

Anna Marmodoro. *Everything in Everything: Anaxagoras's Metaphysics.* Oxford University Press 2017. 224 pp. \$78.00 USD (Hardcover ISBN 9780190611972).

In *Everything in Everything*, Anna Marmodoro offers an interpretation of the metaphysics of Anaxagoras, and claims that his view 'has something new to contribute to potentially advance current debates in metaphysics' (10). While I recommend her book to anyone working in the field, I have some objections to her project, which I will mention below.

In Chapter One, Marmodoro introduces and expounds upon what she takes to be the fundamental elements of Anaxagoras' ontology. According to her, these are the opposites (e.g., the hot and the cold, the wet and the dry, etc.), the seeds, and nous. She largely defers her discussion of the latter two until Chapter Five, and thus spends most of her time in this chapter discussing the opposites. According to Marmodoro, Anaxagoras believes that the opposites have existed from eternity (16). He also believes, according to Marmodoro, that while they used to exist in a state of complete mixture (16), at a certain point in time they became spatially separated from each other (16), and eventually came to constitute the world of experience. In addition, Anaxagoras believes that the opposites accomplished this largely by coming to constitute stuffs (e.g., earth and flesh) (17). Thus, according to her, although Anaxagoras' opposites are spatial (16) and even physical (19), he did not regard them as being material or even as being inherent in matter (18-19). Rather, he regarded them as being properties (17-18). Moreover, according to her, since he did not regard them as being universals, they must ultimately be identified as tropes (18). One confusing aspect of Marmodoro's discussion in this chapter, however, is that, in addition to categorizing Anaxagoras' opposites as tropes, she also categorizes them as powers (31), albeit ones that do not have a merely potential state but rather always are active (37). Yet it does not seem that she would have had to go through all the trouble of attributing to Anaxagoras a power ontology (38-42) if she had claimed instead that Anaxagoras' immanent tropes, much like Plato's transcendent forms, simply possess themselves or self-exemplify.

In Chapter Two, Marmodoro discusses what she takes to be the five fundamental principles that govern Anaxagoras' metaphysics. They are:

- UE-P: 'Any opposite or combination of opposites can be extracted from any other combination of opposites' (50).
- EE-P: 'There is a share of everything in everything' (51).
- No Least-P: 'There is no lowest limit to the magnitude of the opposites' (55).
- No Largest-P: 'There is no upper limit to the magnitude of the opposites' (58).
- P-P: 'A thing is *f* if and only if the opposite *f* is preponderant in that thing's constitution (in relation to other opposites also present in the thing)' (60).

She spends much of her time in this chapter discussing how Anaxagoras uses these principles to explain how change occurs: for example, how a glass of water goes from being hot to being cold. According to Marmodoro, since Anaxagoras is a follower of Parmenides, he cannot claim that when water goes from being hot to being cold, the property of being hot simply ceases to exist and is replaced by the property of being cold, as this would violate the principle of *ex nihilo nihil fit* (48). Instead, according to her, Anaxagoras claims that when the water goes from being hot to being cold, this is explained by the fact that whereas the water used to contain more shares of the hot, it now contains more shares of the cold (69). While Marmodoro seems to have confidence that this explanatory strategy can be generalized to other cases, there seem to be counterexamples to several of the principles she attributes to Anaxagoras. For example, it does not seem that there could be anything wetter than water (and it does not seem that any water could be wetter than any other water),

in which case No Largest-P is false. But if No Largest-P is false, the falsity of EU-P and EE-P both seem to follow; for if nothing can be more wet than water, then since water does not contain any shares of the dry, no shares of that opposite can be extracted from it.

In Chapters Three and Four, Marmodoro elaborates on certain aspects of the theory of extreme mixture she attributes to Anaxagoras, and contrasts her interpretation of that theory with other interpretations prominent in the literature. One of her central claims in this chapter is that Anaxagoras' opposites are, to use the term of art in contemporary metaphysics, gunky (84-90). Indeed, according to Marmodoro, Anaxagoras' opposites are not only gunky in the sense that each instance of any opposite has two or more proper parts, but also in the sense that each instance of any opposite has two or more proper parts that are instances of the same opposite. So, for example, according to Marmodoro, Anaxagoras believes that each instance of the opposite of the wet has two or more instances of the wet as proper parts. To my mind, Marmodoro does an inadequate job of responding to or redressing the objection that there is disconfirmation at the level of sub-atomic physics of the view that the opposites are gunky in this manner.

In Chapter Five, Marmodoro discusses the seeds and nous. The former are powers for life (110) and are responsible for the structures of living organisms (147). The latter is an intelligent power (153) who generates the cosmic vortex (153). An important part of her discussion in this chapter concerns the story Anaxagoras tells about how the opposites went from a state of mixture to a state of separation. However, while it is clear on her interpretation that nous is responsible for this transition, and while it is also fairly clear on her interpretation how nous is responsible for it (136-45), it is somewhat less clear on her interpretation why nous causes the transition to begin to occur when it did (as opposed to some other time).

Finally, in Chapter Six, Marmodoro discusses the relation between Anaxagoras' metaphysics and the metaphysics of Stoicism.

By way of conclusion, I should mention that there is an issue that seems to me conspicuous by its absence in Marmodoro's work. As we have seen, she claims that Anaxagoras' metaphysics 'has something new to contribute to potentially advance current debates in metaphysics' (10). I too think that ancient metaphysical views, even pre-Socratic ones, have something to offer to contemporary debates in metaphysics. But I have often wondered what this says about metaphysics. Does the fact that some works of pre-Socratic metaphysics still have relevance to contemporary debates indicate the staying power of those ancient views? Or does it indicate that there is something retrograde, misguided, futile, or even foolish about the project of metaphysics? I would have enjoyed a fuller discussion of this matter by Marmodoro.

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