

Monism in Aristotle's *Metaphysics* I.3–5

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THOMAS KJELLER JOHANSEN / *University of Oslo* /

Introduction

In *Metaphysics* Book I Aristotle reconstructs the early history of his subject. Scholars have often seen Parmenides as entirely opposed to earlier materialistic philosophy.¹ While Aristotle certainly acknowledges important differences between the two camps, what is more striking is the degree of continuity that he sees between Parmenides and the material monists. My main aim here is to try to explain the coupling of Parmenides and the material monists, the better to understand what he takes to be distinctive and problematic with Parmenides' monism.

A secondary aim is to make Aristotle's representation of the monists less implausible than sometimes presented. Few would probably go as far today as to say with L. Tarán that "Aristotle's testimony concerning Parmenides is of almost no positive value."² However, there seems to be a general view that Aristotle's account straightjackets the Presocratics into his own categories in ways that cast serious doubts about its historical credentials. I shan't try to defend Aristotle's general status as a historian of philosophy,

¹ Cf. e.g. Kirk, Raven, Schofield (1983: 241): "Parmenides' metaphysics and epistemology leave no room for cosmologies such as his Ionian predecessors had constructed."

² Tarán (1965: 291).

whatever that might mean, nor shall I review in any detail the actual views of the monists and adjudge Aristotle's readings. However, I do want to show that Aristotle's account in *Metaphysics* A.3–5 of both the materialists and Parmenides as monists is a good deal more cogent and plausible than has been widely acknowledged, and that, one might think, *prima facie*, raises the chances that it might also be historically correct.

First causes and principles

In *Metaphysics* I.3 Aristotle tries to find the first causes as the principles of wisdom. The point in the first instance is to identify what the possible causes are that could fit this role. He refers back to the four causes in the *Physics* and then attempts to demonstrate that there are no other causes that we need to take into account, since these are the only causes employed by previous philosophers. His survey takes us from the earliest philosophers who operated primarily with the material cause, to those like Empedocles and Anaxagoras who also invoked the efficient cause, to those who had some concept of the final cause, and others who seemed to recognize the formal cause. Parmenides and Melissus also make an appearance as representatives of monism, though Aristotle qualifies their relevance to the discussion.

The identification of the four causal principles is apparently progressive and accumulative: first the material, then also the efficient, then also the final, and at last the formal. However, the attribution to the philosophers of the four causes is not accumulative in the same way. It is not the case that those who acknowledge the causes later mentioned also necessarily knew of the prior ones. So Plato operates with the material and formal cause but makes no use of the efficient. Nor is the attribution of specific causes to specific philosophers always clear-cut. There is a point to this since, as Aristotle says:

T1 (...) these people too up to this point touched on two of the causes which we determined in the *Physics*, the matter and the cause from which the change is. However, they did so obscurely and not at all clearly, but like those untrained in battles, for those people too as they move around often strike good hits, but they do not do so from knowledge, nor do these resemble people who talk knowing what they are saying. For they clearly make almost no use of these causes beyond the slightest. (*Metaph.* I.4 985a10–18)³

Pointing obscurely and not clearly to one of the causes may be understood as pointing to too little of the cause, not having as it were the full picture. But it may also be taken as indicating too much, that is, taking in under one term both the cause in question and another cause. In any case, Aristotle is not telling us that the earlier philosophers clearly demarcated one or other of the four causes and tried to explain nature simply in terms

³ Translations of *Metaph.* I are my own, based on Primavesi's (2012).

of this cause so understood. He is saying rather that in their causal talk they hit on one or other of the causes in a way which may involve more or less of what that cause does, if we understand it in the proper Aristotelian way. Ultimately, Aristotle's own view is that none of the causes can be understood in isolation from each other, particularly so in the realm of natural philosophy with which *phusiologoi* were concerned.⁴ The material or the efficient cause cannot be understood without the formal, for example. So, Aristotle could not possibly saddle any of the philosophers with using just one of the causes understood in the proper Aristotelian manner. Rather the extent to which these philosophers 'strike a good blow' must, if Aristotle is to be consistent in his view that the causes are explanatorily related, involve also allowing for an explanatory connection with the other causes.

T2 But they were searching for these causes vaguely, and in a way all of the causes were stated, in another not at all. For the first philosophy about all things resembles someone speaking inarticulately, because it is both young and at the beginning. (*Metaph.* I.10 993a13–18)

As in *Physics* I.1's example of children who inarticulately call all men 'fathers' and all women 'mothers', the point is not that the predecessors do not manage to refer to causes, but that they do not do so by their proper function. Not all causes are material, just as not all men are fathers, and by referring to matter as the cause, they end up generalising from something playing one causal role to playing other distinct causal roles. But crucially this confusion also relies on an inadequately clear conception of the material cause, from which they generalise. Just as children if they knew what being a father really meant would not call all men fathers, so the materialists would, with a properly circumscribed material cause, not generalise about the role of matter as they do.⁵

Material monism

My focus in the following will be on the materialist philosophers and Eleatics who all appear to say that there is only one thing, that is, they are monists.

T3 Well, most of those who first philosophized thought that only the causes in the order of matter were principles of all things. For that from which all beings are and the first thing from which they come into being and the last thing into which they pass away, the substance (983b10) that persists while it changes its attributes, this they say is the element and principle of the things that are. And because of this they think nothing either comes into being or is

⁴ G. Betegh (2012: 107) hits the nail on the head: "At the end of the day, the theory of the four causes, properly speaking, turns out to be an all or nothing affair."

⁵ Cf. also Aristotle's other example in *Ph.* I.1: "A name, e.g. 'round', means vaguely a sort of whole: its definition analyses this into its particular senses."

destroyed, since this kind of nature is always preserved. Just as we do not say that Socrates either comes into being without qualification when he becomes fine or musical (983b15) or that he is destroyed when he loses these states, because the underlying thing, Socrates himself, persists, so we do not say it in any of the other cases. For it is necessary for there to be some nature, either one or more than one, from which the others come to be while it is preserved. (*Metaph.* 983b8–18)

On the basis of this passage, Daniel Graham defines material monism (MM) as follows:⁶

- I. Everything arises from and terminates back into one source or principle (*arkhê*).
- II. Everything is in essence identical to that principle, which is a single substance.
- III. There is no (unqualified) coming to be or perishing, but only alteration.
- IV. The source of all things is (a) water or (b) air or (c) fire or (d) the boundless (?) or (e) earth (?).

MM is in Graham's view the position Aristotle attributes to the *phusiologoi*, not, he thinks, the view that the *phusiologoi* actually held. I agree with Graham that MM captures Aristotle's meaning in T3, though its formulation calls for some clarification. Claim I, together with IV, says no more than that matter is a terminus from which and to which all things develop. So one might say that man goes from dust to dust but with no implication that man throughout *is* dust. II, however, adds this claim. The subject of change is not just the one matter at the beginning and end of this process, but also during the process. II with III suffers from a scope ambiguity. Is the claim that for each thing there is a single substance, its source, that it is identical with throughout? In this case the substance may be dust for man, milk for ice-cream and cotton for socks. Or is it that there is for all things a single substance, e.g. dust for all things? IV disambiguates in favour of the second reading. So material monism is strict in positing one material substance for all things.

Finally, II makes a claim not just about the identity of the single substance with anything in the cosmos, it says that the single substance is identical in essence with it. This would mean that when you define for any X what X is, you will give the definition of the single substance. For this reason also if and when anything comes to be or alters, the coming to be or alteration does not count as substantial change, because none of the attributes that define that thing will have changed or come to be. MM, then, allows for differentiation and change in the cosmos. One could imagine a substance, rather like the receptacle in Plato's *Timaeus*, taking on a wide array of forms in different regions and at different times while not changing its underlying nature. But if one asked what that thing was in its different shapes and forms the same answer would always come back:

⁶ Graham (2006: 49).

one thing, water or air or earth or some such. That is the force of Aristotle's example of Socrates. Whether he is fine having dressed up for a symposium, or has learned music, as he did towards the end of his life, he remains the same substance, Socrates.

How does MM stand in terms of the four causes? When we are referring to this view as material monism we are ascribing the role of principle to matter of one sort. But what is included or excluded in terms of the four causes by so calling the principle is not clear at all. Indeed, it is the issue at stake for Aristotle when he charges his predecessors with unclarity. As we have seen, Aristotle's analogies with fighting suggest that the predecessors are mixing up the material cause with other causes.

First of all, Aristotle is not committing his monist predecessors to just having one notion of a cause, the material cause. He is committing them to positing one cause, the matter, *as a principle*. As he said in the first of line of T3: "most of those who first philosophized thought that only the causes in the order of matter were principles of all things." So there may be other causes, but they do not have the priority that matter has as a principle, or there may be other causes that have in some sense the status of principle (*arkhê*) – all causes are after all an *arkhê* in one sense according to *Metaphysics* V.1, 1013a16–17 – but they will not be principles of all things. As we shall see, Aristotle does attribute to the monists other causal factors than just material. Rather the material monists hold that a single material substance is the *principle* of all things. All beings derive then, directly or indirectly, from the causal properties of the single material substance as their principle. As Graham's clause I. rightly puts it "Everything arises from and terminates back into one principle (*arkhê*)."

Ross summarizes T3 by saying that "most of the earliest thinkers recognized only material causes, i.e. that out of which all things are generated and into which they pass when destroyed. Because such a substratum persists, they think nothing really is generated or destroyed."⁷ Material monism does not say that all causes are material causes, but that the only cause that is a principle is a certain kind of matter. That the thesis in this way is more restricted may sometimes not be obvious from Aristotle's discussion, as it develops into a discussion of the causes that the early philosophers recognized and which we therefore need to take account of as candidates for Aristotelian *first* causes or principles. However, Aristotle reminds us sufficiently often that the material causes are discussed in the context of the claim that they are principles.⁸ Even when Aristotle's interest is directed towards the more general question of which of the four causes the predecessors recognized and finds their answers on this matter insufficiently clear, one way, indeed the central way, in which the predecessors would be unclear about the distinction between the four causes is exactly the way they deploy these causes as principles of everything there is. Their failure to unravel the application of the four causes in this basic area shows their muddleheadedness about the four causes in general. For to understand the differ-

⁷ Ross (1924: 125).

⁸ E.g. Arist. *Metaph.* 984a13, b8, 985b4, b25, 986a15.

ence between the four causes is also to see how they each can play the role of principle, of first cause, in the relevant contexts. When any of the four causes works as a principle you also see its irreducibility to the other causes, and so also its distinctness as a certain kind of cause.

Another way of putting the point about their muddleheadedness is in terms of an ambiguity in the expression 'material cause'. When we talk of matter as a cause, do we mean that there is some matter which is a cause in one or other of the recognized senses or do we mean more strictly that matter is a cause as what Aristotle would call a material cause? As we shall see, it is perfectly possible to talk about fire as a cause but not as a material cause, for example, if one wants to talk about fire heating up something in a way Aristotle would recognize as efficient causation. We can refer to the matter as the single principle without implying, implausibly, that it is always a cause as a material cause. This, I think, is also a reasonable way of taking Aristotle's claim in **T1** and **T2** that the predecessors only identify the causes in a fumbling or vague way. They hit on something that is a cause but not the respect in which it is a cause, the *qua*-bit.

Aristotle in *Metaphysics* I.3 talks repeatedly of the first philosophers identifying the cause only *en hulês eidei*, in the class of matter (*Metaph.* 983b7, 984a17, cf. 987a7). But this is ambiguous between finding the cause in the class of things that are matter, like water, and locating it in the class of material cause amongst the four causes. The distinction here is the same as the one Aristotle invokes in his discussion of the final cause: while Anaxagoras and Empedocles talk of Nous and Friendship as causes of good they do not show how they act for the sake of the good. So they do not act as final causes except by accident.⁹ Just as there is distinction between being a cause that is material and being a material cause, so there is a distinction between being a cause of something good and being a cause for the sake of something good.

This is of course not to say that Aristotle does not describe the monists' matter as a material cause. He says in **T3** that the matter is that from which all things are and which underlies the changes and affections. And one take on this is clearly as a material cause (cf. *hupokeimenon*, *Metaph.* 983a30 with *hupomenousēs*). However, one cannot say that **T3** unambiguously describes the matter in material causal terms. So when Aristotle says that the matter is underlying he refers to it not as 'matter' but as 'a subsistent substance' (*ousias hupomeinousēs*), while the claim that the matter does not undergo substantial change in the transformations but only alteration is incompatible with the general role of matter *qua* matter (unlike *qua* substance) in change. Notice also that the expression 'coming from which' could also be read as efficient causal (*Metaph.* V.24). MM is not then a restrictive claim about the matter *just* being a material cause. Its restrictiveness comes rather from

⁹ Arist. *Metaph.* 988b8–16: "For while those who speak of reason or friendship posit these causes as something good, they do not speak of any of the things that are as being or coming into being for the sake of these but rather of the changes being from these. In the same way too those who talk of the one or what is say that such nature is responsible for the substance, but not that it is or comes to be for the sake of this, so they end up somehow both saying and not saying that the good is a cause. For they speak [of it] not in a simple way but by accident."

taking a single kind of matter to be the only principle of all things, and so having to derive all other properties from this matter.

One reason for stressing the difference between principle and cause is the overall context of Aristotle's argument in *Metaphysics* I.3–10. The first two chapters have argued that the knowledge we are concerned with, wisdom, is not just knowledge of causes, or even principles broadly understood, but knowledge of first principles (*Metaph.* 982b9), which is also the most universal knowledge. The discussion of causes is subservient to this aim. Hence Aristotle begins I.3, as in T3, by pointing to causes, like matter, that have been taken as principles of all things; his description is motivated by finding a view that at least at the first blush fits his determination in I.2 of the sort of principle, first and universal, that wisdom should have as its object.

Another advantage of stressing the difference between being a material principle and being a material cause is that it makes better sense of Aristotle's presentation of the evidence of the earliest monists. So his evidence for Thales' identification of the principle with water reads like a ragbag of opinions, most of which hardly illustrate material causation. According to Aristotle, Thales believed in water as the principle of all things (*Metaph.* 983b21–27) thinking that the earth rests on water, that the nutriment of all things is moist, that the hot itself arises from the wet and that animals live by this, and that the seeds of all things have a wet nature. It makes no sense to think that water is just a material cause here, whether it is as supporting the earth or nourishing animals. Some acknowledgment of the efficient causal power of water must be assumed. But as we have seen, Aristotle is not in the business of accusing his predecessors of acknowledging only one cause. Rather he takes them as not distinguishing them clearly and making some single matter the principle of all things. Thales can take water to be the principle while also thinking that water as water can have efficient and other causal functions.

Other causes than the material

To see more clearly how the material monists, on Aristotle's story, draw on other causes let's skip to the end of Aristotle's discussion of the atomists in I.4:

T4 Just as those who make the underlying substance one generate the other things by means of its affections (*pathēmata*), when positing the rare and the dense as the principles of the affections in the same way these people too claim that their differences are the causes of the other affections. They say, meanwhile, that these differences are three: shape, order and position. For they say that being differs only by form, mutual contact, and turning. Of these, form is shape, mutual contact is order and turning is position. For A differs from N by shape, AN and NA by order, and Z from N by position. Concerning change, from where and how it belongs to the things that are, this these people too carelessly neglected, like the others. Concerning,

then, the two causes, as we are saying, it seems that the earlier inquiry went this far. (*Metaph.* 985b10–22)

Here Aristotle compares the rare and the dense in the monists – one thinks primarily of Anaximenes – with the three kinds of differences between the atoms, shape, order and position. He says that these are the differences by which the monists ‘generate the other things’. I take this to be another way of saying that, according to them, the underlying substance generates the other things. Differences such as the rare and the dense would clearly qualify as opposites, a positive attribute and its privation, according to Aristotle’s account in *Physics* I.7:

T5 Thus, clearly, from what has been said, whatever comes to be is always complex. There is, on the one hand, (a) something which comes into existence, and again (b) something which becomes that – the latter (b) in two senses, either the subject or the opposite. By the ‘opposite’ I mean the ‘unmusical’, by the ‘subject’, ‘man’, and similarly I call the absence of shape or form or order the ‘opposite’, and the bronze or stone or gold the ‘subject’. (*Ph.* I.7 190b12–17, Oxford transl.)

Aristotle himself approvingly made the identification of the monists’ differences with the contraries in *Physics* I.6:

T6 If then we accept both the former argument and this one, we must, to preserve both, assume a third somewhat as the substratum of the contraries, such as is spoken of by those who describe the All as one nature – water or fire or what is intermediate between them. What is intermediate seems preferable; for fire, earth, air, and water are already involved with pairs of contraries. There is, therefore, much to be said for those who make the underlying substance different from these four; of the rest, the next best choice is air, as presenting sensible differences in a less degree than the others; and after air, water. All, however, agree in this, that they differentiate their One by means of the contraries, such as density and rarity and more and less, which may of course be generalized, as has already been said into excess and defect. (*Ph.* I.6 189a35–b12, Oxford transl.)

Air, water, earth and fire are material substances, and as such themselves composites in some sense of form and matter, though it is notoriously difficult for Aristotle to say just what the matter of the four simple bodies is. But it is not in question that they are treated by the earlier philosophers as substances with definite natures, and so for Aristotle having distinctive forms. As to what constitutes this form the simplest answer seems to be those opposite qualities that are typical for this kind of substance, hot and dry, say, in the case of fire.

Now what makes the philosophers in question materialists is that they take this substance, *ousia* as T3 called it, which counts as matter in relation to all other things, because everything somehow comes from them, to be their only principle of being, and

not also the form of the things they give rise to, as Aristotle and Plato for example would say. However, while not making form a principle the material monists, like the atomists, are still free to use a range of formal differences in their preferred material substance to differentiate other things in the cosmos, for example, the four elements can be differentiated, as water, fire, air or earth, by their degree of density or heat.

This point makes a difference when we turn to the question whether or not the material monists engaged with efficient causes. The answer here is parallel to the answer just given about formal causes. Aristotle is not denying that the monists gave the underlying matter an efficient causal role. So in T4 he said that “those who make the underlying substance one generate the other things by means of its affections (*pathēmata*), when positing the rare and the dense as the principles of the affections in the same way these people too claim that their differences are the causes of the other affections.” To say this is clearly to assign efficient causal powers to the one substance by way of its affections. Moreover, the efficient causes are the same affections which we might consider the formal aspects of the material substance, dense and rare, hot and cold, etc. So we stand within range of Aristotelian orthodoxy: agents of change act in virtue of possessing the form which they convey to the patient. Fire heats up what is cold because it is hot. Again, however, and this is the key point, we are not going beyond the attributes that the material substances have qua fire, water, air or earth. Because the efficient attributes are just aspects of the underlying matter as such, they do not, I shall suggest, represent an efficient causal *principle*.

The failure of the first philosophers to recognise the distinction between material and efficient cause is noted in the *Generation of Animals*:

T7 So far as the regular, definite products of nature's hand are concerned, whatever a thing may be as regards its quality, the reason why each thing is of such or such a quality is not because it gets formed such while it develops; the truth is that things get formed such because they are such, for of course the process of formation takes its lead from the being, and is for the sake of that; the being does not take its lead from the process. The old physiologists, however, thought the opposite, because they did not see that the causes were numerous; they recognized only the material cause and the efficient cause (and even these they did not clearly distinguish), whereas they paid no attention to the formal cause and the final cause. (*GA* V.1 778b7–12, transl. after A.L. Peck)

Aristotle does not mean himself to deny that there are contexts in which material and efficient cause work together. Indeed, he spends much of the rest of *Generation of Animals* V using this combination of causes to explain phenomena, such as variation in eye-colour. However, before doing so he is keen to point out that in the general course of nature the formal and final cause together has priority. Being comes before becoming where nature is generally such as to bring about a certain result. Material and efficient causation may, as in the case of eye-colour, explain differences between individuals of the same species, but when it comes to the attributes that all animals of one species share,

formal and final causation take precedence. The error of the early natural philosophers was not that they did not use efficient causes, they did, but that they just used the properties of their matter as such as efficient causes. So, they ended up explaining all natural attributes from the bottom up, as if the attributes were accidents, like eye-colour.

The point, again, is that they have not grasped the formal or efficient cause as anything over and above the material cause because it is the same attributes that qualify the material substrate as such which makes for its formal and efficient causal attributes. If you ask for example what makes this tea wet, the answer will be the water in it or more precisely the wetness of the water, the opposite that characterises it as water. Here material, efficient and formal explanation are present together, but it would be hard to state just how saying that the water makes the tea wet differs when taken as a claim about the water as a material cause (the tea is wet because it is made out of water) or as an efficient cause (the wetness of the water acts on the tea to make it wet) or even as a formal causal claim (the form of the water, its characteristic wetness, enters into that of the tea). As Aristotle said in T7, they did not distinguish these causes clearly.

Discerning the efficient cause

In *Metaphysics* I.3 Aristotle explains the shortcomings of the materialist monist approach that led subsequent thinkers to introduce the efficient cause:

T8 From these considerations some might come to the view that the cause that is mentioned in the order of matter is the only one. But as they advanced in this way, the subject matter itself guided them and helped force them to continue inquiring. For if indeed all corruption and coming-into-being are from some one thing or even several things, why is this the case, that is, what is the cause? For it is certainly not the underlying itself which makes itself change. I mean, to give an example, neither the wood nor the bronze is responsible for either of them changing, and neither does the wood make a bed nor the bronze a statue, but it is something else which is responsible for the change. To search for this is to search for another principle, as we would say, the principle of the change 'from which'. (*Metaph.* 984a16–27)

Aristotle's examples of the bed and the statue are taken from the crafts. In craft, unlike in nature, the efficient cause typically lies outside the patient. So one might object that Aristotle is making his point about the distinctness of the efficient cause by reference to a case that is not appropriate to natural substances, where the efficient cause exactly would be internal. If nature is an *inner* cause of motion, as Aristotle says, one might expect the form to emerge from the matter itself. However, in at least two ways this objection misses the point. One is that Aristotle is introducing Empedocles, Anaxagoras (and Parmenides) as thinkers who were led to a notion of the efficient cause, and these all took the efficient cause to be an external mindlike entity. So historically the craft examples look appropriate. But more importantly for my purposes, the key point is not whether

the monists employed some sort of efficient cause (or formal cause), as clearly they did, but whether they had the right conception of it, and so could use it as a distinct principle to explain how other things come to be, the bed out of the wood, or the statue out of the bronze in Aristotle's examples.

A famous passage in *Physics* II.1 helps make the point:

T9 Some identify the nature or substance of a natural object with that immediate constituent of it which taken by itself is without arrangement, e.g. the wood is the 'nature' of the bed, and the bronze the 'nature' of the statue. As an indication of this Antiphon points out that if you planted a bed and the rotting wood acquired the power of sending up a shoot, it would not be a bed that would come up, but wood – which shows that the arrangement in accordance with the rules of the art is merely an accidental attribute, whereas the real nature is the other, which, further, persists continuously through the process of making.

But if the material of each of these objects has itself the same relation to something else, say bronze (or gold) to water, bones (or wood) to earth and so on, that (they say) would be their nature and essence. Consequently, some assert earth, others fire or air or water or some or all of these, to be the nature of the things that are. For whatever any one of them supposed to have this character – whether one thing or more than one thing – this or these he declared to be the whole of substance, all else being its affections, states, or dispositions. Every such thing they held to be eternal (for it could not pass into anything else), but other things to come into being and cease to be times without number. (*Ph.* 193a10–28)

Here Aristotle reconstructs the reasoning behind material monism in a way that makes it clear that while the matter has causal powers – the wood can sprout more wood – it has no ability as such to generate any of the forms, like that of a bed. In nature all the other attributes of things, gold, bones, are simply accidents of the underlying matter, and so do not constitute natures in their own right. In this it is clear that while the matter has the power to work as an efficient cause, its power is restricted to reproducing the properties it already has: the wood sprouts wood, the hot heats, the water moistens and so on. Put differently, since the nature of everything is just the material substance it is the character of *this* substance, or properties that necessarily follow from having this character, that reproduces itself in nature. Everything else is accidental.

Let's return to **T8**: 'it is certainly not the underlying itself which makes itself change. I mean, to give an example, neither the wood nor the bronze is responsible for either of them changing'. This reads then as a claim about the limitations of the material substrate as an efficient cause. From the point of view of the wood, becoming a bed would be a mere accident. There is nothing in the wood as such to generate specifically a bed. The wood will in the language of *Metaphysics* IX.7 allow the imposition of a form by a craftsman, and in that sense the wood is potentially a bed, but it is not itself such as to generate one. The fact that the efficient cause, like a craftsman, is an entity other than the elements organized clearly shows that it is a distinct causal principle. Yet what matters from the

Aristotelian viewpoint is not so much whether the efficient cause is external or not, but whether it brings with it causal attributes over and beyond just those possessed by the matter as such.

In this context, to have a proper notion of an efficient cause is then to have a notion of a cause that is such as to bring about a change in the matter so that the matter becomes something it was not already as a function of the sort of matter it is. It is in other words, to appreciate that the efficient cause can have the status of principle in addition to matter. The matter does not suffice to explain efficient causation, not because the matter as such is inert, nor because it cannot exert efficient causation, but because the attributes it can generate include only those that already characterize it as the sort of matter it is. Or as we might add, it cannot generate other attributes except *per accidens*, but this is exactly the situation that talking of a cause as a principle is supposed to rule out. If the matter were to act as an efficient causal *principle* of the various entities in the world, it would have to be *not* by accident.

On this reading, Aristotle's claim that the material monists only posited the matter as a principle is not quite as causally impoverished as it might appear. The claim of MM is that only matter is a principle because only causal properties, including formal and efficient, that can be derived from the nature of a single material substance count as causes of being for anything else in the natural world.¹⁰ In contrast, to posit a distinct efficient causal principle or a formal causal principle would be to posit causal properties that are not reducible to the properties of matter as such, which are not bestowed by matter as such but which enable its possessor to change or organize matter so that it has other properties than those that belong to it *qua* that matter. But to see the inadequacy of matter as a principle is also to concede that efficient and formal causes have distinct causal roles, which may be prior to that of matter.

An efficient cause, properly understood, has then to be a cause that can impose itself on matter. This is why Aristotle thinks it a first, albeit insufficient, step towards a clear notion of efficient causation to distinguish between two kinds of material substance:

T10 But those who make [the universe] more [than one], have more freedom to speak, such as those who make it hot and cold or fire and earth. For they treat the fire as having a moving nature, and water and earth and such things in the opposite way. (*Metaph.* I.3, 984b5–8)

The freedom comes from allowing one element to be active in relation to another. This element then can impose its attributes on the other. However, the move is inadequate insofar as it just passes the buck to the other active substance. In the case of the single substance it was hard to see how it could initiate a change given that it was already qualified by its own attributes; at least when there are two distinct elements we can see how the passive element comes to acquire attributes from without which it did not possess

¹⁰ There is of course nothing in material monism to exclude that human agency can produce other things.

before. But the range of attributes that can be acquired in such change is still limited to those that characterize the agent substance as the matter it is, and so gives no answer to how material substances can acquire other attributes or enter into more complicated arrangements.

For Aristotle the key move to understanding efficient causation is to link the efficient cause to form rather than matter. The efficient cause can only emerge as a principle, can only acquire priority as a first cause, when it is linked to form, because its role is to impose a form on matter that the matter does not already possess. So to try to carve out a notion of efficient cause based on the properties that matter already possesses is bound to fail, and *a fortiori* so when one only accepts one kind of matter. This then, to repeat, is not to say that the material monists could not conceive of matter as having efficient or formal causal attributes, only that these attributes will be derivative from the matter in a way that goes against the proper Aristotelian conception of the efficient and formal causes' priority over matter. And so efficient and formal properties of matter as such cannot rise to the status of principles.

Aristotle continues from T10 to highlight the inadequacy of the material substances as final causal principles

T11 After these people and those sorts of principles, since the principles were not sufficient to generate the nature of beings, people were again forced by the truth itself, as we put it, to pick up the search for the next principle. It is not likely that equally either fire or earth or any other of this sort of thing should be responsible for certain entities being good and fine and others coming to be so, nor is it likely that those people should have thought so. Nor again is it likely to entrust so great a matter to spontaneity and chance. (*Metaph.* 984b8–15)

Aristotle's point here lies in extension of what he has said about material principles and efficient causes. The efficient causality of a material element or elements is insufficient to generate the variety of attributes we find in natural beings. Or, to the extent that they can generate these attributes it is by accident. But what is caused by accident is not a regular feature of the natural thing. Rather like variation in human eye-colour, it is a matter of accident. Here the features Aristotle homes in on are the good and the fine. Given their regularity in nature, these cannot be accidental, but require per se causes, final causes, which material elements cannot provide. Failing to be a per se cause of the good, matter does not give us a final causal principle.

The general point, then, in all these criticisms of the material monists is the inadequacy of matter as such to play the role of a principle, as an irreducible per se cause, be it either as an efficient, formal and final cause.

Parmenidean monism

Parmenides is only dealt with in passing in *Metaphysics* I. There is nothing to compare with the extended discussion of the Eleatics in *Physics* I.3–4. Aristotle's reference back to the *Physics* rather suggests that he is content to rely on that earlier discussion.

It is striking how Aristotle in *Metaphysics* I.3 presents the Eleatic denial of change as a continuation of material monism:

T12 To search for this [the efficient cause] is to search for another principle, as we would say, the principle of the change 'from which'. Some latching on to this method right from the beginning and claiming that the underlying was one had no misgivings, but some at least of those who say that it was one, as if worsted by this inquiry, say that the one is changeless and the whole of nature is not only [changeless] with respect to coming into being and decay but also with respect to all other change. (*Metaph.* 984a25–b1)

The Eleatics here appear as a subgroup of the larger monistic clan, the other being the material monists. The impression created is that the Eleatic denial of change is a consequence of failing to find a distinct efficient cause, given the same starting point as the material monists.

It is not difficult to see a basis in Parmenides' poem for Aristotle's diagnosis:

T13 But not ever was it, nor yet will it be, since (*epei*) it is now together entire,
one, continuous; for what birth will you seek of it?
How, whence increased? From not being I shall not allow
you to say or to think: for not to be said and not to be thought
is it that it is not. And indeed what need could have aroused it
later rather than before, beginning from nothing, to grow?
(DK 28 B8.5–10, J.Palmer transl. slightly altered)

Lines 5–6 here ('it is now together entire, one, continuous') could plausibly be read as a description of the monist's single substance, including the material monist's. Taken as material, there is only ever properly one thing, water, say, and as everything is water, everything is continuous, and everything is together as water. Taking this as a premise (*epei*) we can then ask why such a thing being single and self-same should cause any change in itself at any time, sooner or later. Asking for a cause in this way, one that would explain the occasion of the change, is of course to ask in Aristotle's terms for the efficient cause. The parallel seems clear then with Aristotle's *aporia* in T8 'if indeed all corruption and coming-into-being are from some one thing or even several things, why is this the case, that is, what is the cause? For it is certainly not the underlying itself which makes itself change.' There is nothing in the one substance, be it Eleatic or Ionian (or both), that

is unable to explain efficient causation. But it falls to Parmenides to conclude that monism leads to the abolition of all change.

Later, in *Metaphysics* I.5, Aristotle again presents the Eleatics as one branch of a monism with material monism as the other:

T14 There are some who made claims about the universe as being one nature, but they did not all do so in the same manner either when it comes to how well they spoke nor when it comes to being in accordance with nature. The account concerning these people in no way fits into our current investigation of the causes. (For they were not like some of the natural philosophers who when hypothesizing being as one nevertheless generate [things] from the matter of the one, but these people speak in another manner. For while those people in addition posited change, *generating* the universe, these people say it is changeless.) Nevertheless, this much at least is appropriate to our current investigation. For Parmenides seems to touch on the one in the sense of the account (*logos*), while Melissus touches on it in the sense of matter (that is also why the first says that it is limited, but the other that it is unlimited.) (*Metaph.* 986b10–21)

Not all monists speak equally well or in accordance with nature. It is on the question of nature (*phusis*) in particular that natural philosophers (*phusiologoi*) and Eleatics differ. For the natural philosophers at least tried to generate things, while the Eleatics denied change, and so by implication did not posit causes of change or generation. The Eleatic denial of change is what makes them less relevant to our current investigation of the causes.

Nevertheless, Aristotle thinks that what Parmenides says about being ‘one in account’ is worth noting. He suggests Parmenides touches on the one in *logos* and for that reason makes everything limited.¹¹ There are two ways, at least, one can take this according to one’s reading of *logos*. *Logos* may refer to ‘reason’ or ‘reasoning’.¹² However, this does not give a natural contrast with Melissus’ ‘one in matter’, since surely he too would present his material oneness as identified through reasoning. A better contrast emerges if we take *logos* in the sense of form.¹³ However, if we specify ‘form’ it is most natural to take Aristotle’s choice of *logos* rather than *eidos*, to indicate his interest in form as what answers to the definition. Aristotle already glossed the formal cause as *logos* and essence when he introduced the four causes in I.3.¹⁴ Aristotle’s thought seems then to be that Parmenides attempted to give an essential definition of his substance as one. For Aristotle an essential definition of substance gives us the strongest kind of unity

¹¹ Taking *to pan* to be implicit subject.

¹² In that case it is natural to see a reference to Parmenides DK 28 B7.5–6: “judge by reason (*logos*) the much-disputed refutation (*elenkhos*) spoken by me.”

¹³ With Alexander of Aphrodisias, *pace* Schofield (2012: 159–160).

¹⁴ Arist. *Metaph.* 983a27–28: “one cause is the substance and the essence (*to ti ên einai*) (for the primary ‘because of what’ is brought back to the ultimate account (*logos*)).”

available.¹⁵ If, then, as a monist your concern is to show the oneness of your preferred substance, to seek to establish the oneness *in definition* of this substance is a reasonable move for Aristotle, even though your initial monism is of course misguided by Aristotle's lights.¹⁶

Oneness in definition here would correspond to the third of the three notions of 'one' that Aristotle distinguishes in his critique of Parmenides and Melissus in *Physics* I.2. This reading, that all being for Parmenides is one in definition, also fits with the focus of a large section of Aristotle's discussion in *Physics* I.3, where he discusses the implications of saying that being is one in definition. As in T14, Parmenides' position in *Ph.* I.3 is distinguished from that of Melissus. There are several arguments aimed specifically at Parmenides. One is that even if there is only one thing it will admit of different definitions, just as 'whiteness' and 'what is white' will have different definitions, even if there is only one white thing. To block this objection, Aristotle says,

T15 It is necessary for him, then, to assume not only that 'being' has the same meaning, of whatever it is predicated, but further that it means what being is (*hoper on*) and what one is (*hoper hen*). For (1) an attribute is said of some subject, so that the subject to which what is (*to on*) is attributed will not be, as it is something different from what is. So it will be something not being. Hence what being is will not belong to anything else. For it will not be possible for it to be a being, unless being means several things, in such a way that each is something. But ex hypothesi being means one thing.

If, then, what being is is not attributed to anything, but (2) other things are attributed to it, how will what being is mean what is rather than what is not? For let what being is be also white. The being of white is not the same as what being is (for it is not even possible to attribute being to it). So the white will be not being – and that not in the manner of a certain not being, but in not being entirely. Hence what being is is not being; for it is true to say that it is white, which we found to mean not being. If to avoid this we say that even white means what being is, it follows that what is has more than one meaning. (*Ph.* 186a32–b12)

Here Aristotle considers two scenarios on the assumption that being has just one meaning and is the same as what it is to be. On the first scenario, we consider being as an attribute. Then if what is is what being is, then what being is, the definition of being, does not belong to the subject as it belongs to the attribute. If it belonged to both, subject and attribute would be defined in the same way, and they would not be different, and the attribute would not be said of the subject. On the second scenario, we reverse the argu-

¹⁵ Arist. *Metaph.* V.6, 1016b1–6.

¹⁶ To say that Parmenides 'touched on' is consistent with Aristotle's general metaphor of the predecessors' fumbling, and so does not imply that his account of the oneness of being fully meets the Aristotelian criteria of an essential definition.

ment and consider the subject as what is. If so, the attribute, white is the example, is not what it is to be and so is not being. (Indeed, the first scenario has shown that we cannot attribute being to white as a predicate.) Hence if say that what is is white we are saying that being is not being, which is absurd.

The two scenarios together form a dilemma which excludes any sort of predication of attributes that are not identical with the definition of what is. Put differently, any predication will involve saying that being either as a subject or as a predicate is not in a way that attributes the opposite of being (not being entirely) to what is. The basic premise here is the identification of what is with the definition of being, which means that anything that doesn't match the definition of being, by having some other account, will not be any sort of being, any instance of what is.

Now this line of argument in *Physics* I.3 seems to be what Aristotle has in mind when in *Metaphysics* I.5 he refers back to the *Physics*:

T16 But Parmenides seems to some extent to be speaking with more insight. For as he, next to what is, views what is not as being nothing, he necessarily thinks that what is is one, and nothing else. (We have spoken more clearly about this in the *Physics*.) But being forced to follow the appearances, and taking there to be the one thing according to the account (*logos*)¹⁷ and many things in accordance with perception,¹⁸ he posits two causes and again two principles, hot and cold, as he refers to fire and earth. Of these he ranges the one [the hot] with what is and the other with what is not. (*Ph.* 986b27–987a2)

Aristotle refers back here to the ground covered in *Physics* I.3, particularly the identification of what is not what it is to be with what is nothing (not a being entirely) and the impossibility of predicating anything of what is ('what is is one and nothing else'). There is only one thing that satisfies the definition of being and whatever does not satisfy that definition is not, given the identification of what is and what is to be.

What role does the notion of 'one' play in this argument? There are at least two ways to view the matter. First, oneness can be seen as an internal demand on the definiens. Nothing particularly follows about there being one thing in the world from this requirement. So, when Aristotle himself uses the notion of 'one in definition', he clearly does not want to exclude that there are many different kinds of substance with many different definitions but each a unity. What makes Parmenides' approach different is that he takes being itself, what being is, to be the definiendum, rather than cat or dog or some

¹⁷ Clarke (2019: 179–182) argues for a 'psychological' reading of *logos* as reason here. If so, as Clarke acknowledges, *logos* is used in a different way from the 'ontological' notion of *logos* a few lines above in T14. I prefer to translate 'account' in both cases, taking Aristotle particularly to have oneness in definition in mind. This does not commit us to the 'cosmological' reading to which I think Clarke rightly objects.

¹⁸ Omitting, with Primavesi, Christ's supplement, *to on*. Clarke (2019: 182) translates "holding that the One exists *kata ton logon*, but that more things exist *kata ten aisthēsin*," while Schofield (2012: 158) offers "he makes the hypothesis that there is one thing in reason but a plurality in sensation." Schofield's reading captures better than Clarke's the contrast between the monist claim, that there is just one thing, and the pluralistic option.

other substance. Moreover, it seems that if something has being so defined, it cannot have it accidentally. This is a condition which Aristotle himself would agree with in his natural philosophy: if something has an attribute essentially nothing else has the same attribute accidentally. It follows, then, that as the definition of being is of one thing, and nothing else has being so defined, only that one thing, what is or what being is, is. The oneness of definition ensures, then, that the being that is defined is a unity in a strict sense, which nothing else can partake of, any more than non-cats for Aristotle can partake of the defining features of cat. As in the closing lines of *T15*, this impasse sets up Aristotle's own treatment later in the *Metaphysics* of being as said in many ways, that is, with no single definition.

On this analysis Aristotle cannot be taking Parmenides' monism to be the sort of predicational monism that allows for many different kinds or types of being, cat, blackbird, carp, etc.¹⁹ As being is of one kind for all beings, one in definition, we cannot have different attributes in the account of what it is for different kinds of being. Still the analysis may be said to leave open a pluralism of essentially identical tokens of being. Some have of course seen atomism as exactly such a theory, consistent at least in intention with Parmenides' position.²⁰ However, Aristotle's presentation of Parmenides' position does not obviously leave room for any accidental differences between tokens of being either. As we saw the argument of *Ph.* I.3 also seemed to exclude accidental predicates, e.g. white, as involving the ascription of not being. Aristotle's Parmenides seems, then, to be both a predicational and numerical monist.²¹

On this reading, the import of the claim that Parmenides is 'forced' by appearances to posit two causes and principles is to contrast the appearance with what must hold true essentially of what is, that it is one and changeless. What perception forces upon us is at odds with the rational truth of the world. The cosmology of the Way of Doxa cannot then be properly rational, though that does not preclude that Parmenides might try to rationalize appearances, make them as far possible like what is.²² On those terms, Parmenides might still single out the hot as more like being and the cold like what is not.

To return to the key theme of this paper, the relationship between material monism and Eleatic monism. As we have seen, Aristotle sees Parmenides' position as a monist alternative to material monism. Both positions face the challenge of efficient causation: how one substance can generate out of itself all other entities in the cosmos. The materialist monists take up the challenge and try to account for non-substantial change through the properties of the one matter. Parmenides defies the challenge: by defining all being as the same he denies the being of non-substantial attributes, and so the cogency also of non-substantial change.

¹⁹ Though Curd (2004) rejects numerical monism as an interpretation of Parmenides, I am indebted to her lucid argumentation in favour of predicational monism. An interpretation of Parmenides is of course not the same as an interpretation of Aristotle's interpretation of Parmenides, of the sort I am engaged in here.

²⁰ For discussion see Graham (2006: 256).

²¹ Cf. also Arist. *Metaph.* III.4, 1001a31–b3. Clarke (2019: 19–57) argues forcefully that *Ph.* I.2–3 shows Aristotle's Parmenides to be a numerical monist.

²² For this sort of reading of Parmenides, see Johansen (2016).

Parmenides as a 'formal monist'

If we view the relationship between Parmenides and his monist predecessors in the way I have suggested Aristotle sees it, Parmenides' position serves as a partial correction of material monism. His reply to the *phusiologoi* is of the sort: you were right to insist that there is only one substance, and that there is no change with respect to that substance, but if you try properly to define that one substance you will find that it has no accidental attributes, and that no change is therefore possible either in substantial or non-substantial attributes. It is a certain vision of what is involved in defining being that motivates Parmenides' correction. This vision is in itself neutral as to which entity one postulates as one's single substance. For Parmenides' strictures on what is are what we might call formal constraints. In principle, any material (or immaterial) substance could be the one being as long it meets the definitional criteria. So,

for any X, if X is, X is one, changeless, limited etc.

where X could in principle be any entity: water, air, *apeiron*, fire or whatnot.

If, for a moment, we return to Graham's account of material monism we can now see the differences from and similarities with Parmenides' position:

- I. Everything arises from and terminates back into one source or principle (*arkhê*).
- II. Everything is in essence identical to that principle, which is a single substance.
- III. There is no (unqualified) coming to be or perishing, but only alteration.
- IV. The principle of all things is (a) water or (b) air or (c) fire or (d) the boundless (?) or (e) earth (?).

Parmenides agrees with II, and disagrees with I and III, as he denies the possibility of any change, including alteration. As for IV he is non-committal in the sense that he would allow *in principle* for any of these materials to satisfy the definition of being, if it satisfies the formal criteria, which is of course far from saying that any particular one of them will do so. The key Aristotelian thought is, then, that Parmenides' strictures on what is are formal, definitional strictures. One might, to coin a phrase, call Parmenides' position 'formal monism'.

In terms of philosophical progress, as Aristotle sees it in *Metaphysics* I, Parmenides' step is in the right direction. It is a move towards the priority of form, of what corresponds to the definition, over matter. If his argument had been liberated from the mistake of taking being to be said only in one way and of one thing, it would have opened up not only for an Aristotelian vista of a world with many kinds of substance enjoying different kinds of being, but also for a world where form could take priority over matter. Insofar as this is also the move that would liberate the efficient cause to play its determining role in relation to matter, there would be a path here also to a proper conception of the effi-

cient cause. The materialist monist starting out along the same monist path ends up in a different cul-de-sac, by postulating only one underlying material principle all formal and efficient causation, beyond that following from this principle, becomes accidental.

Formal monism in the text of Parmenides?

Now it is obviously one thing to interpret Aristotle's reading of Parmenides, another to defend this interpretation as a reading of Parmenides' poem. My aim in this paper has been the first. However, it may be worth indicating where Aristotle's reading could gain traction as a reading of Parmenides' text. I have already suggested that Aristotle's impression that Parmenides' denies efficient causation could derive from B8.5–10. Let me add to this now that what I have called 'formal monism' might also seem supported by B8, where it sets out the markers or 'signposts' of being.²³

A summary (with the relevant line numbers in brackets) of these markers reads as follows:

What is, is
 single in kind (*mounogenes*, 4);²⁴
 altogether, one (*hen*), continuous (5–6);
 ungenerated, imperishable (3, 6–21);
 whole, unperturbed, complete (4, 38);
 it never was, will be, but is now (5);
 it is indivisible, all alike, and continuous (22–25, 45);
 changeless, motionless (26, 38);
 steadfast, limited by Necessity (30);
 has nothing else next to it (36);
 is complete and equal from every direction, like a well-rounded sphere (DK 28 B.8, 42–44, 49)

The signposts set out 'formal requirements', as Schofield puts it,²⁵ for any object of thinking. As the Goddess says, the same thing is there for being and thinking (*noein*).

²³ Cf. Alexander Mourelatos' insightful comment: "In an important sense Parmenides does not attempt to answer the speculative cosmological question directly; he does not take still one more guess about the nature or reality of things. He transposes the question to the critical or reflective level: What exactly is it for something to be the nature or reality of things? (...) The question »What is it?« has become itself the subject of a study that is essentially methodological or conceptual." (Mourelatos 2008: 134).

²⁴ For this understanding see Curd (2004: 71–73). She also makes the connection with Aristotle: "In the *Metaphysics*, at I.5 (986b18–20 = DK 28 A 24), Aristotle contrasts Parmenides and Melissus, noting that while Melissus was concerned with what is one in matter (*kata tēn hulēn*), Parmenides »seems to fasten on what is one in account (or: definition)« (...) This unity of definition or account is just what we meet with in lines B8.22–25, and is just what we might expect in lines corresponding to the preliminary announcement that what-is is *mounogenes*" (Curd 2004: 82–83).

²⁵ Kirk, Raven, Schofield 1983: 249.

The Aristotelian take on this would be to read what is in the strictest sense, as the being or essence of something, and *noein* correspondingly as thinking about essences, what Aristotle himself would call *nous*. The markers are the formal characteristics of what is, the essence, insofar as it answers to the definition of what it is to be. So, to give one illustration, when Aristotle said in **T14** that what is is 'limited', this might correspond in B8 to the *peras* that necessarily constrains what is (30). The limiting would then on Aristotle's reading being a definitional one: the definiendum necessarily having the attribute specified in the definiens. For what the definiendum is essentially, it also is necessarily. The changelessness and eternity of what is follow from the universal truth and necessity of the definition. Other criteria would be read similarly: being single in kind refers to the simplicity of the characteristic defined, what is as such. Further as what is has nothing else next to it: as what is is one and the same as what it is to be there is no being except what is. As we saw, it was the identification of being with what is that seemed to ensure numerical monism. Being whole and complete might mean that nothing is missing from the thing as defined. Again, on Aristotle's reading this makes sense: there are no degrees of substance;²⁶ what something is essentially it is completely. Accidental attributes might qualify different parts of an entity, but all essential attributes are possessed equally throughout the being that has them. Or as one might say, using Parmenides' spatial image, its being is complete and equal from every direction, "like a well-rounded sphere" (49).²⁷

To consider whether Aristotle's account makes sense of the detail of Parmenides' text would be an exercise for another occasion. But I hope that these closing remarks have shown that Aristotle's reading of Parmenides is not unfounded and may even have some 'positive value'.

²⁶ Arist. *Cat.* 3b34–4a9.

²⁷ For the image, see Mourelatos (2008: 124–130) and Curd (2004: 94).

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THOMAS KJELLER JOHANSEN

/ University of Oslo, Norway /
t.k.johansen@ifikk.uio.no

Monism in Aristotle’s *Metaphysics* I.3–5

Scholars have often seen Parmenides as entirely opposed to earlier materialistic philosophy. In this paper I argue that what is more striking in Aristotle’s *Metaphysics* Book I is the degree of continuity that he sees between Parmenides and the material monists. I explore this coupling of Parmenides with the material monists to understand better what he takes to be distinctive and problematic with Parmenides’ monism.

KEY WORDS

Parmenides, Aristotle, monism, materialism, causes