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## ARISTOTLE

384 B.C. - 322 B.C.



Aristotle was the greatest philosopher and scientist of the ancient world. He originated the study of formal logic, enriched almost every branch of philosophy, and made numerous contributions to science.

Many of Aristotle's ideas are outmoded today. But far more important than any of his individual theories is the rational approach underlying his work. Implicit in Aristotle's writings is the attitude that every aspect of human life and society may be an appropriate object of thought and analysis; the notion that the universe is not controlled by blind chance, by magic, or by the whims of capricious deities, but that its behavior is subject to rational laws; the belief that it is worthwhile for human beings to conduct a systematic inquiry into every aspect of the natural world; and the conviction that we should utilize both empirical observations and logical reasoning in forming our conclusions. This set of attitudes—which is contrary to traditionalism, superstition, and mysticism—has profoundly influenced Western civilization.

Aristotle was born in 384 B.C., in the town of Stagira, in Macedonia. His father was a prominent physician. At seventeen,

Aristotle went to Athens to study in the Academy of Plato. He remained there for twenty years, until shortly after Plato died. From his father, Aristotle may have gained an interest in biology and in "practical science"; under Plato he cultivated an interest in philosophical speculation.

In 342 B.C., Aristotle returned to Macedonia to become the private tutor of the king's son, a thirteen-year-old boy who was to become known to history as Alexander the Great. Aristotle tutored the young Alexander for several years. In 335 B.C., after Alexander had ascended the throne, Aristotle returned to Athens, where he opened his own school, the Lyceum. He spent the next twelve years in Athens, a period roughly coinciding with Alexander's career of military conquest. Alexander did not ask his former tutor for advice, but he did provide him generously with funds for research. This was probably the first example in history of a scientist receiving large-scale government funding for his research, and it was to be the last for centuries to come.

Nevertheless, association with Alexander had its dangers. Aristotle was opposed on principle to the dictatorial style of Alexander, and when the conqueror executed Aristotle's nephew on suspicion of treason, he seems to have considered executing Aristotle as well. But if Aristotle was too democratic for Alexander's tastes, he was too closely associated with Alexander to be trusted by the Athenians. When Alexander died, in 323 B.C., the anti-Macedonian faction gained control in Athens, and Aristotle was indicted for "impiety." Aristotle, recalling the fate of Socrates seventy-six years earlier, fled the city, saying that he would not give Athens a second chance to sin against philosophy. He died in exile a few months later, in 322 B.C., at the age of sixty-two.

The sheer quantity of Aristotle's output is astonishing. Forty-seven of his works have survived, and ancient lists credit him with no fewer than 170 books. However, it is not merely the number of his works, but the enormous range of his erudition, which is amazing. His scientific works constitute a virtual encyclopedia of the scientific knowledge of his day. Aristotle wrote



*Portrait of Aristotle by Raphael, detail from "The School of Athens."*

on astronomy, zoology, embryology, geography, geology, physics, anatomy, physiology, and almost every other field of learning known to the ancient Greeks. His scientific works represent, in part, a compilation of knowledge already acquired by others; in part, the findings of assistants whom he hired to acquire data for him; and in part, the results of his own numerous observations.

To be a leading expert in every field of science is an incredi-

ble feat, and one not likely to be duplicated by any man in the future. But Aristotle achieved even more than that. He was also an original philosopher, and made major contributions to every area of speculative philosophy. He wrote on ethics and on metaphysics, on psychology and on economics, on theology and on politics, on rhetoric and on aesthetics. He wrote on education, poetry, barbarian customs, and the constitution of the Athenians. One of his research projects was a collection of the constitutions of a large number of different states, which he subjected to a comparative study.

Perhaps most important of all was his work on the theory of logic, and Aristotle is generally considered the founder of this important branch of philosophy. It was indeed the logical nature of his mind that enabled Aristotle to make contributions to so many fields. He had a gift for organizing thought, and the definitions that he proposed and the categories that he established have provided the basis for later thought in many different fields. Never mystical and never an extremist, Aristotle is consistently the voice of practical common sense. He made mistakes, of course, but what is surprising is how few times in this vast encyclopedia of thought Aristotle made foolish errors.

Aristotle's influence upon all later Western thought has been immense. During ancient and medieval times, his works were translated into Latin, Syriac, Arabic, Italian, French, Hebrew, German, and English. The later Greek writers studied and admired his works, and so did Byzantine philosophers. His work was a major influence on Islamic philosophy, and for centuries his writings dominated European thought. Averroës, perhaps the most famous of all Arab philosophers, attempted to create a synthesis of Islamic theology and Aristotelian rationalism. Maimonides, the most influential of medieval Jewish thinkers, achieved a similar synthesis for Judaism. But the most celebrated such work was the great *Summa Theologica* of the Christian scholar, St. Thomas Aquinas. Far too many medieval scholars were deeply influenced by Aristotle to list them all.

Admiration for Aristotle became so great that in late

medieval times it approached idolatry, and his writings became a kind of intellectual straight jacket inhibiting further inquiry, rather than a lamp to light the way. Aristotle, who liked to observe and think for himself, would doubtless have disapproved of the blind adulation that later generations gave to his writings.

Some of Aristotle's ideas seem extremely reactionary by today's standards. For example, he supported slavery as being in accord with natural law, and he believed in the natural inferiority of women. (Both of these ideas, of course, reflected the prevailing views of his time.) However, many of Aristotle's views are strikingly modern, e.g., "Poverty is the parent of revolution and crime," and "All who have meditated on the art of governing mankind are convinced that the fate of empires depends on the education of youth." (There was, of course, no public education at the time that Aristotle lived.)

In recent centuries, Aristotle's influence and reputation have declined considerably. Nevertheless, I feel that his influence was so pervasive, and lasted for so long, that I rather regret that I cannot place him higher on this list. His present ranking is primarily a consequence of the enormous importance of each of the twelve persons preceding him.



*Aristotle and his pupil, Alexander.*