

# Lecture 14

## Aristotle on Nature and Causes

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## Natural things

*Of things that exist, some exist by nature, some from other causes. By nature the animals and their parts exist, and the plants and the simple bodies (earth, fire, air, water)—for we say that these and the like exist by nature. All the things mentioned plainly differ from things which are not constituted by nature. For each of them has within itself a principle of motion and of stationariness (in respect of place, or of growth and decrease, or by way of alteration). [192b9]*

- “Motion” here is any change; “stationariness” is lack of change. There are 3 kinds:
  - *Change in place* (e.g., earth falls, fire rises)
  - *Growth and decrease* (e.g., a seedling grows into a tree)
  - *Alteration* (e.g., a caterpillar turns into a butterfly)
- In all these cases the cause of the change (the “principle of motion”) is within the thing, not external. Natural things are things that have such a principle.

## Artifacts

- Things that aren't natural are called *artifacts*. Examples: a bed, a cloak.
- A bed develops in a certain way, and it may be altered. But the cause is not something in the bed; it is external.
- Beds fall, but this tendency doesn't belong to the bed in its own right; it only belongs to the bed because the bed is made of wood (say).

## Definition of nature

- *Nature is a principle or cause of being moved and of being at rest in that to which it belongs primarily, in virtue of itself and not accidentally.* [192b21]
- More simply: A nature is a cause of change and stability that belongs to something in virtue of what it is.

## That natures exist

*What nature is . . . has been stated. That nature exists, it would be absurd to try to prove; for it is obvious that there are many things of this kind, and to prove what is obvious by what is not is the mark of a man who is unable to distinguish what is self-evident from what is not. [193a3]*

## Theories of nature

- *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. [193a10]*
- *Another account is that nature is the shape or form which is specified in the definition of the thing. [193a30]*
- *What is potentially flesh or bone has not yet its own nature, and does not exist by nature, until it receives the form specified in the definition, which we name in defining what flesh or bone is. [193a36]*
- *The form indeed is nature rather than the matter; for a thing is more properly said to be what it is when it exists in actuality than when it exists potentially. [193b7]*

- *The next point to consider is how the mathematician differs from the student of nature; for natural bodies contain surfaces and volumes, lines and points, and these are the subject-matter of mathematics.* [193b23]
- Plato's view: Mathematicians discuss ideal geometrical shapes that we perceive only with our minds and that exist separately from perceptible things.
- Aristotle's view:
  - Shapes don't exist separately from the things that have them; they only exist as forms of natural bodies.
  - E.g., there are spherical bodies, like balls and the moon; the shape of the sphere only exists as the form of them.
  - But although they don't exist separately from natural bodies, it is possible to separate them in thought. That is what mathematicians do.



Detail from *The School of Athens* by Raphael.

# The four causes (*Physics II 3, 194b24*)

- *In one way, then, that out of which a thing comes to be and which persists, is called a cause, e.g. the bronze of the statue, the silver of the bowl. (Material cause.)*
- *In another way, the form or the archetype, i.e. the definition of the essence, and its genera, are called causes (e.g. of the octave the relation of 2:1, and generally number), and the parts in the definition. (Formal cause.)*
- *Again, the primary source of the change or rest; e.g. the man who deliberated is a cause, the father is cause of the child, and generally what makes of what is made and what changes of what is changed. (Efficient cause.)*
- *Again, in the sense of end or that for the sake of which a thing is done, e.g. health is the cause of walking about. ('Why is he walking about?' We say: 'To be healthy', and, having said that, we think we have assigned the cause.) (Final cause.)*

- ① What is Aristotle's definition of nature? Give an example of something that has a nature and something that doesn't.
- ② If a stone is thrown upwards, is its motion in accordance with nature? Explain.
- ③ Does Aristotle think that the nature of a thing is identifiable with its matter or its form? What reason does he have for his view?
- ④ How does Aristotle's view of the subject matter of mathematics differ from Plato's?
- ⑤ What are the four causes of an automobile?



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.