

Lecture 13

Aristotle on Change

Patrick Maher

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Introduction

- This lecture discusses parts of Aristotle's book *Physics*.
- The word "physics" come from Greek "phusis," which means nature. So Aristotle's book is about nature in general.
- Aristotle begins (book I ch. 1) by saying that scientific knowledge requires knowing the principles of a subject. So in the science of nature, our first task is to determine the principles.
- The whole book is really about determining what are the principles governing nature.
- Today we look at his account of change.

Change is from contraries or intermediates (*Physics I 5*)

- *White comes from not-white—and not from any not-white, but from black or some intermediate. Similarly, musical comes to be from non-musical, but not from any thing other than musical, but from unmusical or any intermediate state there may be. [188b1]*
- *Nor again do things pass away into the first chance thing; white does not pass into musical (except, it may be, accidentally), but into not-white—and not into any chance thing which is not white, but into black or an intermediate; musical passes into not-musical—and not into any chance thing other than musical, but into unmusical or any intermediate state there may be. [188b4]*
- *If then this is true, everything that comes to be or passes away comes from, or passes into, its contrary or an intermediate state. [188b21]*

General model of change (*Physics* I 7)

- In any change, there is a subject that persists through the change and there are two contraries.
- The subject has one contrary before the change and another contrary afterwards. (One of these contraries may be replaced by an intermediate.)
- E.g., if a man comes to be musical:
 - The man persists through the change.
 - The contraries are “musical” and “unmusical.”
 - Before the change the man was unmusical or an intermediate; afterwards he is musical.

The problem

- Substances (for Aristotle) are things that exist in their own right, not as properties of something else.
 - A man, a statue, and a house are substances.
 - Black, white, musical, unmusical, are not substances.
- Substances come into existence and go out of existence.
- How can this fit Aristotle's general model of change?

Aristotle's solution

- Substances consist of matter and form. E.g., a man is matter with a certain form.
- When a substance is created, matter that was unformed becomes formed. E.g.:
 - unformed bronze → bronze in form of a statue
 - unformed matter → matter in form of a man

When it is destroyed, formed matter becomes unformed.

- *Whatever comes to be is always complex. There is, on the one hand, something which comes to be, and again something which becomes that—the latter 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. [190b11]*

Parmenides' argument

The first of those who studied philosophy were misled in their search for truth and the nature of things by their inexperience, which as it were thrust them into another path. So they say that none of the things that are either comes to be or passes out of existence, because what comes to be must do so either from what is or from what is not, both of which are impossible. For what is cannot come to be (because it is already), and from what is not nothing could have come to be (because something must be underlying). [191a25]

Aristotle's response (free restatement by me)

- To say something comes “from what is” is ambiguous. It might mean:
 - (a) It comes from what already is what it will become.
 - (b) It comes from something that exists.
- To say something comes “from what is not” might mean:
 - (a) It comes from nothing.
 - (b) It comes from something that isn't yet what it will become.
- In the (a) senses, things can't come to be either from what is or from what is not.
- In the (b) senses, things come to be *both* from what is *and* from what is not.
- Parmenides went astray by confusing the (a) and (b) senses.

- 1 (a) If something comes to be hot, what was it before? (b) If something ceases to be hot, what was it before and what does it become?
- 2 What happens in any change, according to Aristotle? Illustrate your answer with an example.
- 3 What does Aristotle mean by a “substance”? How does Aristotle accommodate the creation and destruction of substances in his general model of change?
- 4 How did Parmenides argue that nothing can come to be? What was Aristotle’s response to Parmenides’ argument?



Jonathan Barnes, editor.

The Complete Works of Aristotle.

Princeton University Press, 1984.

[Online in Past Masters.](#)

Numbers in brackets are standard page numbers given in many editions of Aristotle.