

Limit and Void

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The purpose of this inquiry is to explicate the sense, unities, and points of departure of the Parmenidean “what-is-not” and the void as conceived of in Ancient Atomic Theory purported to Leucippus and Democritus, hereafter referred to as AAT. I assert that Parmenidean One can be accommodated by AAT given Parmenides relaxes his requirement the One be motionless and hold his commitment to the necessity of limit.

The Parmenidean first principles asserts that the two modes of inquiry, concerning “what-is” and “what-is-not.” Since it is useless to inquire about the “what-is-not”, all that remains is to inquire about “what-is.” And now that we cannot divide “what-is” into further components, we are left with the Parmenidean One.

Consider the features of the Parmenidean One¹:

- a) The One is Eternal
- b) The One is Indivisible
- c) The One is Motionless
- d) The One is Complete

(a), (b) and (d) seem reasonable. The denial of motion appears to function to maintain Parmenides’ commitments to the omnidirectionality² of the One and a commitment to the ultimacy of limit³ rather than a claim about the nature of motion in the world. For Parmenides, the completeness of the One is grounded in the necessity of the limit.⁴ If we can get Parmenides to agree to the that the ultimate

¹ Simplicius, *Commentary on Aristotle’s Physics* 145.1-146.25

² Simplicius, *Commentary on Aristotle’s Physics* 145.1-146.25 line 44

³ Simplicius, *Commentary on Aristotle’s Physics* 145.1-146.25 line 42

⁴ Simplicius, *Commentary on Aristotle’s Physics* 145.1-146.25 line 31

nature of the limit is infinite, which is the nature of the void,⁵ he will be in a much friendlier position to consider the void in formulating his first principles if he weren't to dispel it as mere "mortal opinion."⁶

The features and commitments of AAT are loosely characterized by the six authors of antiquity who outlined Democritus' view and rehashed as follows:

- a) All is causally determined by the movement of atoms in the void⁷
- b) Atoms are indivisible, uniform units of reality⁸
- c) Atoms have size and differ in shape, arrangement and position⁹
- d) Atoms collide and entangle with other atoms, propelled by difference¹⁰/similarity¹¹
- e) Atoms can envelop void and produce surface qualities¹²
- f) Surface qualities are not real but are perceptible in virtue of an atom's arrangement¹³

Aristotle characterizes Leucippus and Democritus both as being in agreement over the "what-is-not" [*to me on*] being empty¹⁴ and the void [*ouden*] is infinite since the finite is "what is full [and] cannot admit anything else."¹⁵ The Democritean turn is the embrace of the void, being the not-hing that consumes the "what-is". Where there is the void is therefore necessary for separation of bodies. It is not unlike the Parmenidean "what-is-not" in that it refers to a *lack of some-thing*, but the void is distinct in virtue of *being nothing but lack*. Restated, it is nothing and lacks everything. That is to say, the void *is* in virtue of its potential. In contrast, the "what-is-not" does not exist and for Parmenides,

⁵ Simplicius, *Commentary on Aristotles On the Heavens* 242.21-26

⁶ Simplicius, *Commentary on Aristotle's Physics* 145.1-146.25 line 31

⁷ Sextus Empiricus, *Against the Mathematicians* 7.138

⁸ Aëtius 1.3.18

⁹ Aristotle, *On Democritus*, quoted by Simplicius, *Commentary on Aristotle's On the Heavens* 295.1-22

¹⁰ Simplicius, *Commentary on Aristotle's On the Heavens* 242.21-26

¹¹ Diogenes Laertius, *Lives of the Philosophers* 9.31-32

¹² Diogenes Laertius, *Lives of the Philosophers* 9.31-32

¹³ Theophrastus, *Causes of Plants* 6.1.6

¹⁴ Aristotle, *Metaphysics* I.4 985b4-20

¹⁵ Aristotle, *Physics* IV.6 213a27-b22

about which nothing can be meaningfully spoke.¹⁶ The distinction between “what-is-not” and the void was slight enough that they have been used interchangeably four times¹⁷ in the fragments of Democritus’ thought but it mattered enough for Parmenides to maintain his position.

Parmenides claims that, “[I]t is full of what-is. Therefore, it is all holding together; for what is draws near to what is,”¹⁸ asserting there is a cohesive nature to the stuff of what-is. This cohesive property is echoed in AAT’s treatment of atoms and compound bodies. There is ambiguity in what grounds movement in the fragments of Democritus, of which I will call the major interpretation and the minor interpretation. The major, Aristotelian interpretation of movement portrays movement of atoms due to their dissimilarities¹⁹. The minor, Diogenesian interpretation portrays the movement of atoms in virtue of their similarities, “like to like.”²⁰ Parmenides would not accept the major interpretation as he does not admit difference “for nothing else either is or will be except what is.”²¹ He may allow a minor interpretation but not without suspending his requirement of the One to be motionless and even then he may contend that the similar atoms are not distinct in virtue of their similarity. That is to say, because of a particular relation to *fixity*. A rebuttal: that fixity is the limit of the atom, the “great bonds” of necessity that ground a commitment to completeness, fullness.

The limit occurs at the end of all direction²², where the not-hing is nowhere to be found. That is to say what does not terminate is the infinite nature of the void. The limit holds, that is, contains, that “what-is” on “all sides”²³ and so that it is “not incomplete” and “not lacking.” But if “what-is”

¹⁶ Proclus, *Commentary on Plato’s Timaeus* 1.345.18; lines 3-8

¹⁷ J. Dayley, Democritus’ Parmenidean Influence 58

¹⁸ Simplicius, *Commentary on Aristotle’s Physics* 145.1-146.25

¹⁹ Aristotle, *On Democritus*, quoted by Simplicius, *Commentary on Aristotle’s On the Heavens* 295.1-22

²⁰ Diogenes Laertius, *Lives of the Philosophers* 9.31-32

²¹ Simplicius, *Commentary on Aristotle’s Physics* 145.1-146.25 line 36

²² Simplicius, *Commentary on Aristotle’s Physics* 145.1-146.25

²³ Simplicius, *Commentary on Aristotle’s Physics* 145.1-146.25; 39.1-9 line 51-62

already contains a cohesive nature, what is the limit holding onto? What then is on the other side of “what-is?”

Positing the void was preceded by the empirical observation of movement and separation between beings. The void is necessary for movement of atoms²⁴ and change²⁵ whereas Parmenides does not permit movement or change to exist, claiming they are merely appearances of the One. The Eleatics concluded there could be no motion without void²⁶ as what-is, being completely full has nothing to expand into “as two bodies cannot coincide.”²⁷ A possible positive interpretation here is that fullness *possesses* nothing in which it expands, where of being surrounded by emptiness that it displaces. Democritus described what others could not see. I contend that the Parmenidean concept of limit can bridge Parmenides and AAT. Rudolf Siegel also holds the view that Parmenides never explicitly denied the void²⁸ and concerned himself with were less epistemological matters than ontological ones.

Considering the One was postulated in response to the eccentric theories of the Milesians, it seems like an improvement in form and content. Parmenides provides a theory that does not depend upon otherworldly forces, but his concept of the One forecloses upon movement, change, and the plurality of being. It is this cut that Democritus seeks to parry through the admission of a void as an *answer* to account for the reality of separation. The “what-is-not” is born from the negation of what-is, which is mere instance but for Parmenides and proponents of the AAT, necessity is “what-is.” In virtue of the indivisibility and completeness of the One, *what remains* of “what-is” engulfed by the void is the atom which is the One.

²⁴ Aristotle, *Physics* IV.6 213a27-b22

²⁵ Simplicius, *Commentary on Aristotle's Physics* 1318.35-1319.5

²⁶ Aristotle, *On coming-to be and Ceasing-to-be* 1.8 324b35-325a36

²⁷ Aristotle, *Physics* IV.6 213a27-b22

²⁸ R. Siegel, *Parmenides and the Void* 264-266

Proponents of AAT would be right to seek to rehabilitate Parmenides and transform his existential claim of “there is only one” to a universal disjunction, “All is either atom or void.” Aristotle characterized the void as an “interval in which there is no perceptible body”²⁹ Simplicius recalls division occurs where there is void in a body.³⁰ This is coherent with the Parmenidean One’s requirement of indivisibility. What is expelled from the atom is that what is cut off from the void, for “[t]here is no reason for the “hing” to be than the nothing.”³¹

Where the AAT and Parmenides **differ** is in their initial positions and first commitments. The AAT is pluralistic, declaring principles to be “infinite in multitude”³² and presupposes “what-is“ and “what-is-not”, positing one more kind of reality (the void) over the monistic Parmenides who asserts there is only One and denies being to “what-is-not”.

AAT and Parmenides **align** in the necessity of being. That is to say, that being could not have appeared or have actually been different than it actually appears.³³

The Atomists and the Eleatic hold that it is impossible for the many for come from one³⁴. Both see perceptible qualities as illusory. For AAT, perceptible qualities are reductions of clusters of particular arrangements of atoms that give rise to sensations that are not found in the constituent bodies but in virtue of their surface qualities³⁵.

While proponents of AAT and Parmenides do share the idea that the perceptible world is made of appearances, they differ what grounds the appearance For AAT, it is impossible for many to come from one³⁶ because separation can only occur when there is a void between bodies³⁷ which would

²⁹ Aristotle, *Physics* IV.6 213a27-b22

³⁰ Simplicius, *Commentary on Aristotle’s On the Heavens* 242.18-21

³¹ Plutarch, *Against Colotes* 1108F

³² Simplicius, *Commentary on Aristotle’s On the Heavens* 242.18-21

³³ Aëtius 1.25.4 and Simplicius, *Commentary on Aristotle’s Physics* 145.1-146.25 line 45-50

³⁴ Aristotle, *On Democritus*, quoted by Simplicius, *Commentary on Aristotle’s On the Heavens* 295.1-22

³⁵ Aristotle, *On Democritus*, quoted by Simplicius, *Commentary on Aristotle’s On the Heavens* 295.1-22

³⁶ Aristotle, *On coming-to be and Ceasing-to-be* 1.8 324b35-325a36

³⁷ Simplicius, *Commentary on Aristotle’s On the Heavens* 242.18-21

imply that the being was a plurality from the beginning. For Parmenides, he reiterates that it is impossible for many to come from one in virtue of there being *only* One, the “what-is”.

While we may not get Parmenides to admit to the existence of the void, it is possible to maintain that AAT would accept that “what-is-not” does not exist³⁸. AAT similarly could accommodate 3 of 4 of the requirements of the Parmenidean One in the concept of the atom. However, it is doubtful whether Parmenides would concede to the existence of motion given his commitment to the non-existence of the “what-is-not.” To conclude, the necessity of the limit grounds the completeness of the One and entails an infinity not contained by the One which is the void that Parmenides sought but the object of which he preferred not to speak.

³⁸ J. Dayley, Democritus' Parmenidean Influence 59

Works Cited

- Dayley, J. (2006). Democritus' Parmenidean Influence. *Aporia*, 16(2), 51-59. Retrieved from http://aporia.byu.edu/pdfs/dayley-democritus_parmenidean_influence.pdf
- Reeve, C. D. C. *et al* (2016). *Readings in Ancient Greek Philosophy - from Thales to Aristotle*. Hackett Publishing Co, Inc.
- Siegel, R. (1961). Parmenides and the Void. *Philosophy and Phenomenological Research*, 22(2), 264-266. doi:10.2307/2104850