Aristotle (384—322 B.C.E.)

Aristotle is a towering figure in ancient Greek philosophy, making contributions to logic, metaphysics, mathematics, physics, biology, botany, ethics, politics, agriculture, medicine, dance and theatre. He was a student of Plato who in turn studied under Socrates. He was more empirically-minded than Plato or Socrates and is famous for rejecting Plato's theory of forms.

As a prolific writer and polymath, Aristotle radically transformed most, if not all, areas of knowledge he touched. It is no wonder that Aquinas referred to him simply as "The Philosopher." In his lifetime, Aristotle wrote as many as 200 treatises, of which only 31 survive. Unfortunately for us, these works are in the form of lecture notes and draft manuscripts never intended for general readership, so they do not demonstrate his reputed polished prose style which attracted many great followers, including the Roman Cicero. Aristotle was the first to classify areas of human knowledge into distinct disciplines such as mathematics, biology, and ethics. Some of these classifications are still used today.

As the father of the field of logic, he was the first to develop a formalized system for reasoning. Aristotle observed that the validity of any argument can be determined by its structure rather than its content. A classic example of a valid argument is his syllogism: All men are mortal; Socrates is a man; therefore, Socrates is mortal. Given the structure of this argument, as long as the premises are true, then the conclusion is also guaranteed to be true. Aristotle’s brand of logic dominated this area of thought until the rise of modern propositional logic and predicate logic 2000 years later.

Aristotle’s emphasis on good reasoning combined with his belief in the scientific method forms the backdrop for most of his work. For example, in his work in ethics and politics, Aristotle identifies the highest good with intellectual virtue; that is, a moral person is one

who cultivates certain virtues based on reasoning. And in his work on psychology and the soul, Aristotle distinguishes sense perception from reason, which unifies and interprets the sense perceptions and is the source of all knowledge.

Aristotle famously rejected Plato's theory of forms, which states that properties such as beauty are abstract universal entities that exist independent of the objects themselves. Instead, he argued that forms are *intrinsic* to the objects and cannot exist apart from them, and so must be studied in relation to them. However, in discussing art, Aristotle seems to reject this, and instead argues for idealized universal form which artists attempt to capture in their work.

Aristotle was the founder of the Lyceum, a school of learning based in Athens, Greece; and he was an inspiration for the Peripatetics, his followers from the Lyceum.

Table of Contents

1. Life

Aristotle was born in 384 BCE at Stagirus, a now extinct Greek colony and seaport on the coast of Thrace. His father Nichomachus was court physician to King Amyntas of Macedonia, and from this began Aristotle's long association with the Macedonian Court, which considerably influenced his life. While he was still a boy his father died. At age 17 his guardian, Proxenus, sent him to Athens, the intellectual center of the world, to complete his education. He joined the Academy and studied under Plato, attending his lectures for a period of twenty years. In the later years of his association with Plato and the Academy he began to lecture on his own account, especially on the subject of rhetoric. At the death of Plato in 347, the pre-eminent ability of Aristotle would seem to have designated him to succeed to the leadership of the Academy. But his divergence from Plato's teaching was too great to make this possible, and Plato's nephew Speusippus was chosen instead. At the invitation of his friend Hermeas, ruler of Atarneus and Assos in Mysia, Aristotle left for his

court. He stayed three year and, while there, married Pythias, the niece of the King. In later life he was married a second time to a woman named Herpyllis, who bore him a son, Nichomachus. At the end of three years Hermeas was overtaken by the Persians, and Aristotle went to Mytilene. At the invitation of Philip of Macedonia he became the tutor of his 13 year old son Alexander (later world conqueror); he did this for the next five years. Both Philip and Alexander appear to have paid Aristotle high honor, and there were stories that Aristotle was supplied by the Macedonian court, not only with funds for teaching, but also with thousands of slaves to collect specimens for his studies in natural science. These stories are probably false and certainly exaggerated.

Upon the death of Philip, Alexander succeeded to the kingship and prepared for his subsequent conquests. Aristotle's work being finished, he returned to Athens, which he had not visited since the death of Plato. He found the Platonic school flourishing under Xenocrates, and Platonism the dominant philosophy of Athens. He thus set up his own school at a place called the Lyceum. When teaching at the Lyceum, Aristotle had a habit of walking about as he discoursed. It was in connection with this that his followers became known in later years as the *peripatetics*, meaning "to walk about." For the next thirteen years he devoted his energies to his teaching and composing his philosophical treatises. He is said to have given two kinds of lectures: the more detailed discussions in the morning for an inner circle of advanced students, and the popular discourses in the evening for the general body of lovers of knowledge. At the sudden death of Alexander in 323 BCE., the pro-Macedonian government in Athens was overthrown, and a general reaction occurred against anything Macedonian. A charge of impiety was trumped up against him. To escape prosecution he fled to Chalcis in Euboea so that (Aristotle says) "The Athenians might not have another opportunity of sinning against philosophy as they had already done in the person of Socrates." In the first year of his residence at Chalcis he complained of a stomach illness and died in 322 BCE.

2. Writings

It is reported that Aristotle's writings were held by his student Theophrastus, who had succeeded Aristotle in leadership of the Peripatetic School. Theophrastus's library passed to his pupil Neleus. To protect the books from theft, Neleus's heirs concealed them in a vault, where they were damaged somewhat by dampness, moths and worms. In this hiding place they were discovered about 100 BCE by Apellicon, a rich book lover, and brought to Athens. They were later taken to Rome after the capture of Athens by Sulla in 86 BCE. In Rome they soon attracted the attention of scholars, and the new edition of them gave fresh impetus to the study of Aristotle and of philosophy in general. This collection is the basis of the works of Aristotle that we have today. Strangely, the list of Aristotle's works given by Diogenes Laertius does not contain any of these treatises. It is possible that Diogenes' list is that of

forgeries compiled at a time when the real works were lost to sight.

The works of Aristotle fall under three headings: (1) dialogues and other works of a popular character; (2) collections of facts and material from scientific treatment; and (3) systematic works. Among his writings of a popular nature the only one which we possess of any consequence is the interesting tract *On the Polity of the Athenians*. The works on the second group include 200 titles, most in fragments, collected by Aristotle's school and used as research. Some may have been done at the time of Aristotle's successor Theophrastus. Included in this group are constitutions of 158 Greek states. The systematic treatises of the third group are marked by a plainness of style, with none of the golden flow of language which the ancients praised in Aristotle. This may be due to the fact that these works were not, in most cases, published by Aristotle himself or during his lifetime, but were edited after his death from unfinished manuscripts. Until Werner Jaeger (1912) it was assumed that Aristotle's writings presented a systematic account of his views. Jaeger argues for an early, middle and late period (genetic approach), where the early period follows Plato's theory of forms and soul, the middle rejects Plato, and the later period (which includes most of his treatises) is more empirically oriented. Aristotle's systematic treatises may be grouped in several divisions:

- Logic
  1. Categories (10 classifications of terms)
  2. On Interpretation (propositions, truth, modality)
  3. Prior Analytics (syllogistic logic)
  4. Posterior Analytics (scientific method and syllogism)
  5. Topics (rules for effective arguments and debate)
  6. On Sophistical Refutations (informal fallacies)
- Physical works
  1. Physics (explains change, motion, void, time)
  2. On the Heavens (structure of heaven, earth, elements)
  3. On Generation (through combining material constituents)
  4. Meteorologics (origin of comets, weather, disasters)
- Psychological works
  1. On the Soul (explains faculties, senses, mind, imagination)
  2. On Memory, Reminiscence, Dreams, and Prophesying
- Works on natural history
  1. History of Animals (physical/mental qualities, habits)
  2. On the parts of Animals
  3. On the Movement of Animals
  4. On the Progression of Animals
  5. On the Generation of Animals

6. Minor treatises
7. Problems

- Philosophical works
  1. Metaphysics (substance, cause, form, potentiality)
  2. Nicomachean Ethics (soul, happiness, virtue, friendship)
  3. Eudemain Ethics
  4. Magna Moralia
  5. Politics (best states, utopias, constitutions, revolutions)
  6. Rhetoric (elements of forensic and political debate)
  7. Poetics (tragedy, epic poetry)

3. Logic

Aristotle's writings on the general subject of logic were grouped by the later Peripatetics under the name *Organon*, or instrument. From their perspective, logic and reasoning was the chief preparatory instrument of scientific investigation. Aristotle himself, however, uses the term "logic" as equivalent to verbal reasoning. The *Categories* of Aristotle are classifications of individual words (as opposed to sentences or propositions), and include the following ten: substance, quantity, quality, relation, place, time, situation, condition, action, passion. They seem to be arranged according to the order of the questions we would ask in gaining knowledge of an object. For example, we ask, first, what a thing is, then how great it is, next of what kind it is. Substance is always regarded as the most important of these. Substances are further divided into first and second: first substances are *individual* objects; second substances are the *species* in which first substances or individuals inhere.

Notions when isolated do not in themselves express either truth or falsehood: it is only with the combination of ideas in a proposition that truth and falsity are possible. The elements of such a proposition are the noun substantive and the verb. The combination of words gives rise to rational speech and thought, conveys a meaning both in its parts and as a whole. Such thought may take many forms, but logic considers only *demonstrative* forms which express truth and falsehood. The truth or falsity of propositions is determined by their agreement or disagreement with the facts they represent. Thus propositions are either affirmative or negative, each of which again may be either universal or particular or undesignated. A definition, for Aristotle is a statement of the essential character of a subject, and involves both the genus and the difference. To get at a true definition we must find out those qualities within the genus which taken separately are wider than the subject to be defined, but taken together are precisely equal to it. For example, "prime," "odd," and "number" are each wider than "triplet" (that is, a collection of any three items, such as three rocks); but taken together they are just equal to it. The genus definition must be formed so that no species is left out. Having determined the genus and species, we must next find the points of similarity in the

species separately and then consider the common characteristics of different species. Definitions may be imperfect by (1) being obscure, (2) by being too wide, or (3) by not stating the essential and fundamental attributes. Obscurity may arise from the use of equivocal expressions, of metaphorical phrases, or of eccentric words. The heart of Aristotle's logic is the syllogism, the classic example of which is as follows: All men are mortal; Socrates is a man; therefore, Socrates is mortal. The syllogistic form of logical argumentation dominated logic for 2,000 years until the rise of modern propositional and predicate logic thanks to Frege, Russell, and others.

4. Metaphysics

Aristotle's editors gave the name "Metaphysics" to his works on *first philosophy*, either because they went *beyond* or followed *after* his physical investigations. Aristotle begins by sketching the history of philosophy. For Aristotle, philosophy arose historically after basic necessities were secured. It grew out of a feeling of curiosity and wonder, to which religious myth gave only provisional satisfaction. The earliest speculators (i.e. Thales, Anaximenes, Anaximander) were philosophers of nature. The Pythagoreans succeeded these with mathematical abstractions. The level of pure thought was reached partly in the Eleatic philosophers (such as Parmenides) and Anaxagoras, but more completely in the work of Socrates. Socrates' contribution was the expression of general conceptions in the form of definitions, which he arrived at by induction and analogy. For Aristotle, the subject of metaphysics deals with the first principles of scientific knowledge and the ultimate conditions of all existence. More specifically, it deals with existence in its most fundamental state (i.e. being *as* being), and the essential attributes of existence. This can be contrasted with mathematics which deals with existence in terms of lines or angles, and not existence as it is in itself. In its universal character, metaphysics superficially resembles dialectics and sophistry. However, it differs from dialectics which is tentative, and it differs from sophistry which is a pretence of knowledge without the reality.

The axioms of science fall under the consideration of the metaphysician insofar as they are properties of*all* existence. Aristotle argues that there are a handful of universal truths. Against the followers of Heraclitus and Protagoras, Aristotle defends both the laws of contradiction, and that of excluded middle. He does this by showing that their denial is suicidal. Carried out to its logical consequences, the denial of these laws would lead to the sameness of all facts and all assertions. It would also result in an indifference in conduct. As the science of being *as* being, the leading question of Aristotle's metaphysics is, What is meant by the real or true substance? Plato tried to solve the same question by positing a universal and invariable element of knowledge and existence -- the forms -- as the only real permanent besides the changing phenomena of the senses. Aristotle attacks Plato's theory of the forms on three different grounds.

First, Aristotle argues, forms are powerless to explain *changes* of things and a thing's ultimate extinction. Forms are not causes of movement and alteration in the physical objects of sensation. *Second*, forms are equally incompetent to explain how we arrive at *knowledge* of particular things. For, to have knowledge of a particular object, it must be knowledge of the substance which is *in* that things. However, the forms place knowledge outside of particular things. Further, to suppose that we know particular things better by adding on their general conceptions of their forms, is about as absurd as to imagine that we can count numbers better by multiplying them. Finally, if forms were needed to explain our knowledge of particular objects, then forms must be used to explain our knowledge of objects of art; however, Platonists do not recognize such forms. The *third* ground of attack is that the forms simply cannot explain the *existence* of particular objects. Plato contends that forms do not exist *in* the particular objects which partake in the forms. However, that substance of a particular thing cannot be separated from the thing itself. Further, aside from the jargon of "participation," Plato does not explain the relation between forms and particular things. In reality, it is merely metaphorical to describe the forms as patterns of things; for, what is a genus to one object is a species to a higher class, the same idea will have to be both a form and a particular thing at the same time. Finally, on Plato's account of the forms, we must imagine an intermediate link between the form and the particular object, and so on *ad infinitum*: there must always be a "third man" between the individual man and the form of man.

For Aristotle, the form is not something outside the object, but rather *in* the varied phenomena of sense. Real substance, or true being, is not the abstract form, but rather the *concrete* individual thing. Unfortunately, Aristotle's theory of substance is not altogether consistent with itself. In the *Categories* the notion of substance tends to be nominalistic (that is, substance is a concept we apply to things). In the*Metaphysics*, though, it frequently inclines towards realism (that is, substance has a real existence in itself). We are also struck by the apparent contradiction in his claims that science deals with universal concepts, and substance is declared to be an individual. In any case, substance is for him a merging of matter into form. The term "matter" is used by Aristotle in four overlapping senses. *First*, it is the underlying structure of changes, particularly changes of growth and of decay. *Secondly*, it is the potential which has implicitly the capacity to develop into reality. *Thirdly*, it is a kind of stuff without specific qualities and so is indeterminate and contingent. *Fourthly*, it is identical with form when it takes on a form in its actualized and final phase.

The development of potentiality to actuality is one of the most important aspects of Aristotle's philosophy. It was intended to solve the difficulties which earlier thinkers had raised with reference to the beginnings of existence and the relations of the one and many. The actual vs. potential state of things is explained in terms of the causes which act on

things. There are four causes:

1. Material cause, or the elements *out of which* an object is created;
2. Efficient cause, or the means *by which* it is created;
3. Formal cause, or the expression of *what* it is;
4. Final cause, or the end *for which* it is.

Take, for example, a bronze statue. Its material cause is the bronze itself. Its efficient cause is the sculptor, insofar has he forces the bronze into shape. The formal cause is the idea of the completed statue. The final cause is the idea of the statue as it *prompts* the sculptor to act on the bronze. The final cause tends to be the same as the formal cause, and both of these can be subsumed by the efficient cause. Of the four, it is the formal and final which is the most important, and which most truly gives the explanation of an object. The final end (purpose, or teleology) of a thing is realized in the full perfection of the object itself, not in our conception of it. Final cause is thus internal to the nature of the object itself, and not something we subjectively impose on it.

To Aristotle, God is the first of all substances, the necessary first source of movement who is himself unmoved. God is a being with everlasting life, and perfect blessedness, engaged in never-ending contemplation.

For a fuller discussion, see the article Aristotle's Metaphysics and Western Concepts of God.

5. Philosophy of Nature

Aristotle sees the universe as a scale lying between the two extremes: form without matter is on one end, and matter without form is on the other end. The passage of matter into form must be shown in its various stages in the world of nature. To do this is the object of Aristotle's physics, or philosophy of nature. It is important to keep in mind that the passage from form to matter within nature is a movement towards ends or purposes. Everything in nature has its end and function, and nothing is without its purpose. Everywhere we find evidences of design and rational plan. No doctrine of physics can ignore the fundamental notions of motion, space, and time. Motion is the passage of matter into form, and it is of four kinds: (1) motion which affects the substance of a thing, particularly its beginning and its ending; (2) motion which brings about changes in quality; (3) motion which brings about changes in quantity, by increasing it and decreasing it; and (4) motion which brings about locomotion, or change of place. Of these the last is the most fundamental and important.

Aristotle rejects the definition of space as the void. Empty space is an impossibility. Hence, too, he disagrees with the view of Plato and the Pythagoreans that the elements are

composed of geometrical figures. Space is defined as the limit of the surrounding body towards what is surrounded. Time is defined as the measure of motion in regard to what is earlier and later. It thus depends for its existence upon motion. If there where no change in the universe, there would be no time. Since it is the measuring or counting of motion, it also depends for its existence on a counting mind. If there were no mind to count, there could be no time. As to the infinite divisibility of space and time, and the paradoxes proposed byZeno, Aristotle argues that space and time are potentially divisible *ad infinitum*, but are not actually so divided.

After these preliminaries, Aristotle passes to the main subject of physics, the scale of being. The first thing to notice about this scale is that it is a scale of values. What is higher on the scale of being is of more worth, because the principle of form is more advanced in it. Species on this scale are eternally fixed in their place, and cannot evolve over time. The higher items on the scale are also more organized. Further, the lower items are inorganic and the higher are organic. The principle which gives internal organization to the higher or organic items on the scale of being is life, or what he calls the soul of the organism. Even the human soul is nothing but the organization of the body. Plants are the lowest forms of life on the scale, and their souls contain a nutritive element by which it preserves itself. Animals are above plants on the scale, and their souls contain an appetitive feature which allows them to have sensations, desires, and thus gives them the ability to move. The scale of being proceeds from animals to humans. The human soul shares the nutritive element with plants, and the appetitive element with animals, but also has a rational element which is distinctively our own. The details of the appetitive and rational aspects of the soul are described in the following two sections.

For a fuller discussion of these topics, see the article Aristotle: Motion and its Place in Nature.

6. The Soul and Psychology

Soul is defined by Aristotle as the perfect expression or realization of a natural body. From this definition it follows that there is a close connection between psychological states, and physiological processes. Body and soul are unified in the same way that wax and an impression stamped on it are unified. Metaphysicians before Aristotle discussed the soul abstractly without any regard to the bodily environment; this, Aristotle believes, was a mistake. At the same time, Aristotle regards the soul or mind not as the product of the physiological conditions of the body, but as the *truth* of the body -- the substance in which only the bodily conditions gain their real meaning.

The soul manifests its activity in certain "faculties" or "parts" which correspond with the

stages of biological development, and are the faculties of nutrition (peculiar to plants), that of movement (peculiar to animals), and that of reason (peculiar to humans). These faculties resemble mathematical figures in which the higher includes the lower, and must be understood not as like actual physical parts, but like such*aspects* as convex and concave which we distinguish in the same line. The mind remains throughout a unity: and it is absurd to speak of it, as Plato did, as desiring with one part and feeling anger with another. Sense perception is a faculty of receiving the forms of outward objects independently of the matter of which they are composed, just as the wax takes on the figure of the seal without the gold or other metal of which the seal is composed. As the subject of impression, perception involves a movement and a kind of qualitative change; but perception is not merely a passive or receptive affection. It in turn acts, and,*distinguishing* between the qualities of outward things, becomes "a movement of the soul through the medium of the body."

The objects of the senses may be either (1) special, (such as color is the special object of sight, and sound of hearing), (2) common, or apprehended by several senses in combination (such as motion or figure), or (3) incidental or inferential (such as when from the immediate sensation of white we come to know a person or *object* which is white). There are five special senses. Of these, touch is the must rudimentary, hearing the most instructive, and sight the most ennobling. The organ in these senses never acts directly , but is affected by some medium such as air. Even touch, which seems to act by actual contact, probably involves some vehicle of communication. For Aristotle, the heart is the common or central sense organ. It recognizes the common qualities which are involved in all particular objects of sensation. It is, first, the sense which brings us a consciousness of sensation. Secondly, in one act before the mind, it holds up the objects of our knowledge and enables us to distinguish between the reports of different senses.

Aristotle defines the imagination as "the movement which results upon an actual sensation." In other words, it is the process by which an impression of the senses is pictured and retained before the mind, and is accordingly the basis of memory. The representative pictures which it provides form the materials of reason. Illusions and dreams are both alike due to an excitement in the organ of sense similar to that which would be caused by the actual presence of the sensible phenomenon. Memory is defined as the permanent possession of the sensuous picture as a copy which represents the object of which it is a picture. Recollection, or the calling back to mind the residue of memory, depends on the laws which regulate the association of our ideas. We trace the associations by starting with the thought of the object present to us, then considering what is similar, contrary or contiguous.

Reason is the source of the first principles of knowledge. Reason is opposed to the sense

insofar as sensations are restricted and individual, and thought is free and universal. Also, while the senses deals with the concrete and material aspect of phenomena, reason deals with the abstract and ideal aspects. But while reason is in itself the source of general ideas, it is so only potentially. For, it arrives at them only by a process of development in which it gradually clothes sense in thought, and unifies and interprets sense-presentations. This work of reason in thinking beings suggests the question: How can immaterial thought come to receive material things? It is only possible in virtue of some *community* between thought and things. Aristotle recognizes an active reason which *makes* objects of thought. This is distinguished from passive reason which receives, combines and compares the objects of thought. Active reason makes the world intelligible, and bestows on the materials of knowledge those ideas or categories which make them accessible to thought. This is just as the sun communicates to material objects that light, without which color would be invisible, and sight would have no object. Hence reason is the constant support of an intelligible world. While assigning reason to the soul of humans, Aristotle describes it as coming from without, and almost seems to identify it with God as the eternal and omnipresent thinker. Even in humans, in short, reason realizes something of the essential characteristic of absolute thought -- the unity of thought as subject with thought as object.

7. Ethics

Ethics, as viewed by Aristotle, is an attempt to find out our chief end or highest good: an end which he maintains is really final. Though many ends of life are only means to further ends, our aspirations and desires must have some final object or pursuit. Such a chief end is universally called happiness. But people mean such different things by the expression that he finds it necessary to discuss the nature of it for himself. For starters, happiness must be based on human nature, and must begin from the facts of personal experience. Thus, happiness cannot be found in any abstract or ideal notion, like Plato's self-existing good. It must be something practical and human. It must then be found in the work and life which is unique to humans. But this is neither the vegetative life we share with plants nor the sensitive existence which we share with animals. It follows therefore that true happiness lies in the active life of a rational being or in a perfect realization and outworking of the true soul and self, continued throughout a lifetime.

Aristotle expands his notion of happiness through an analysis of the human soul which structures and animates a living human organism. The parts of the soul are divided as follows:

	Calculative -- Intellectual Virtue
Rational	

	Appetitive -- Moral Virtue
Irrational	
	Vegetative -- Nutritional Virtue

The human soul has an irrational element which is shared with the animals, and a rational element which is distinctly human. The most primitive irrational element is the vegetative faculty which is responsible for nutrition and growth. An organism which does this well may be said to have a nutritional virtue. The second tier of the soul is the appetitive faculty which is responsible for our emotions and desires (such as joy, grief, hope and fear). This faculty is both rational and irrational. It is irrational since even animals experience desires. However, it is also rational since humans have the distinct ability to control these desires with the help of reason. The human ability to properly control these desires is called moral virtue, and is the focus of morality. Aristotle notes that there is a purely rational part of the soul, the calculative, which is responsible for the human ability to contemplate, reason logically, and formulate scientific principles. The mastery of these abilities is called intellectual virtue.

Aristotle continues by making several general points about the nature of moral virtues (i.e. desire-regulating virtues). First, he argues that the ability to regulate our desires is not instinctive, but learned and is the outcome of both teaching and practice. Second, he notes that if we regulate our desires either too much or too little, then we create problems. As an analogy, Aristotle comments that, either "excess or deficiency of gymnastic exercise is fatal to strength." Third, he argues that desire-regulating virtues are character traits, and are not to be understood as either emotions or mental faculties.

The core of Aristotle's account of moral virtue is his doctrine of the mean. According to this doctrine, moral virtues are desire-regulating character traits which are at a mean between more extreme character traits (or vices). For example, in response to the natural emotion of fear, we should develop the virtuous character trait of courage. If we develop an excessive character trait by curbing fear too much, then we are said to be rash, which is a vice. If, on the other extreme, we develop a deficient character trait by curbing fear too little, then we are said to be cowardly, which is also a vice. The virtue of courage, then, lies at the mean between the excessive extreme of rashness, and the deficient extreme of cowardice. Aristotle is quick to point out that the virtuous mean is not a strict mathematical mean between two extremes. For example, if eating 100 apples is too many, and eating zero apples is too little, this does not imply that we should eat 50 apples, which is the mathematical mean. Instead, the mean is rationally determined, based on the relative merits of the situation. That is, it is "as a prudent man would determine it." He concludes that it is difficult to live the virtuous life primarily because it is often difficult to find the mean between the extremes.

Most moral virtues, and not just courage, are to be understood as falling at the mean between two accompanying vices. His list may be represented by the following table:

VICE OF DEFICIENCY	VIRTUOUS MEAN	VICE OF EXCESS
Cowardice	Courage	Rashness
Insensibility	Temperance	Intemperance
Illiberality	Liberality	Prodigality
Pettiness	Munificence	Vulgarity
Humble-mindedness	High-mindedness	Vainglorіness
Want of Ambition	Right Ambition	Over-ambition
Spiritlessness	Good Temper	Irascibility
Surliness	Friendly Civility	Obsequiousness
Ironical Depreciation	Sincerity	Boastfulness
Boorishness	Wittiness	Buffoonery
Shamelessness	Modesty	Bashfulness
Callousness	Just Resentment	Spitefulness

The prominent virtue of this list is high-mindedness, which, as being a kind of ideal self-respect, is regarded as the crown of all the other virtues, depending on them for its existence, and itself in turn tending to intensify their force. The list seems to be more a deduction from the formula than a statement of the facts on which the formula itself depends, and Aristotle accordingly finds language frequently inadequate to express the states of excess or defect which his theory involves (for example in dealing with the virtue of ambition). Throughout the list he insists on the "autonomy of will" as indispensable to virtue: courage for instance is only really worthy of the name when done from a love of honor and duty: munificence again becomes vulgarity when it is not exercised from a love of what is right and beautiful, but for displaying wealth.

Justice is used both in a general and in a special sense. In its general sense it is equivalent to the observance of law. As such it is the same thing as virtue, differing only insofar as virtue exercises the disposition simply in the abstract, and justice applies it in dealings with people. Particular justice displays itself in two forms. First, *distributive justice* hands out honors and rewards according to the merits of the recipients. Second, *corrective justice* takes no account of the position of the parties concerned, but simply secures equality between the

two by taking away from the advantage of the one and adding it to the disadvantage of the other. Strictly speaking, distributive and corrective justice are more than mere retaliation and reciprocity. However, in concrete situations of civil life, retaliation and reciprocity is an adequate formula since such circumstances involve money, depending on a relation between producer and consumer. Since absolute justice is abstract in nature, in the real world it must be supplemented with equity, which corrects and modifies the laws of justice where it falls short. Thus, morality requires a standard which will not only regulate the inadequacies of absolute justice but be also an idea of moral progress.

This idea of morality is given by the faculty of moral insight. The truly good person is at the same time a person of perfect insight, and a person of perfect insight is also perfectly good. Our idea of the ultimate end of moral action is developed through habitual experience, and this gradually frames itself out of particular perceptions. It is the job of reason to apprehend and organize these particular perceptions. However, moral action is never the result of a mere act of the understanding, nor is it the result of a simple desire which views objects merely as things which produce pain or pleasure. We start with a rational conception of what is advantageous, but this conception is in itself powerless without the natural impulse which will give it strength. The will or purpose implied by morality is thus either reason stimulated to act by desire, or desire guided and controlled by understanding. These factors then motivate the willful action. Freedom of the will is a factor with both virtuous choices and vicious choices. Actions are involuntary only when another person forces our action, or if we are ignorant of important details in actions. Actions are voluntary when the originating cause of action (either virtuous or vicious) lies in ourselves.

Moral weakness of the will results in someone does what is wrong, knowing that it is right, and yet follows his desire against reason. For Aristotle, this condition is not a myth, as Socrates supposed it was. The problem is a matter of conflicting moral principles. Moral action may be represented as a syllogism in which a general principle of morality forms the first (i.e. major) premise, while the particular application is the second (i.e. minor) premise. The conclusion, though, which is arrived at through speculation, is not always carried out in practice. The moral syllogism is not simply a matter of logic, but involves psychological drives and desires. Desires can lead to a minor premise being applied to one rather than another of two major premises existing in the agent's mind. Animals, on the other hand, cannot be called weak willed or incontinent since such a conflict of principles is not possible with them.

Pleasure is not to be identified with Good. Pleasure is found in the consciousness of free spontaneous action. It is an invisible experience, like vision, and is always present when a perfect organ acts upon a perfect object. Pleasures accordingly differ in kind, varying along with the different value of the functions of which they are the expression. They are

determined ultimately by the judgment of "the good person." Our chief end is the perfect development of our true nature; it thus must be particularly found in the realization of our highest faculty, that is, reason. It is this in fact which constitutes our personality, and we would not be pursuing our own life, but the life of some lower being, if we followed any other aim. Self-love accordingly may be said to be the highest law of morals, because while such self-love may be understood as the selfishness which gratifies a person's lower nature, it may also be, and is rightly, the love of that higher and rational nature which constitutes each person's true self. Such a life of thought is further recommended as that which is most pleasant, most self-sufficient, most continuous, and most consonant with our purpose. It is also that which is most akin to the life of God: for God cannot be conceived as practising the ordinary moral virtues and must therefore find his happiness in contemplation.

Friendship is an indispensable aid in framing for ourselves the higher moral life; if not itself a virtue, it is at least associated with virtue, and it proves itself of service in almost all conditions of our existence. Such results, however, are to be derived not from the worldly friendships of utility or pleasure, but only from those which are founded on virtue. The true friend is in fact a second self, and the true moral value of friendship lies in the fact that the friend presents to us a mirror of good actions, and so intensifies our consciousness and our appreciation of life.

For a fuller discussion of these topics, see the article Aristotle's Ethics.

8. Politics

Aristotle does not regard politics as a separate science from ethics, but as the completion, and almost a verification of it. The moral ideal in political administration is only a different aspect of that which also applies to individual happiness. Humans are by nature social beings, and the possession of rational speech (logos) in itself leads us to social union. The state is a development from the family through the village community, an offshoot of the family. Formed originally for the satisfaction of natural wants, it exists afterwards for moral ends and for the promotion of the higher life. The state in fact is no mere local union for the prevention of wrong doing, and the convenience of exchange. It is also no mere institution for the protection of goods and property. It is a genuine moral organization for advancing the development of humans.

The family, which is chronologically prior to the state, involves a series of relations between husband and wife, parent and child, master and slave. Aristotle regards the slave as a piece of live property having no existence except in relation to his master. Slavery is a natural institution because there is a ruling and a subject class among people related to each other as soul to body; however, we must distinguish between those who are slaves by nature, and

those who have become slaves merely by war and conquest. Household management involves the acquisition of riches, but must be distinguished from money-making for its own sake. Wealth is everything whose value can be measured by money; but it is the use rather than the possession of commodities which constitutes riches.

Financial exchange first involved bartering. However, with the difficulties of transmission between countries widely separated from each other, money as a currency arose. At first it was merely a specific amount of weighted or measured metal. Afterwards it received a stamp to mark the amount. Demand is the real standard of value. Currency, therefore, is merely a convention which represents the demand; it stands between the producer and the recipient and secures fairness. Usury is an unnatural and reprehensible use of money.

The communal ownership of wives and property as sketched by Plato in the *Republic* rests on a false conception of political society. For, the state is not a homogeneous unity, as Plato believed, but rather is made up of dissimilar elements. The classification of constitutions is based on the fact that government may be exercised either for the good of the governed or of the governing, and may be either concentrated in one person or shared by a few or by the many. There are thus three true forms of government: monarchy, aristocracy, and constitutional republic. The perverted forms of these are tyranny, oligarchy and democracy. The difference between the last two is not that democracy is a government of the many, and oligarchy of the few; instead, democracy is the state of the poor, and oligarchy of the rich. Considered in the abstract, these six states stand in the following order of preference: monarchy, aristocracy, constitutional republic, democracy, oligarchy, tyranny. But though with a perfect person monarchy would be the highest form of government, the absence of such people puts it practically out of consideration. Similarly, true aristocracy is hardly ever found in its uncorrupted form. It is in the constitution that the good person and the good citizen coincide. Ideal preferences aside, then, the constitutional republic is regarded as the best *attainable* form of government, especially as it secures that predominance of a large middle class, which is the chief basis of permanence in any state. With the spread of population, democracy is likely to become the general form of government.

Which is the best state is a question that cannot be directly answered. Different races are suited for different forms of government, and the question which meets the politician is not so much what is abstractly the best state, but what is the best state under existing circumstances. Generally, however, the best state will enable anyone to act in the best and live in the happiest manner. To serve this end the ideal state should be neither too great nor too small, but simply self-sufficient. It should occupy a favorable position towards land and sea and consist of citizens gifted with the spirit of the northern nations, and the intelligence of the Asiatic nations. It should further take particular care to exclude from government all those engaged in trade and commerce; "the best state will not make the "working man" a

citizen; it should provide support religious worship; it should secure morality through the educational influences of law and early training. Law, for Aristotle, is the outward expression of the moral ideal without the bias of human feeling. It is thus no mere agreement or convention, but a moral force coextensive with all virtue. Since it is universal in its character, it requires modification and adaptation to particular circumstances through equity.

Education should be guided by legislation to make it correspond with the results of psychological analysis, and follow the gradual development of the bodily and mental faculties. Children should during their earliest years be carefully protected from all injurious associations, and be introduced to such amusements as will prepare them for the serious duties of life. Their literary education should begin in their seventh year, and continue to their twenty-first year. This period is divided into two courses of training, one from age seven to puberty, and the other from puberty to age twenty-one. Such education should not be left to private enterprise, but should be undertaken by the state. There are four main branches of education: reading and writing, Gymnastics, music, and painting. They should not be studied to achieve a specific aim, but in the liberal spirit which creates true freemen. Thus, for example, gymnastics should not be pursued by itself exclusively, or it will result in a harsh savage type of character. Painting must not be studied merely to prevent people from being cheated in pictures, but to make them attend to physical beauty. Music must not be studied merely for amusement, but for the moral influence which it exerts on the feelings. Indeed all true education is, as Plato saw, a training of our sympathies so that we may love and hate in a right manner.

For a fuller discussion of these topics, see the article Aristotle's Politics.

9. Art and Poetics

Art is defined by Aristotle as the realization in external form of a true idea, and is traced back to that natural love of imitation which characterizes humans, and to the pleasure which we feel in recognizing likenesses. Art however is not limited to mere copying. It idealizes nature and completes its deficiencies: it seeks to grasp the universal type in the individual phenomenon. The distinction therefore between poetic art and history is not that the one uses meter, and the other does not. The distinction is that while history is limited to what has actually happened, poetry depicts things in their universal character. And, therefore, "poetry is more philosophical and more elevated than history." Such imitation may represent people either as better or as worse than people usually are, or it may neither go beyond nor fall below the average standard. Comedy is the imitation of the worse examples of humanity, understood however not in the sense of absolute badness, but only in so far as what is low and ignoble enters into what is laughable and comic.

Tragedy, on the other hand, is the representation of a serious or meaningful, rounded or finished, and more or less extended or far-reaching action -- a representation which is effected by action and not mere narration. It is fitted by portraying events which excite fear and pity in the mind of the observer to purify or purge these feelings and extend and regulate their sympathy. It is thus a homeopathic curing of the passions. Insofar as art in general universalizes particular events, tragedy, in depicting passionate and critical situations, takes the observer outside the selfish and individual standpoint, and views them in connection with the general lot of human beings. This is similar to Aristotle's explanation of the use of orgiastic music in the worship of Bacchas and other deities: it affords an outlet for religious fervor and thus steadies one's religious sentiments.

For a discussion of poetics and dramatic literature, see the article Aristotle's Poetics.

For a discussion of Aristotle's views on biology, see the article Aristotle's Biology.

Author Information

The author of this article is anonymous. The IEP is actively seeking an author who will write a replacement article.