Aristotle

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Aristotle represents for most of us an icon of difficult or abstruse philosophical thinking; to know Aristotle often provokes hushed whispers even from highly educated people. For all this reputation, though, Aristotle is actually quite an easy read, for the man thought with an incredible clarity and wrote with a superhuman precision. It really is not possible to talk about Western culture (or modern, global culture) without coming to terms with this often difficult and often inspiring philosopher who didn't get along with his famous teacher, Plato, and, in fact, didn't get along with just about everybody (no-one likes a know-it-all). We can say without exaggeration that we live in an Aristotelean world; wherever you see modern, Western science dominating a culture in any meaningful way (which is just about everywhere), Aristotle is there in some form.

Although he studied under Plato, Aristotle fundamentally disagreed with his teacher on just about everything. He could not bring himself to think of the world in abstract terms the way Plato did; above all else, Aristotle believed that the world could be understood at a fundamental level through the detailed observation and cataloging of phenomenon. That is, knowledge (which is what the word science means) is fundamentally empirical. As a result of this belief, Aristotle literally wrote about everything: poetics, rhetoric, ethics, politics, meteorology, embryology, physics, mathematics, metaphysics, anatomy, physiology, logic, dreams, and so forth. We aren't certain if he wrote these works directly or if they represent his or somebody else's notes on his classes; what we can say for certain is that the words, "I don't know," never came out of his mouth. In addition to studying everything, Aristotle was the first person to really think out the problem of evidence. When he approached a problem, he would examine a.) what people had previously written or said on the subject, b.) the general consensus of opinion on the subject, c.) and a systematic study of everything else that is part of or related to the subject. In his treatise on animals, he studied over five hundred species; in studying government, he collected and read 158 individual constitutions of Greek states as his fundamental data. This is called inductive reasoning: observing as many examples as possible and then working out the underlying principles. Inductive reasoning is the foundation of the Western scientific method.

Outside of the empirical method, three characteristics stand out in Aristotle's thought: the classification of knowledge, the four causes, and the ethical doctrine of the mean.

The Classification of Knowledge. Perhaps the most fundamental aspect of Aristoteleanism is the classification of knowledge according the objects of that knowledge. The Greeks for some time had been concerned about the nature of human knowledge; this concern is called epistemology, or the "study of knowledge." For a long time, Greek philosophy dealt with questions of certainty; how could one be certain of knowledge? Suppose everything was an illusion? Aristotle resolved the question by categorizing knowledge based on their objects and the relative certainty with which you could know those objects. For instance, certain objects (such as in mathematics or logic) permit you to have a knowledge that is true all the time (two plus two always equals four). These types of knowledge are characterized by certainty and precise explanations. Other objects (such as human behavior) don't permit certain knowledge (if you insult somebody you may not make them angry or you may make them angry). These types of knowledge are characterized by probability and imprecise explanations. Knowledge that would fall into this category would include ethics, psychology, or politics. Unlike Plato and Socrates, Aristotle did not demand certainty in everything. One cannot expect the same level of certainty in politics or ethics that one can demand in geometry or logic. In Ethics I.3, Aristotle defines the difference in the following way, "we must be satisfied to indicate the truth with a rough and general sketch: when the subject and the basis of a discussion consist of matters which hold good only as a general rule, but not always, the conclusions reached must be of the same order. . . . For a well-schooled man is one who searches for that degree of precision in each kind of study which the nature of the subject at hand admits: it is obviously just as foolish to accept arguments of probability from a mathematician as to demand strict demonstrations from an orator."

The Four Causes. If you walk out of this class knowing anything really well, it should be this, for Aristotle's "four causes" stand at the heart of Western rationality and Western science. In order to know a thing, anything at all, Aristotle says that one must be able to answer four questions (Physics).

Plato looked at the world and saw nothing but change; he wondered how we can know anything at all when everything is in motion and change. Plato solved the problem by postulating an unchanging world of intelligible Forms or Ideas of which our world is but an imperfect copy. But Aristotle embraced the visible world of change and motion and sought all his life to describe the principles which bring about change and motion. Therefore, the question that dominated his thought at all points was: what is the cause (in Greek, aitia , which also means "responsible factor") of this particular change or motion that I'm observing? What causes this thing to come into existence? What causes it to pass out of existence? Aristotle was the first major thinker to base his thought and science entirely on the idea that everything that moves or changes is caused to move or change by some other thing.

What causes motion and change in the universe? The four causes: a.) the material cause: the matter out of which a thing is made (clay is the material cause of a bowl); b.) the formal cause: the pattern, model, or structure upon which a thing is made (the formal cause of a bowl is "bowl-shaped"; the formal cause of a human is "human-shaped"); c.) the efficient cause: the means or agency by which a thing comes into existence (a potter is the efficient cause of a bowl); d.) the final (in Greek, telos) cause: the goal or purpose of a thing, its function or potential (holding cereal and milk is the final cause of a bowl). The final cause is the most unscientific, but is far and away the most important "cause" of a thing as far as Aristotle was concerned. Aristotle's analysis of phenomenon and change, then, is fundamentally teleological (goal or end oriented).

D and C are not causes in the same way; the one is an end, the other is a source of movement. Again, the same thing will be the case of two contraries, for we will sometimes describe what is by its presence the cause of one thing, as being by its absence the cause of that thing's contrary: for instance, we describe the absence of the pilot as the cause of the ship's being sunk, whereas his presence would have been the cause of its preservation.

But all the causes that we have just mentioned fall into the four most obvious groups. The letters of a syllable, the raw material of a manufactured article, fire and such things in bodies, the parts of a whole, and the premises of a syllogism—all these are causes in the sense of being what a thing comes from; but whereas some are causes in the sense of being a substratum (the parts of a whole are, for instance), others are causes by virtue of being a thing's essence: the whole, the combination, and the form. The seed, the doctor, the adviser, and the producer, in general, are all sources of change or rest. Other things are causes by virtue of being the end and the good of everything else. For being the purpose means being the best of things and the end of everything else—and let us understand that it makes no difference whether we speak of the real or of the apparent good.Aristotle's thought is consistently teleological: everything is always changing and moving, and has some aim, goal, or purpose (telos). To borrow from a Newtonian physics, we might say that everything has potential which may be actualized (an acorn is potentially an oak tree; the process of change and motion which the acorn undertakes is directed at realizing this potential).

The Doctrine of the Mean. The Four Causes are universally applicable. However, ethics is a science that admits of a high degree of uncertainty because of the infinite variety of human actions and motivations. Now, normally ethics seems to require absolute and unchanging principles ("Thou shalt not kill") which individuals depart from at their peril. The idea that ethics are "man-made" is a problematic idea ; the idea that it is the individual situation which dictates whether an action is right or wrong is, at least to early human society, downright revolutionary. But this is what Aristotle concluded and it fits in perfectly with his general empirical temperament. He works out an entire system of ethics based on the "mean" to serve as a guideline to human behavior. There is no proper definition of any moral virtue, but rather every moral virtue stands in relationship to two opposing vices. Take courage. Courage is the opposite of cowardice. But, it is also the opposite of foolhardiness. Somewhere between foolhardiness and cowardice, that's where courage lies. What constitutes this "mean" between the two terms varies from situation to situation: what is courageous in one situation may be cowardly in

another; what is foolhardy in one situation may be courageous in another. Therefore, every action needs to be judged according to all the relevant circumstances and situation. Aristotle called judging actions in this manner, "equity," and equity is the foundation of modern law and justice, and is absolutely critical in understanding foundational Christianity and its later permutations, such as the Protestant Reformation. But that's a story for another day.