

Aristotle

ARISTOTLE'S LIFE

Aristotle was born in 384 BCE in the small town of Stagira on the northeast coast of Thrace. His father was physician to the king of Macedonia. It could be that Aristotle's great interest in biology and science in general was nurtured in his early childhood. When he was 17 years old, Aristotle went to Athens to enroll in Plato's Academy, where he spent the next twenty years as a pupil and a member. At the Academy Aristotle had the reputation of being the "reader" and "the mind of the school." He was profoundly influenced by Plato's thought and personality even though eventually he broke away from Plato's philosophy in order to formulate his own version of certain philosophical problems. Still, while at the Academy, he wrote many dialogues in a Platonic style, which his contemporaries praised for the "golden stream" of their eloquence. In his *Eudemus* he even reaffirmed the very notion so central to Plato's thought, the theory of the Forms, which he later criticized so severely.

There is no way now to reconstruct with exactness just when Aristotle's thought diverged from Plato's. Plato's own thought, it must be remembered, was in the process of change while Aristotle was at the Academy. Indeed, scholars believe that Aristotle studied with Plato during Plato's "later" period, a time when Plato's interests had shifted toward mathematics, method, and natural science. During this time, also, specialists in various sciences, such as medicine, anthropology, and archeology, came to the Academy. This meant that Aristotle was exposed to a vast array of empirical facts, which, because of his outlook, he found useful for research and for formulation of scientific concepts. It may be, therefore, that the intellectual atmosphere of the Academy, marked by some of Plato's latest dominant concerns and the availability of collected data in special fields, provided Aristotle with a direction in philosophy that was congenial to his scientific disposition.

The direction Aristotle took did eventually cause him to depart from some of Plato's theories, though the degree of difference between Plato and Aristotle is still a matter of careful interpretation. But even when they were together at

the Academy, certain temperamental differences must have been apparent. Aristotle, for example, was less interested in mathematics than Plato and more interested in empirical data. Moreover, as time went on, Aristotle's gaze seemed to be more firmly fixed on the concrete processes of nature, so that he considered his abstract scientific notions to have their real habitat in this living nature. By contrast, Plato separated the world of thought from the world of flux and things, ascribing true reality to the Forms, which, he asserted, had an existence separate from the things in nature. We can say, therefore, that Aristotle oriented his thought to the dynamic realm of *becoming*, whereas Plato's thought was fixed more upon the static realm of timeless *Being*. Whatever differences there were between these two great minds, the fact is that Aristotle did not break with Plato personally, as he remained at the Academy until Plato's death. Moreover, throughout Aristotle's later major treatises, we find unmistakable influences of Plato's thought in spite of Aristotle's unique interpretations and style. But his distinctly "Platonist" period came to an end with Plato's death. The direction of the Academy had then passed into the hands of Plato's nephew Speusippos, whose excessive emphasis on mathematics was uncongenial to Aristotle. For this and other reasons, Aristotle withdrew from the Academy and left Athens.

It was in 348/47 BCE that Aristotle left the Academy and accepted the invitation of Hermeias to come to Assos, near Troy. Hermeias had formerly been a student at the Academy and was now the ruler of Assos. Being somewhat of a philosopher-king, he gathered a small group of thinkers into his court, and here Aristotle was able for the next three years to write, teach, and carry on research. While at Hermeias's court, he married the ruler's niece and adopted daughter, Pythias, who bore him a daughter. Later, after they had returned to Athens, his wife died, and Aristotle then entered into a relationship with a woman named Herpyllis, which was never legalized. Nevertheless, it was a happy, permanent, and affectionate union from which there came a son, Nicomachus, after whom Aristotle's book the *Nicomachean Ethics* was named. After his three years in Assos, Aristotle moved to the neighboring island of Lesbos, settling for the time being in Mitylene, where he taught and continued his investigations in biology, studying especially the many forms of marine life. Here he also became known as an advocate of a united Greece, urging that such a union would be more successful than independent city-states in resisting the might of Persia. In 343/42 BCE, Philip of Macedon invited Aristotle to become the tutor of his son Alexander, who was then 13 years old. As a tutor to a future ruler, Aristotle's interests included politics, and it is possible that it was here that he conceived the idea of collecting and comparing various constitutions, a project he later carried out by collecting digests of the constitutions of 158 Greek city-states. When Alexander ascended the throne after his father Philip's death, Aristotle's duties as tutor came to an end, and after a brief stay in his hometown of Stagira, he returned to Athens.

Upon his return to Athens in 335/34 BCE, Aristotle began the most productive period of his life. Under the protection of the Macedonian statesman Antipater, Aristotle founded his own school. His school was known as the Lyceum, named after the groves where Socrates was known to have gone to think and which were the sacred precincts of Apollo Lyceus. Here Aristotle and

his pupils walked in the Peripatos, a tree-covered walk, and discussed philosophy, for which reason his school was called *peripatetic*—meaning “walking about.” Besides these peripatetic discussions, there were also lectures, some technical for small audiences and others of a more popular nature for larger audiences. Tradition maintains that Aristotle also formed the first great library by collecting hundreds of manuscripts, maps, and specimens, which he used as illustrations during his lectures. Moreover, his school developed certain formal procedures whereby its leadership would alternate among members. Aristotle formulated the rules for these procedures, as he did for the special common meal and symposium once a month. On these occasions a member was selected to defend a philosophical position against the critical objections of the other members. For a dozen or so years Aristotle remained as the head of the Lyceum, teaching and lecturing. Above all, though, while there he formulated his main ideas about the classification of the sciences, fashioned a bold new science of logic, and wrote his advanced ideas in every major area of philosophy and science, exhibiting an extraordinary command of universal knowledge.

When Alexander died in 323 BCE, a wave of anti-Macedonian feeling arose, making Aristotle’s position in Athens precarious because of his close connections with Macedonia. Like Socrates before him, Aristotle was charged with “impiety,” but, as he is reported to have said, “lest the Athenians should sin twice against philosophy,” he left the Lyceum and fled to Chalcis, where he died in 322 BCE of a digestive disease of long standing. In his will he expressed his humanity by providing amply for his relatives, preventing his slaves from being sold, and providing that some of the slaves should be emancipated. As with Socrates and Plato, Aristotle’s thought was of such decisive force that it was to influence philosophy for centuries to come. From the vast range of his philosophy, we will consider here some aspects of his logic, metaphysics, ethics, politics, and aesthetics.

METAPHYSICS

In his work titled *Metaphysics*, Aristotle develops what he called the science of *first philosophy*. The term *metaphysics* has a somewhat cloudy origin, but in this context it seems at least in part to signify the position of this work among Aristotle's other writings, namely, that it is *beyond*, or comes *after*, his work on physics. Throughout *Metaphysics* he deals with a type of knowledge that he thought could be most rightly called *wisdom*. This work begins with the statement "All men by nature desire to know." This innate desire, Aristotle says, is not only a desire to know in order to do or make something. In addition to these pragmatic motives, there is in us a desire to know certain kinds of things simply for the sake of knowing. An indication of this, Aristotle says, is "the delight we take in our senses; for even apart from their usefulness they are loved for themselves" inasmuch as our seeing "makes us know and brings to light many differences between things."

There are different levels of knowledge. Some people know only what they experience through their senses, as, for example, when they know that fire is hot. But, Aristotle says, we do not regard what we know through the senses as wisdom. Instead, wisdom is similar to the knowledge possessed by scientists. They begin by looking at something, then repeat these sense experiences, and finally go beyond sense experience by thinking about the *causes* of the objects of their experiences. There are as many sciences as there are definable areas of investigation, and Aristotle deals with many of them, including physics, ethics,

politics, and aesthetics. In addition to the specific sciences, though, there is another science, first philosophy, or what we now call *metaphysics*, which goes beyond the subject matter of the other sciences and is concerned with the knowledge of true reality.

The Problem of Metaphysics Defined

The various sciences seek to find the first principles and causes of specific kinds of things, such as material bodies, the human body, the state, or a poem. Unlike these sciences, which ask, "What is such-and-such a thing like and why?" metaphysics asks a far more general question—a question that each science must ultimately take into account, namely, "What does it mean to be anything whatsoever?" What, in short, does it mean *to be*? It was precisely this question that concerned Aristotle in his *Metaphysics*, making metaphysics for him "the science of any existent, as existent." The problem of metaphysics as he saw it was therefore the study of Being and its "principles" and "causes."

Aristotle's metaphysics was to a considerable extent an outgrowth of his views on logic and his interest in biology. From the viewpoint of his logic, "to be" meant for him to be *something* that could be accurately defined and that could therefore become the subject of discourse. From the point of view of his interest in biology, he was inclined to think of "to be" as something implicated in a dynamic process. "To be," as Aristotle saw the matter, always meant to be *something*. Hence, all existence is individual and has a specific nature. All the categories (or predicates) that Aristotle dealt with in his logical works—categories such as *quality*, *relation*, *posture*, and *place*—presuppose some subject to which these predicates can apply. This subject to which all the categories apply Aristotle called *substance* (*ousia*). "To be," then, is to be a particular kind of substance. Also, "to be" means to be a substance as the product of a dynamic process. In this way metaphysics is concerned with *Being* (that is, existing substances) and its *causes* (that is, the processes by which substances come into being).

Substance as the Primary Essence of Things

Aristotle believed that the way we know a thing provides a major clue as to what we mean by "substance." Having in mind again the categories or predicates, Aristotle says that we know a thing better when we know *what it is* than when we know its color, size, or posture. We separate a thing from all its qualities, and we focus upon what a thing really is, upon its *essential nature*. To this end Aristotle distinguishes between *essential* and *accidental* properties of things. For example, to say that a person has red hair is to describe something accidental, since to be a human it is not necessary or essential that one have red hair—or even any hair for that matter. But it is essential to my being human that I am mortal. We similarly recognize that all humans are *human* in spite of their different sizes, colors, or ages. *Something* about each concretely different person makes him or her a person in spite of the unique characteristics that make him or her *this particular* person. At this point Aristotle would readily agree that

these special characteristics (categories, predicates) also exist and have some kind of being. But the being of these characteristics is not the central object of metaphysical inquiry.

The central concern of metaphysics is the study of substance, that is, the essential nature of a thing. On this view substance means "that which is not asserted of a subject but of which everything else is asserted." Substance is what we know as basic about something, *after* which we can say other things about *it*. Whenever we define something, we get at its essence *before* we can say anything about it, as when we speak of a large table or a healthy person. Here we understand table and person in their "essence"—in what makes them a table or a person—before we understand them as large or healthy. It is true that we can know only specific and determinate things—actual individual tables or persons. At the same time, the essence, or substance, of a table or a person has its existence peculiarly separate from its categories or its qualities. This does not mean that a substance is ever in fact found existing separately from its qualities. Still, Aristotle believed that we can know the essence of a thing such as "table-ness" as separated from its particular qualities of round, small, and brown. Thus, he says, there must be some universal essence that is found wherever we see a table. And this essence or substance must be independent of its particular qualities inasmuch as the essence is the same, even though in the case of each actual table the qualities are different. Aristotle's point is that a thing is more than the sum of its particular qualities. There is something "beneath" (*substance*) all the qualities; thus, any specific thing is a combination of qualities, on the one hand, and a substratum to which the qualities apply, on the other. With these distinctions in mind, Aristotle was led, like Plato before him, to consider just how this essence, or "universal," was related to the particular thing. What, in short, makes a substance a substance; is it *matter* as a substratum or is it *form*?

Matter and Form

Although Aristotle distinguished between *matter* and *form*, he nevertheless said that, in nature, we never find matter without form or form without matter. Everything that exists is some concrete individual thing, and every *thing* is a unity of matter and form. Substance, therefore, is always a composite of form and matter. Plato, you will recall, argued that Forms, such as Human or Table, have a separate existence. Particular things, such as the table in front of me, obtain their nature by *participating* in the Forms, such as the Form Tableness. Aristotle rejected Plato's explanation of the universal Forms—specifically, the contention that the Forms existed separately from individual things. Of course, Aristotle did agree that there are universals and that universals such as Human and Table are more than merely subjective notions. Indeed, Aristotle recognized that without the theory of universals, there could be no scientific knowledge, for then there would be no way of saying something about all members of a particular class.

What makes science effective is that it identifies classes of objects (for example, a certain form of human disease), so that whenever an individual falls into this class, we can also assume that other facts are relevant. These classes, then,

are not merely mental fictions but do in fact have objective reality. But, Aristotle said, we simply find their reality in the individual things themselves. What purpose, he asked, could be served by assuming that the universal Forms exist separately? If anything, this would complicate matters, since everything would have to be replicated in the world of Forms—not only individual things but also their relationships. Moreover, Aristotle was not convinced that Plato's theory of the Forms could help us know things any better; "they help in no wise toward the knowledge of other things." Since presumably the Forms are motionless, Aristotle concluded that they could not help us understand things as we know them, as full of motion. Nor could they, being immaterial, explain objects of which we have sense impressions. Again, how could the immaterial Forms be related to any particular thing? It is not satisfactory to say, as Plato did, that things *participate* in the Forms: "to say that they are patterns and that other things share in them, is to use empty words and poetical metaphors."

When we use the words *matter* and *form* to describe any specific thing, we seem to have in mind the distinction between what something is made *of* and what it is made *into*. This, again, inclines us to assume that matter—what things are made of—exists in some primary and unformed state until it is made into a thing. But, again, Aristotle argues that we shall not find anywhere such a thing as "primary matter," that is, matter without form. Consider the sculptor who is about to make a statue of Venus out of marble. He or she will never find marble without some form. It will always be this marble or that, a square piece or an irregular one. But he or she will always work with a piece in which form and matter are already combined. That the sculptor will give it a different form is another question. The question here is, How does one thing become another thing? What, in short, is the nature of *change*?

The Process of Change: The Four Causes

In the world around us we see things constantly changing. Change is one of the basic facts of our experience. For Aristotle the word *change* meant many things, including motion, growth, decay, generation, and corruption. Some of these changes are *natural*, whereas others are the products of *human art*. Things are always taking on new form; new life is born and statues are made. Because change always involves taking on new form, we can ask several questions about the process of change. Of anything, Aristotle says, we can ask four questions, namely (1) What is it? (2) What is it made of? (3) By what is it made? and (4) For what end is it made? The four responses to these questions represent Aristotle's four *causes*. Although the word *cause* refers in modern use primarily to an event prior to an effect, for Aristotle it meant an *explanation*. His four causes, therefore, represent a broad pattern or framework for the total explanation of anything or everything. Taking an object of art, for example, the four causes might be (1) a statue (2) of marble (3) by a sculptor (4) for decoration. Distinguished from objects produced by human art, there are also things that are caused *by nature*. Although nature does not, according to Aristotle, have "purposes" in the sense of "the reason for," it does always and everywhere have

“ends” in the sense of having built-in ways of behaving. For this reason seeds sprout, and roots go down (not up!), and plants grow. In this process of change, plants move toward their “end,” that is, their distinctive function or way of being. In nature change will involve these same four elements. Aristotle’s four causes are therefore (1) the *formal* cause, which determines what a thing is, (2) the *material* cause, or that out of which it is made, (3) the *efficient* cause, by what a thing is made, and (4) the *final* cause, the “end” for which it is made.

Aristotle looked at life through the eyes of a biologist. For him nature was *life*. All things are in motion—in the process of becoming and dying away. The process of reproduction was for Aristotle a clear example of the power inherent in all living things to initiate change and to reproduce. Summarizing his causes, Aristotle said that “all things that come to be come to be by some agency and from something, and come to be something.” From this biological viewpoint Aristotle elaborated the notion that form and matter never exist separately. In nature generation of new life involves first of all an individual who already possesses the specific form that the offspring will have (the male parent). After that there must be matter capable of being the vehicle for this form (this matter being contributed by the female parent). Finally, from this comes a new individual with the same specific form. In this example Aristotle shows that change does not involve bringing together formless matter with matterless form. On the contrary, change occurs always in and to something that is already a combination of form and matter and that is on its way to becoming something new or different.

Potentiality and Actuality

All things, said Aristotle, are involved in processes of change. Each thing possesses a power to become what its form has set as its end. There is in all things a dynamic power of striving toward their “end.” Some of this striving is toward external objects, as when a person builds a house. But there is also the striving to achieve ends that pertain to a person’s internal nature, as when we fulfill our nature as a human being by the act of thinking. This notion of a self-contained end led Aristotle to consider the distinction between *potentiality* and *actuality*. He used this distinction to explain the processes of change and development. If the *end* of an acorn is to be a tree, in some way the acorn is only potentially a tree but not actually so at this time. A fundamental type of change, then, is the change from potentiality to actuality. But the chief significance of this distinction is that Aristotle argues for the priority of actuality over potentiality. That is, although something actual emerges from the potential, there could be no movement from potential to actual if there were not first of all something actual. A child is potentially an adult, but before there can be a child with that potentiality, there has to be an actual adult.

As all things in nature are similar to the relation of a child to an adult, or an acorn to a tree, Aristotle was led to see in nature different levels of being. If everything were involved in change—in generation and corruption—everything would partake of potentiality. But, as we have seen, for there to be something

potential, there must already be something actual. To explain the existence of the world of potential things, Aristotle thought it was necessary to assume the existence of some actuality at a level above potential or perishing things. This led to the notion of a Being that is pure actuality, without any potentiality, at the highest level of being. Since change is a kind of motion, Aristotle saw the visible world as one composed of things in motion. But motion, a type of change, involves potentiality. Things are potentially in motion but must be moved by something that is actually in motion.

The Unmoved Mover

For Aristotle the Unmoved Mover is the ultimate cause of all change in the natural world. However, this notion is not the same thing as a *first* mover, as though motion could be traced back to a *time* when motion began. Nor did he consider the Unmoved Mover to be a *creator* in the sense of later theology. From his previous distinction between potentiality and actuality, Aristotle concluded that the only way to explain how motion or change can occur is to assume that something actual is *logically* prior to whatever is potential. The fact of change implies the existence of something *purely* actual without any mixture of potentiality. This mover is not, according to Aristotle, an *efficient* cause in the sense of a mighty force exerting its power. Such acts would imply potentiality, as when we say that God intended to create the world. This would mean that *before* God created the world, he was potentially capable or intended to create it.

The heart of Aristotle's notion of the Unmoved Mover is that it is a way of explaining the fact of motion. All of nature is full of things that strive toward fulfilling their particular purposes. Each thing aims at perfecting its possibilities and its *end*, that is, at becoming the perfect tree, the perfectly good person, and so on. The aggregate of all these strivings constitutes the large-scale processes of the world order. All of reality, then, is in the process of change, moving from its potentialities and possibilities to the ultimate perfection of these potentialities. To explain this comprehensive or general motion, Aristotle referred to the Unmoved Mover as the "reason for" or the "principle of" motion. For this reason the Unmoved Mover stood for the actual and—because there is here no potentiality—the *eternal* principle of motion. Since this explanation of motion implies an eternal activity, then, there was never a "time" when there was not a world of things in process. For this reason, too, Aristotle denied that there was a "creation" in time.

To speak of an Unmoved Mover involved Aristotle in certain metaphorical language. In explaining how an Unmoved Mover can "cause" motion, he compared it to a beloved who "moves" the lover merely by being the object of love, by the power of attraction and not by force. In a more technical way Aristotle considered the Unmoved Mover as the *form* and the world as the substance. From the point of view of his four causes, Aristotle considered the Unmoved Mover as the *final* cause, in the same way that the *form* of the adult is in the child, directing the motion of change toward a *final* end—one that is fixed or appropriate. By being a final cause, the Unmoved Mover thereby becomes an

efficient cause of the world. Through the power of attraction, it inspires things to strive toward their natural ends. Although Aristotle's Unmoved Mover functions as a scientific principle of motion and immanent form of the world, it nevertheless carries some religious overtones. Centuries later—especially at the hands of Aquinas in the thirteenth century—this notion was transformed into the philosophical description of the God of Christianity.