

that can be observed only in its distorting effects.¹⁴ Noticing those effects produces a radically unfamiliar vision of ancient atomism. This chapter traces the impact of the *den* on Democritus's physics, where it renders the atom heterogeneous and unstable, destabilizing in turn the physical laws predicated on it; and on his ethics, where the self-sufficient ethical subject—the subject as atom—is shown to be structured around a psychic void. We will also trace the *den*'s effects on Democritus's *logos*. A point of opacity within a philosophical language that aims for transparency and an omission within a theoretical discourse that aims for universality, the *den* marks the limits of Democritus's discourse and the atomic reality it purports to reveal. In so doing, it sets that discourse in a particular relation to truth and knowledge that, as I will suggest at the end, characterizes it—more than any superficial similarity to modern atomic physics—as a science. In this way, *den* figures the aporia within ontology as a philosophical and discursive project that has been one of the central themes of this book. Situated at the asymptotic non-convergence between *onta* and *logos*, the *den* encapsulates both the impossibility of bringing being into language and the generative force of that impossibility.

ATOMS, VOID, AND THE INDIFFERENT PHYSICS OF THE *DEN*

The atomists start from a double *arkhē*, as Aristotle explains in the *Metaphysics*.

Λεύκιππος δὲ καὶ ὁ ἑταῖρος αὐτοῦ Δημόκριτος στοιχεῖα μὲν τὸ πλήρες καὶ τὸ κενὸν εἶναι φασί, λέγοντες τὸ μὲν ὄν τὸ δὲ μὴ ὄν, τούτων δὲ τὸ μὲν πλήρες καὶ στερεόν, τὸ ὄν, τὸ δὲ κενὸν καὶ μανόν, τὸ μὴ ὄν (διὸ καὶ οὐθὲν μᾶλλον τὸ ὄν τοῦ μὴ ὄντος εἶναι φασί, ὅτι οὐδὲ τὸ κενὸν (ἐλαττον) τοῦ σώματος), αἷτια δὲ τῶν ὄντων ταῦτα ὡς ὕλην. (*Metaph.* 1.4 985b4–10 < 67A6/D31 [Diels-Kranz's text])

Leucippus and his associate Democritus say that the basic elements are the full and the empty, meaning what is (*to on*) and what is not (*to mē on*). Of these the former is full and solid, what is, and the latter empty and sparse, what is not (and for this reason they also say that what is exists no more than what is not, because the void [exists] no less than the body), and these are the causes of the things that exist, comprising their material.

In the form of atoms and void, what is (*to on*) and what is not (*to mē on*) occupy the same ontological footing: nonbeing exists no less than being, and the two share top billing as the origins and primary elements (*stojikeia*) of the atomists' cosmology.¹⁵

14. This is the dynamic of the Lacanian Real, which is not some "real thing" beyond the symbolic, but, as Eysers (2012, 61–93) stresses, a projection of the symbolic's lack (incompleteness, incoherence), an external cause retroactively posited on the basis of its effects within signification.

15. See further Diog. Laert. 9.44 (< A1/D13); Simpl. in *Phys.* 28.15 (< A38/D32); 67A8/D32, 67A12/≠LM, 67A14/D61, A44/≠LM, A46/≠LM.

In *On Generation and Corruption*, Aristotle explains this dual *arkhē* as an attempt to reconcile Parmenides's unitary, unchanging being with the empirical experience of plurality and change.

ὁμολογήσας δὲ ταῦτα μὲν τοῖς φαινομένοις, τοῖς δὲ τὸ ἐν κατασκευάζουσιν ὡς οὐκ ἂν κίνησιν οὐσαν ἄνευ κενοῦ τὸ τε κενὸν μὴ ὄν καὶ τοῦ ὄντος οὐθὲν μὴ ὄν, φησιν εἶναι τὸ κυρίως ὄν παμπλήρες ὄν, ἀλλ' εἶναι τὸ τοιοῦτον οὐχ ἓν, ἀλλ' ἅπειρα τὸ πλῆθος καὶ ἀόρατα διὰ σμικρότητα τῶν ὄγκων. ταῦτα δ' ἐν τῷ κενῷ φέρεσθαι (κενὸν γὰρ εἶναι), καὶ συνιστάμενα μὲν γένεσιν ποιεῖν, διαλυόμενα δὲ φθοράν. (*Gen. corr.* 1.8 325a25–32 = D30/67A7 [Laks-Most's text])

Agreeing in this respect with the phenomena, but agreeing with those who maintain of the one that there could not be change without void, that the void does not exist and that nothing that does not exist pertains to being, he [Leucippus] says that what properly exists is entirely full, but that such a being is not one, but they are boundless in number and invisible because of the smallness of their mass. These travel in the void (for the void exists) and by coming together they cause generation and by separating, destruction.

“Little beings (*mikrai ousiai*) boundless in number,” atoms are ungenerated and eternal, unchanging, indivisible, and homogeneous: as “what properly exists” (*to kuriōs on*), they are Parmenides's *To Eon* miniaturized and pluralized.¹⁶ These tiny beings combine and separate to produce all the phenomena in our world. This positive ontology of atomic being also positivizes nonbeing in the form of the void. Void is understood as the physical vacuity (*kenon*) that enables atoms to move, join, and separate.¹⁷ “An interval in which there is no perceptible body,” as Aristotle says (*diastēma en hōi mēden esti sōma aisthēton*, *Ph.* 4.6 213a28–29), the void enables the atom's presence: *atoma* can only “be there” because the *kenon* provides a place for them to be. Likewise void sustains the atom's atomic identity: an atom can only be an individual because it is separated from other atoms by void, and it can only be indivisible because it contains no void within it and therefore cannot be cut.¹⁸ So, on the one hand, void as what is not functions as a support for what is. On the other hand, in void nonbeing is granted a positive (albeit empty) being of its own, equally real as the atom, “for the void exists” (*kenon gar einai*).¹⁹

16. *Mikrai ousiai*: Arist. *Dem.* fr. 208 Rose (= A37/D29). Mourelatos (2004) lays out clearly the ways in which the atom meets (and fails to meet) the “Parmenidean requirements” for being. On Democritus as a response to the Eleatics, see Von Fritz 1938, 15–17; Stokes 1971, 218–36; Furley 1974; Wardy 1988; Curd 1998, 180–216; Sedley 2008a; and Clarke 2019, 146–66; and as a mediation between monism and pluralism, Bailey 1964, 69–76.

17. Cf. Arist. *Ph.* 4.6 213b3–22 (< 67A19/D39): void receives; it contracts and compresses; it absorbs. Simplicius explains that void “is yielding and does not resist” the atoms that move through it (*in Phys.* 1318.31–19.2 < A58/D36). On the relation of void to atomic motion, see Berryman 2002; and Mourelatos 2004, 52–53.

18. Curd 1998, 184–88, 201–3; cf. Stokes 1971, 218–22.

19. Serres 2018, 83: “The void is the zero state of matter; the atom is the minimum state.” Sedley (1982, 179) believes Aristotle got it wrong, and the atomists understood void not as empty space but

In this conception of atoms and void, the atomists' double *arkhai* work together to affirm the positivity of being. Together they provide an exhaustive description of reality: atoms and void are what is and they are all that is.

Exegetes both ancient and modern have largely followed Aristotle in viewing Democritus as a material positivist and have worked to reconstruct the details of his atomic physics, to understand the nature of the atom and the principles governing its movement and interactions in the void.²⁰ But in so doing, as Cassin argues, they sidestep the most challenging aspect of Democritus's theory, the inextricability of being and nonbeing formalized in the *den*. For Aristotle, followed by Galen and Plutarch, the *den* is simply a synonym for the atom as positive substance: "He calls each of the substances (*tôn ousiōn*) by these names: the *den*, the compact, what is (*to on*)."²¹ But *to den*, as Cassin stresses, implies a very different ontology from the atom and cannot be reduced to Parmenides's *To Eon* under a new name. What would Democritean physics look like if we viewed it, not from the familiar angle of atoms and void—those double *arkhai* of presence—but from the parallaxic perspective of the *den*?

First, the physics of the *den* splits the atom. The word "atom" comes from the adjective *atomos*, meaning "unable to be cut." The *den*, by contrast, is the product of an ostentatious and artificial cut, the incomplete excision of *mēden*. If one point of calling atoms uncuttable is to signal that they are completely homogeneous, with no parts that can be separated off, the atom as *den* is intrinsically heterogeneous, a compound of *-de* and *hen*. As *den*, the atom not only could be divided; it would have to be divided in order to become a positive autonomous one (*hen*).²² In this scission, what is generated out of what is not. Parmenides decreed that something cannot come from nothing, but the *den* does just that: it is something—a word, at a minimum, but also the (non)entity it names—generated out of (the word and [non]substance) nothing. Moreover, it retains that nothing within its being, for in the false division of *mēden*, the excision of the negative is incomplete: the *d'* is a shard of the nothing (*mēden*) left in the one (*hen*). This means that

as the negative substance that occupies it; cf. Kirk, Raven, and Schofield 1983, 415–16; contra, Furley (1987, 117–22), for whom void is "not anything in particular," the negation of the properties of what is. Attempts have been made to differentiate *mēden* from *ouden* as different types of nonexistent (Bailey 1964, 118–19; Cassin 2017, 29–30), but the ancient testimonia use both terms for the void and the Greek rules of negation militate against overinterpreting the difference.

20. For a clear synopsis of the physics of atoms see Taylor 1999b, 69–90, 160–95 (abbreviated at 1999a, 181–85).

21. Arist. *Dem.* fr. 208 Rose = A37/D29. Cf. Gal. *Elem. Hipp.* 1.2 (= A49/D23b); Plut. *Adv. Col.* 1109A (= B156/D33). "If the *den* ends up being a 'stowaway,' [as Lacan says] it is because Aristotle forbade it the first-class deck—the open field of 'philosophy'" (Cassin 2017, 5 ~ 2020, 101).

22. There is a telling variation in Galen's gloss on fragment B9/D14: "In reality all things are *den* and *mēden*, for he has also said this, naming the atoms *den* and the void *mēden*" (A49/D23b). *Den* here is an editorial correction for the manuscripts' *hen*: someone, whether Galen himself or a later copyist, thought of atoms as "one" and an antonym of nothing. *Den* complicates that antimony. The *de-* of *mēde/oude* emphasizes the negation of the one: not even one.

the division between being and nonbeing is internal to being itself. Thus in place of the positive ontology of atoms and void, we have in *den* a being derived from nonbeing and bearing nonbeing within it. Neither atom nor void but merging aspects of both, a thing that is also nothing, *den* is “the parasite of ontology.”²³

Blurring the fundamental distinction between is and is not, the *den* introduces something like a quantum indeterminacy into Democritus’s physics. Seen from this angle, the atom oscillates weirdly between matter and immateriality. In B9/D14 (“in reality atoms and void”) atoms are *atoma*, the neuter plural form of the adjective agreeing, the doxographers suggest, with an implied noun *sōmata* (bodies).²⁴ Corporeality is also suggested by another Democritean term for atoms, *ta nasta*, “compact things” (A37/D29, A47/D37), and by their possession of shape, size, and (according to some testimonia) weight.²⁵ But alongside the neuter *ta atoma* we also find the feminine, *hai atomoi*, for which Plutarch supplies the noun *ideai* (forms).²⁶ Are atoms form or matter? Are they somehow both at once, as Galen suggests when he writes, apparently without sensing a contradiction, “*hai atomoi* [sc. *ideai*], being all small *sōmata*, are without qualities” (A49/≠LM)? The atom as *den* oscillates between *hulē* and *morphē*, as Dolar observes, posing a challenge to Aristotle’s hylomorphism *avant la lettre*.²⁷

23. Cassin 2020, 107; cf. 2017, 34.

24. B9/D14 contains the only direct reference to atoms in the text considered verbatim by Laks-Most, and thus, if they are correct, the only form we can confidently attribute to Democritus himself (cf. A49/D63, B117/D24, B125/D23a, all quotations of this fragment). *Sōmata* is supplied at 67A1/D80a, 67A6/D31, 67A13/R95, 67A14/D61, 67A15/D45, 67A16/R42, A43/≠LM, A47/D37, R94, A49/D43, A58/D36, A101/D130, B156/D33. Even if the neuter adjective stands alone as a substantive, it substantivizes the atom.

25. *Nasta*: see further 67A8/D32, 67A14/≠LM, A46/≠LM, A125/≠LM. Atoms are frequently characterized in the testimonia as *stereā* (solid): 67A6/D31, 67A7/R18, A45/≠LM, A60/D40, D68, A135/S82/R59. Whether atoms had weight was disputed: see A58/D36, A47/D50–51, A60/D48, A61/D49. O’Brien (1981, 330–47) argues that they did; cf. Furley 1983. Some of the diction of their interactions suggests the collision of massy bodies (e.g. *allēlotupia*, A47/D53; *plēgē*, A47/D54), but Democritean atoms do not fall downward, as Epicurean atoms do: see Furley 1987, 150–51; O’Keefe 1996; Salem 1996, 89–95; and Taylor 1999b, 179–84.

26. *Adv. Col.* 1111A (A57/D34). This supplement may be supported by the fact that Democritus wrote a treatise entitled *Peri Ideōn* (B6/D5). Other possible feminine nouns are *phuseis* (A58/D36) and *ousiai* (A37/D29). Imagined as forms, the atoms could have conceptual shape and size without physical mass, and their indivisibility could be theoretical, as argued by Furley (1974, 1987, 125–31); contra, Barnes 1982, 352–60. This might explain the mysterious possibility of an atom the size of a cosmos (A47/D62). But the question is debated: see Alfieri 1979, 199–204; Konstan 1982; Sorabji 1983, 354–57; Makin 1989; Hasper 2006; and Sedley 2008a.

27. Dolar 2013a, 20. Wismann goes so far as to speculate that the famous materialists were in fact idealists (2010, 51–66). Cf. Hegel 1975b, 144, 1955, 303; Lacan 1973, 51, 1977, 64; Alfieri 1979, esp. 59–60; and Joly 1984, 262. This ambivalence is partly what makes Democritus attractive to thinkers, from Nietzsche and Marx to Dolar and Žižek, rethinking both materialism and idealism. On Nietzsche’s

This atomic indeterminacy is generalized as a universal law in the so-called indifference principle that operates across Democritus's system.²⁸ The indifference principle takes the form *mē mallon ē*: "not more X than Y." This principle governs Democritus's physics. Atoms combine in the ways they do because of the infinite diversity of their shapes, "since nothing is more one sort of thing than another" (Simpl. in Phys. 28.15 < A38/D32). It also governs his metaphysics, as Aristotle suggests in the passage of the *Metaphysics* quoted at the start of this section: the atomists "say that what exists no more than what is not, because the void [exists] no less than the body."²⁹ Plutarch puts it pithily: "He declares that the *den* exists no more than the *mēden*" (*mē mallon to den ē to mēden einai*).³⁰ The formula was clearly striking. Simplicius repeats it four times in the space of two paragraphs (twice in reference to the heterogeneity of atomic shapes and twice to the equality of being and nonbeing), and it was apparently parroted by Democritus's disciples.³¹

The indifference principle is generally understood as a negative corollary of the principle of sufficient reason, which C. C. W. Taylor takes to be the atomists' primary logical axiom. While that principle dictates that nothing can be true without a reason for it being so and not otherwise, the indifference formula posits that in the absence of such a reason, one thing is no more true than its alternatives.³² But if the *mē mallon* formula reaffirms the general hegemony of the law of sufficient reason, it also marks off a terrain on which it does not function, a terrain where the insufficiency of reason is itself an operative principle. Structured as a negated comparison, the phrase asserts the irreducibility of difference even as it

early fascination with Democritus, see Porter 2000, 82–126; for Marx's views on atomism, see Marx 2006; and McCarthy 1990, 19–56.

28. Makin (1993, 8–14, 49–97) believes Democritus's physical and epistemological theories arose out of his interest in this mode of argument, which he adapted from Zeno. On the role of the principle in Democritus's thought, see the clear and helpful discussion of Curd (1998, 188–98).

29. Arist. *Metaph.* 1.4 985b4–8 (< 67A6/D31). *Elatton* is supplied by Zeller and accepted by Diels. The manuscripts' reading (without the supplement) makes void exist no more than body, contradicting the preceding clause.

30. Plut. *Adv. Col.* 1108F–1109A (B156/D33). Diels takes this as the original Democritean formulation. On the formula in Plutarch's *Against Colotes*, see Matson 1963; and Kechagia 2011, 313–21. In that treatise, Colotes (the "he" in the sentence quoted) interprets Democritus's use of the formula along epistemological lines as a kind of Protagorean relativism, while Plutarch argues for an ontological interpretation. As Kechagia points out, both can be right and simply focused on different parts of Democritus's theory.

31. Simpl. in Phys. 28.4–27 (67A8, A38/D32). Sen. *Ep.* 88.43 (B4/R74) attributes it to Nausiphanes. The same principle is adduced to explain the variations in sense perception: one person's perception is no more accurate than another's (Arist. *Metaph.* 4.5 1009b10 [A112/R52]). Cf. Sext. *Emp. Pyr.* 1.213 (R106/≠DK), who distinguishes Democritus's use of the phrase from the Skeptics'; see DeLacy 1958.

32. Taylor 1999b, 162, 166–67, 189–93. Both principles have many permutations, analyzed by Makin (1993).

ostensibly levels it. It is a comparison that declines to compare and an equation that doesn't really equate: instead of a simple identity ($X = Y$) we get an approximate equivalence ($X \approx Y$) in the form of a nonaddition (not more) that is also a nonsubtraction (not less), as Aristotle implies when he conflates the positive version of the formula ("what is exists no more than what is not") with the negative ("the void exists no less than the body").

This equivocal equation reiterates the incomplete subtraction of the *den* and generalizes its logic. Etymologically, *den* is literally no more than *mēden*. Thus to write, as Plutarch does, "the *den* exists no more than the *mēden*" is both a truth and a tautology. Both *mē mallon* and *den* subtract difference but do not eliminate it so as to produce a singular one, identity or the *hen*. For Parmenides Is and Is Not are binary and mutually exclusive, 1/0. But with the *den* that difference becomes a matter of indifference, formalized in the indifference principle. The distinction between being and nonbeing is irreducible but cannot be posed in binary or even comparative terms. It is a difference that makes no clear difference.

The principle of indifference governs the atomic interactions that produce the phenomenal world. Atoms are in constant motion, their rhythms, rotations, and contacts determined by their shape.³³ That shape, however, is indifferent: "The number of shapes in the atoms is boundless because nothing is more one sort of thing than another" (Simpl. in Phys. 28.9–10 < 67A8, A38/D32). This means that atomic motion lacks sufficient, to say nothing of necessary, reason. In this it goes against the atomists' general emphasis on *anankē* (necessity), a term that appears frequently in the extant fragments and seems to denote not strict determinism but rather an insistence on a cause or sufficient reason. As Leucippus wrote in one of his only surviving verbatim fragments, "No thing comes about at random (*matēn*), but everything for a reason (*ek logou*) and by necessity (*hup' anankēs*)" (67B2/D73).³⁴ Aëtius, our source for this fragment, equates the atomists' *anankē* specifically with atomic interaction.³⁵ But if those interactions are determined by the

33. Democritus's terms for atomic movement are *rhusmos* (rhythm), *diathigē* (touching), and *tropē* (rotation) (67A6/D31, A38/D32). As Von Fritz notes (1938, 25–28, followed by Wismann [2010, 7–9, 29–32, 60–61]; Cassin [2017, 37]; and Dolar [2013a, 24]), these terms suggest a flux and dynamism that Aristotle fixes into static ontological states with his translation of the three terms as *skhēma* (shape), *taxis* (order), and *thesis* (position) (*Metaph.* 1.4 985b15–19 < 67A6/D31). See the discussion by Mourelatos (2004).

34. Aristotle praises the atomists for proposing "that nothing happens by *tukhē*, but that there is some determinate cause (*aition*) for everything we say happens spontaneously or by chance" (*Ph.* 2.4 195b36–96a3 = A68/D76a3; cf. A36/R28), although he observes that they failed to offer an *aition* for motion (*Arist. Metaph.* 1.4 985b19–20; cf. *Metaph.* 12.6 1071b31–34 = 67A18/R37, 67A6/R38, A67/R31). For assessments of Aristotle's critique, see Balme 1941; Barnes 1982, 429–32; Hirsch 1990; and Johnson 2005, 104–12.

35. Aët. 1.26.2 < A66/D75. See also *Arist. Dem.* fr. 208 Rose (= A37/D29): atomic aggregates hold together until "some stronger necessity (*anankē*) from the environment" disperses them. That necessity can only be the impact of other atoms. Diogenes Laertius associates *anankē* closely with the

shapes of atoms, and atomic shapes are a matter of indifference—no more likely to be of one sort than another—then there is a fundamental contingency within causal necessity. This *tukhē* is not merely epistemological, the scientist's acknowledgment of the limits of his knowledge of natural causes, as Taylor suggests.³⁶ Instead, it marks a more fundamental ontological indeterminacy. Insufficient reason is not a lack of known cause, it *is* the cause. To that extent, contingency is *anankē* and the sufficient/insufficient cause of atomic motion.

By positing contingency at the primary causal level of the cosmos, the *mē mallon* principle introduces a swerve at the heart of Democritus's physics. In *The Birth of Physics*, Michel Serres draws a strong line between the early atomists and Epicurus who, Serres proposes, revolutionized atomic theory with the introduction of the *clinamen*, the swerve, the minimal difference from the rigid parallel fall of gravity without which there could be no atomic interaction and hence no generation.³⁷ For Serres the *clinamen* represents an openness and contingency within Epicurean physics that Democritus failed to grasp. Yet if, as Serres says, the *clinamen* is a minimal deviation from perpetual self-sameness—"to exist rather than," as he puts it—there could hardly be a more precise formulation of this idea than Democritus's indifference principle.³⁸ Moreover, *mē mallon* locates the *clinamen* not just within atomic motion (as in Epicurus) but within the atom itself. No more likely to be one shape than another, no more likely to *be* than what is not, the atom as *den* is intrinsically swervy.³⁹

vortex (*dinē*), which comes into being during the course of cosmogenesis and determines the subsequent direction of atomic movement (Diog. Laert. 9.45 < A1/D13, 9.33 < 671A1/D80). On the atomists' conception of necessity, see Guthrie 1965, 414–19; Edmunds 1972; Alfieri 1979, 97–120; Barnes 1984; Taylor 1999b, 188–95, 1999a, 185–89; Morel 2000, 16–37; and Johnson 2009.

36. Taylor 1999a, 187: events only appear to happen by chance when we do not know the cause. Cf. Bailey 1964, 138–43; Edmunds 1972, 353–54; and Salem (1996, 77–89), who remarks that this makes chance a "sobriquet" for necessity.

37. Serres 2018. Dolar (2013a, 16–22, 2013b, 228–33) notes the recent fad for the *clinamen* and examines its treatment by Badiou and Deleuze. The dichotomy between Democritean necessity and the freedom of the swerve is present already in Marx (2006, 112–18).

38. Serres 2018, 40. Serres does credit Democritus with understanding the mathematical principles underpinning the physics of the *clinamen* (28–30, 126–28, 130–31) and even speculates that Democritus may have developed a "fluid mechanics" in his lost works (29–30). He also notes that Democritus discovered the vortex, which is a perpetual *clinamen* (24, 25, 29, 104, 114). Schmidt (2007, 77–117) examines Epicurus's rethinking of Democritus's theory of atomic motion.

39. Serres's (2018) "to exist rather than" sheds a different light on the description of atoms as "full" (*plēres*) and void as "empty" (*kenon*) or "sparse" (*manon*). In the *Metaphysics* passage quoted at the start of this section, Aristotle offers the full and the empty as Leucippian synonyms for *to on* and *to mē on*. Recalling the homogenous plenitude of Parmenidean Being (which "is all full of being," B8.24/D8.29), this formulation figures *plēres* and *kenon* as absolutes. But full and empty are relative terms, and relative precisely to one another. This is hinted at in the second Aristotle passage quoted above, from *On Generation and Corruption*: Leucippus differentiated the atom from the void, saying that "what properly exists is entirely full" (*to gar kuriōs on pamlēres on*). The existence of nonbeing requires Leucippus to assert a being surcharged with existence: *pamlēres* is a *hapax legomenon* and *to kuriōs on* nearly so. The

Atomic physics imagines atoms combining in the void to produce the phenomena around us. The atom's positive being grants phenomena a solid, though impermanent, reality. But what is the ontology of phenomena in the physics of the *den*? Like the *den*, phenomena too stand in an indeterminate relation to form and matter. This is most manifest in the case of the so-called *eidōla*. *Eidōla* (or *deikela*, as Democritus also calls them, B123/D146) are the images of phenomena by which we perceive them. As Theophrastus explains, every object gives off an atomic efflux (*aporrhoē*) that produces an impression on the air. This shaped air, which has solidity and color, then impresses itself on the moist surface of the eye.⁴⁰ An ancient etymologist glosses the *eidōlon* as "an efflux that is similar in form to things" (*kat' eidos homoia tois pragmasin aporrhōia*, B123/D146); they are not real things but merely their formal likeness. These airy images would seem to be paradigmatically immaterial.⁴¹ But in fact *eidōla* are atomic aggregates and to that extent every bit as material as the objects that emit them. Theophrastus uses the material diction of stamping, carving, or casting (*tupoō*) to describe the process by which the image is produced in the air and says Democritus compared it to molding wax (*Sens.* 51 < A135/R57). Not just material, the *eidōla* are corporeal. Theophrastus worries about potential traffic jams of *eidōla* in the air when there are multiple objects in the same field of vision; he objects that the air would be so crowded with images (including those we ourselves emit) that we would be unable to see anything (Theophr. *Sens.* 53 < A135/R57). This suggests that *eidōla* are not merely likenesses of bodies but bodies themselves, at least corporeal enough to impede one another's path and block the viewer's line of sight.

These quasi-corporeal beings exhibit quasi-intelligence and quasi-agency, "a share of perception and impulsion," as Plutarch puts it (*Quaest. conv.* 682F < A77/D153). He explains that the *eidōla* "not only possess molded similarities of shape to the body . . . but also receive impressions of the motions and decisions of each person's soul and his habits and emotions which they carry along with them and, with these things, when they meet someone they speak like living beings and announce to those who receive them the opinions, arguments, and desires of those who sent them."⁴² Since soul atoms are part of the atomic efflux that we are always

superlative underlines the problem of the comparative, even as it seems to solve it, for if an atom can be "entirely full" it can also be less than entirely full, "sparse" or even (relatively) "empty." In the striking diction of this passage we may sense anxiety about a comparative ontology in which the difference between is and is not is a matter not of all-or-nothing but of more-or-less.

40. Theophr. *Sens.* 50 < A135/D147. Rudolph (2016, 49–52) offers a succinct synopsis of the mechanics of Democritean vision.

41. The question of whether air is matter or immaterial (a live question at this period) reiterates rather than resolves the problem of the *eidōla*'s status. Renehan (1980, 111–12) suggests that air provided a means of conceptualizing the immaterial before Plato invented the relevant technical vocabulary.

42. *Quaest. conv.* 735A–B < A77/D152. Cf. *Quaest. conv.* 682F–683A < A77/D153: the *eidōla* emitted by jealous and malicious individuals are themselves jealous and malicious and a constant torment to

shedding, it makes sense that our *eidōla* would possess psychological as well as physical qualities.⁴³ As bearers of affect, ethical traits, speech, will, and desire, the *eidōla* take on a quasi-autonomous existence, separate from the subjects who emit them: they are no more likeness than real being. By the same token, in the transitive logic of indifference, phenomena themselves (including the human subject) are no more real beings than their likenesses; they are both materially and theoretically continuous with their ghostly doubles. Moreover, if Taylor is right in supposing that the atomic efflux of different objects can merge in the air to form a joint *eidōlon* (for instance, horse atoms and man atoms combining to form the *eidōlon* of a centaur), then really existent things could produce a nonexistent thing, which nonetheless exists materially (atomically) no less than they.⁴⁴ Hovering between matter and form, something and nothing, the *eidōla* exhibit the same indifferent existence as the *den* and generalize its equivocal (non)being to phenomenal reality as a whole.⁴⁵

As Theophrastus's detailed exposition suggests, ancient commentators found *eidōla* explicable within the terms of atomic theory, and it seems likely that Democritus explained them in those terms, not in terms of the *den*. Indeed, the *den* appears manifestly in no verbatim statement of Democritus's physical theory. This is not, I think, just an effect of the lacunose state of the evidence. Nor is it, as Casin proposes, solely the result of Aristotle's determination to overwrite the weird physics of the *den* with the binarism of atoms and void. Democritus never had an explicit theory of the *den*. And how could he? As an entity that is both/neither atom and void, there is literally no space for the *den* in a physics that is all and only atoms and void ("but in reality atoms and void," B9/D14). And yet if the *den* cannot appear manifestly in Democritus's account of the cosmos, it leaves symptomatic traces in that account: in the atom's oscillation between matter and immateriality; in the contingency within atomism's causal necessities and the indifferent ontology of its phenomena. These traces let us sense, beneath or beyond the reality of atoms and void, those twin *stokheia* of a positivist physics, the latent Real of nonbeing within being. The *den* is not only a *passager clandestin* within the later exegesis of atomism; it is there from the *arkhē*.

their originals. Two testimonia suggest that these autonomous *eidōla*, or perhaps a particularly striking subset of them, are the origin of belief in the gods (B166/D154, A74/D209).

43. Cf. Taylor 1999b, 207: inasmuch as *psukhē* is the source of animacy, this also means "that *eidōla* of living things are themselves alive."

44. Taylor 1999b, 206.

45. Joly (1984) emphasizes the double nature of the *eidōla* as matter and form. The same ontological gray zone is occupied by the dead. Because life is itself atomic (based on the presence of *psukhē* atoms, A117/D140) one can be more or less alive (cf. A160/D141, 142): see Warren 2002a; Taylor 2007a. Perhaps this explains Democritus's interest in accounts of the dead coming back to life, apparently collected in his work "About Hades" (*Peri tou Haidou*). Žižek (2012, 60) associates the *den* with the living dead, nonbeings thought within the space of living beings.