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Making Room for Matter

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Introduction

Socrates rejects material causes in the *Phaedo*, in sharp contrast to Aristotle, who gives them a fundamental role in his account of the natural world. Why do they disagree about this? It is sometimes suggested that Socrates rejects material causation because he requires causes to be rational or to be teleological.¹ You might think, then, that Aristotle can have material causes because he does not have any such requirement. In this paper I argue for a different explanation. Plato and Aristotle ultimately disagree about material causation because of a difference in their causal frameworks: Socrates thinks that each change has just one cause, whereas Aristotle thinks each change has multiple causes. Because each change only has one cause in the *Phaedo*, a cause must provide an adequate explanation of a change on its own. Socrates rejects material causes because such causes, on their own, cannot adequately explain a change. Aristotle, on the other hand, thinks each change has four causes, which are all involved in the explanation of the change. This allows matter to be a cause for Aristotle, because it only needs to provide part, not all, of the explanation.

The paper has three parts. First, I examine features common to Socrates and Aristotle's causal theories in order to frame the discussion and argue that Plato and Socrates are not talking past each other. Second, I turn to why Socrates rejects material causes in the *Phaedo*, arguing that he rejects them because they violate the requirement that the same thing cannot cause opposites. Then I argue that Socrates is committed to this causal requirement because he is committed to one cause per change. In the third part of the paper I explain how Aristotle can have a material cause by having multiple causes. I claim that Aristotle draws attention to relevant anti-Platonic features of his causal account in a *Physics* passage that has not been fully appreciated.

Before beginning, let me clarify one aspect of my thesis. I am claiming that Aristotle, by having four causes, is rejecting the *sort* of account found in the *Phaedo*, an important type that Aristotle knew well, and by rejecting it he can have a material cause in his account, which Plato cannot have in the *Phaedo*.² I am not claiming that Aristotle is targeting the *Phaedo*'s account in particular.

The general framework

One might worry that Plato and Aristotle mean different things by "cause" and so are simply talking past each other when they talk of causes. Although this worry cannot be fully addressed until the end of the paper, an important first step is to see how similar their accounts are. Doing so will also help frame their dispute about material causes.

¹ E.g., Annas 1982, Menn 2010, and Wiggins 1986.

² GC 335b10-24 makes clear that Aristotle thinks that forms are the *only* causes that Plato accepts in the *Phaedo*.

In the *Phaedo*, Socrates investigates causation in order to respond to Cebes' objection to Socrates' affinity argument. But, Socrates does not narrowly focus on a few key premises needed for this argument; he engages in a "thorough inquiry into the cause of coming-to-be and passing away" (95e9-96a1). He is explicitly concerned with natural science (*peri phuseos historia*), which he connects with an earlier intellectual tradition that we have come to think of as Greek cosmology and Greek medicine. Here is what he says natural science involves:

It seemed to me splendid to know the causes of each thing, because of what [*dia ti*] it comes to be, because of what it perishes, and because of what it is. (96a7-10)

This connection between causes and answers-to-the question "because of what?" is fundamental for Plato.³

Compare this with what we find in Aristotle's *Physics*. In *Physics* II.1 Aristotle defines nature and relates it to what his predecessors (the *phusikoi*) have been searching for. And in *Physics* II.3 he turns to the causes of natural change. He begins by explaining why we need to investigate causes:

These distinctions having been drawn [in *Physics* II.1 and II.2], we must see if we can characterize and enumerate the various sorts of cause. For since the aim of our investigation is knowledge, and we think we have knowledge of a thing only when we can answer the question about it "because of what" [*dia ti*] and that is to grasp the primary cause—it is clear that we must do this over coming-to-be, passing away, and all natural change; so that, knowing their sources, we may try to bring all particular objects of inquiry back to them. (194b16-24; modified Charlton trans.)

Aristotle's goal is acquiring knowledge of coming-to-be, passing-away, and all natural change. He wants to grasp the various sorts of cause because doing so will provide him with answers to the "because of what?" question needed to understand the natural world.

Thus, both Plato and Aristotle are working within the ancient Greek tradition of natural science, both see causes as answers to "because of what?" questions, and both think we must grasp causes to understand the natural world. Note also that for both of them a cause is what is responsible for something – in this case, change. David Sedley has emphasized that in Plato we must keep in mind that in Greek "*aiti-alon*," which is generally translated "cause," tells us what is responsible for something⁴ and Moravscik has made the same point for Aristotle's use of *aitia*.⁵ It is connected to the legal context of determining who is ultimately responsible for some crime.

Plato's account

Let us turn to why Socrates does not allow matter-like causes.⁶ After Socrates introduces us to the study of nature and describes some of initial puzzles, he describes

³ See Sedley, "Platonic Causes," 115 for further discussion of Plato's causal language.

⁴ Sedley 1998. See Frede for the possibility reasons to distinguish between *aitia* and *aition*. Sedley n 1, among others, provides reasons for skepticism about this distinction in the *Phaedo*.

⁵ Moravscik 1991.

⁶ In Plato's dialogues, the term for matter *hule*, only occurs in the sense of "matter" (as opposed to lumber) in the *Philebus*. Otherwise, it is Aristotle's term. In describing Socrates as rejecting material causes, I am

three causal theories: first, the theory he was hoping Anaxagoras would provide, in terms of *nous*, then the theory Anaxagoras actually provided, and finally the theory in terms of forms that Socrates adopts. We are interested in Socrates' criticism of the theory that Anaxagoras actually provided. It will be useful to have before us much of Socrates' criticism of the theory:

As I went on with my reading I saw that the man made no use of reason [*nous*], and did not assign any real causes for the ordering of things, but mentioned as causes air and ether and water and many other absurdities. And it seemed to me it was very much as if one should say that Socrates does with intelligence whatever he does, and then, in trying to give the causes of the particular things I do, should say first that I am now sitting here because my body is composed of bones and sinews.... and should fail to mention the real causes, which are, that the Athenians decided that it was best to condemn me, and therefore I have decided that it was best for me to sit here and that it is right for me to stay and undergo whatever penalty they order. For, by the Dog, I fancy these bones and sinews of mine would have been in Megara or Boeotia long ago, carried thither by an opinion of what was best, if I did not think it was better and nobler to endure any penalty the city may inflict rather than to escape and run away. But it is most absurd to call things of that sort causes. If anyone were to say that I could not have done what I thought proper if I had not bones and sinews and other things that I have, he would be right. But to say that I do what I do because of these things, and that I act with reason [*nous*] but not from the choice of what is best, would be an extremely careless way of talking. Whoever talks in that way is unable to make a distinction and to see that in reality the cause is one thing, and the thing without which the cause could never be a cause is quite another thing. (98b-99b; modified Fowler trans.)

Socrates would say that he is in jail because he thought this best. But the sort of scientific explanations Anaxagoras gives are analogous to saying that Socrates' bones and sinews are the cause of his being in jail. This is to confuse a cause with something necessary for the cause to be a cause, rather than the cause itself.

Why does Socrates think that the bones and sinews are a necessary condition rather than the proper cause? He is often read as claiming that true causes must involve or exhibit *nous*. I think, instead, that Socrates has neutral criteria for being a cause, which he uses to test the various options: (a) what he initially supposed were causes, (b) *nous*, (c) Anaxagorean materials, and (d) forms. He thinks (b) *nous* and (d) forms meet these criteria (the problem with *nous* is that he does not know how to implement the theory). On the other hand, he thinks that (a) what he initially took to be causes and (c) bones and sinews do not meet these criteria. In the passage above, he claims that it is absurd to call something a cause of my staying in jail if it could be present and yet I have gone to some other city. Why is this supposed to be absurd? Following Sedley, I think it is supposed to be absurd because it goes against one of Socrates' general requirements on causation in the *Phaedo*.

using the term "material" loosely. As we will see, for our purposes all that is important is that matter-like causes can be involved in opposite changes.

The causal requirement violated in this passage is that one thing cannot be the cause of opposites.⁷ This requirement applies as follows: Socrates' bones and sinews cannot be the cause of his staying in prison because they serve equally well as a cause of his leaving prison. When Socrates says that he could have long ago been in Megara or Boeotia, the point is that bones and sinews no more account for his staying in jail than for his leaving jail.

To understand why Socrates rejects material causes, we need to understand why he requires that a single thing not be the cause of opposites. The secondary literature tends to simply treat this as a ground-level fact about causation for Plato.⁸ I think it follows from his commitment to a single cause. Before I explain why we should interpret Socrates as committed to a single cause, let me explain how this commitment leads to the requirement that the same thing not cause opposites. Given his commitment to a single cause and given that a cause tells us because-of-what something happens, there will be only one thing that tells us because-of-what a given change happens. In other words, there will only be a single thing that provides the fundamental explanation of the change. A minimal requirement on a good explanation is that it not equally well explain its opposite. Thus, if you are committed to a single cause, you should not think the same thing can cause opposites.

Why interpret Socrates as committed to a single cause? The evidence is quite simple. First, Socrates frequently says he is searching for *the* cause of each thing; he uses the definite article, which strongly suggests that there is only one. It is quite natural for him to do so, since his original question "because of what?" (*dia ti;*) is phrased in the singular rather than the plural (*dia tina;*). Second, Socrates considers the different candidate causes as alternatives to each other: first considering naïve causes, then considering *nous*, next considering things like air, ether, and fire, and finally considering the forms. He does not consider the possibility of *nous*, air, and the form of sitting are all the cause of his sitting in jail. He treats them as vying for the title of being *the* cause of his sitting.

You might think that this is a simple accident of the way the discussion happened to proceed – that if Plato had been able to give an explanation in terms of *nous*, he might have also allowed forms to be causes. But at a number of points Socrates is adamant about *not* giving multiple causes for the same thing. For example, consider when he gives an account in terms of forms:

For I think that, if there is anything beautiful besides the beautiful itself, it is beautiful because of nothing other than that it shares in that beautiful, and I say so with everything. (100c5-6)

Each beautiful thing is caused to be beautiful because of *nothing other than* its sharing in beauty. There is no room for further causes of its being beautiful.

I have briefly argued that Socrates thinks that the same thing cannot cause opposites because of his commitment to a single cause. But this raises a new question: why is Socrates committed to a single cause in the *Phaedo*? Although the evidence indicates that he is, we have to be speculative about why, since he simply does not tell us.

⁷ Sedley 1998 notes this requirement, p. 121. Sedley provides the interpretation I offer here briefly, p. 122. For an example of this in action see 101a4-b2.

⁸ E.g., Sedley 1998, 121, describes it as a law of causation assumed by Plato.

The most likely explanation is that it is because of his strong commitments to unified explanations. If there were purported to be multiple causes, one wants to know why they all come together to explain something. This unifying element, then, seems to be the true cause of the change.

Aristotle's account

Let's turn to how Aristotle's account of causation is different and how this makes room for material causes. One might mistakenly think that Aristotle's four causes are four different sorts of things that he thinks can be *the* cause in a change. But immediately after describing the four causes, he says that multiple things can be causes of the same thing:

That is a rough enumeration of the things which are called causes. Since many different things are called causes, it follows that many different things can all be causes, and not by virtue of concurrence, of the same thing. Thus the art of statue-making and the bronze are both causes of a statue, and causes of it, not in so far as it is anything else, but as a statue; they are not, however, causes in the same way, but the latter is a cause as matter and the former as that from which the change proceeds. (195a3-8)

In *Physics* II.7 Aristotle emphasizes that the student of nature must know *all* four causes to understand the natural world:

Plainly, then, these are the causes and this is how many they are. They are four, and the student of nature should know about them all, and it will be his method, when stating because of what, to get back to them all: the matter, the form, the thing which effects the change, and what the thing is for. (198a21-25)

Aristotle seems to think that this is just the way things are. A number of different things are involved in a change and they are each partly responsible for why the change is what it is and happens in the way it does.

Recall that in the *Phaedo* Socrates does not think the same thing can be the cause of opposites. I suggested that this is because for him one cause must explain the change on its own. Because Aristotle thinks that each change has four causes, no single cause need do this. This opens up the possibility that something could cause one thing and its opposite – a possibility that Aristotle acknowledges. This is found in the three remarks (195a3-14) made immediately after Aristotle's introduces his four causes in *Physics* II.3. In fact, I think that all three of these sentences are meant to deny Platonic claims, although I cannot argue for that here. The first of these claims is that the same thing can have multiple causes. The second claim, not relevant to us here, is that two things can cause one another. And the third claim is this:

And again, the same thing is [a cause] of opposites. That which, being present, is the cause of so and so, this thing is sometimes, being absent, held responsible for the opposite. (195a11-13)⁹

⁹ The passage poses an interpretive difficulty because it continues, "thus the loss of the ship is set down to the absence of the steersman, whose presence would have been the cause of its being saved." The passage starts by clearly stating that the *same thing* can be a cause, and goes on to say that *that* which is present... *this* thing is held responsible when absent. However, at the end of the passage he says that the loss is set down to the *absence* of the steersman, and that the *presence* would be the cause. The absence and the presence are not one and the same thing. So he does not actually seem to illustrate the principle he lays

Here we have a direct denial of the requirement found in the *Phaedo*. In fact, Aristotle frequently tells us that the same thing is the matter for opposite changes. He connects matter to a passive *dunamis* (i.e., power, capacity) for opposites. Such matter is not directed towards a particular result; instead, it is open to different, opposing options.¹⁰

Early I pointed to similarities between Socrates and Aristotle's accounts of causation in order to suggest that they are not talking past each other. But now you might worry that they are because for Socrates a cause provides a complete explanation for something, whereas for Aristotle it only needs to be part of an explanation. I do not think we can avoid a disagreement in this way. Aristotle simply does not think that there is a single thing that provides the complete explanation for a change – multiple things must be brought in. So if Socrates simply built into the notion of a cause that it is the complete explanation for a change, then Aristotle would just reject the whole notion. Instead, Aristotle does not treat completeness as central to the notion of cause and rejects the thought that a single cause must provide a complete explanation.

Conclusion

I have explained why Aristotle can accept material causes, whereas Plato rejects them in the *Phaedo*. I have purposefully restricted myself to the *Phaedo*. In the *Philebus*, Socrates also does not allow matter-like things to be causes, instead saying that only the producer is a cause (26e). In the *Timaeus*, on the other hand, Timaeus says that auxiliary causes (συνάιτια) are a type of cause (46e). These certainly seem, at least in certain cases, to be matter-like. But rather than try to include a study of these in this paper, they are best treated as a separate topic. My goal here has simply been to shed mutual light on the *Phaedo* and the *Physics* by showing how a core commitment in the *Phaedo* makes matter-like causes impossible and how rejecting this commitment in the *Physics* makes room for matter as a cause.

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down at the beginning. But, however we resolve this, there is no reason to doubt that Aristotle holds onto the principle he states at the beginning: that the same thing can be the cause of opposites.

¹⁰ For example see *Generation and Corruption* I.1, 314b26-28.