

Revision Notes: I talked with Dr. Haas about my first paper, and he agreed with your suggestion of abandoning the dialog form and instead writing a straightforward essay, because the dialog wasn't essential to the discussion. I decided to focus on Aristotle's Four Causes, and it seemed a little artificial and unnecessary to include references to Alice or Candide.

Aristotle's Four Causes

Today, understanding Aristotle's doctrine of the Four Causes requires some effort, because our modern notion of "cause" differs from Aristotle's. By giving a careful account of the Four Causes and explaining the relationship among them, we can appreciate Aristotle's thinking despite our modernity.

First of all, we need to clarify what Aristotle means by "cause", because it is not what we mean by "cause". In its modern usage, a cause is an event, which brings about other events, which we call its effects. For Aristotle, CAUSE has a broader meaning, as it is applicable not only to events but to almost anything. In the Aristotelian sense, a CAUSE is an explanatory factor: it is what we answer when asked a "why" question.

The Four Causes, then, classify the ways we can answer a "why" question about a thing. With his doctrine, Aristotle disambiguates the senses of CAUSE and distinguishes four kinds:

- (1) *Material* CAUSE ("that out of which a thing comes to be and which persists"¹),
- (2) *Formal* CAUSE ("the statement of essence"),
- (3) *Efficient* CAUSE ("the primary source of the change"),
- (4) *Final* CAUSE (the end or 'that for the sake of which' a thing is done").

¹ Aristotle. *Physics*. Translated by Robin Waterfield, and edited by David Bostock. New York: Oxford University Press, 1999. (Selections)

The *material* and *formal* CAUSES explain how something is and the *efficient* and *final* CAUSES explain how something becomes. For example, the *material* CAUSE of a statue is its bronze, the *formal* CAUSE is its shape, the *efficient* CAUSE is its sculptor, and the *final* CAUSE is the goal the sculptor had in mind.

Aristotle intended the Four Causes to apply not only to artifacts but also to natural objects. In the case of an artifact, the *efficient* CAUSE is the artisan and the *final* CAUSE is the artisan's purpose. In the case of Nature, the analogy with artifacts seems problematic: is the *efficient* CAUSE God and the *final* CAUSE God's purpose? Aristotle doesn't say so. To motivate the need for the *final* CAUSE in Nature, Aristotle uses the example of how teeth grows, rejecting that it can happen by chance, because it "invariably or normally comes about in a given way; but of not one of the results of chance or spontaneity is this true."² An attribute of a thing cannot just be a coincidence if it happens regularly. The *final* CAUSE explains the regularity of the connection. For a natural object, the final cause is what lies at the end of its development process. In this sense, the *final* CAUSE of a child is a man.

A CAUSE can often range more than one of the four Aristotelian senses at once; in natural objects in particular, the *final*, *formal* and *efficient* CAUSES coincide. The *final* CAUSE is the form the natural object will ultimately achieve, and so the *final* CAUSE is the same as the *formal* CAUSE. For Aristotle, the *efficient* CAUSE of a child is the father, and so the *efficient* CAUSE is the same as the *final* CAUSE. For example, a man is a CAUSE of a man, in the *final*, *formal* and *efficient* senses. Though it seems circular and vacuous to say, "an X is for the sake of an X", where X is a natural

² Aristotle. *Physics*. Translated by Robin Waterfield, and edited by David Bostock. New York: Oxford University Press, 1999. (Selections)

object, it isn't, because we gain a key insight: reproduction. Indeed, the coincidence of these three CAUSES in a natural object tells us that this object undergoes a development process that will lead to another object of the same kind.

For Aristotle's contemporaries, the doctrine of the Four Causes divides a known term (CAUSE) into sub-terms (*material, formal, efficient and final* CAUSES), pointing out insightful nuances.

More than two millennia later, his doctrine actually teaches us this new term (CAUSE in the sense of explanatory factor), stimulating an analysis of "why" questions. We can learn from both these circumstances: the first teaches us to open up a complex idea by combining simpler ones, the second, to define a word to abstract a common pattern. These teachings are invaluable in understanding the world.

"The acts of the mind, wherein it exerts its power over simple ideas, are chiefly these three:

- 1. Combining several simple ideas into one compound one, and thus all complex ideas are made.*
- 2. The second is bringing two ideas, whether simple or complex, together, and setting them by one another so as to take a view of them at once, without uniting them into one, by which it gets all its ideas of relations.*
- 3. The third is separating them from all other ideas that accompany them in their real existence: this is called abstraction, and thus all its general ideas are made."*³

Acknowledgments

The lecture notes of Professor S. Marc Cohen of the University of Washington influenced my understanding of Aristotle's Four Causes.

³ Locke, John. *An Essay Concerning Human Understanding*. 1690. (Book II, Chapter XII).