

# Aristotle: The Dissection of Reality

by Sophia



## WHAT'S COVERED

Plato's student, Aristotle, was one of the most influential thinkers of all time. We say “thinker” rather than “philosopher” because his influence stretches far beyond philosophy. His groundbreaking work in astronomy, biology, physics, and formal logic had a greater impact on science than that of any other individual in history. In this tutorial, we investigate Aristotle's work, focusing on the differences and similarities between his philosophical approach and Plato's.

This tutorial examines Aristotle's approach to, and interpretation of, reality in two parts:

1. [Aristotle's Scientific Approach](#)
2. [The Mathematician and the Biologist](#)

## 1. Aristotle's Scientific Approach

When attempting to gain an overview of Aristotle's work, it is helpful to think of him as, first and foremost, a biologist. Though not all of Aristotle's writings have been preserved, he wrote twice as much on biology as he did on philosophy (and he wrote *a lot* on philosophy). That is not to say that all of his philosophical questions have been answered in terms of biology, but it does help us to understand his perspective.

Aristotle took a “hands on” approach to the search for knowledge.



### DID YOU KNOW

As far as we know, Aristotle was the first scientist to dissect animals. Also, he identified approximately 500 species of fish, mammals, and birds using binomial nomenclature, a method that is still used by biologists today.

In philosophy, Aristotle began his investigations with specific knowns (i.e., examples found in the world). When Aristotle wanted to understand goodness he began by researching past approaches to ethics (i.e., accounts of goodness) to determine whether they were satisfactory, before developing a system of his own.

Aristotle can be credited with the invention of academic research. The school he founded—the Lyceum—became a repository of knowledge. When his research led him to conclude that existing accounts were

unsatisfactory, he developed an account of his own. When he did so, Aristotle used a known (i.e., something he *knew* could be, or was, true), as the starting point for his inquiry. If we want to know about the human essence, Aristotle's research method directs us to begin with individual humans rather than an abstract Form of Humanity. Aristotle held that starting with the known world (i.e., the one we encounter through our senses) rather than an abstract realm of metaphysics, was the best way to begin a philosophical inquiry.

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## 2. The Mathematician and the Biologist

When attempting to gain an understanding of Aristotle's approach and accomplishments, it may be helpful to consider two later epistemological viewpoints: empiricism and rationalism. These two perspectives are distinguished by their identification of the source of knowledge.

**Empiricism** is the epistemological view based on the claim that all knowledge is grounded in experience.

Note the “grounded” qualification included in this definition. Empiricists do not claim that everything one can conceive of must have been experienced by that person. For example, a person does not have to have seen a golden mountain in order to refer to, or think about, one. He or she only needs ideas of “gold” and “mountain” to combine. Empiricism maintains that all of our *building blocks* come from experience and that those building blocks can be combined into ideas we have not experienced. This epistemological viewpoint is contrasted with rationalism:

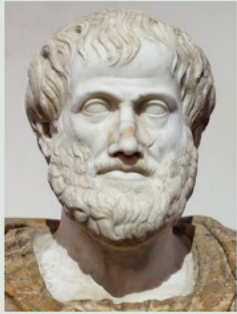
**Rationalism** is the epistemological view based on the claim that humans can access certain conceptual truths independent of experience.

It is important to understand that rationalism is *not* the opposite of empiricism. Empiricism maintains that knowledge only comes from the senses. That does not mean, however, that rationalism denies that the senses are a source of knowledge. Instead, rationalism denies that knowledge *only* comes from the senses. Empiricism claims that there is one source of knowledge. Rationalism asserts that there are two.

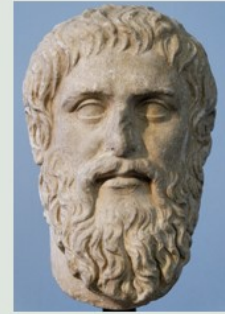
Empiricism and rationalism are in agreement on most issues. Rationalists grant all of the empirical truths of the sciences learned through experience, all knowledge of the senses, etc. The area of disagreement is mostly involved with concepts—but not all concepts. For example, empiricism and rationalism both grant that human minds have the power of abstraction. Humans can conceive and discuss a concept of horse derived from individual horses. What kind of concept, then, does the rationalist propose as knowable, independent of experience? The primary area of digression involves large metaphysical concepts about causation. Many rationalists hold that claims like “nothing comes into existence un-caused” are conceptual truths that must be true independent of experience. However, empiricists maintain that this is something that is known only through experience.

The following example provides only a rough overview of these distinctions, but if we think of epistemology as a scale, with pure empiricism at one end and pure rationalism at the other, we can place Aristotle very close to the empiricism end of the scale, and Plato close to the rationalist end.

# Epistemology



Aristotle



Plato

Pure  
Empiricism

Pure  
Rationalism

Aristotle's scientific approach is primarily empirical. He maintained that we learn about humanity by abstracting from particular humans. This is what we would expect from a biologist. Plato, however, frequently appealed to a realm of pure intellect, known as Platonic Heaven, where the Forms reside. Recall that the Forms are analogous to mathematical objects or entities. Plato, in some of his writings, implied that we may learn about the Forms in between lives and later recollect them, or access them through pure philosophical reasoning. Either of these methods, as a result of the topics involved, are unsatisfactory to empiricists. Empiricists don't object to mathematical entities but do not accept mathematical entities that interact causally with the world.

Raphael di Santi captured the contrast of approaches between Plato and Aristotle in his painting, *The School of Athens*.



Raphael's *The School of Athens*, painted between 1509 and 1511. The fresco painting resides in the Apostolic Palace, Vatican City. It is a remarkable size, measuring approximately 16.5 feet across and 25 feet tall!

The painting depicts a number of Greek philosophers, each of them engaged in an activity related to their philosophy and/or life. Take a look at the two figures in the middle of the painting.





Close-up view of Plato and Aristotle in Raphael's The School of Athens"





## THINK ABOUT IT

Study the image above and consider the differences in approaches between Plato and Aristotle. Which of the figures do you think is Plato, and which one is Aristotle? Why? In what ways has Raphael depicted the differences between the approaches of Plato and Aristotle?

On the left is Plato, pointing to the heavens. Aristotle, on the right, gestures at the ground (trying to bring Plato down to earth). This indicates the fundamental difference in their approaches to learning. For Plato, inquiry begins in the metaphysical realm of the Forms. Aristotle's approach begins with the world around him.



## LEARN MORE

Explore [Raphael's painting "School of Athens"](#) and learn more about the other Greek philosophers depicted in it.



## TERMS TO KNOW

### Empiricism

The epistemological view based on the claim that all knowledge is grounded in experience

### Rationalism

The epistemological view based on the claim that humans can access certain conceptual truths independent of experience



## SUMMARY

In this lesson, we discussed **Aristotle's Scientific Approach** and **The Mathematician and the Biologist**. Aristotle studied under Plato for years. Although he was a brilliant student, he was not an uncritical disciple. The most fundamental difference between teacher and student was in their approaches to learning, and their starting points in the quest for knowledge. Plato, who was epistemologically closer to what would later be called rationalism, sought knowledge in near-mathematical Forms and the realm of metaphysics, the world behind the world. Aristotle began his search with the world around him. Unsurprisingly, Aristotle's work involves the sciences to a great extent. His epistemological view was closer to what was later called empiricism.

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## TERMS TO KNOW

### **Rationalism**

The epistemological view centering around the claim that humans can access certain conceptual truths independently of experience

### **Empiricism**

The epistemological view centering around the claim that all knowledge is grounded in experience