of the *Aeneid*, suggesting that the phrase served as a loose idiom, but the similar word order, line-final position, and use of the enclitic *-que* all suggest the Lucretian line as a more specific model for Mezentius' return to consciousness.<sup>260</sup> Furthermore, while in English the physical metaphor of 'regaining one's mind' has become an empty cliché in the era of modern science, the phrase in Lucretius describes a literal process grounded in an atomic understanding of psychology. As a physical object composed of super-fine atoms, the Epicurean soul can be physically tossed about by disturbances in the body. By describing Mezentius' return to consciousness in similarly physical terms (*mentemque recepit*), and only one line after Aeneas' reference to *vis animi* ("strength of spirit"), Virgil casts a subtle Epicurean pall over Mezentius' soul in the moments before his death.

When that death finally comes, only a few lines later, Virgil again resorts to language that evokes Lucretian psychology in combination with an underlying Homeric model:

haec loquitur, iuguloque haud inscius accipit ensem  
undantique animam diffundit in arma cruore. (*Aen.* 10.907-8)

Thus he spoke and, hardly unaware, he receives the sword in his throat and pours his soul out onto his armor in a billowing stream of blood.

The 'pouring out' (*animam diffundere*) of Mezentius' soul, which echoes one other Virgilian description of death from Book 1, finds its closest Homeric parallel in a formula for the 'loosing' of the soul from the body that occurs at times in the *Iliad*: τοῦ δ' αἴθι λύθη ψυχή τε μένος τε

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Servius in glossing *caelum* as a stylized synonym of *aer*, it is possible that Virgil's hyperbolic use of *caelum* possesses gigantomachic undertones here.

<sup>260</sup> For other appearances of the phrase prior to or contemporaneous with the *Aeneid*, cf. Ter. *Ad.* 324: *animam recipe*; Livy 2.20.11: *recipit extemplo animus pedestris acies*; and 2.50.10: *inde primo restitere; mox, ut respirandi superior locus spatium dedit recipiendique a pauore tanto animus*.

(“straightaway his soul is loosed along with his strength,” *Il.* 5.296, 8.123, 8.315).<sup>261</sup> In contrast to most other Homeric descriptions of death, which depict a lively, active soul that moves itself from the inert body, the ‘loosing’ (λύθη) formula imagines the soul being passively ejected by the failing corpse.<sup>262</sup> While Virgil elsewhere in the *Aeneid* depicts souls surviving death and actively leaving the body, the ‘pouring-out’ expression (*diffundere*) in Mezentius’ death is closer to the passive notion of the soul’s release in the expression λύθη ψυχή τε μένος τε (“his soul is loosed along with his strength”) than to other early Greek descriptions.<sup>263</sup>

As for the Latin model, modern commentators agree that the pouring-out of Mezentius’ soul likely alludes to Lucretius’ atomic account of death.<sup>264</sup> In four separate passages of Book 3, Lucretius employs some variation of *anima* and (*dif*)*fundere* to describe how the dying body physically pours out its wispy material soul, the atoms of which are fine enough to allow them to escape the body with ease.<sup>265</sup> Of course, there is room to interpret *animam diffundere* here, as

<sup>261</sup> Cf. Aeneas’ cry of despair during the storm in Book 1: *Tydide! mene Iliacis occumbere campis / non potuisse tuaque animam hanc effundere dextra...?* (1.98-9). It is perhaps not insignificant that Virgil opts for the materialist, Lucretian wording at a moment when Aeneas is gripped with pessimism about the fate of the Trojans.

<sup>262</sup> For the more usual active description, cf. the soul ‘flying’ and ‘traveling’ to Hades: ψυχή δ’ ἐκ ρεθέων παμμένη Ἄϊδος δὲ βεβήκει (*Il.* 22.362). Elsewhere the soul ‘goes’ (ῥχεται) down to the underworld (*Il.* 23.101) and ‘abandons the body’ τὸν δ’ ἔλπε ψυχή (*Il.* 5.696; *Od.* 14.426). All of these expressions are consistent with received mythological and religious notions that the soul has its own power and existence independent of the body.

<sup>263</sup> By contrast, the deaths of two other non-Trojans are portrayed in more active (and therefore, less Epicurean) terms, specifically that of Camilla: *exsolvit se corpore... vitanque cum gemitu fugit* (*Aen.* 11.829-31), and of Turnus: *uitaque cum gemitu fugit* expression (12.952). However, these two non-atomic deaths do not invalidate the overall association between non-Trojans enemies and the disorderly worldview of atomism, but instead must be understood on their own terms. In Camilla’s case, her mythic association with Diana outweighs the general tendency to associate non-Trojan antagonists in the *Aeneid* with atomism. Turnus’ death, on the other hand, marks the final defeat of Epicurean (i.e. non-teleological) cosmology in the poem, and so the traditional, non-atomic nature of his soul’s flight to the underworld signals a return to the traditional epic universe of immortal souls and divine order.

<sup>264</sup> See Kronenberg 2005: 424 n.79: “Virgil emphasizes Mezentius’ materialism once more in his description of the dispersion of his spirit (*animam diffundit*).” See also Harrison ad loc.

<sup>265</sup> See *Lucr.* 3.434-9, 3.580-8, 3.698-700, and 3.1033. While the expression *anima fusa* does appear outside of Lucretius in pre-Virgilian Latin literature, it does so in descriptions of the soul’s *life-sustaining* dispersion throughout the body, as opposed to its exit from the corpse at the moment of death. Cf. Varro’s use of *diffusast anima* at *Sat. Men.* fr. 32 (Bücheler 1963: 262).

Servius does in his comment on *animam effundere* in Book 1, as a learned reference to an entirely different explanation of the soul residing in blood:<sup>266</sup>

EFFUNDERE secundum eos qui dicunt sanguinem esse animam, ut ipse alibi *'purpuream vomit ille animam.'* nam alio loco aliorum opinionem sequitur, qui dicunt spiritum esse animam, unde est *'atque in ventos vita recessit.'*

POUR OUT according to those who say that the soul is blood, as Virgil himself says elsewhere: “he spews out his dark red soul.” For elsewhere he follows the opinion of others, who say that the soul is breath, according to which he says “and her life receded into the winds.”

While Virgil very well may be alluding to multiple descriptions of the soul’s material nature—ghostly, atomic, and even hematic—the simple fact that he conflates them by means of the Lucretian phrase (*animam diffundere*) casts the entire description in the materialistic terms of atomism. Furthermore, when this Lucretian verbal echo is taken in conjunction with the other Lucretian details concerning atomic psychology, including Mezentius’ *vis animi* (“strength of spirit,” 10.898) and *mentemque recepit* (“he recovered his mind,” 10.899), a picture emerges in which his soul appears to be atomic in its dying moments.

### 3.5 CONCLUSION

As I suggested above in my discussion of Dido’s death and Turnus’ humiliating removal from the battlefield and subsequent suicide attempts, I believe that Mezentius’ defeat conforms to a broader pattern in the *Aeneid* of associating noteworthy enemies of Trojan progress with atomic physics. Whether one chooses to interpret the dying souls of Dido and Mezentius as literally atomic (if only for a brief moment before the poem’s dominant teleological cosmology reasserts itself) or as being allegorically connected to atomic psychology, the portrayal of non-

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<sup>266</sup> Serv. ad 1.98. The two lines quoted are from *Aen.* 9.349 (death of Rhoetus) and 4.705 (death of Dido).

Trojan failures in atomic terms further solidifies the status of Epicurean atomism as an enemy of Roman power.

Furthermore, in addition to the allegorical conflict between teleological cosmologies and non-teleological atomism, these personal antagonisms can be mapped onto major historical conflicts in Rome's past. Each of the three non-Trojan characters examined in this chapter represent ethnic groups that posed significant historical challenges to the expansion of Roman power: Turnus is from Ardea, an early member of the Latin League that successfully resisted attempts at conquest by Tarquinius Superbus; Mezentius hails from Etruria, a perennial and dangerous enemy of Rome throughout the regal and early republican periods; and Dido founded Carthage, arguably the greatest foreign threat to Rome's existence during its initial period of expansion beyond central Italy.<sup>267</sup> Thus, by depicting the deaths (or near-death, in Turnus' case) of these characters with the language of atomic phenomena, Virgil aligns the enemies of Rome's historical and imperial teleology with an Epicurean cosmology that is similarly opposed to narratives of fate and fixed authority, both national and divine. As we will see in the next chapter, which looks at the role of atomism in the conclusion of the poem, these lesser episodes of allegorical defeat for atomic cosmology and its human representatives foreshadow a more permanent rejection of atomism, embodied in Turnus' defeat at the hands of Aeneas.

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<sup>267</sup> For Ardea's conflict with Rome during the reign of Tarquinius Superbus: Livy 1.57-60, Flor. 1.1.7, Oros. 2.4, Eutr. 1.8, and Dion. Hal. *Ant. Rom.* 4.64. See *RE* s.v. Ardea 2.

## Chapter 4. TURNUS AND THE END OF THE EPICUREAN WORLD

*Post haec quaedam de his quae ab Homero sumpta sunt ostendam non ipsum ab Homero tulisse, sed prius alios inde sumpsisse, et hunc ab illis, quos sine dubio legerat, transtulisse. (Macrob. Sat. 6.1.7)*

Afterwards I will show, regarding certain lines and passages from Homer, that Virgil did not copy them directly, but rather borrowed from earlier Latin poets who had imitated these passages and whom he had doubtless read. (Macrobius)

In the preceding chapters I have shown how Virgil evokes Epicurean atomism, along with the pessimistic view of cosmology and history that it entails, as a foil to the divine order that underwrites Rome's future greatness. While virtually all of these allusions to Epicurean physics are crafted from Lucretian source material, Virgil consistently deploys atomism as a symbol of caprice and disorder, a strategy adopted from a long line of anti-materialist and anti-Epicurean philosophical arguments. For Aeneas, the specter of atomic chaos arises at moments of distress and hesitation, when the Trojans risk straying from their fated mission to establish the Roman people. Prior to Book 12, Virgil also associates atomism with certain enemies of Aeneas and the Trojans, depicting such characters as forces of disorder to be contained or vanquished, obstacles on the road to unlimited Roman power.

However, the most comprehensive and consequential moment of engagement with Epicurean physics occurs at the end of Book 12, during the duel between Aeneas and Turnus. In this momentous final scene Virgil synthesizes Homeric and Lucretian allusive models, systematically Epicureanizing the Homeric material. A dense network of allusions to Epicurean teachings on physics, cosmology, history, and perception links Turnus' stone-throwing to an eschatology of decline and dissolution that is diametrically opposed to the narrative of boundless

Roman power proclaimed elsewhere in the *Aeneid*.<sup>268</sup> Through this allegorical conflation, Turnus' defeat by Aeneas signals the triumph of universal Roman order over political and cosmological chaos.

#### 4.1 TURNUS' ATOMIC ATTACK

To begin, let us consider two passages earlier in Book 12 where Virgil allusively compares some aspect of battle to atomic motion. As we shall see, these allusions help foreground the cosmological element of the war in Latium, anticipating the final showdown between Aeneas and Turnus. In the first passage, Turnus wounds the Trojan warrior Eumedes with a javelin:

hunc procul ut campo Turnus prospexit aperto,  
ante levi iaculo longum per inane secutus  
sistit equos biiugis et curru desilit atque  
semianimi lapsoque supervenit, et pede collo  
impresso dextrae mucronem extorquet et alto  
fulgentem tingit iugulo atque haec insuper addit:  
'en agros et, quam bello, Troiane, petisti,  
Hesperiam metire iacens; haec praemia, qui me  
ferro ausi temptare, ferunt, sic moenia condunt'. (12.353-61)

When Turnus glimpsed [Eumedes] from afar on the open plain, he first threw a light javelin at him through the long void, then halted his twin horses and leapt down from the chariot and stood over his fallen, half-dead body. With one foot pressed to his neck, he wrested the sword from his right hand and submerged its gleaming blade in the depths of his throat, adding these words: 'behold, Trojan, the fields that you sought in war, and measure out Hesperia when you lie dead. These are the prizes for those who have dared to test me with the sword; thus do they found their walls.'

Virgil's description of the javelin's flight, *iaculo longum per inane secutus* ("he threw a javelin through the long void"), echoes a distinctive Lucretian phrase that describes the dispersal of

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<sup>268</sup> Narratives of boundless Roman power such as: Jupiter's prophecy at *Aen.* 1.257ff.; Anchises' teleology in *Aen.* 6; Aeneas' shield at *Aen.* 8.626ff.; and Juno and Jupiter's political settlement at *Aen.* 12.808ff.

atomic matter through the void: *magnum per inane soluta* (“dispersed through the great void” Lucr. 1.1018, 1.1103).<sup>269</sup> However, virtually all commentators on this line interpret it not as a deliberate evocation of Epicurean physics, but as an instance of Virgil adopting Lucretian phrasing while ignoring philosophical content.<sup>270</sup> First of all, the exact syntax, meter, and placement of the expression, consisting of an adjective + *per inane* + trisyllabic perfect participle at line end, recalls an earlier adaptation of Lucretius by Virgil in the cosmological ‘Song of Silenus’ in *Eclogue 6*:

namque canebat uti magnum per inane coacta  
semina terrarumque animaeque marisque fuissent  
 et liquidi simul ignis. (*Ecl.* 6.31-3)

For he sang of how the seeds (atoms) of earth, spirit, sea, and limpid fire  
 together had been driven through the great void.

According to Servius, *inane* and *semina* here refer to “the void” and “atoms,” the materialist building blocks of Epicurean physics.<sup>271</sup> While more recent scholarship has shied away from Servius’ thoroughly Epicurean, biographical reading of the miniature cosmology in *Eclogue 6* and instead emphasizes its idiosyncratic, syncretic character, there is a general consensus that the phrase *magnum per inane coacta* (“driven through the great void”) refers unambiguously to Epicurean atomism.<sup>272</sup> Therefore, when another version of this phrase reappears at *Aen.* 12.354,

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<sup>269</sup> The *per inane* expression occurs in Lucretius with a number of other modifying adjectives (and an adverb), depending upon which aspect of the void the poet wishes to stress— *vacuum*: 2.151, 2.158, 2.202, 6.838; *magnum*: 1.1018, 1.1103, 2.65, 2.105, 2.109; *profundum*: 1.1108, 2.96, 2.222; *quietum*: 2.238; *rectum* (adverbial accusative): 2.217, 2.226.

<sup>270</sup> This reductive interpretation goes back to Servius’ gloss: *LONGUM PER INANE hoc est per longum spatium* (ad 12.354). So Tarrant (2012) ad loc. and Traina (1997) ad loc. Warde Fowler (1919) does not mention Lucretius at all in his note on the Eumedes episode. Even Conington and Nettleship, generally quite sensitive to Lucretian intertexts, are of little help: “*inane* is used as a substantive, in Lucretian fashion.”

<sup>271</sup> Serv. ad loc. *Epicurei vero, quos nunc sequitur... dicunt duo esse rerum principia, corpus et inane... nam ‘semina’ atomos dicit.*

<sup>272</sup> So C-N ad *Ecl.* 6.31-40: “The cosmogony here is Epicurean, and the phraseology Lucretian.” See also Lieberg 1981: 228 and Saint-Denis & Lesueur 1992: 69. Although Clausen 1994: 176 attributes the opening of the Song of Silenus to the song of Orpheus in Apollonius, he acknowledges the Lucretian origin of *magnum per inane*, while his line-by-line notes reveal a detailed and thorough engagement with the vocabulary and ideas of Lucretian atomism and cosmology (ad *Ecl.* 6.31, 31-32, 32, 33, 34, 35, 36, 40).

it evokes three earlier passages as plausible allusive models, two Lucretian and one Virgilian, all of which explicitly describe atomic motion. Given that Virgil already associates the ‘adjective + *per inane*’ phrase with atomism in *Eclogue 6*, and because we possess no other pre-*Aeneid* examples of the expression other than in Lucretius, it stands to reason that Virgil’s readers would have recognized in Turnus’ javelin throw, *longum per inane secutus*, an allusion to the void of Epicurean atomism.

Despite the close metrical and syntactic correspondence to Lucretius, Tarrant follows the *TLL* in arguing against an Epicurean reading of this line on semantic grounds: “*inane* as a noun can evoke Lucretian descriptions of the void (as in *Ecl.* 6.31-2 *magnum per inane coacta | semina*), but here it is a loftier equivalent of *aer*” (ad 12.354). Although neither the *TLL* nor Tarrant argue in detail why this must be the case, their assumption about the correct meaning of *inane* in this context is worth investigating. The *OLD* defines the substantive *inane* in the singular as ‘an empty space, void,’ of which three subcategories are distinguished: **A**) an empty expanse; (often poet., of the heavens). **B**) an empty part in a structure. **C**) (in Epicurean phil.) a space devoid of matter.<sup>273</sup> Interestingly, the dictionary cites Turnus’ stone throw at *Aen.* 12.906, which corresponds closely in context and language to the javelin toss against Eumedes at 12.354, as an example of the non-philosophical definition (**A**), while listing the beginning of Silenus’ cosmology at *Ecl.* 6.31 as an instance of definition (**C**), the Epicurean void.<sup>274</sup> Of course, dictionary entries need not demonstrate the sort of sensitivity to multivalent word meanings that we may reasonably expect of a commentator, but I believe that the *OLD* categorization betrays a

<sup>273</sup> *OLD* s.v. *inane* (n.). The second definition, ‘worthless or illusory things, vanities,’ refers only to the plural *inania*, and is therefore irrelevant to the discussion at hand.

<sup>274</sup> *Lewis and Short* takes an even stronger stance against Epicurean readings of *inane* in Virgil, citing both *Ecl.* 6.31, and *Aen.* 12.906 as instances where *per inane* means only ‘through the air.’ Admittedly, the subheading for substantive uses of *inanis* in the *L&S* entry does not discriminate in its citations between *inane* as ‘an empty space’ versus ‘a void,’ which suggests that the editors were not especially concerned with that level of philosophical detail.

crucial assumption about the allusive force of *inane* that is shared by Tarrant and others: if the word appears in an *explicitly* cosmological context, as in Lucretius, Cicero's philosophical dialogues, or *Eclogue* 6, it may refer to the Epicurean void, but in any other context it is assumed to mean 'air' or 'sky.' While such binary distinctions can be useful in a lexicographical context, we ought not assume that these two definitions are mutually exclusive in Virgil, semantically either/or. In the context of the battle scene, *inane* may literally denote the air through which Turnus' javelin flies, but that does not rule out the possibility that it also evokes the Epicurean void, whether literally or as part of an allegorical argument. In fact, as closer examination of the history of the substantive use of *inane* will show, the word refers exclusively to the void of atomism in pre-Augustan literature, and there are good reasons to suppose that *inane* did not come to mean 'air' in a philosophically unmarked way until *after* Virgil, perhaps even as a result of his novel usage in Book 12 of the *Aeneid*.

The earliest alleged use of *inane* as a substantive of which we have any record is found in Persius 1.1, a line attributed by certain medieval *scholia* to Lucilius, the second-century BC satirist: *o curas hominum, o quantum est in rebus inane* ("O worries of men, o how much vanity there is in things!").<sup>275</sup> However, this attribution is complicated by textual difficulties in the *scholia* manuscripts, and several scholars have argued that the line does not (or cannot) allude to Lucilius, but rather to Lucretius.<sup>276</sup> If this is the case, as it seems to be, then Persius' use of *inane*, which literally means something like 'vanity,' is clearly a pun on the Lucretian sense of the word as 'void,' referring to the fact that Lucretius describes all material things (*res*) as a

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<sup>275</sup> Although the comment is appended to line 1.2, it has long been understood to refer to 1.1: *QUIS LEGET HAEC hunc versum de Lucilii primo transtulit. et bene vitae vitia increpans ab admiratione incipit*. See Zetzel 1977: 40.

<sup>276</sup> For summary of the history of this question, along with relevant bibliography, see Sosin 1999: 281-7. Hendrickson 1928: 98-9 notes the similarity of Persius' first hemistich to Lucr. 2.14, *o miseris hominum mentes, o pectora caeca!* as well as the identical line ending at Lucr. 1.330 and 1.569, *est in rebus inane*. For fuller discussion of the textual problems in the scholia, as well as the possibility of *Lucilii* in the scholia being a corruption of *Lucretii*, see Zetzel 1977: 41-2.

mixture of atoms and void.<sup>277</sup> Leaving aside the dubious attribution of the allusion in Persius 1.1 to Lucilius, we are left with Cicero and Lucretius as the only other pre-Virgilian writers for whom we have examples of *inane* used as a substantive. Unsurprisingly, in both of those authors the substantive usage refers unambiguously and consistently to the Epicurean void, since the word occurs only in discussions of Epicurean philosophy.<sup>278</sup>

Although we do not have any earlier examples of the substantive *inane*, Cicero provides indirect evidence of his contemporaries also using the word to denote ‘the void.’ In a section of *De Fato* in which Cicero seeks to clarify different meanings of the phrase *sine causa*, he makes an analogy to the discrepancy between the colloquial and philosophical meanings of *inanis*: *cum vas inane dicimus, non ita loquimur, ut physici, quibus inane esse nihil placet, sed ita, ut verbi causa sine aqua, sine vino, sine oleo vas esse dicamus* (“When we say a vessel is *inane*, we are not speaking like the natural philosophers, for whom *inane* means ‘nothing,’ but in the way that we say, for example, that a vessel is ‘empty’ of water, wine, or oil” Cic. *Fat.* 24).

This passage is interesting for two reasons. First, it is the only pre-Virgilian source that explicitly addresses the distinction between the adjectival, colloquial meaning of the word (empty of tangible contents) and the substantive, philosophical meaning (atomic void). Second, Cicero’s mention of natural philosophers (*physici*) indicates that others had already been using the term in their own speeches or writing in a strictly philosophical sense. While Cicero could have copied this substantive usage from Lucretius, we know from elsewhere in his writings that other Roman Epicureans had been writing philosophy in Latin since the early 1<sup>st</sup> century BC, and that these early writers were already interested in translating Greek concepts with novel uses of

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<sup>277</sup> Lucr. 1.382: *esse admixtum dicendumst rebus inane*.

<sup>278</sup> Word search performed using PHI database.

existing Latin vocabulary.<sup>279</sup> In the absence of more concrete evidence, it is conceivable that the substantive use of *inane* originated among these early Epicurean writers as they sought a recognizable Latin word to render Epicurus' term for the void, τὸ κενόν.

Although our evidence for the semantic range of *inane* before Virgil is limited in key respects then, the examples that we have paint a clear picture: prior to *Aen.* 12.354, every single instance of *inane* as a substantive means 'the void,' and nowhere is it used as a synonym of *aer*.<sup>280</sup> In contrast, many of the post-Virgilian uses of *inane* as a synonym for air pointedly recall either *Aen.* 12.354 or 12.906, suggesting that later writers engaged with the 'per *inane* + perfect participle' phrase as a Virgilian topos of epic combat and swift movement, rather than as a reference to Lucretian natural philosophy.<sup>281</sup> For Virgil, however, steeped in Hellenistic critical traditions that emphasized allegorical readings of Homer, epic combat and natural philosophy need not be disjunctive.<sup>282</sup> Of course, *inane* literally means 'the air' here, because it would be silly to suppose that the space between Turnus and Eumedes is a perfect vacuum, totally devoid of air or any errant specks of material. But in adapting the specialized Epicurean term for 'void' in such a way, perhaps for the first time in Latin epic, *Aen.* 12.354 adumbrates a broader

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<sup>279</sup> These early Roman Epicureans include Amafinius, Rabirius, and "many imitators" (*multi eius aemuli, Tusc.* 4.3.6-7; *Acad. Post.* 2.5-6). According to Cicero, Amafinius used *corpusculum* to translate *atomos* (*Acad. Post.* 2.6).

<sup>280</sup> Of Virgil's contemporaries, Horace is the only possible outlier, where *inane*, as in Persius 1.1, may mean something like 'vanity': *quaerere plus prodest et inane abscindere soldo?* (*Sat.* 1.2.111). But even this metaphorical usage is almost certainly meant to evoke Lucretian materialism, as Brown argues (1993: ad 1.2.111-13). See also Gowers (2012) ad 1.2.113: "Horace's appeal to realism is couched in the language of Epicurean physical theory: atoms and void." Gowers dates the publication of Horace's first book of *Satires* to 36/35 BC.

<sup>281</sup> Silius Italicus, for instance, cleverly alludes to both of Turnus' throws (*Aen.* 12.354, 906) in his own description of a slinger's bullet, but without any discernible engagement with the original atomic context in Lucretius: *fratrisque videt labentia membra / Quercentis, quem funda procul per inane voluta / sopierat* (*Pun.* 10.150-2) Cf. *tum lapis ipse viri vacuum per inane volutus* (*Aen.* 12.906). To this example we may add Ovid *Met.* 4.718, Stat. *Theb.* 1.310, and 9.832, Amm. Marc. 17.4.15, and Oros. 1.35.17, among others. It is my suspicion that Virgil's influence on Latin epic idiom was such that many phrases in Virgil, originally of Lucretian provenance, were adopted by later epic poets for use as generically 'epic' language, increasingly stripped of any lingering connection to Epicurean philosophy.

<sup>282</sup> Indeed, Lucretius makes frequent use of martial imagery to describe the collisions of atoms in *De Rerum Natura*. See Gale 2000: 232-4.

argument about cosmology and Roman power, conflating the attacks of Rome's enemies with a particular model of cosmology that is used elsewhere in the *Aeneid* as an image of disorder.

But in what exact sense is Turnus' javelin like an atom, and what does this imply about the broader struggle against the Trojans? First of all, it is important to recognize that atoms are imagined in this scene as instruments of violence. According to Epicurean physics, the random bombardment of atoms from the void can cause a compound body to collapse and disintegrate back into its component parts, and Lucretius places great emphasis on these collisions in his explanations of various natural phenomena. In and of themselves, atoms are not necessarily destructive (for example, they are constructive when they link together to form compounds). However, as argued throughout this dissertation, Virgil uniformly ignores the creative possibilities of atomism in the *Aeneid*, while context and common sense indicate that Turnus' atomic throw is a purely destructive act—it does, after all, kill a man. Furthermore, as the rest of the scene reveals, Turnus' attack represents atoms not only as instruments of personal violence, but of political and cosmic disorder.<sup>283</sup>

The idea that this atomic javelin throw represents an attack on Roman political order and its cosmic foundations is supported by Turnus' subsequent boast over the corpse of Eumedes. Here Turnus expands the scope of his individual attack to include the entire colonizing mission of the Trojans in Italy:

'en agros et, quam bello, Troiane, petisti,  
Hesperiam metire iacens; haec praemia, qui me  
ferro ausi temptare, ferunt, sic moenia condunt'. (12.359-61)

'Behold, Trojan, the fields that you sought in war, and measure out Hesperia when you lie dead. These are the prizes for those who have dared to test me with the sword; thus do they found their walls.'

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<sup>283</sup> In contrast, when Aeneas kills Turnus, the verb *condere* suggests that his violence is a foundational act of *order*: *ferrum adverso sub pectore condit* (*Aen.* 12.950).

With this challenge Turnus singles out two quintessentially Roman acts of political order, land surveying (*agros metire*) and the construction of city walls.<sup>284</sup> For the Romans, the measurement and division of lands was a cosmological concern as well as a political one, since the layout of settlements ideally reproduced the order of the cosmos. In a treatise on Roman land surveying, Hyginus attributes the origins of land surveying to the arrangement of the heavens, explaining that agricultural demarcations reflect cosmological ones, such as the orbit of the sun and the alignment of the earth's axis.<sup>285</sup> In following these cosmological principles, a well-ordered Roman town would mimic a well-ordered cosmos. If such procedures were not followed, e.g., if the orientation of the *cardo*, a central road named after the polar "hinge" of the world, lay east-west rather than north-south, then the town would resemble "the measurement system of *another world*" (emphasis mine).<sup>286</sup> By pitting disorderly atomism, embodied in Turnus' javelin throw, against land surveying, an act that harmonizes Roman legal boundaries with the structure of the universe, Virgil outlines an allegorical conflict between cosmic disorder and Roman order.

The second object of Turnus' verbal attack, the laying of city walls, illustrates the same point. Defensive walls played a vital role in Rome's mythic early history and, according to one version of the story, were even tied up in the act of fraternal bloodshed upon which Rome was

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<sup>284</sup> I am grateful to Catherine Connors for suggesting to me the cosmological importance of land surveying for the Romans. As for the identification of Turnus' *metire* with land surveying, see Serv. ad loc: *EN AGROS subauditur, quos victore Aenea te accipere posse credebas, corpore tuo 'metire'; metiuntur autem agros qui colonis adsignant: inde enim sarcasmos factus est. nam consuetudo erat ut victores imperatores agros militibus suis darent, ut in historiis legimus.*

<sup>285</sup> See Campbell 2000: 134 (*Hygini Constitutio <Limitum>*) *constituti enim limites non sine mundi ratione, quoniam decumani secundum solis decursum diriguntur, kardines a poli axe... kardinem nominaverunt a mundi kardine.* According to Campbell, the *Corpus Agrimensorum Romanorum* was probably compiled in the 5<sup>th</sup> century CE, although it preserves works from much earlier. The dating of these texts is discussed in the introduction (xxvii-xliv).

<sup>286</sup> See Campbell 2000: 144 (*Hygini Constitutio <Limitum>*) *potest dici mensura orbis alterius aut certe sinistra, hoc est inversa. cum ipsa kardinum appellatio a kardine mundi nominetur, quare ab oriente in occidentem dirigatur, nulla est ratio.*

founded.<sup>287</sup> Aside from keeping enemies at bay, Rome's early walls also determined the traditional circuit of the *pomerium*, the legal city limits within which magistrates were constrained to lay aside their *imperium* after campaigning abroad.<sup>288</sup> By marking the boundary between the city's inviolable domestic space and the outside world, subject to the full power and unlimited exercise of Roman military might, Rome's walls deeply influenced how the Roman imagination ordered its universe.<sup>289</sup>

Nothing illustrates this cosmological significance better than the passage in Lucretius in which Epicurus' intellectual accomplishment is compared to that of a victorious Roman general returning for his triumph.<sup>290</sup> Epicurus, the *Gravus homo* who endeavored to prove that the universe has no outer limits, is depicted as having crossed beyond the 'flaming walls of the world' to bring back the spoils of his intellectual victory:

ergo vivida vis animi pervicit et extra  
processit longe **flammania moenia mundi**  
atque omne immensum peragravit mente animoque,  
unde refert nobis victor quid possit oriri,  
quid nequeat, finita potestas denique cuique  
quanam sit ratione atque alte terminus haerens.  
quare religio pedibus subiecta vicissim  
obteritur, nos exaequat victoria caelo. (Lucr. 1.72-9)

Therefore the lively strength of his mind has won, has proceeded far beyond **the flaming walls of the world**, and he has traveled the whole immensity of the universe with his intellect and mind, whence he brings back to us, as a victor, information about what can arise and what cannot, and the reason why each thing

<sup>287</sup> Livy 1.7 records the 'more common story' (*volgatior fama*) that Romulus killed his brother in a rage for jumping over his incipient city walls: *sic deinde, quicumque alius transiliet moenia mea!*

<sup>288</sup> Livy 1.44 discusses the derivation of the word *pomerium* as *circamoerium*, defining a space on either side of the wall, while Varro, in *Ling.* 5.143 and *Rust.* 2.1.9-10, defines it as *postmoerium*, referring to the space behind the small 'wall' of dirt displaced by the ritual plowing of the boundary. See Woodard 2006: 152-3. Whether we choose to interpret the boundary as *postmoerium* or *circamoerium*, the boundary is still ultimately based upon the position of the wall.

<sup>289</sup> See also the sacrosanctity of Roman walls described at Cic. *Nat. D.* 3.40.94: *est enim mihi tecum pro aris et focus certamen et pro deorum templis atque delubris proque urbis muris, quos vos pontifices sanctos esse dicitis diligentiusque urbem religione quam ipsis moenibus cingitis*. Woodard 2006: 218-19 discusses the *pomerium* as a boundary between 'near' and 'remote' spaces, a ritual and mythic division that affected the historical location of temples and processions, and the periodic expansions of Rome's defensive walls.

<sup>290</sup> See Harrison 2016: 38-40, Buchheit 1971/2007: 106-7, as well as Bailey's note ad Lucr. 1.75.

has limited power and a deep boundary-stone. Wherefore religion is cast beneath his feet and trampled, and his victory exalts us to the sky.

This passage stands out as a fairly early example of a Latin epic poet conflating the city of Rome with the world as a whole, since the conspicuous triumph imagery leaves no doubt as to which walls we are meant to imagine in the role of the *moenia mundi* ('walls of the world'). However, some clarification is in order about what the Epicureans mean by 'world' (*mundus* or κόσμος). Although the universe itself is boundless and contains an infinite number of atoms, it is inhabited by an infinite number of discrete worlds like our own, each wrapped in a protective sphere of fiery atoms (called the πέρας by Epicurus) that prevents that world from spilling its contents into the void.<sup>291</sup> This outer boundary, which Lucretius calls the 'walls of the world' (*moenia mundi*), is all that stands between the orderly *mundus* and the chaos of the outside void, the loss of which leads to global collapse and dissolution.<sup>292</sup> When Epicurus returns to the walled world in the prologue of Book 1 of *De Rerum Natura* to proclaim his philosophical discoveries, he re-crosses a boundary that is simultaneously political and cosmological. Lucretius' image is effective precisely because it maps Epicurean cosmology onto a preexisting Roman cultural landscape in which the walls of the city had long served the quasi-cosmological function of distinguishing Rome from the rest of the world.

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<sup>291</sup> See *Ep. Pyth.* 88-9, as well as *Lucr.* 5.449-54. Bailey, in a note on *Lucr.* 5.449-94, offers a helpful description of how the *moenia mundi* come to be, along with visual representations of an Epicurean cosmos and relevant citations of the ancient testimonia.

<sup>292</sup> Such a scenario is imagined at *Lucr.* 1.1102-3:  
*ne volucris ritu flammaram moenia mundi*  
*diffugiant subito magnum per inane soluta*

And again at 1.1102-3:  
*sic igitur magni quoque circum moenia mundi*  
*expugnata dabunt labem putrisque ruinas.*

We may now summarize the preceding points about Turnus' attack on Eumedes and its broader implications for cosmological themes in the *Aeneid*.<sup>293</sup> By means of a pointed allusion to Lucretian physics, Turnus' javelin assumes the allegorical role of an atom striking at a larger compound. As Turnus' subsequent challenge to would-be Roman *agrimensores* ('land surveyors') and wall-builders reveals, this is an act of both political and cosmic disorder. This opposition between atomism—used as an image of cosmological disorder—and conventional symbols of Roman political power plays a crucial part in the final duel of the poem, where Turnus throws another atomic projectile, but with a radically different result.

#### 4.2 TURNUS, AENEAS, AND THE ATOMIC BATTLEFIELD

Admittedly, *longum per inane* is only one Epicurean detail amidst a crowd of other combat scenes in Book 12 with no obvious connection to atomism. However, Virgil evokes Epicurean physics in a similar fashion about 200 lines later, in an extended simile that singles out Aeneas and Turnus as they fight among the rank and file:

ac velut immissi diversis partibus ignes  
 arentem in silvam et virgulta sonantia lauro,  
 aut ubi decursu rapido de montibus altis  
dant sonitum spumosi amnes et in aequora currunt,  
 quisque suum populatus iter: non segnius ambo  
 Aeneas Turnusque ruunt per proelia. (12.521-6)

Just like fires let loose from different sides into a burning forest and thickets of crackling laurel, or when, in a swift descent from the lofty mountains, frothy rivers roar and run into the sea, and each makes its own path of devastation, no more sluggishly did Aeneas and Turnus rush through the battle.

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<sup>293</sup> I have deliberately omitted discussion here of another famous moment of throwing in Lucretius, the hypothetical javelin-throw at *Lucr.* 1.969-73, used as a thought experiment to demonstrate the infinity of the universe. Aside from the shared notion of throwing a projectile, the Eumedes episode contains no direct verbal parallels with the Lucretian javelin-throwing passage, whereas the later stone-throwing scene at *Aen.* 12.896-907 is at least thematically linked to Lucretius' thought experiment by the presence of a boundary marker (*limes*). See Hardie 2009: 175-6. For further consideration of *Lucr.* 1.969-73, see below.

As Tarrant and others point out, the river element of this description is modeled on two similes from the *Iliad*. The first compares the noise of combat to the force of a rushing mountain river:

ὡς δ' ὅτε χεῖμαρροι ποταμοὶ κατ' ὄρεσφι ῥέοντες  
 ἐς μισγάγκειαν συμβάλλετον ὄβριμον ὕδωρ  
 κρουνοῶν ἐκ μεγάλων κοίλης ἔντοσθε χαράδρης,  
 τῶν δέ τε τηλόσε δοῦπον ἐν οὔρεσιν ἔκλυε ποιμήν·  
 ὡς τῶν μισγομένων γένετο ἰαχὴ τε πόνος τε. (*Il.* 4.452-6)

Just as snow-swollen winter streams, rushing down from the mountains, join together in a meeting place and the mighty waters from their great sources join in a hollow gully, and a shepherd hears their thundering far off in the mountains, thus was the din and toil of the men fighting together.

In the second simile, Homer compares the noise of Trojan horses to the thundering of rivers swollen by rain:

ὡς δ' ὑπὸ λαίλαπι πᾶσα κελαινὴ βέβριθε χθῶν  
 ἤματ' ὀπωρινῶ, ὅτε λαβρότατον χέει ὕδωρ  
 Ζεὺς, ὅτε δὴ ῥ' ἄνδρεςσι κοτεσσάμενος χαλεπήνη,  
 οἱ βίη εἰν ἀγορῇ σκολιάς κρῖνωσι θέμιστας,  
 ἐκ δὲ δίκην ἐλάσωσι θεῶν ὅπιν οὐκ ἀλέγοντες·  
 τῶν δέ τε πάντες μὲν ποταμοὶ πλήθουσι ῥέοντες,  
 πολλὰς δὲ κλιτῦς τότ' ἀποτμήγουσι χαράδραι,  
 ἐς δ' ἄλλα πορθυρέην μεγάλα στενάχουσι ῥέουσαι  
 ἐξ ὀρέων ἐπικάρ, μινύθει δέ τε ἔργ' ἀνθρώπων·  
 ὡς ἵπποι Τρῶαὶ μεγάλα στενάχοντο θέουσαι. (*Il.* 16.384-93)

Just as the whole dark earth is heavy from a furious storm on harvest day, when Zeus has poured down the most turbulent water, grievously angry at men who decide their wicked laws by force in the agora and drive away justice, disregarding the vengeance of gods; all the rushing rivers swell and then the torrents plow many hillsides, and they thunder greatly, rushing headlong down from the mountains to the billowing sea, and the works of men are diminished; thus do the Trojan horses thunder greatly as they rush forth.

Both Homeric similes describe rivers flowing down from mountains, and Virgil forms his own image by fusing together related details from each passage. Behind this synthesis, however, lies a

third natural-philosophical model, a passage in *De Rerum Natura* where Lucretius offers proofs based on natural phenomena for the existence of invisible atomic bodies.<sup>294</sup>

sunt igitur venti ni mirum corpora caeca  
 quae mare, quae terras, quae denique nubila caeli  
 verrunt ac subito vexantia turbine raptant,  
 nec ratione fluunt alia stragemque propagant  
 et cum mollis aquae fertur natura repente  
 flumine abundanti, quam largis imbris auget  
montibus ex altis magnus decursus aquai  
 fragmina coniciens silvarum arbustaque tota,  
 nec validi possunt pontes venientis aquai  
 vim subitam tolerare: ita magno turbidus imbri  
 molibus incurrit validis cum viribus amnis,  
dat sonitu magno stragem volvitque sub undis  
 grandia saxa, ruit qua quidquid fluctibus obstat. (1.277-89)

Therefore, unsurprisingly, invisible bodies of wind exist that sweep the sea, the land, and the clouds of the sky, and jolt and snatch them up in a sudden whirlwind. They run and spread their destruction in the same way that the soft nature of water is suddenly carried away by a swelling river, which a great descent of water from the tall mountains increases after heavy rains, smashing together broken branches and entire trees, and strong bridges are unable to endure the sudden force of the coming water. In this way, rough from the great rain, the river runs against the piles with much power; it causes destruction with a great noise, rolls mighty rocks beneath its waves, and it rushes with its waves over anything in its way.

Although Virgil compresses Lucretius' description of rivers from ten lines down to two, virtually every word in the Virgilian passage has a close parallel in the Lucretian text:

*decursu rapido* (*Aen.* 12.523) < *decursus aquai* (Lucr. 1.283)  
*de montibus altis* (*Aen.* 12.523) < *montibus ex altis* (Lucr. 1.283)  
*dant sonitum* (*Aen.* 12.524) < *dant sonitu magno stragem* (Lucr. 1.288)  
*amnes... currunt* (*Aen.* 12.524) < *incurrit... amnis* (Lucr. 1.287)

Here Virgil has accomplished a thorough *contaminatio* of epic simile and scientific argument from analogy. The theme and martial context of the simile are immediately recognizable as Homeric, but Virgil filters his comparison through the language of a Lucretian passage with no

<sup>294</sup> Although Hardie 1986: 207-8 compares Lucr. 1.277-89 to *Il.* 5.87-90, *Aen.* 2.496, and 8.726, he does not extend the comparison to the simile at *Aen.* 12.521-6.

explicit connection to combat. On its surface, we might say that Virgil's reworking of the simile is Lucretian in form and Homeric in spirit.

Before turning to the Epicurean implications of the Virgilian passage, it will be useful to consider the relationship of the Lucretian description to its Homeric antecedents. For the Lucretian passage arguing for the existence of invisible bodies appears to engage with one or both of the Iliadic similes identified (4.452-6 and 16.384-93) as sources for Virgil's simile.<sup>295</sup> As discussed previously, Hardie describes Lucretius' relationship to Greek literary models as a process of demythologization, or what he calls "Lucretius' peculiar tactic of getting inside his opponents' positions and then evacuating them of their prior content to refill them with Epicurean doctrine" (1986: 11).<sup>296</sup> This often involves reinterpreting awe-inspiring natural phenomena as predictable, mechanistic consequences of atomism, and we can see this process at work in the case of the two Iliadic river similes in question. While Homer attributes thunder and torrential rainfall to an angry Zeus in the second simile (*Il.* 16.384-93), Lucretius reimagines the same destructive swelling of water as a consequence of *corpora caeca*, invisible atoms in motion. This rationalizing style of allusion creates a two-way interpretive relationship between Lucretius and Homer. On the one hand, it bestows epic grandeur and dignity on Lucretius' scientific text. On the other hand, it invites the reader to retroactively consider the Homeric source text from the perspective of Epicurean atomism—Lucretius becomes more Homeric and Homer becomes more Lucretian. In this second, retroactive sense, it can be read as an allusion that specifically encourages philosophical reflection and the application of Epicurean physics to an epic text.

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<sup>295</sup> Murley 1947: 339. Both Gale 2000: 237 and Leonard-Smith *ad loc.* cite *Il.* 5.87-92 as another possible source for the Lucretian passage. Although that simile does describe flooding, it lacks any reference to mountains, making it less relevant for the Virgilian simile in question. For a general treatment of Lucretian imitation of Homer, see West 1969: 23-34.

<sup>296</sup> See p. 8 above.

As detailed in the introduction to this dissertation, Hardie further contends that Virgil systematically ‘re-mythologizes’ such passages when alluding to Lucretius in the *Aeneid*, stripping them of their Epicurean explanations and reintroducing the active interference of the gods.<sup>297</sup> Hardie argues this case convincingly for many passages in the *Aeneid*, but I believe that Virgil is doing something quite different in the simile at *Aen.* 12.521-6. First of all, although Virgil makes no explicit mention of Lucretius’ atomic *corpora* in the description of rushing water, he similarly passes over Homer’s Zeus, who features prominently in the second Iliadic simile as the cause of heavy rain and flooding (*Il.* 16.384-93). In Hardie’s most convincing examples of ‘re-mythologizing’ allusions, the divine explanation originally rejected by Lucretius is made far more obvious in the Virgilian reworking.<sup>298</sup> Yet in the simile at *Aen.* 12.521-6, Virgil offers no opinion on the cause of the river’s strength, be it material or divine. In the absence of such an opinion, or any other details suggesting divine causation, it would be inappropriate to describe Virgil’s technique in this simile as ‘re-mythologizing.’

Instead, I believe that the key to understanding this double allusion lies in its combination of Homeric context and Lucretian phrasing. In terms of substance and context, Homer is clearly the structural, or code, model for Virgil: the two Iliadic similes provide the battlefield setting, the emphasis on noise, and the comparison to rivers. While Lucretius’ allusion (1.277-89) is divorced from this original battlefield setting, it invites us to reimagine the Homeric descriptions of rivers from an atomic perspective, and to reflect more generally on the possible applications of Epicurean physics to the world of epic. Virgil, by retaining the Homeric battlefield context yet cobbling together his description nearly word for word from the Lucretian passage, does not invert Epicurean doctrine here, but rather encourages the reader to consider the relationship of

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<sup>297</sup> Hardie 1986: 233-7.

<sup>298</sup> As in the first example of re-mythologization cited by Hardie, in which Aeneas’ spear is compared to a thunderbolt, the traditional instrument of divine retribution (1986: 177-80).

Lucretius to the Homeric source text; that is, he recalls Lucretius' strategy of demythologization without refuting it. In the absence of any mention of gods, explicit or implied, the overwhelmingly Lucretian diction hints at a latent atomic explanation, imported from Lucretius' rushing rivers, for the whirlwind of destruction caused by Turnus and Aeneas.

A further reason to read Epicurean physics into the simile at *Aen.* 12.521-6 is that it anticipates a cosmological dimension to Turnus' fight with Aeneas that will reappear in their final confrontation. Virgil does not simply equate the destructive power of Turnus and Aeneas with the force of nature, but with a specifically *atomic* force of nature. As we have seen in chapters 2 and 3, Virgil consistently emphasizes the disorder of atomic motion when alluding to Epicurean physics in the *Aeneid*, and this bias towards the chaotic and destructive aspects of atomism is echoed in other Roman sources from the 1<sup>st</sup> century BC. Lucretius himself offers a model for characterizing atoms as warlike in at least one passage, in which the atoms of hard substances resist each other like soldiers arrayed in a battle line.<sup>299</sup> The latent atomism of Virgil's river simile taps into this idea, associating the wanton destruction of the combatants with the lawless collision of atoms. When these themes reappear at the end of the poem, they endow the duel between Turnus and Aeneas with cosmic significance, representing a global struggle between order and disorder. As an allegory for two clashing systems of cosmology, Aeneas' defeat of Turnus at the end of the poem guarantees the stability of the natural world against the caprice and purposelessness represented by atomism.

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<sup>299</sup> Lucr. 2.447-50:

*in quo iam genere in primis adamantina saxa  
prima acie constant ictus contemnere sueta  
et validi silices ac duri robora ferri  
aeraque quae claustris restantia vociferantur.*

### 4.3 TURNUS' ATOMIC ATTACK, REVISITED

The theme of Epicurean physics and its concomitant cosmic disorder, hinted at briefly in these earlier scenes of Book 12, returns in earnest during the final confrontation between Turnus and Aeneas. After a narrative interruption during which Jupiter and Juno strike a deal to unite the Trojans and Italians under the sole leadership of Aeneas, the focus shifts back to the battlefield, where Turnus finds himself bereft of divine aid, facing his enemy alone. When Aeneas challenges and mocks him, Turnus finally resigns himself to the enmity of the gods:

ille *caput quassans*: 'non me tua fervida terrent  
dicta, ferox; di me terrent et Iuppiter hostis'. (12.894-5)

Shaking his head, he spoke: "Your fiery words do not frighten me, savage man; the gods frighten me, and Jupiter as an enemy."

Aeneas' pursuit of Turnus just prior to this scene clearly mimics Achilles' pursuit of Hector around the walls of Troy in *Iliad* 22, and Tarrant points to Hector's speech at an analogous point in the *Iliad* (*Il.* 22.297-305), when he realizes that the gods have abandoned him to die, as the model for Turnus' terse speech to Aeneas.<sup>300</sup> In addition to Hector, however, there is another Homeric model at work in Turnus' speech: a verbal confrontation between Achilles and Aineias in *Iliad* 20. In that passage, Achilles mocks Aineias before combat (as Aeneas does Turnus) and the Trojan hero responds with a dismissal of the value of his words similar to Turnus' dismissal of Aeneas':

Πηλεΐδη, μη δὴ ἐπέεσσὶ με νηπύτιον ὧς  
ἔλπεο δειδίξεσθαι. (*Il.* 20.200-1)

Son of Peleus, do not hope to frighten me with words like a child.

Thus, as far as Homeric antecedents go, Turnus' brief speech is modeled upon analogous speeches by both Hector and Aineias in the *Iliad*.

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<sup>300</sup> Tarrant ad 12.894-5.

However, the most emotionally evocative detail in Virgil's description, Turnus' forlorn headshake, is found in neither of the previously mentioned Iliadic models. Instead, its likely source is the Lucretian plowman (*arator*), a character introduced at the end of *De Rerum Natura* Book 2 who embodies the personal frustration caused by ignorance of Epicurean philosophy:

iamque caput quassans grandis suspirat arator  
 crebrius, incassum magnos cecidisse labores,  
 et cum tempora temporibus praesentia confert  
 praeteritis, laudat fortunas saepe parentis. (Lucr. 2.1164-7)

And now, shaking his head, the aged plowman often sighs, thinking that his great labors have passed in vain, and when he compares time present to time past, he usually praises the fortunes of his parent.

Scholars have generally hesitated to interpret Virgil's *caput quassans* ('shaking his head') as an allusion to one specific source, instead seeing it as a common idiomatic expression with no particular Lucretian resonance. While many commentators do refer to the Lucretian *Arator* passage in their notes on *Aen.* 12.894, they universally stress that the expression *caput quassare* is not limited to Lucretius.<sup>301</sup> Tarrant, for example, records several pre-Virgilian examples where the expression denotes sorrow and anger, but sees Turnus' headshake as general evidence of "defiant determination," rather than a specific allusion to an earlier text.<sup>302</sup>

However, a number of factors indicate that Turnus' headshake engages meaningfully with the Lucretian plowman and the Epicurean view of global decline described at the end of Book 2 of *De Rerum Natura*. First of all, both the word order and metrical *sedes* of Virgil's *caput quassans* match the Lucretian passage exactly. A small detail, perhaps, but all of the other

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<sup>301</sup> So C-N, Bailey, and Tarrant ad loc. The full list of pre-Virgilian examples of *caput quassare* is short: Plaut. *Merc.* 600: *tristis incedit, pectus ardet, haereo, quassat caput*; Plaut. *Trin.* 1169: L: *quid quassas caput?* Ch: *cruciatu cor mi, et metuo*; and Lucr. 2.1164. Virgil uses the expression one other time, applied to Juno at *Aen.* 7.292: *stetit acri fixa dolore. / tum caput quassans*, which Lyne 1987: 57 interprets as an echo of Poseidon's headshake at *Od.* 5.285. Among post-Virgilian examples, Seneca uses the expression as a sign of anger and frustration in *de Ira*: *hoc non frendens nec caput quassans* (1.19.2).

<sup>302</sup> Tarrant ad 12.894. Similarly, Bailey identifies the expression in Lucretius as a "not uncommon" expression of grief, comparing Plaut. *Trin.* 1169 and *Aen.* 7.292.

pre-Virgilian examples of the idiom change either the person of the verb or the order of the words, which leaves *Aen.* 12.894 and *Lucret.* 2.1164 as the only two identical cases. For contrast, we may compare a description of Juno's exasperation in Book 7 of the *Aeneid*, where the word order is reversed and occupies a different *sedes* in the verse: *stetit acri fixa dolore. / tum quassans caput, haec effundit pectore dicta* ("She stood transfixed by sharp pain. Then, shaking her head, she poured out these words from her breast" *Aen.* 7.291-2). No scholar argues that the phrase in this line is an allusion to Lucretius, I suspect in part because the line does not metrically evoke *Lucret.* 2.1164 in the way that *Aen.* 12.894 does.<sup>303</sup> Without this close metrical correspondence, and in the absence of any other Lucretian or Epicurean details in the surrounding passage, I believe it is correct in such a case to refrain from declaring an allusive connection.

Turnus' headshake, on the other hand, is followed by a sustained series of Lucretian allusions that authorize a more sensitive reading of *caput quassans*. This dense cluster of Lucretian references should tip the balance in favor of an 'allusive' reading (one that tries to draw out the meaning constructed by linking Turnus' actions to the Epicurean cosmology depicted at the end of Book 2 of *De Rerum Natura*), rather than a dismissal of the phrase as a common idiom or accidental linguistic confluence.<sup>304</sup> Furthermore, the reference to the ending of

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<sup>303</sup> Silius Italicus provides interesting evidence for the idea that different interpretive emphases can become associated with different metrical arrangements of the same basic expression. When describing Hannibal, an epic antagonist comparable to Virgil's Turnus, Silius preserves the original Lucretian *sedes*: [*ductor Sidonius*] *ipse caput quassans circumlustravit anhelos* (*Sil. Pun.* 1.298) cf. Turnus: *ille caput quassans, non me tua fervida terrent* (*Aen.* 12.894). However, when Silius applies the same phrase to Voluptas, a spurned female goddess like Virgil's Juno, he replicates the changed word order and *sedes* of Juno's head-shake in *Aeneid* 7: *sic quassans caput in nubis se sustulit atras* (*Sil. Pun.* 15.128). cf. Juno: *tum quassans caput haec effundit pectore dicta* (*Aen.* 7.292). See also Jupiter at *Pun.* 6.600: *tum quassans caput, 'haud umquam tibi Iuppiter,' inquit*. While these passages have no direct bearing on the interpretation of the Virgilian line in question, I include them to illustrate the sensitivity that Latin poets feel for word order and meter in their allusive borrowing.

<sup>304</sup> Cf. Hardie 2009: 173, who similarly emphasizes the importance of Lucretius to the ending of the *Aeneid*: "A cluster of allusions in Turnus' last attempt to bring down his opponent serves to write his failure in Lucretian terms." For Hardie, however, "Lucretian terms" mostly refers to the poet's portrayal of Epicurus as an epic intellectual victor, as opposed to any particular aspect of Epicurean physics (2009: 178-9).

Book 2 of *De Rerum Natura*, which describes the inevitable dissolution of the Epicurean cosmos, allows for a more interesting reading of the ending of the *Aeneid*. Thematically, the Epicurean notion of global decline evoked by *caput quassans* complements the Homeric and Lucretian allusions that follow, and when these allusions are considered in the broader context of Virgil's engagement with cosmological themes, they provide a more compelling picture of Aeneas' final victory as one of order over chaos at every level: elemental, cosmic, political, and divine.

So then how, specifically, does Virgil's *caput quassans* engage with the worldview of Epicurean atomism? To answer this question, let us first consider how the gesture functions in Lucretius' poem, where it appears at the end of Book 2. The first two books of *De Rerum Natura* explain the atomistic physics of Epicurus, and are summarized by Bailey as follows: "In the First Book Lucr. has laid the foundations of the atomic system and has shown that the universe consists of an infinite number of atoms, small indivisible, eternal particles, moving in space infinite in extent. In the Second Book he proceeds to consider deductions from these principles" (vol. 2, p. 794). One of these deductions is the existence of an infinite number of worlds that grow and dissolve in the same manner as atomic compounds, and it is on this topic of cosmic birth and death that Book 2 ends. There, Lucretius describes the weakening of the earth as it slowly loses its fertility and its outer shell, the *moenia mundi* ('walls of the world'), yield to the constant blows of atoms from the void, increasing humanity's hardships while people struggle to eke out an existence from agriculture (Lucr. 2.1118-63). Extending this description of decay up to the present day (*iamque*, 1164), Lucretius concludes by introducing two figures, the plowman and the vinedresser, who bemoan the process of global degeneration:

iamque caput quassans grandis suspirat arator  
 crebrius, in cassum magnos cecidisse labores,  
 et cum tempora temporibus praesentia confert  
 praeteritis, laudat fortunas saepe parentis.

tristis item vetulae vitis sator atque vietae  
temporis incusat momen saeclumque<sup>305</sup> fatigat,  
et crepat, antiquum genus ut pietate repletum  
perfacile angustis tolerarit finibus aevum,  
cum minor esset agri multo modus ante viritim;  
nec tenet omnia paulatim tabescere et ire  
ad capulum spatio aetatis defessa vetusto. (Lucretius 2.1164-74)

And now, shaking his head, the aged plowman often sighs, thinking that his great labors have passed in vain, and when he compares time present to time past, he frequently praises the fortunes of his parent. Likewise, the sad dresser of an old and withered vine blames the movement of time and bemoans the epoch, murmuring about how the old race full of piety bore their age easily within its narrow bounds, though in the past the allotment of land to each person was much smaller. And he does not grasp that all things waste away little by little and go to the grave, worn out in the ancient space of time.

The plowman and the vinedresser embody the mental distress caused by ignorance of Epicurean natural philosophy. Their complaint is twofold: the plowman fears that he has labored in vain (*in cassum magnos cecidisse labores*, 2.1165), while the vinedresser laments the moral and agricultural decay of the world. For Lucretius, of course, cosmological decline and destruction is not the problem *per se*. Rather, the dissatisfaction of these characters stems from a failure to understand the scientific necessity of this generational decline and eventual destruction (*omnia paulatim tabescere et ire / ad capulum*, 2.1173-4), which must occur in any world consisting of atoms and void.<sup>306</sup> Returning now to Turnus, we find both of these themes in play at the moment of head shaking. First, Turnus is nearly overwhelmed by the recognition that he has fought *in vain*, realizing that even Jupiter now opposes him.<sup>307</sup> In addition, like the Lucretian characters, Turnus shakes his head against a cosmic reality that he is powerless to change. The plowman

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<sup>305</sup> Although *saeclumque* is the manuscript reading, many editors prior to Bailey print Wakefield's emendation *caelumque*, which Bailey disputes as contextually inappropriate. Though not mentioned by Bailey, it is possible that Wakefield had *Aen.* 1.279-80 in mind: *quin aspera Iuno, / quae mare nunc terrasque metu caelumque fatigat*, in which case we should be wary of a possible anachronism.

<sup>306</sup> Bailey accepts Vossius' *capulum* as an emendation for the manuscript reading *scopulum*. Regardless of which reading we choose, the final two lines express the same idea of the physical impermanence of all things.

<sup>307</sup> Compare the complaint of Lucretius' plowman at 2.1165: *in cassum magnos cecidisse labores*.

cannot change the fact that the world has weakened and will dissolve into its constituent atoms, while Turnus cannot stop the universe's march towards Roman domination and cosmic stability.

The theme of cosmological decline receives fuller treatment in the description of Turnus' final act of defiance, which immediately follows. Picking up a nearby rock, Turnus prepares one last attack upon his enemy:

nec plura effatus saxum circumspicit ingens,  
saxum antiquum ingens, campo quod forte iacebat,  
limes agro positus litem ut discerneret arvis.  
vix illum lecti bis sex cervice subirent,  
qualia nunc hominum producit corpora tellus. (12.896-900)

Speaking no more, he spies a giant rock, an ancient giant rock, which by chance was lying on the plain, placed there as a boundary to decide disputes over fields. Twelve picked men could scarcely lift it on their necks, with the sort of bodies of humans the earth now produces.

Once again, Homer provides the primary model for the scene. There are numerous examples of stone-throwing in the *Iliad*, almost all of which are characterized by a high degree of accuracy and gruesome harm.<sup>308</sup> Certain idiosyncrasies of stone-warfare in Homer also distinguish it as a particularly ancient form of combat, unlike anything the contemporary audience would encounter in their own experience. This is best captured in a formula that occurs four times in the *Iliad*, describing how the combatant wields a stone single-handedly which two men could not lift, “such as mortals are now” (οἷοι νῦν βροτοί εἰσ').<sup>309</sup> The basic concept is one of generational decline from the time of the narrative to that of the reader, a popular motif found throughout both Greek and Roman literature.

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<sup>308</sup> See Dihle 1970: 77 “Heitsch hat richtig beobachtet, dass der treffsichere Steinwurf in allen Zweikämpfen der Ilias... den Sieg des Werfers herbeiführt.” In total, I count 13 instances of stone-throwing in the *Iliad*: 11 in which one warrior throws a stone at another warrior, one in which a god attacks another god, and one in which a stone is thrown as a siege weapon against the gates of the Achaean camp.

<sup>309</sup> *Il.* 5.304, 12.383, 12.449, 20.287.

In a clear allusion to Homeric stone-throwing, Apollonius plays on this motif in the *Argonautica* by increasing the necessary number of contemporary men from two to four:<sup>310</sup>

λάζετο δ' ἐκ πεδίοιο μέγαν περιγέα πέτρον,  
 δεινὸν Ἐνυαλίου σόλον Ἄρεος· οὐ κέ μιν ἄνδρες  
 αἰζηοὶ πίσυρες γαίης ἄπο τυτθὸν ἄειραν. (3.1365-7)

He seized a great circular rock from the plain, a fearful disc of Ares Enyalios; four vigorous men would not have lifted it even a little bit off the ground.

Apollonius, however, does not include any equivalent to the “such as mortals are now” formula, and his description does not specify whether the comparison is with four strong men of Jason’s time or his (Apollonius’) own. Without this detail, we are left with two possible interpretations. One is that the Homeric reference is so obvious that we should supply “such as men are now” on our own, based on our knowledge of the allusive model. However, there are 13 stone-throwing scenes in Homer, and the “such as men are now” formula only occurs in four of these episodes, so it is not necessarily an obvious inference. The other possible interpretation is that Jason, perhaps as a result of Medea’s magical aid, is temporarily much stronger than the men of his own time. Instead of evoking the generational gap between the epic hero and the reader, the stone-throwing motif in this case may simply emphasize Jason’s exceptional strength vis-à-vis his peers.

However one chooses to interpret the relationship between Apollonius’ stone-throwing scene and its Homeric antecedents, Virgil’s text casts both the Homeric and Apollonian scenes as links in a chain of progressive imitations culminating in the *Aeneid*. In the description of Turnus’ stone-throwing, Virgil continues the exaggeration begun by Apollonius, while also cleverly reworking the motif in a way that reengages with the idea of generational decline found in the Homeric source text. By increasing the number of contemporary men needed to lift the stone to

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<sup>310</sup> See Nelis 2001: 372-3.

twelve, “with the sort of bodies of humans the earth now produces” (*qualia nunc hominum producit corpora tellus*, *Aen.* 12.900), Virgil is mathematical in his application of the logic of continuous generational decline: the Argonauts came before the Trojan War, and Apollonius’ contemporary audience after Homer’s, so the process of physical decline had longer to work; hence Apollonius’ increase from two to four. Since Virgil writes 200 years after Apollonius, the decline of human strength is even more pronounced, perhaps even accelerating in the space between the 3<sup>rd</sup> century and the Augustan period. Just as Turnus’ headshake activates the philosophical theme of physical and global decline found at the end of Book 2 of *De Rerum Natura*, Virgil’s allusion to Homeric stone-throwing imports a similar idea from the epic tradition.

Yet the relevance of Epicurean eschatology to this Homeric detail goes beyond thematic similarity. In fact, Virgil incorporates close verbal echoes from Lucretius’ description of the earth’s weakening that gesture at the atomic unraveling of the world, envisioned as a dissipation of matter into the void. Conington-Nettleship astutely observe at *Aen.* 12.900 that Virgil’s subtle alteration of the Homeric “such as men are now” formula directly evokes the cosmology of Lucretius Book 2:<sup>311</sup>

Virg. amplifies Homer’s οἷοι νῦν etc., by bringing in the notion of the earth’s motherhood, so copiously illustrated by *Lucr.* 5.829 foll. The idea developed there is that the earth’s productive force, like a woman’s, wears out with continued child-bearing, and that her later offspring is therefore weaker and punier than the earlier. (ad *Aen.* 12.900)

Conington-Nettleship go on to cite *Lucr.* 2.1150-1 in support of this claim, although it is worth including the subsequent line as well when we consider the direct verbal parallels with Virgil:

iamque adeo fracta est aetas effetaque tellus  
vix animalia parva creat quae cuncta creavit

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<sup>311</sup> Although Tarrant dismisses Conington-Nettleship’s allegation of Lucretian resonance in this line, he offers no argument as to why this cannot be the case.

saecla deditque ferarum ingentia corpora partu. (Lucretius 2.1150-2)

And so now the time of life is broken and the weary earth scarcely creates small living things, the earth that created all the ages and gave birth to the giant bodies of beasts.

We may again compare the Virgilian line: *qualia nunc hominum producit corpora tellus*, (“with the sort of bodies of humans the earth now produces” *Aen.* 12.900). The production of bodies by Virgil’s *tellus* (‘earth’) is remarkably similar to what Lucretius describes, while the odd rephrasing of οἰοί νῦν βροτοί as *qualia nunc hominum corpora*, with “humans” changed to the genitive and the relative adjective shifting to agree with “bodies,” deserves some explanation.<sup>312</sup> It is not, as I shall show, simply an instance of syntactic *oppositio in imitando*, but engages with the atomism of the Lucretian passage.

In and of itself, *corpora* plus the genitive is not unusual in epic, and is used in a periphrastic sense as far back as Ennius’ *Annales*.<sup>313</sup> In the *Aeneid*, the idiom occurs regularly, and in some cases the specific mention of ‘bodies’ (*corpora*) is actually necessary for clarifying some aspect of a description, such as when snakes wrap themselves around the bodies of Laocoon’s children on the shores of Troy.<sup>314</sup> Likewise, Virgil often uses the expression to describe corpses, where the word *corpus* has a contextually appropriate meaning analogous to the modern English usage of ‘body’ to denote a corpse.<sup>315</sup> In other cases, however, the inclusion of *corpora* is basically otiose, as far as sense goes, because the expression simply means

<sup>312</sup> Virgil just as easily could have written the line without any unusual syntax: *quales nunc homines producit* <— u u> *tellus*, with a dactylic adjective in the fifth foot modifying *tellus*.

<sup>313</sup> See Skutsch ad *Ann.* 88: “The periphrastic use of *corpora* with the genitive is popular in dactylic poetry because it eases versification... It seems probable that the idiom was suggested to Ennius by Greek models; but the corresponding use of σώμα is not very common and almost entirely restricted to choral song in tragedy: Soph. *OC* 1568f. σώμα θηρός; Eur. *Tro.* 201 τεκέων σώματα.”

<sup>314</sup> *corpora natorum serpens amplexus uterque implicat et miseris morsu depascitur artus* (*Aen.* 2.214-5).

<sup>315</sup> See *Aen.* 1.101, 8.539, 10.662. Virgil also uses the expression to denote female war captives in a way that suggests their objectification: *lectissima matrum / corpora* (*Aen.* 9.272-3).

‘people.’<sup>316</sup> As Traina points out, this periphrastic use has precedents in earlier Latin epic, namely Ennius and Lucretius, as a common idiom.<sup>317</sup>

Yet, as far as the phrase ‘bodies of humans’ (*corpora hominum*) at *Aen.* 12.900 is concerned, the Lucretian passage offers itself as a specific model for a number of reasons. At the level of individual words and phrasing, the idea in Lucretius of the earth (*tellus*) producing ‘bodies of beasts’ (*ferarum corpora*) is mirrored in Virgil by that same *tellus* creating ‘bodies of humans’ (*hominum corpora*). Furthermore, the *iamque* (“and now”) at the beginning of the Lucretian description is analogous to Homer’s *vōv* (“now”), presenting another potential linguistic connection between the two passages.

Most importantly, however, Lucretius’ adaptation of the ‘*corpora* plus genitive’ periphrasis at 2.1152 is memorable precisely because it makes the use of *corpora* philosophically meaningful, where in Ennius it was semantically superfluous. In its overall organization, *De Rerum Natura* moves from microcosm to macrocosm, beginning with the smallest groupings of atoms and proceeding by the processes of deduction and analogy to ever-larger structures.<sup>318</sup> In his description of earth’s decline up to the present day, Lucretius depicts the universe as an atomic compound writ large, subject, as such, to the same laws of dissolution as any smaller cluster of individual atoms.<sup>319</sup> Thus, when Lucretius describes the failure of the earth to produce the *corpora* (“bodies”) of animals, we are reminded of the original *corpora* (“atoms”) that underlie this cosmic decline. Virgil’s nod to Lucretian *corpora*, in concert with the other verbal

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<sup>316</sup> See *Aen.* 2.18-19: *huc delecta virum sortiti corpora furtim / includunt*; as well as *Aen.* 11.690-1: *Orsilochum et Buten, duo maxima Teucrum / corpora*.

<sup>317</sup> Traina 1997 ad 12.270-1 cites *Ann.* 88, *Lucr.* 1.1015, and 2.1083 as examples.

<sup>318</sup> See Gale 2004: 53 for a more detailed schematic account of this movement. This bottom-up approach is fundamental to Lucretius’ analogical method: *rerum magnarum parva potest res / exemplare dare et vestigia notitiae* (*Lucr.* 2.123-4).

<sup>319</sup> See Bailey 1928: 341, 360, who notes the similarity in Epicurus’ writings between a small atomic structure (*περιπλοκή*) and the organization of a world (*κόσμος*), particularly in the shared need for an outer shell to prevent internal atoms from spilling out into the void.

cues from the end of Book 2, performs the same function. In borrowing the language of the Lucretian passage, Virgil alludes to a description that invites its original readers to draw an implicit comparison between living bodies and atomic ones, and to see the laws of atomism as the driver of physical decay in the world. This Epicurean recasting of the Homeric formula thus invites the reader of the *Aeneid* to perform the same operation on Virgil's text, and to see in Turnus' last-gasp effort a fleeting glimpse of the chaotic, disordered worldview of atoms and void.

Virgil supplements this picture of atomic decay and destruction with a related image drawn from the Athenian plague at the end of Book 6 of *De Rerum Natura*. When Turnus runs forward to throw the stone at Aeneas, he has an out-of-body experience that precedes his total mental and emotional collapse in the face of impending death:

sed neque currentem se nec cognoscit euntem  
tollentemve manu saxumve immane moventem. (*Aen.* 12.903-4)

But he does not recognize himself running, nor going, nor raising the enormous rock in his hand and moving it.

As Tarrant and others note, it is likely that Virgil drew upon an earlier description of loss of self-awareness in Lucretius that describes the travails of plague victims:<sup>320</sup>

atque etiam quosdam cepere obliviam rerum  
cunctarum, neque se possent cognoscere ut ipsi. (*Lucret.* 6.1213-14)

And forgetfulness of all things overtook some of them, and they could not even recognize themselves.

In a way, the plague in Lucretius is the social (or historical) equivalent of the cosmic dissolution depicted at the end of Book 2. In Book 5, Lucretius describes the growth of the physical world and the subsequent development of society, ending with the highest point of human progress.<sup>321</sup>

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<sup>320</sup> See also Hardie 2009: 173.

<sup>321</sup> Literally, "the summit." Book 5 ends: *ad summum donec venere cacumen* (5.1457).

However, it is a fundamental law of Epicurean physics that all compounds must eventually dissolve back into their constituent parts, and the finale of Book 6 provides the counterpoint when Athens, devastated by plague, collapses into chaos. Lucretius' description of the plague's effects on Athenian society is memorable for how it depicts the unraveling of the foundations of social order.<sup>322</sup> Echoing earlier descriptions of the destruction of the earth (Book 2) and of the human soul (Book 3), the plague is representative of an Epicurean worldview that predicts eventual decline and dissolution at all levels, be it atomic, spiritual, societal, or cosmic.

The fact that Turnus is associated with this decline through an allusive comparison to victims of Lucretius' plague is surely relevant to the larger issues of Roman power and stability raised by the *Aeneid's* ending. While Aeneas strives to establish order in the midst of suffering and disorder, in the figure of Turnus we catch a momentary glimpse of a foreign and dangerous cosmology at work that is diametrically opposed to traditional ideas about divine providence and the promise of eternal Roman power. Alternately depicted as an agent and victim of Epicurean physics, Turnus becomes a symbol of disorder itself, and it is in this capacity that his personal duel with Aeneas takes on universal significance. If Virgil in the *Aeneid* is concerned with mapping Rome's *imperium* onto the divine structure of the cosmos, as Hardie so persuasively argues, then Turnus embodies the corollary that Rome's enemies are conflated with chaos, represented in this case by atomism.<sup>323</sup>

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<sup>322</sup> Foundations such as the maintenance of religious spaces (6.1272-7) and proper care for the dead (6.1278-86).

<sup>323</sup> Hardie 1986: 85-156 examines this idea with respect to Greek myths of Gigantomachy, a "struggle between cosmos and chaos at the most universal level" (85). I am essentially arguing that atomism does on the natural-philosophical level what Gigantomachy does on a mythological plane, by providing memorable images of disorder.

The allegorical battle between the forces of cosmological order and disorder reaches its climax at the moment of Turnus' failed stone-throwing. As with Turnus' javelin throw against Eumedes earlier in Book 12, the flight of the stone is described in distinctly atomic terms:<sup>324</sup>

tum lapis ipse viri vacuum per inane volutus  
nec spatium evasit totum neque pertulit ictum. (*Aen.* 12.906-7)

Then the man's stone whirled through the empty void, and it neither crossed the whole space nor struck a blow.

As noted above, *inane* is the technical term in Latin for the Epicurean void, and '*per inane*' plus a modifying adjective or adverbial neuter singular appears regularly in Lucretius as a kind of formulaic expression to convey the idea of atomic motion.<sup>325</sup> Like the earlier occurrence of this phrase at *Aen.* 12.354, Virgil's *vacuum per inane volutus* ('whirled through the empty void') is synthesized from a passage of *De Rerum Natura* in which Lucretius imagines atoms from a dying world spilling out into the void, *magnum per inane soluta* ('released through the great void' *Lucr.* 1.1018, 1.1103), while the adjective *vacuum* is drawn from another iteration of this formula that occurs without the perfect participle: *vacuum per inane* ('through the empty void' *Lucr.* 2.202).<sup>326</sup> The failure of the stone to 'strike a blow' (*neque pertulit ictum*) further evokes Lucretian language, as it subtly echoes previous descriptions of atomic motion and collision: *perlabitur ictus* (*Lucr.* 4.357). Aside from these verbal and metrical correspondences with Lucretius, the adjective *vacuum* carries particularly strong Epicurean connotations because it

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<sup>324</sup> Hardie 2009: 174.

<sup>325</sup> See 133-6 above. While Hardie 2009: 174 notes the Lucretian force of *inane*, he eschews further consideration of the philosophical implications of Virgil's allusion, stating only that "the Lucretian passage is used to narrate a failed attempt to reach a goal." Hardie bases this reading on a perceived connection between Turnus' throw and the hypothetical spear-throw beyond the boundaries of a finite universe depicted at *Lucr.* 1.968-83. That scene, however, lacks any direct verbal or metrical parallel to the Virgilian line, whereas the descriptions of cosmic destruction at *Lucr.* 1.1018 and 1.1103 are virtually identical, allowing for a slight change in the modifying participle.

<sup>326</sup> Lucretius uses '*per inane*' in conjunction with 5 different adjectives and 1 adverbial accusative, depending upon which aspect of the void he wishes to stress—*vacuum*: 2.151, 2.158, 2.202, 6.838; *magnum*: 1.1018, 1.1103, 2.65, 2.105, 2.109; *profundum*: 1.1108, 2.96, 2.222; *quietum*: 2.238; *rectum* (adv.): 2.217, 2.226.

emphasizes the emptiness of the Lucretian void in contrast to the *plenum* of material posited by certain other schools of natural philosophy.<sup>327</sup>

Within the broad thematic movement from chaos to order over the course of the *Aeneid*, Turnus' atomic stone-throw raises the specter of cosmological apocalypse at the moment when Roman power faces its final obstacle.<sup>328</sup> Virgil's allusive weaponizing of Lucretian atoms throws the philosophical implications of that conflict into stark relief. When Turnus challenges the future political order of Rome, his attack takes the form of an atom seeking to disrupt the political *concilium* recently formed between Jupiter, Juno, the Trojans, and the Italians. The conflation of physics, politics, and cosmology in this act becomes apparent in light of the type of stone thrown by Turnus—a boundary stone: *limes agro positus litem ut discerneret arvis* ("placed there as a boundary to decide disputes over fields" *Aen.* 12.898). While there is a Homeric precedent for this detail, when Athena throws a boundary stone at Ares (οὔρον ἀρούρης *Il.* 21.405), Roman boundary stones have their own cultural history and legal significance independent of the Greek poetic tradition. Roman tradition placed great value upon the observance of these boundaries, which were overseen by their own tutelary deity, the primeval god Terminus.<sup>329</sup> As Huskey shows, the Roman boundary stone, imbued with physical, legal, and religious meaning, was an inviolable marker of order, and Turnus' attempt to move such a boundary is tantamount to sacrilege.<sup>330</sup> By displacing this physical reminder of governmental

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<sup>327</sup> La Cerda ad loc. sees in the Virgilian line an echo of Lucretius' definition of the void: *utramque vocem etiam coniungit Lucretii liber I: scilicet hoc quid erit vacuum, quod inane vocamus.*

<sup>328</sup> Although disagreement persists over the extent and nature of 'resolution' present in the ending of the *Aeneid*, many scholars have noted the poem's trajectory from chaos to order, particularly in the physical realm. See Hardie 1986: 199; cf. Ross 1987: 5-6.

<sup>329</sup> For a convenient summary of the various traditions regarding Terminus and the sacrosanctity of agricultural boundaries, see Huskey 1999: 77-9 (esp. footnotes).

<sup>330</sup> Huskey 1999: 79. The dire cosmic consequences of disturbing a boundary stone are vividly captured in the writings of one of the Roman land surveyors: *si servi faciant, dominio mutabuntur in deterius. sed si conscientia dominica fiet, caelerius domus extirpabitur, gensque eius omnis interiet... tum etiam terra a tempestatibus vel*

authority and social organization, Turnus' action is an assault not just on the person of Aeneas, but on the political settlement in Italy that Rome's eventual triumph requires. The twin function of the stone as both atom and symbol of disturbed political order makes Turnus an agent of political and cosmological anarchy.<sup>331</sup> As such, his failure to strike a blow represents the victory of cosmic and political order over forces of chaos.

The philosophical dimension of this failure is driven home in the immediately following lines, where Virgil recasts yet another memorable Homeric simile in distinctly Lucretian language, comparing Turnus' helplessness to that of a person unable to move or speak in a dream:

ac velut in somnis, oculos ubi languida pressit  
nocte quies, nequiquam avidos extendere cursus  
velle videmur et in mediis conatibus aegri  
succidimus; non lingua valet, non corpore notae  
sufficiunt vires nec vox aut verba sequuntur:  
sic Turno... (12.908-13)

And like in dreams, when languid quiet has pressed upon our eyes at night and in vain we seem to want to extend our eager running and, wearied, we fall in the midst of our efforts—the tongue has no power, and the usual strength of our body does not suffice and neither voice nor words follow—thus for Turnus...

The Homeric model for this simile comes from Book 22 of the *Iliad*, when Achilles chases Hector around the walls of Troy:

ὥς δ' ἐν ὄνειρῳ οὐ δύναται φεύγοντα διώκειν·  
οὔτ' ἄρ' ὁ τὸν δύναται ὑποφεύγειν οὔθ' ὁ διώκειν·  
ὥς ὁ τὸν οὐ δύνατο μάρψαι ποσίν, οὐδ' ὃς ἀλύξαι. (*Il.* 22.199-201)

As in a dream when one is not able to catch another who flees—the one is not able to get away and the other cannot catch up—thus Achilles could not catch Hector with his feet, nor could Hector escape.

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*turbiniibus plerumque labe movebitur. fructus saepe laedentur decutienturque imbris atque grandine, caniculis interient, robigine occidentur. multae dissensiones in populo* (Campbell 2000: 258).

<sup>331</sup> Hardie 2009: 174 sees a further Epicurean inversion present in this scene, interpreting the moving of the boundary stone as a transgression of the 'deeply fixed limit' of Lucretian physics: *alte terminus haerens* (Lucr. 1.77).

While commentators universally identify this passage as the model for the Virgilian allusion, Virgil deploys the idea of dreaming in an entirely different context from Homer.<sup>332</sup> In the Homeric passage, Hector is still running from Achilles, and has not yet made his final failed attack upon Achilles, a deflected javelin throw that corresponds roughly to Turnus' stone throwing at *Aen.* 12.896-907. The dream-simile in the *Iliad* describes a suspension of narrative time, a snapshot of endless pursuit, where both the pursuer and pursued are powerless to break the stalemate until Zeus weighs in with his golden scales to decide the outcome (*Il.* 22.208-13). In the *Aeneid*, the dream comparison also describes a feeling of powerlessness, but Virgil transposes his simile to the end of the fight, rather than earlier on when Aeneas chases Turnus around the city walls, so that the dreamlike inability to act applies only to the defeated Rutulian prince, and not to Aeneas. Thus, the modified image is not one of equilibrium between two rivals, as it is in the Homeric description, but of the physical and mental collapse of one single character in the face of death.

This shift in narrative context from the Homeric original is paralleled by a change of emphases in the Lucretian allusive content as well. As various scholars have previously noted, peculiarities of rhythm, vocabulary, and even grammar in this passage overwhelmingly identify Lucretius as an important source for Virgil's dream simile.<sup>333</sup> This is signaled by the opening hemistich of the Virgilian passage, *ac velut in somnis* ("and like in dreams" *Aen.* 12.908), which echoes a similar expression used by Lucretius to compare the motion of the soul to images of

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<sup>332</sup> Schlunk 1974: 104-6 notes the different circumstances under which Virgil deploys the Homeric dreaming simile, although without any mention of Lucretian influence.

<sup>333</sup> So Tarrant ad 12.908: "[Virgil's] alterations are Lucretian both in spirit and in specific reference." See also Hardie 2009: 173-4.

smoke seen while sleeping, *quod genus in somnis* (“like in dreams” Lucr. 3.431).<sup>334</sup> In the construction of the simile that follows, Virgil draws upon two distinct passages in Lucretius. The first is an account of dreams and sleep-consciousness, which occurs in the context of a longer section on perception from Book 4 of *De Rerum Natura*:

denique cum suavi devinxit membra sopore  
 somnus et in summa corpus iacet omne quiete,  
 tum vigilare tamen nobis et **membra movere**  
**nostra videmur**, et in noctis caligine caeca  
 cernere censemus solem lumenque diurnum,  
 conclusoque loco **caelum mare flumina montis**  
**mutare et campos pedibus transire videmur**,  
 et **sonitus audire**, severa silentia noctis  
 undique cum constant, et **reddere dicta tacentes**  
 cetera de genere hoc mirande multa videmus,  
 quae violare fidem quasi sensibus omnia quaerunt,  
nequiquam, quoniam pars horum maxima fallit  
 propter opinatus animi, quos addimus ipsi,  
 pro visis ut sint quae non sunt sensibus visa. (Lucr. 4.453-66)

Finally, when sleep has bound our limbs in gentle rest and our entire body lies in deepest quiet, then we seem, nevertheless, to be awake and **to move our limbs**, and in the blind darkness of night we judge that we see the sun and the daylight, and though in a closed space, we seem to move through sky, sea, streams and mountains, and **to cross fields on our feet, and to hear sounds** even when the stern silence of the night surrounds us, and **to answer with words, even when we are not talking**. We see many other miraculous things of this type, all of which almost seeks to undermine our faith in the senses—in vain, because the greatest part of these deceive us based on opinions of the mind, which we ourselves provide, with the result that things not seen by the senses are taken as seen.

At the level of individual words and phrases, the correspondences with Virgil are numerous. The opening line of the Virgilian simile, *oculos ubi languida pressit / nocte quiete* (“when languid quiet has pressed upon our eyes at night” 12.908-9) closely mimics that of the Lucretian passage, particularly in the delayed use of *quiete*: *denique cum suavi devinxit membra sopore / somnus et in summa corpus iacet omne quiete* (“Finally, when sleep has bound our limbs in gentle rest and

<sup>334</sup> Leonard-Smith ad 3.431 gloss *quod genus* as “equivalent of *velut*... an adverbial accusative often found in Lucretius.” In his note on the same line, Bailey observes that *in somnis* occurs 14 times in Lucretius.

our entire body lies in deepest quiet" 4.453-4). For Virgil's use of *nequiquam* ("in vain" 12.909), Tarrant suggests the Lucretian usage at 4.464. Most striking, however, is Virgil's adoption of the first person plural verb *videmur* ("we seem" *Aen.* 12.910) from Lucretius (4.456, 459), a narrative tactic unparalleled elsewhere in Homeric and Virgilian poetry.<sup>335</sup> This generalizing and inclusive use of the verb, employed by Lucretius as a way to relate his atomistic explanations of perception to the everyday experiences of his audience, creates a powerful feeling of sympathy for Turnus, while memorably evoking the Lucretian description of dreams.

Yet beneath this flurry of verbal echoes, Virgil presents a fundamentally different account of dreaming from Lucretius, changing the dreamer's experience from one of activity to inaction.<sup>336</sup> In his Epicurean account of dream perception, Lucretius is interested mainly in the way that we seem to move and perform normal activities while asleep: *membra movere / nostra* ("to move our limbs" 4.455-6); *caelum mare flumina montis / mutare* ("to move through sky, sea, streams and mountains" 4.458-9); *campos pedibus transire* ("to cross fields on our feet" 4.459); *sonitus audire* ("to hear sounds" 4.460).<sup>337</sup> This contrasts with the Virgilian dream simile, in which similar attempts at movement are rendered impossible: *nequiquam avidos extendere cursus / velle videmur et in mediis conatibus aegri succidimus* ("in vain we seem to want to extend our eager running and, wearied, we fall in the midst of our efforts" *Aen.* 12.909-10). Similarly, while Lucretius describes people in dreams producing speech without even speaking, *reddere dicta tacentes* ("to answer with words, even when we are not talking" 4.461), Virgil's dreamers are helpless to communicate: *non lingua valet, non corpore notae / sufficiunt*

<sup>335</sup> Tarrant ad 12.910 notes one prior instance in Apollonius where the poet interrupts a simile with a generalizing comment in the first person plural (2.541-2).

<sup>336</sup> Giesecke 2000: 82 reads Virgil's account of dreaming as essentially similar to that of Lucretius, citing the fact that "both groups of lines speak of the apparent failure of physical efforts in one's dreams." However, the Lucretian passage does not describe a single failure of physical efforts while dreaming; on the contrary, it abounds with examples of positive action and motion within dreams. The point, rather, is that such action is illusory.

<sup>337</sup> See also *Lucretius* 4.962-72, which similarly elaborates dream activity (rather than helplessness).

*vires nec vox aut verba sequuntur* (“the tongue has no power, and the usual strength of our body does not suffice and neither voice nor words follow” *Aen.* 12.911-12). Although Virgil colors his own dream simile with certain details culled from Lucretius’ account of dreaming, the content is inverted, so that dreams do not provide examples of action, but of the tragic inability to act or speak, as in a nightmare.

So where does the theme of individual powerlessness and physical failure come from, if not from the original Homeric simile or from Lucretius’ description of dreams? As I mentioned before, commentators generally acknowledge two separate sources of Lucretian allusion in Virgil’s simile. The second of these passages has no explicit connection to dreaming, but instead describes the emotional experience of fear and its physical symptoms, in the context of the relationship of the mind to the body:<sup>338</sup>

verum ubi vementi magis est commota metu mens,  
consentire animam totam per membra videmus  
sudoresque ita palloremque existere toto  
corpore et infringi linguam vocemque aboriri,  
caligare oculos, sonere auris, succidere artus,  
denique concidere ex animi terrore videmus  
saepe homines. (*Lucr.* 3.152-8)

But when the mind is disturbed by intense fear, we see that the whole soul feels it throughout the limbs, and thus sweating and pallor break out all over the body, and the tongue breaks and the voice fails. The eyes grow dark, the ears ring, limbs fall, and finally we see that men often die from a terror of the mind.

In this description of fear we see a number of parallels to the Virgilian simile. Just like in Lucretius’ account of dreaming, *videre* (‘to see’) appears in the first person plural with the same generalizing function, although this time in the active, rather than passive, voice. In addition,

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<sup>338</sup> Tarrant ad 12.911 calls the Lucretian description “a plausible subtext for the present passage.” In addition, Bailey ad 3.154-6 identifies Sappho 31.7-9 (specifically γλῶσσα ἔαγε) as a literary model for *Lucr.* 3.155: *infringi linguam vocemque aboriri*, while Fowler 2000: 149-55 argues that Lucretius mediated this Sapphic allusion through Greek medical texts. In addition, Tarrant offers two other *comparanda* from Latin love poetry: *Catull.* 51.9 and *Hor. Carm.* 4.1.35-6. Richard Thomas, in his commentary (2011) ad *Hor. Carm.* 4.1.35-6, identifies a long lineage of borrowings on this topic extending from Sappho down to Horace.

Tarrant argues that *succidere* ('to fall') in *Lucr.* 3.156 provided the specific model for Virgil's use of *succidimus* in *Aen.* 12.911. Most importantly, Tarrant identifies Lucretius' description of the voice breaking, *infringi linguam vocemque aboriri* ("the tongue breaks and the voice fails" 3.155), as a model for Virgil's: *non lingua valet, non corpore notae / sufficiunt vires nec vox aut verba sequuntur* ("the tongue has no power, and the usual strength of our body does not suffice and neither voice nor words follow" *Aen.* 12.911-12). To complete our picture of Lucretian borrowings in Virgil's dream simile, we may add the following two lines from Lucretius' explanation of the atomic causes of sound, which plausibly provided the inspiration *nec vox aut verba* in the Virgilian passage: *haud igitur dubiumst quin voces verbaque constant...* ("therefore there is absolutely no doubt that voices and words exist..." *Lucr.* 4.533).

Thematically, these descriptions of fear-induced helplessness provide an obvious link to Epicurean philosophy, namely in its concern with the fear of death. Just as Turnus' stone-throwing failure is cosmologically Epicurean, so his mental unraveling represents a distinctly Epicurean defeat through his inability to master that fear. In the lines leading up to the dream simile, the varied allusions to atomic physics connect Turnus' failure with the failure of Epicurean cosmology and the corresponding triumph of Roman order, while the Lucretian descriptions of fear within the simile add a final ethical component to this loss. Although Turnus himself is not an adherent of Epicureanism in any meaningful sense, his frequent allusive association with the worldview of atomism makes him a representative of that philosophy on an allegorical level. Therefore, his complete emotional unraveling in the face of death presents a provocative inversion of Epicurean values. According to the teaching of Epicurus, a correct understanding of the transitory, atomic nature of all human existence should liberate us from our fear of death, yet here we see Turnus, the allegorical avatar of the atomic worldview, buckling

under that very fear. This defeat, as it is communicated through a pastiche of Lucretian allusions, invalidates the Epicurean philosophy in its own terms, both on the atomic and the ethical level.<sup>339</sup>

One may perhaps object at this point that the Lucretian details clustered around Turnus' stone-throwing failure have more to do with epic register than philosophical doctrine,<sup>340</sup> or that fear of death is entirely appropriate in the narrative context, and that such a fear is neither the exclusive property of Epicurean philosophy, nor even of philosophy in general. Yet the preponderance of thematically relevant Lucretian allusions at this moment in the text surely encourages a philosophical interpretation of that fear. By constructing Turnus' fear from the physical symptoms of fear presented in *Lucr.* 3.152-8, Virgil does not just engage with fear as a topos of literary allusion, but also with a particular philosopher's understanding of fear as the result of atomic interactions between the body and mind.<sup>341</sup>

A fuller look at the source of Virgil's *nec vox aut verba* ("neither voice nor words" 12.912), mentioned above briefly in the list of Lucretian correspondences, illustrates this point. In isolation, Lucretius' *voces verbaque* ("voices and words" 4.533) conveys no philosophical agenda, but now let us recall that phrase in its original context: *haud igitur dubiumst quin voces verbaque constent / corporeis e principiis, ut laedere possint* ("therefore there is absolutely no doubt that voices and words exist from atomic origins, so that they are able to inflict damage" 4.533-4). Latent in Virgil's adaptation of the Lucretian phrase is a neat summary of the Epicurean explanation for sound arising from atomic particles. I do not mean to suggest that

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<sup>339</sup> Cf. Hardie 2009: 178: "Aeneas' enemy Turnus collapses in disorderly fragments of the Lucretian project."

<sup>340</sup> As Tarrant argues for the stone-throwing episode as a whole: "Language recalling Lucretius is also frequent, clustering around the simile in 908-12... Using Lucretian language is a means of elevating the tone, but it also seems possible that Lucretius was associated in V.'s mind with a certain area of experience or type of emotion, as was Catullus. A possible specific factor is the prominence of the fear of death in the portrayal of T. in this final section" (ad 12.887-918).

<sup>341</sup> The philosophical or 'scientific' texture of this fear is even more striking when one considers that Lucretius' description of fear at 3.152-8 is itself constructed from a variety of earlier Greek medical texts; see Fowler 2000: 151-4.

Virgil here is endorsing the Epicurean model for the transmission of sound within the world of the poem, but merely that such allusions form an undercurrent of Epicurean meaning that ought to shape our reading of Turnus' fear as a particularly *philosophical* fear. Since this fear is composed almost entirely from Lucretian intertexts, we should interpret it in Epicurean terms. And on that basis, Turnus' collapse represents a defeat for Epicureanism on both personal and cosmological levels: the failure of Turnus to strike a blow at Aeneas with his atomic stone embodies the defeat of atomism as a chaotic, anarchic worldview, while his terror in the face of death makes this philosophical defeat intensely personal.<sup>342</sup>

If Turnus' failure marks the defeat of political and cosmological anarchy, then Aeneas' response provides a clear picture of the triumphant alternative: Roman military power sanctioned by pro-Roman deities. After Turnus has spent his energy on the unsuccessful stone-throw, Aeneas attacks him with more-than-supernatural force, combining the power of divine lightning and Roman military engineering:

murali concita numquam  
tormento sic saxa fremunt nec fulmine tanti  
dissultant crepitus. volat atri turbinis instar  
exitium dirum hasta ferens. (12.921-4)

Never did walls struck by siege weapon make such a sound, nor did such crashing spring from lightning. The spear flies like a black whirlwind, bearing dire destruction.

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<sup>342</sup> Indeed, this assimilation of the local to the universal is the defining feature of any allegorical approach to the *Aeneid*. It is, in Hardie's words, "the relationship between cosmological models, on the one hand, and the structures of human history and society, on the other" (1986: 1-2). To which we may add a third point of comparison: the individual or personal.

Hardie, who cites this passage as the culminating moment of Virgil's remythologization of Lucretian cosmological material in the *Aeneid*, points out the close verbal parallels between this passage and one in Lucretius about the atomic mechanics of thunderbolts:<sup>343</sup>

exprimitur vis atque ideo volat impete miro,  
ut validis quae de tormentis missa feruntur. (Lucret. 6.328-9)

The force [of the thunderbolt] is squeezed out and flies with marvelous force, like missiles shot from mighty siege weapons.

According to Hardie, Lucretius' comparison to siege weaponry robs thunder of its supernatural mystique, displacing the conventional image of the thunderbolt as a weapon of Jupiter with the philosopher's atomistic explanation. Conversely, Virgil de-emphasizes the human element of the comparison (siege weaponry) by placing it first in an ascending list of comparisons that culminates in two traditional tools of divine power: lightning (*fulmen*) and the whirlwind (*turbo*).<sup>344</sup>

Hardie is right to categorize this allusion as an instance of remythologization, but in order to appreciate the broader significance of this polemical allusion or 'inversion,' we must ask how it fits with the cluster of Lucretian allusions that occur precede it. In the preceding pages, I have argued that Virgil employs those Lucretian intertexts in order to connect Turnus' personal failure with Epicurean physics, which predicts a periodic dissolution of the cosmos back into its constituent atoms. In his role as the agent of Jupiter's divine will, and allegorically as a wielder of both Roman military engineering and Olympian lightning, Aeneas embodies a uniquely

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<sup>343</sup> Hardie 1986: 177-8. Hardie uses this passage as a case study for his larger claim in the chapter on Lucretian intertextuality, namely that this sort of "remythologization" is the characteristic feature of Virgil's Lucretian allusions in the *Aeneid*. This contention is restated at greater length at 233-37.

<sup>344</sup> Hardie 1986: 178, "To compare [thunderbolts] to a siege-missile has two effects: firstly, it firmly reduces the phenomenon to a non-supernatural, materialist, causality; secondly, the reference to a weapon of war reminds us of the traditional identification of the *fulmen* as the ultimate weapon of Jupiter. The conventional way of thinking which starts from the observation that the *fulmen* is like a weapon, and proceeds to the conclusion that it has an anthropomorphic divine wielder, is here short-circuited by the preceding explanation of the true, scientific, way in which the *fulmen* is like a *tormentum*." See also 147-54 for how this image compares Aeneas to Jupiter.

Roman alternative to civil dissension and cosmological disorder. The framing of this climactic moment of spear throwing as a conscious inversion of Epicurean philosophy offers a powerful cosmological closing statement to Book 12. Although the specter of atomic chaos hangs over the text at many points earlier in the poem, threatening Aeneas' progress towards Roman rule and cosmic order, the thunderbolt-like spear thrown by Aeneas rejects the possibility of an atomic Epicurean cosmos with finality. Turnus' failure to hit Aeneas with the atom-like boundary stone reveals the failure of the atomic worldview, while Aeneas' successful spear throw turns Lucretius' own words against his philosophy, all in order to support a vision of divinity and cosmology antithetical to that of Epicureanism.

At this point Turnus' rebellion against Aeneas has ceased to be a threat to the new Trojan order in Italy, but there is one final detail of cosmological interest that has gone unremarked.

After being struck in the thigh by Aeneas' spear, Turnus falls to his knees:

[hasta] per medium stridens transit femur. incidit ictus  
ingens ad terram duplicato poplite Turnus. (12.926-7)

Whistling through the air, the spear pierces his thigh. Having been struck, mighty Turnus falls to the earth on bent knee.

Much has been made of the various Homeric antecedents for these lines; in particular how Turnus' fall recapitulates the defeat of Hector by Achilles in *Iliad* 22 and of Aeneas by Diomedes in *Iliad* 5.<sup>345</sup> Yet commentators pass over a subtle verbal echo from within the *Aeneid* itself: namely between *incidit ictus* ("having been struck, he falls" 12.926) and *neque pertulit ictum* ("nor did it strike a blow" 12.907), describing the unsuccessful flight of Turnus' stone only moments earlier. While the recurrence of a single word is not necessarily meaningful, these two instances of *ictus* are thematically linked by their use of technical language drawn from Latin

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<sup>345</sup> Tarrant ad loc.; Fletcher 2006: 255-6; Quint 1993: 68-72; Van Nortwick 1980: 312; Knauer 1964: 316-20. For further discussion of the intense engagement with Homeric models that occurs in Turnus' death scene, see Barchiesi 2015: 69ff.

descriptions of atomic motion. In the case of *incidit ictus*, the atomic resonance of the language depends on a punning use of *ictus*, which is suggested by its enjambment at the end of the line and separation from its grammatical subject. Unlike *ictum* at 12.907, which is the noun meaning “impact” or “blow,” *ictus* at 12.926 is adjectival, the perfect passive participle of *icio*, *-ere*, agreeing with Turnus in the following line as its subject: “he falls, *having been struck*.”

However, given that the subject of the previous sentence is Aeneas’ spear as it strikes Turnus, the enjambment of *incidit ictus* at the end of its line suggests an alternative reading of *ictus* as the noun form: “the blow falls.” Of course this interpretation must be revised in light of the nominative *Turnus* in the next line, but the rhythmic break created by the enjambment isolates these two words in a way that pointedly recalls atomic terminology. The use of *ictus* (n.) as a technical term for atomic collisions in Epicurean physics is well attested, while *incidere* appears in both Lucretius and Cicero as a quasi-technical term for the physical impact of individual atoms or atomic compounds striking other bodies.<sup>346</sup> In light of these connections to the technical language of atomism, *incidit ictus* leaves us with a sobering final image of Turnus as a failed atom. In a moment of pitiable irony, unable to strike a blow against Aeneas with the boundary stone, Turnus’ only success in landing an atomic *ictus* comes at the moment when his wounded body falls to the ground in defeat.

#### 4.4 CONCLUSION

Ultimately, Turnus’ duel with Aeneas ends with polemical inversion and remythologization in its strongest sense—the philosophy of Lucretius utterly rejected, but in terms distinctly Lucretian. Atomism yields, at last, to Roman *imperium* and a divinely ordered

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<sup>346</sup> In Lucretius, *incidere* is used of individual atoms 4 times (2.227, 2.240, 3.818, 5.363); also of wind (6.296); of lightning (6.351); and of sound (4.568). In Cicero, the term is applied to atomic *imagines* striking the senses (*Nat. D.* 1.107).

cosmos. Yet it is important to remember that this conclusion is the result of a long struggle between order and chaos over the course of the poem, during which the contest is far from resolved. While Hardie rightly characterizes many of the Lucretian allusions in the *Aeneid* as instances of remythologization, it has been the purpose of this dissertation to document the many cases of Lucretian allusion that preserve the original demythologizing, rationalizing impulse of Lucretius, and to show how such allusions work alongside the remythologizing variety in the *Aeneid*. To focus exclusively on instances of inverted or rejected Epicurean philosophy, or to interpret virtually every use of Lucretian vocabulary by Virgil as an inversion of Lucretian philosophy, is to miss the fact that atomism persists in many scenes of the *Aeneid*, un-inverted and independent, as a powerful metaphor for disorder right up to the final scene of Book 12. On an allegorical level, this metaphor adds a cosmological component to the fundamental narrative of how Rome's ancestors overcame adversity and disorder to build a more harmonious universe at the level of physics, culture, politics, and religion.

David Quint, writing about the fate of antagonists in epic poetry, observes that such challengers, typically portrayed as culturally 'other' in some sense, inevitably fail: "They and their stories can... be finally assimilated with the forces of nature that the victorious builders of empire and history strive to overcome" (1993: 99). For Turnus, this defeat marks the taming of atomic forces of purposeless chaos that previously threatened the orderly, teleological universe of Roman imperial power. Furthermore, as I hope I have adequately demonstrated over the course of this dissertation, this allegorical triumph of order is never exclusively literary or philosophical—nor exclusively political, religious, or mythological—but always multivalent and subject to coordinated interpretations on multiple levels.

In choosing to analyze and parse intertexts of Lucretius in the *Aeneid*, to take seriously the philosophical implications of each borrowing, and to consider in depth the intellectual background against which such borrowings took place, spanning centuries of natural-philosophical debate from Democritus to Cicero, I have treated Virgil's epic as a philosophically serious text with a coherent orientation towards basic issues of teleology, order, and purpose. While it is perhaps much more difficult to provide a positive answer to the question of what the philosophical worldview of the *Aeneid* is, one can follow the *via negativa* to find an approximate answer (or a helpful start) in the poem's total rejection of Epicurean atomism, along with its apolitical, non-teleological ideology.

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