

The Four Causes

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Introduction

Causes and Because

Aristotle says that in order to really understand a thing, we need to understand its αἰτία, and he distinguishes between four kinds of αἰτία. This term, αἰτία, is usually translated as “cause.” However, not all of Aristotle’s four αἰτίαι are causes in the modern sense of this word. Perhaps none of them are. There are no English words that are a direct translation, but if one uses “cause,” some explanation should be added as to what it is supposed to mean in this context. A common way of doing so is to give an example like the following.

Take an artifact, such as a silver cup. The material cause of the cup is the silver it is made of. Its formal cause is the shape into which the silver was brought when the cup was made. The efficient cause of the cup is the person who made it (or, perhaps, the capacity of making it). Its final cause is the purpose for which it was made, which is presumably the purpose that its maker had in mind.¹

This way of explaining Aristotle’s four causes is misleading in several respects (Sprague 1968). To begin with, it explains all of the causes by using a single example, which Aristotle never does, and this single example is in most cases an artifact, such as a silver cup, a statue, or a house. Although Aristotle refers to artifacts in many of his examples, they are not the main targets of his distinction of causes. His four causes are primarily causes of natural things, and natural things differ from artifacts in precisely the respects that are highlighted in the cup example. When natural things come into being, they are not created with a purpose in mind, and not by shaping a

¹ See the similar account given by Heidegger in *Die Frage nach der Technik*, Gesamtausgabe 7, p. 10-11.

given portion of independently identifiable matter. Rather, they grow by themselves, by taking in and exchanging matter, so that both their matter and their form undergo considerable change during their development. This makes it difficult to apply the distinctions, as drawn in the cup example, to natural things. Given that many natural things were never made out of a given portion of matter, it is more difficult to distinguish their form from their matter than it is in the case of a silver cup. Further, Aristotle writes that the formal and the final cause of a living being are the same (e.g. *Physics* II 7, 198a24-25). Again, it would be odd to say this of the shape and the purpose of a cup.

Vlastos suggests that we understand Aristotle's distinction of four causes better when we translate "X is the αἰτία of Y" as "Y happened, or happens, or is the case, because of X" (1969, p. 293-4). Accordingly, Hocutt refers to them as the four "becausees" and claims that for Aristotle, causes are explanations (1974, p. 388). This leads us far away from the cup example. For instance, if Aristotle's causes were explanations, silver could not be one of them. Silver is not a kind of explanation.

Some think that what is wrong with Hocutt's proposal is that Aristotle's causes are real phenomena in the world, whereas explanations and their parts are only bits of language (Mure 1975; Furley 1996, p. 60). However, if this were the only problem, it could be easily avoided. Any explanation must state facts and refer to things, and we can easily switch back and forth between explanation and their parts on the one hand, and the facts and things they refer to on the other (Johnson 2005, p. 41). Still, the silver does not cause the cup, any more than "silver" explains "cup." Likewise, many reasons against identifying the material cause of the cup with the explanation, "because it is made of silver," are also good reasons against identifying it with the fact to which this explanation refers.

The intuition that Aristotle's causes provide explanations is often expressed by saying that they correspond to answers to Why-questions (van Fraassen 1980a, p. 24; Irwin 1988, p. 94; Hübner 2001, p. 378). Indeed, Aristotle seems to introduce them in this way:

For since our undertaking is for the sake of understanding, and we do not believe that we know each thing before we can grasp the “why” [τὸ διὰ τί] of it (this is to grasp its first cause), it is clear that this must be done by us with regard to coming to be and destruction and all natural change, whence, knowing the principles of these, we may try to reduce each one of the things sought to these [principles]. (Physics II 3, 194b17-23, tr. Coughlin, modified)

Aristotle seems to say that to know the cause of something is to grasp the “why” of it. Now if Aristotle’s causes were answers to Why-questions, it would be obscure why there should be exactly four kinds of them. It is of course easy to come up with a set of questions that match the cup example:

Why is this cup shiny? — Because it is made out of silver.

Why does the cup not fit in the drawer? — Because of its shape.

Why does this cup exist? — Because someone made it.

Why is this cup on the table? — Because this makes the room look nicer.

This list of questions, however, is rather ad hoc. One might easily go on asking Why-questions about the cup, and not all of these questions would clearly correspond to one of the Aristotelian causes. Why is it made out of silver? Why is it so expensive? Why don’t we get another one of these? As Falcon notes, “not all why-questions are requests for an explanation that identifies a cause, let alone a cause in the particular sense envisioned by Aristotle” (2008, section 2). Taken as a classification of Why-questions, Aristotle’s scheme is thus at best an “oversimplification” (van Fraassen 1980b, p. 131).

On the other hand, the four Why-questions above are not as easily kept apart as one would like, so that there might well be fewer than four general kinds of them. On a more general level, Why-questions seem to divide into two rather than four kinds:

requests for reasons for acting, and requests for causal explanations in the modern sense of “cause.” For instance, a satisfactory explanation of why the cup is shiny seems to be that its surface reflects light easily, and this looks like the beginning of an explanation in terms of efficient causes. Further, such causal explanations might still be more fundamental than explanations that cite reasons for acting, so that all kinds of answers to Why-questions might ultimately reduce to one. A good explanation why the cup is on the table might be that someone had a certain desire, which (efficiently) caused that person to put it there. Seen in this way, all causes seem to boil down to efficient causes (cf. Irwin 1980, p. 96; Freeland 1991, p. 50; Furley 1996, p. 62).²

Thus the suggestions that causes are answers to Why-questions does not help to preserve the variety of Aristotelian causes. On a very general level, answers to Why-questions seem to divide into fewer than four kinds, and on a less general level, there seem to be more than four kinds of them. This is also the main problem with Hocutt’s suggestion that causes are explanations. There are not exactly four kinds of explanation, nor are there exactly four kinds of real phenomena to which explanations refer. Consider, again, the material cause. If causes were explanations, the material cause would have to be a special kind of explanation, which would presumably explain something on the basis of facts about some matter. However, the idea that such explanations constitute their own kind is in at least as bad a position as the idea that any syllogism that refers to an action is a practical syllogism. As Anscombe writes,

... one might easily wonder why no one has ever pointed out the mince pie syllogism: the peculiarity of this would be that it was about mince pies, and an

² There may be further kinds of answers to Why-questions that do not reduce to efficiently causal explanations, such as mathematical explanations. However, even if these should be the same as explanations in terms of formal causes (cf. *Physics* II 7, 198a17), the argument above still shows that it is difficult to distinguish between explanations in terms of material, efficient, and final causes.

example would be ‘All mince pies have suet in them—this is a mince pie—therefore etc.’ (1957, §33).

Anscombe’s point is that there are no good reasons for distinguishing kinds of reasoning only by their subject matter. If practical reasoning is to be taken seriously as a special kind of reasoning, it must be special in virtue of its logical form. This point need not apply to all kinds of explanatory reasoning. One might, for instance, define mathematical reasoning as reasoning about mathematical objects, and thus distinguish it from other kinds of reasoning in terms of its subject matter. However, it does not seem as appropriate to distinguish material from formal or efficient explanations by saying that the former refer to matter, whereas the latter refer to forms or efficient causes. Here, the subject matter is not sufficiently different. For instance, a material explanation of why the cup is shiny is not clearly distinct from formal and (efficiently) causal explanation of the same: It is shiny because of its matter, because of the form of its surface, and because it reflects light. Therefore, if any explanation that refers to matter were a material cause, one might easily wonder why no one has ever imagined a mince pie cause. This would be an explanation that refers to mince pies. If causes were explanations, it would be difficult to see why there should be four of them. There seem to be no formal differences between them.

Perhaps we should not suppose, then, that Aristotle’s causes are explanations or answers to Why-questions. And indeed, Aristotle only says that they are answers to the question διὰ τί, and this question is more general than our question “Why?” It asks for an account (λόγος, *Metaphysics* A 3, 983a28), but one may also give an account of what a thing is, or how it is structured, and this is not to explain why it exists and why it is structured in this way. The question διὰ τί asks on account of what, in what capacity, or in virtue of what something is such and such, and asking “Why?” is only one way of asking this. Other ways of asking διὰ τί are: How did this

happen? Who did this? What's the point? What does it take to be this kind of thing?³

For instance, the questions “By virtue of what are these bricks a house?” and “Why are these bricks a house?” are not equivalent. The bricks are a house because someone arranged them in a certain way, so that they provide shelter. These are the efficient and final cause of the house. Now one might as well say that the bricks are a house in virtue of having been used to build one, or in virtue of providing shelter. But the phrase “in virtue of” also has a different sense, in which it does not answer a Why-question. For instance, that in virtue of which the bricks are a house may be taken to be the way in which they are arranged, and to say in what way the bricks are arranged is not to say why they are a house. The question to which it is an answer is not “Why are these bricks arranged so that they constitute a house?” but “How are they arranged so that they constitute a house?”

Also, to ask “Who did this?” is not the same as asking “Why was this done?” The latter question asks for an explanation, the former merely concerns the attribution of an action to an agent. When we say that Polycleitus made a statue, we do not actually say why the statue was made; all we say is who made it. That Polycleitus made the statue also means that one may find out why it was made by asking Polycleitus. Polycleitus is responsible, he should be able to give an answer to the question “Why?” In this sense, he may also be said to provide an explanation. Still, to say who did it is not to say why it was done.

Aristotle's four αἰτίαι are not causes in the modern sense of the word “cause,” in the same way in which his question διὰ τί is not our question “Why?” In order to understand what they are, and why there are four of them, we need to understand what the question διὰ τί means, and why there are four ways of answering it. Since διὰ τί does not always mean “why,” we cannot understand the four ways of answering it by investigating Why-questions and their answers. When Aristotle says that the silver is a cause of the cup (194b25), he does not say that silver is the cause for the cup's being

³ Charlton translates the διὰ τί in 194b19 as “on account of what,” Wicksteed (in the Loeb edition) as: “how and why.”

shiny, nor does he say that the fact that silver has been shaped explains the existence of the cup. He simply relates the cup to the silver as one of its causes, and this is not the kind of explanatory relation that would hold between a fact and the explanation why it is so.

Frede points out that Greek philosophers generally distinguish between the αἴτιον of a phenomenon, which is something that is responsible for it, and its αἰτία, which is an account or explanation of why and how an αἴτιον is responsible for this phenomenon. He also notes that Aristotle does not observe this distinction (1987, p. 129-30). Had Aristotle done so, he would probably have consistently used the term αἴτιον rather than αἰτία for his causes (as he does in *Physics* II 3, 194b24). They are not kinds of explanations or answers to Why-questions. Rather, they correspond to four ways in which one should look at things in order to understand them, and eventually be able to answer Why-questions about them. Just as we may ask Polycleitus in order to find out why and how the statue was made, we may investigate certain aspects of natural phenomena (ask them, as it were) in order to find out why and how they come about.⁴

When Aristotle says that in order to really understand a thing we need to ask four kinds of question about it, he says that we may find answers to Why-questions about this thing by asking four questions that are not Why-questions. These other questions are questions like the following:

What is this made of?

What does it take to be this kind of thing?

What made this happen?

What is this for?

⁴ In the sense in which Heidegger says that the question of what nature is must address the movedness of natural things (“bei der Bewegtheit dieses Seienden anfragen,” *Vom Wesen und Begriff der Φύσις*, Gesamtausgabe 9, p. 245).

It is, of course, still not obvious why there should be exactly four kinds of What-questions, any more than it is obvious why there should be four kinds of Why-questions. All we have achieved by turning from Why-questions to What-questions is to direct our attention away from “because” and explanations. In doing so, we have also turned back towards the cup example and its flaws. We still do not see why there should be exactly four kinds of Aristotelian causes, and what each of them is. Showing this is the aim of the present book.