

**Chapter 1 : Aristotle's Metaphysics (Stanford Encyclopedia of Philosophy)**

*Aristotle's description 'the study of being qua being' is frequently and easily misunderstood, for it seems to suggest that there is a single (albeit special) subject matter—'being qua being'—that is under investigation.*

Info to Readers click to show or hide The Vocabulary of Ontology: We know what an extraordinary career it has been. It seems fair to say, with Benveniste, that the systematic development of a concept of Being in Greek philosophy from Parmenides to Aristotle, and then in a more mechanical way from the Stoics to Plotinus, relies upon the pre-existing disposition of the language to make a very general and diversified use of the verb *einai*. Furthermore, insofar as the notions expressed by *on*, *einai*, and *ousia* in Greek underlie the doctrines of Being, substance, essence, and existence in Latin, in Arabic, and in modern philosophy from Descartes to Heidegger and perhaps to Quine, we may say that the usage of the Greek verb *be* studied here forms the historical basis for the ontological tradition of the West, as the very term "ontology" suggests. At the same time it is generally recognized that this wide range of uses for the single verb *eimi* in Greek reflects a state of affairs which is "peculiar to Indo-European languages, and by no means a universal situation or a necessary condition. What is the world made of? These may be soon as lying behind what were later distinguished perhaps first, in a formal way, I. I am here concerned only with the first and most basic question, since that constitutes the inquiry about being. Before beginning a historical survey, it would be well to attempt a definition of the concept with which we are concerned. This reality is initially seen simply as a sort of substratum out of which the multiplicity of appearances may evolve, but progressively there come to be added to it other features, such as absolute unity or, conversely, infinite multiplicity, eternity ultimately timelessness, incorporeality for, conversely, basic corporeality, and rationality or, conversely, blind necessity. John Dillon, *The Question of Being*, in: Jacques Brunschwig, Geoffrey E. What stuff is reality made of? Taken in itself, this question was strikingly indicative of the most fundamental need of the human mind. To understand something is for us to conceive it as identical in nature with something else that we already know. To know the nature of reality at large is therefore for us to understand that each and every one of the innumerable things which make up the universe is, at bottom, identical in nature with each and every other thing. Prompted by this unshakable conviction, unshakable because rooted in the very essence of human understanding, the early Greek thinkers successively attempted to reduce nature in general to water, then to air, then to fire, until one of them at last hit upon the right answer to the question, by saying that the primary stuff which reality is made of is being. The answer was obviously correct, for it is not at once evident that, in the last analysis, air and fire are nothing else than water, or that, conversely, water itself is nothing else than either air or fire; but it cannot be doubted that, whatever else they may be, water, air and fire have in common at least this property, that they are. Each of them is a being, and, since the same can be said of everything else, we cannot avoid the conclusion that being is the only property certainly shared in common by all that which is. Being, then, is the fundamental and ultimate element of reality. When he made this discovery, Parmenides of Elea at once carried metaphysical speculation to what was always to remain one of its ultimate limits; but, at the same time, he entangled himself in what still is for us one of the worst metaphysical difficulties. If I say that everything is water, everybody will understand what I mean, but if I say that everything is being, I can safely expect to be asked: For indeed we all know many beings, but what being itself is, or what it is to be, is an extremely obscure and intricate question. Parmenides could hardly avoid telling us what sort of reality being itself is. In point of fact, he was bold enough to raise the problem and clear-sighted enough to give it an answer which still deserves to hold our attention. As such, it signifies either *d* being that is, the substance, nature, and essence of anything existent, or being itself, a property common to all that which can rightly be said to be. But the reverse is not true. Being is quite conceivable apart from actual existence; so much so that the very first and the most universal of all the distinctions in the realm of being is that which divides it into two classes, that of the real and that of the possible. Now what is it to conceive a being as merely possible, if not to conceive it apart from actual existence? Since being is thinkable apart from actual existence, whereas actual existence is not thinkable apart from being, philosophers will simply yield to one of the fundamental

facilities of the human mind by positing being minus actual existence as the first principle of metaphysics. So we ask, to begin with: What sort of word is this anyway -- Being -- as regards its formal character as a word? What does linguistics tell us about the originary meaning of this word? To put this in scholarly terms, we are asking 1 about the grammar and 2 about the etymology of the word Being. The grammatical analysis of words is neither exclusively nor primarily concerned with their written or spoken form. It takes these formal elements as clues to definite directions and differences in direction in the possible meanings of words; these directions dictate how the words can be used within a sentence or within a larger discursive structure. The character of our word Being, as a word, is determined, accordingly, by three grammatical forms: Thus our first task is to understand the meaning of these grammatical forms. Of the three we have named, verb and substantive are among those that were first recognized at the start of Western grammar and that even today are taken as the fundamental forms of words and of language in general. And so, with the question about the essence of the substantive and of the verb, we find ourselves in the midst of the question about the essence of language. For the question of whether the primordial form of the word is the noun substantive or the verb coincides with the question of the originary character of speech and speaking. In turn, this question entails the question of the origin of language. We cannot start by immediately going into this question. We are forced onto a detour. We will restrict ourselves in what follows to that grammatical form which provides the transitional phase in the development of the verbal substantive: What does "infinitive" mean? This term is an abbreviation of the complete one: Above all we must consider the fact that the definitive differentiation of the fundamental forms of words noun and verb in the Greek form of *onoma* and *rhema* was worked out and first established in the most immediate and intimate connection with the conception and interpretation of Being that has been definitive for the entire West. The terms *onoma* and *rhema* were already known before Plato, of course. But at that time, and still in Plato, they were understood as terms denoting the use of words as a whole. *Onoma* means the linguistic name as distinguished from the named person or thing, and it also means the speaking of a word, which was later conceived grammatically as *rhema*. And *rhema* in turn means the spoken word, speech; the rhetor is the speaker, the orator, who uses not only verbs but also *onomata* in the narrower meaning of the substantive. The fact that both terms originally governed an equally wide domain is important for our later point that the much-discussed question in linguistics of whether the noun or the verb represents the primordial form of the word is not a genuine question. This pseudo-question first arose in the context of a developed grammar rather than from a vision of the essence of language, an essence not yet dissected by grammar. Every sentence, the subject as well as the predicate of which is a noun or noun equivalent is called a noun clause, while in a verbal clause the predicate is a finite verb. This distinction is indispensable for more subtle understanding of Hebrew syntax as of Semitics in general because it is not merely a matter of an external, formal distinction in meaning but of one that goes to the depths of the language. The noun clause with a participial predicate can also assert something moving and in flux, except that here the event and action is fixed as something not active and enduring, as opposed to the verbal clause. For our purpose, it is not necessary to discuss all the various kinds of noun classes, and in particular not those with participial predicates which should logically be considered as verbal clauses. Edited and enlarged by E. Clarendon Press, , p. A

The verb *hayah*: We must devote special attention to this verb not only because it occurs most frequently but also because the verbal problems discussed above are concentrated in this verb and appear in it in their most difficult form. Now, as we have shown above, Hebrew and the other Semitic languages do not need a copula because of the noun clause. As a general rule, therefore, it may be said that *hayah* is not used as a copula; real or supposed exceptions to this rule will be cited later. The majority of formal considerations as well as the actual ones lead to this conclusion: The peculiarity of emphasizing the verbal idea by use of the infinitive absolute before finite verbs; II. Jahveh hurled a great wind, and a mighty tempest was Jonah 1. The meaning of *hayah* is apparently manifold; *hayah* has thus been considered to some extent a general word which can mean everything possible and therefore designates nothing characteristic. Closer examination reveals, however, that this is not the case. It is therefore necessary to establish the many meanings and shades of meaning of *hayah* and to find their inner connexion. We shall use first the results of Ratschow 1 who has examined the occurrences of *hayah* in the Old Testament with a thoroughness hardly to be excelled and in

whose work is to be found extensive evidence. He found three principal meanings: In the main this will be right, and it agrees with our understanding of Hebrew thought; we must object, however, to details. The same seems to be the opinion of Boman, who several times says that a static being is a nothing to the Israelites. On this question they got an answer, and they report as follows: The nominal sentence is a very well-established feature of Semitic syntax. Since this pronoun is not indispensable and is indeed very frequently not so inserted, I think it can be neglected in a discussion of the copula. This is discussed at length by Boman, and I shall later make some remarks about his treatment of it. Moreover, a considerable complication is introduced into the discussion by this word. In fact many cases which use it have also some locality indicated: For Parmenides, "being" to on is one, timeless and changeless, and this, he says, is "the truth"; all talk about plurality and change is "opinion" doxa, and not the truth about "being. Plato also adopts the abstract noun built on the same participle, ousia, the stem ont -- plus the abstract noun ending -- sia. In ordinary Greek, this word must have some of the resonance that "existence" has in ordinary English, but it is most often used, outside of philosophical contexts, to talk about property or wealth or about important personal characteristics. Aristotle does not use the locution to ontos on; apart from his exceedingly widespread use of the word ousia. We may note the locution to on he on, typically translated "being qua being," and to on haplos that which simply is. More generally, Aristotle frequently talks of the many senses of "being": The Stoics tend to use the word hyparchein for both existence and predication. This verb caused great philosophical difficulty to the Greeks and consequential difficulties for us. Secondly, being is one and not many fr. And finally, the epistemological premiss: Being, in short, is a sphere fr. Most of the later pre-Socratics denied this latter premiss cf. For Plato, as for Parmenides, absolute nonbeing is nonsense Sophist c, but there is a relative grade illustrated not only by the Receptacle cited above, but by sensible things aistheta as well Sophist b; Timaeus. Among the Platonic hierarchy of Forms, there is aneidosis of being; indeed it is one of the most important Forms that pervade all the rest Sophist b-d; compare this with the peculiar nature of on in Aristotle, Metaphysics a. Further, Plato distinguishes real beings ontos onta from those that have genesis, and in Timaeus 28a he works out an epistemological-ontological correlation: The first distinction is between "being qua being" to on he on, which is the object of metaphysics, and individual beings onta, which are the objects of the other sciences. This is the view in Metaphysics a, but Aristotle is not consistent on the point: Nichomachean Ethics I, b; see katholou. There follows a basic distinction ibid.

## Chapter 2 : On The Several Senses Of Being In Aristotle by Franz Clemens Brentano

*THE SCIENCE OF BEING AS BEING IN ARISTOTLE, AQUINAS, AND WIPPEL* Robert Sokolowski As my contribution to this series of lectures in honor of Msgr. John Wipfel, I would like to discuss a topic.

Table of Contents Metaphysics What is known to us as metaphysics is what Aristotle called "first philosophy. Thus a thing perceived to be beautiful in this world is in fact an imperfect manifestation of the Form of Beauty. Metaphysics, or the parts still in existence, spans fourteen books. He also describes the nature of wisdom: Such knowledge requires the understanding of both facts and causes, and wisdom comes only with an understanding of the universal principles and primary causes built on this science. By the fourth book he begins to attack some of the sophistry that has contaminated the field. One point that he dwells on is the law of contradictions, which essentially asserts that something cannot both be and not be at the same time. In particular, he is concerned with the relativism and even nihilism that would result from a metaphysics that allowed contradictions. The relationship between form and matter is another central problem for Aristotle. He argues that both are substances, but matter is potential, while form is actual. The two are not separate but intertwined, and actuality precedes potentiality. Although the actual is produced from the potential, it is the actual that makes the production possible. Several of the books covering topics like contrariety, unity, the nature of mathematical objects, and others are usually neglected, as they show less originality compared with the key points of the Metaphysics. Before he draws any grand conclusions, he begins with the idea of substance, of which there are three kinds: If all substances are perishable, then ultimate destruction of everything is inevitable. But Aristotle asserts two imperishable entities: If time were created, then there must have been no time before the creation, but the very concept of "before" necessitates the concept of time. On the other hand, as he argued in his works of natural philosophy, the only continuous motion must be circular. Thus he returns to the idea of the Unmoved Mover, for only such a being could generate eternal circular motion. The Unmoved Mover is the ultimate cause of the universe, and it is pure actuality, containing no matter since it is the very cause of itself. In order for the Mover to be unmoved itself, it must move in a non-physical way, by inspiring desire. Aristotle gives the Mover the name of God, but this figure is unlike most standard conceptions of a divine being. Though Aristotle asserts that it is a living creature and represents the pinnacle of goodness, it also has no interest in the world and no recognition of man, for it exists in a completely transcendent and abstract state. The activity of God—“if it can be called such”—is simply knowledge, and this knowledge is purely a knowledge of itself, because an abstracted being is above sense and experience and can know only what is best. Some have interpreted this to mean that God, in knowing itself, implicitly knows everything else, but Aristotle flatly denied this view. In fact, he believed, for example, that God would have no knowledge of evil. God is the ultimate cause of everything in the world, but it also remains completely detached.

**Chapter 3 : Aristotle: Metaphysics | Internet Encyclopedia of Philosophy**

*Only later, after having read al-Farabi's, Purposes of the Metaphysics of Aristotle, did he understand Aristotle's book. [12] In the 19th century, with the rise of textual criticism, the Metaphysics was examined anew.*

Reviewed by Pol Vandeveld, Marquette University This is the translation of a course that Paul Ricoeur taught at the University of Strasbourg in and several times since then. It circulated in a mimeographed version made at the Sorbonne in and was published as a course in The French edition by Jean-Louis Schlegel appeared in Several other courses will become available electronically in the near future. There are three main benefits in the publication and translation of this course. This course represents his most detailed discussion of two philosophers who have remained his discussion partners until the end. Ricoeur sets for himself a long-term and a short-term goal. The long-term goal is rather ambitious and would make many commentators uncomfortable by its breadth. It is nothing less than "to work out the ontological foundations of our Western philosophy, so as to understand its intention by way of the history of its beginning" p. The short-term goal is more manageable. If we look beyond Platonic essentialism and Aristotelian substantialism, we see, Ricoeur argues, that they share a common ground. This comparison is divided into two parts, one on Plato and the other on Aristotle. Being is "essentially discontinuous" to the extent that it gives itself in multiple ways, in different beings. In a chapter titled "Essence and Language," Ricoeur shows the influence of Cratylus on Plato in the analogy between the problem of essence and the problem of naming. To ask what virtue is amounts to asking what we call virtue. Ricoeur then examines two questions: In an interesting discussion in several chapters, Ricoeur examines the questions raised in several dialogues, for example Parmenides, Sophist, and Timaeus, and the extent of their success in answering them. The theory of ideas and their link to particulars through a "vertical" participation represents the first, most obvious layer. The second layer is less obvious and more radical. It concerns the very being of ideas themselves, given that they "are," and the kind of "lateral" participation they have in other ideas. What he offers is at the end an unfinished ontology, which is rich in many insights, but whose systematic version will only come later with someone like Plotinus. Plato, Ricoeur somewhat provocatively writes, "wanted to do nothing more than compose dialogues" p. It is unfinished because ideas, for example, both subtend the sensible world, providing it with intelligibility, and are also themselves in need of being. It is not religion as such that interests Ricoeur, but rather how philosophy itself in Plato "recharges itself from the Sacred" p. The part has two sections: Such a reconstruction of the genesis of Metaphysics allows us to see the kind of problems Aristotle tries to solve and the difficulties he has to deal with. However, going beyond Jaeger, Ricoeur wants to put the genealogical method at the service of the systematic order so that the historical "dismembering" of Metaphysics p. Regarding substantiality, Ricoeur shows that what ultimately constitutes the substance is not matter, but rather form. This is a close connection with Plato. Although Aristotle starts with the substance in the physical world, the topic of the sensible is approached only as one component of the analysis of being or as one step between the examination of being as being and the analysis of a supreme substance. Regarding matter, Ricoeur uses some French commentators, such as Jean Marie Le Blond, to point out that matter is not really the purely undetermined or the unknowable substrate, but rather a relative term. This also means that matter is not inert, but linked to potency, so that matter "has the same signification as the organ does with respect to function" Matter desires form, as stated in Physics I 9. A substance is knowable through its form, but the singular is "undetermined" p. Aristotle, Ricoeur argues, manifests an "indifference to the singularity of individuals" p. As a consequence, what is most real in an individual is its essence and not so much its existence, for which, Ricoeur contends, Aristotle does not really have a theory. Rather, he "is driven back to the side of a philosophy of quiddity and not of the individual" p. This explains why ousia is both and has been translated as substance and essence. It is a "de-existentialized ousia" p. As he did with Plato, Ricoeur shows that what is at the core of the difficulty is the unstable status of being. In Plato it was, among other things, the ambivalence of the idea as what confers being on the sensible and as what is still in need of being. In Aristotle it is the tension between essence, which makes the individual intelligible, and existence, which gives individuation to the entity, but no intelligibility and thus

no real ontological status. Ricoeur argues that theology is in fact the ultimate realization of the ontology of being as being. This entails that the causality at stake in the first mover is a causality of the quiddity and not of the existence. He never made significant changes to the version of , so the course does not reflect the immense production of secondary literature and the progress of scholarship on these philosophers. However, the dated scholarship of Ricoeur is also an historical testimony to the 19th and early 20th century commentators who have played a central role in how Plato and Aristotle were understood in French speaking countries until the s. This course also has a historical interest in that it illustrates a certain, more continental kind of scholarship, in which a philosopher like Ricoeur discusses two major philosophers and addresses three fundamental issues: This kind of "epic" scholarship obviously has the drawback of being somewhat general and sacrificing the detailed analysis of specific passages. It may appear even suspicious to the highly specialized brand of philosophical inquiry that is more typical in the Anglo-American academic world. However, there is something refreshing and stimulating in such a scholarship in the epic mode. First, it offers a real confrontation and debate, an Auseinandersetzung with two philosophical projects or programs in order to identify the real point and import of these questions about being, essence or substance; and, second, this kind of scholarship reminds us why we in fact care about these issues and what is really "current" or "actual" about them. By presenting in detail how he understands the fundamental ontological project of Plato and Aristotle, he helps us understand better the use he makes of Plato and Aristotle in his later works. For these philosophers were at the basis and often at the center of his studies of issues, such as time, action, the self, memory, and the good life. For example, in *The Course of Recognition and in Memory, History, Forgetting*, Ricoeur uses the Greeks and especially Plato and Aristotle in order to introduce the issue and sketch the history of the problem he wants to address. On several occasions, he also makes a rather creative use of these philosophers. A striking example is offered by his theory of narratives, which may represent the most original and fruitful manner of bringing together Plato and Aristotle. Emplotment is what brings the multiplicity of what happens to a unity of sense. Ricoeur combines this notion of emplotment or narrative with what he calls the three "great kinds" -- the Same, the Other, and the Analogous -- which he interprets as ideas that work as meta-categories, transcending the first-order categories, such as person and thing. We may also vary the past according to "the other," and we have narratives, which are of a different nature and a different order than facts and events. In such variations, the three Platonic "kinds" or meta-categories confer on narratives a quasi ontological status -- a narrative "stands for" an action -- and move the debate about the past beyond a simple opposition between the narrative as "being" the past or the narrative as "not being" the past. In *Oneself as Another*, Ricoeur presents another combination of Plato and Aristotle in order to elaborate the notion of selfhood. From Aristotle Ricoeur borrows the notion of character, ethos, in order to bring out the import in selfhood of being in representation or engaging in the world with others. He draws heavily from the *Nicomachean Ethics* in order to build his own views on the good life, the ethical aim, the virtue of being just, etc. Ricoeur combines this view with the Platonic meta-categories and the dialectic of the same and the other. Or it is a dialectic between ipse and idem that grants changes and variations an ontological status within personal identity. A final word on the translation. David Pellauer has been one of the main translators of Ricoeur in English and has several times collaborated with others, as in this case with John Starkey. This is again the case here. Despite some typos and a sentence here and there that could have been made more clear, Pellauer and Starkey have struck the right balance in their translation between the obligation of reliability toward the French original and the duty of intelligibility and readability toward the audience.

**Chapter 4 : Aristotle | Internet Encyclopedia of Philosophy**

*Aristotle gives four definitions of what is now called metaphysics: wisdom, first philosophy, theology and science of being qua being.. The purpose of this page is to present some of the most important interpretations, ancient and contemporary, of the definition of a science of being qua being.*

Metaphysics substance, cause, form, potentiality Nicomachean Ethics soul, happiness, virtue, friendship Eudemain Ethics Politics best states, utopias, constitutions, revolutions Rhetoric elements of forensic and political debate Poetics tragedy, epic poetry 3. 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. 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: Notions when isolated do not in themselves express either truth or falsehood: 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. 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. All men are mortal; Socrates is a man; therefore, Socrates is mortal. The syllogistic form of logical argumentation dominated logic for 2, years until the rise of modern propositional and predicate logic thanks to Frege, Russell, and others. 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. 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. 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. 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. 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. Forms are not causes of movement and alteration in the physical objects of sensation. 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. 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. 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. 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. There are four causes: Take, for example, a bronze statue. Its material cause is the bronze itself. Its efficient cause is the sculptor, insofar as he forces the bronze into shape. The formal cause is the idea of the completed statue. 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. Philosophy of Nature Aristotle sees the universe as a scale lying between the two extremes: The passage of matter into form must be shown in its various stages in the world 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: 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 were 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. 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*.

**Chapter 5 : The Concept of Being in Western Philosophy and Linguistics**

*The question of being plays a prominent role in Aristotle's corpus. Indeed, the first few books of the Metaphysics are an attempt to justify the fact that there can be a.*

The titles in this list are those in most common use today in English-language scholarship, followed by standard abbreviations in parentheses. For no discernible reason, Latin titles are customarily employed in some cases, English in others. Where Latin titles are in general use, English equivalents are given in square brackets. Whereas Descartes seeks to place philosophy and science on firm foundations by subjecting all knowledge claims to a searing methodological doubt, Aristotle begins with the conviction that our perceptual and cognitive faculties are basically dependable, that they for the most part put us into direct contact with the features and divisions of our world, and that we need not dally with sceptical postures before engaging in substantive philosophy. Accordingly, he proceeds in all areas of inquiry in the manner of a modern-day natural scientist, who takes it for granted that progress follows the assiduous application of a well-trained mind and so, when presented with a problem, simply goes to work. When he goes to work, Aristotle begins by considering how the world appears, reflecting on the puzzles those appearances throw up, and reviewing what has been said about those puzzles to date. These methods comprise his twin appeals to phainomena and the endoxic method. Human beings philosophize, according to Aristotle, because they find aspects of their experience puzzling. According to Aristotle, it behooves us to begin philosophizing by laying out the phainomena, the appearances, or, more fully, the things appearing to be the case, and then also collecting the endoxa, the credible opinions handed down regarding matters we find puzzling. As a typical example, in a passage of his Nicomachean Ethics, Aristotle confronts a puzzle of human conduct, the fact that we are apparently sometimes akratic or weak-willed. When introducing this puzzle, Aristotle pauses to reflect upon a precept governing his approach to philosophy: As in other cases, we must set out the appearances phainomena and run through all the puzzles regarding them. In this way we must prove the credible opinions endoxa about these sorts of experiences—ideally, all the credible opinions, but if not all, then most of them, those which are the most important. For if the objections are answered and the credible opinions remain, we shall have an adequate proof. EN b2—7 Scholars dispute concerning the degree to which Aristotle regards himself as beholden to the credible opinions endoxa he recounts and the basic appearances phainomena to which he appeals. So, as a group they must be re-interpreted and systematized, and, where that does not suffice, some must be rejected outright. It is in any case abundantly clear that Aristotle is willing to abandon some or all of the endoxa and phainomena whenever science or philosophy demands that he do so Met. Still, his attitude towards phainomena does betray a preference to conserve as many appearances as is practicable in a given domain—not because the appearances are unassailably accurate, but rather because, as he supposes, appearances tend to track the truth. We are outfitted with sense organs and powers of mind so structured as to put us into contact with the world and thus to provide us with data regarding its basic constituents and divisions. While our faculties are not infallible, neither are they systematically deceptive or misdirecting. Of course, it is not always clear what constitutes a phainomenon; still less is it clear which phainomenon is to be respected in the face of bona fide disagreement. This is in part why Aristotle endorses his second and related methodological precept, that we ought to begin philosophical discussions by collecting the most stable and entrenched opinions regarding the topic of inquiry handed down to us by our predecessors. Each of these translations captures at least part of what Aristotle intends with this word, but it is important to appreciate that it is a fairly technical term for him. An endoxon is the sort of opinion we spontaneously regard as reputable or worthy of respect, even if upon reflection we may come to question its veracity. Aristotle appropriates this term from ordinary Greek, in which an endoxos is a notable or honourable man, a man of high repute whom we would spontaneously respect—though we might, of course, upon closer inspection, find cause to criticize him. As he explains his use of the term, endoxa are widely shared opinions, often ultimately issuing from those we esteem most: Endoxa play a special role in Aristotelian philosophy in part because they form a significant sub-class of phainomena EN b3—8: He does think this, as far as it goes, but he also maintains,

more instructively, that we can be led astray by the terms within which philosophical problems are bequeathed to us. Very often, the puzzles confronting us were given crisp formulations by earlier thinkers and we find them puzzling precisely for that reason. Equally often, however, if we reflect upon the terms within which the puzzles are cast, we find a way forward; when a formulation of a puzzle betrays an untenable structuring assumption, a solution naturally commends itself. This is why in more abstract domains of inquiry we are likely to find ourselves seeking guidance from our predecessors even as we call into question their ways of articulating the problems we are confronting. Aristotle applies his method of running through the phenomena and collecting the endoxa widely, in nearly every area of his philosophy. To take a typical illustration, we find the method clearly deployed in his discussion of time in *Physics iv* 10. We begin with a phenomenon: So much is, inescapably, how our world appears: Yet when we move to offer an account of what time might be, we find ourselves flummoxed. For guidance, we turn to what has been said about time by those who have reflected upon its nature. It emerges directly that both philosophers and natural scientists have raised problems about time. As Aristotle sets them out, these problems take the form of puzzles, or *aporiai*, regarding whether and if so how time exists. *Phys.* If we say that time is the totality of the past, present and future, we immediately find someone objecting that time exists but that the past and future do not. According to the objector, only the present exists. If we retort then that time is what did exist, what exists at present and what will exist, then we notice first that our account is insufficient: We further see that our account already threatens circularity, since to say that something did or will exist seems only to say that it existed at an earlier time or will come to exist at a later time. Then again we find someone objecting to our account that even the notion of the present is troubling. After all, either the present is constantly changing or it remains forever the same. If it remains forever the same, then the current present is the same as the present of 10, years ago; yet that is absurd. If it is constantly changing, then no two presents are the same, in which case a past present must have come into and out of existence before the present present. Either it went out of existence even as it came into existence, which seems odd to say the least, or it went out of existence at some instant after it came into existence, in which case, again, two presents must have existed at the same instant. In setting such *aporiai*, Aristotle does not mean to endorse any given endoxon on one side or the other. Rather, he thinks that such considerations present credible puzzles, reflection upon which may steer us towards a deeper understanding of the nature of time. In this way, *aporiai* bring into sharp relief the issues requiring attention if progress is to be made. Thus, by reflecting upon the *aporiai* regarding time, we are led immediately to think about duration and divisibility, about quanta and continua, and about a variety of categorial questions. That is, if time exists, then what sort of thing is it? Is it the sort of thing which exists absolutely and independently? Or is it rather the sort of thing which, like a surface, depends upon other things for its existence? When we begin to address these sorts of questions, we also begin to ascertain the sorts of assumptions at play in the endoxa coming down to us regarding the nature of time. Consequently, when we collect the endoxa and survey them critically, we learn something about our quarry, in this case about the nature of time and crucially also something about the constellation of concepts which must be refined if we are to make genuine philosophical progress with respect to it. What holds in the case of time, contends Aristotle, holds generally. This is why he characteristically begins a philosophical inquiry by presenting the phenomena, collecting the endoxa, and running through the puzzles to which they give rise. Whereas science relies upon premises which are necessary and known to be so, a dialectical discussion can proceed by relying on endoxa, and so can claim only to be as secure as the endoxa upon which it relies. This is not a problem, suggests Aristotle, since we often reason fruitfully and well in circumstances where we cannot claim to have attained scientific understanding. Minimally, however, all reasoning—whether scientific or dialectical—must respect the canons of logic and inference. Of course, philosophers before Aristotle reasoned well or reasoned poorly, and the competent among them had a secure working grasp of the principles of validity and soundness in argumentation. No-one before Aristotle, however, developed a systematic treatment of the principles governing correct inference; and no-one before him attempted to codify the formal and syntactic principles at play in such inference. Aristotle somewhat uncharacteristically draws attention to this fact at the end of a discussion of logic inference and fallacy: Once you have surveyed our work, if it seems to you that our system has developed adequately in comparison with

other treatments arising from the tradition to date—bearing in mind how things were at the beginning of our inquiry—it falls to you, our students, to be indulgent with respect to any omissions in our system, and to feel a great debt of gratitude for the discoveries it contains. Generally, a deduction *sullogismos*, according to Aristotle, is a valid or acceptable argument. His view of deductions is, then, akin to a notion of validity, though there are some minor differences. For example, Aristotle maintains that irrelevant premises will ruin a deduction, whereas validity is indifferent to irrelevance or indeed to the addition of premises of any kind to an already valid argument. Moreover, Aristotle insists that deductions make progress, whereas every inference from  $p$  to  $p$  is trivially valid. In general, he contends that a deduction is the sort of argument whose structure guarantees its validity, irrespective of the truth or falsity of its premises. This holds intuitively for the following structure: All  $A$ s are  $B$ s. All  $B$ s are  $C$ s. Hence, all  $A$ s are  $C$ s. This particular deduction is perfect because its validity needs no proof, and perhaps because it admits of no proof either: Aristotle seeks to exploit the intuitive validity of perfect deductions in a surprisingly bold way, given the infancy of his subject: He contends that by using such transformations we can place all deduction on a firm footing. The perfect deduction already presented is an instance of universal affirmation: Now, contends Aristotle, it is possible to run through all combinations of simple premises and display their basic inferential structures and then to relate them back to this and similarly perfect deductions. It turns out that some of these arguments are deductions, or valid syllogisms, and some are not. Those which are not admit of counterexamples, whereas those which are, of course, do not. There are counterexamples to those, for instance, suffering from what came to be called undistributed middle terms, *e*. There is no counterexample to the perfect deduction in the form of a universal affirmation: So, if all the kinds of deductions possible can be reduced to the intuitively valid sorts, then the validity of all can be vouchsafed. To effect this sort of reduction, Aristotle relies upon a series of meta-theorems, some of which he proves and others of which he merely reports though it turns out that they do all indeed admit of proofs. His principles are meta-theorems in the sense that no argument can run afoul of them and still qualify as a genuine deduction. They include such theorems as: He does, in fact, offer proofs for the most significant of his meta-theorems, so that we can be assured that all deductions in his system are valid, even when their validity is difficult to grasp immediately. In developing and proving these meta-theorems of logic, Aristotle charts territory left unexplored before him and unimproved for many centuries after his death. Logic is a tool, he thinks, one making an important but incomplete contribution to science and dialectic. A deduction is minimally a valid syllogism, and certainly science must employ arguments passing this threshold. Still, science needs more: By this he means that they should reveal the genuine, mind-independent natures of things. That is, science explains what is less well known by what is better known and more fundamental, and what is explanatorily anemic by what is explanatorily fruitful. We may, for instance, wish to know why trees lose their leaves in the autumn. We may say, rightly, that this is due to the wind blowing through them. Still, this is not a deep or general explanation, since the wind blows equally at other times of year without the same result. A deeper explanation—one unavailable to Aristotle but illustrating his view nicely—is more general, and also more causal in character:

*Heidegger's science of being begins where Aristotle's science of being qua being end You're asking about Aristotle, not Heidegger. Famously, Heidegger thought Aristotle did ask about Being, too, but not really, because Aristotle assumed it was an entity just like beings.*

References and Further Reading 1. Aristotle and Plato The Plato we are supposed to know from his dialogues is one who posited that, for every name we give to bodies in the world there is a bodiless being in another world, one while they are many, static while they are changing, perfect while they are altogether distasteful. Not surprisingly, those for whom this is Plato find his doctrine absurd, and welcome an Aristotle whom they find saying that being in its highest form is found in an individual man or horse, that mathematical things are abstractions from sensible bodies, and that, if there is an ideal man apart from men, in virtue of whom they are all called men, then there must be yet a third kind of man, in virtue of whom the form and the men can have the same name, and yet a fourth, and so on. This is hard-headed, tough-minded Aristotle, not to be intimidated by fancy, mystical talk, living in the world we live in and knowing it is the only world there is. This Aristotle, unfortunately, is a fiction, a projection of our unphilosophic selves. He lives only in a handful of sentences ripped out of their contexts. The true Aristotle indeed takes at face value the world as we find it and all our ordinary opinions about it--takes them, examines them, and finds them wanting. It is the world as we find it which continually, for Aristotle, shows that our ordinary, materialist prejudices are mistaken, and the abandonment of those prejudices shows in turn that the world as we found it was not a possible world, that the world as we must reflect upon it is a much richer world, mysterious and exciting. Those of you for whom reading the Platonic dialogues was a battle you won by losing, an eye-opening experience from which, if there is no going forward, there is certainly no turning back, should get to know this Aristotle. But you will find standing in your way all those passages in which Aristotle seems to be discussing the dialogues and does so in a shallow way. Each dialogue has a surface in which Socrates speaks in riddles, articulates half-truths which invite qualification and correction, argues from answers given by others as though he shared their opinions, and pretends to be at a loss about everything. Plato never straightens things out for his readers, any more than Socrates does for his hearers. Platonic writing, like Socratic talk, is designed to awaken and guide philosophic thinking, by presenting, defending, and criticizing plausible responses to important questions. The Platonic-Socratic words have only done their work when we have gone beyond them, but they remain in the dialogues as a collection of just what they were intended to be -- unsatisfactory assertions. Aristotle is addressing an audience of students who have read the dialogues and is continuing the work of the dialogues. Aristotle would not be earning his keep as a teacher of philosophy if he did not force his students beyond that position. Aristotle constantly refers to the dialogues because they are the best and most comprehensive texts he and his students share. Aristotle disagrees with Plato about some things, but less extensively and less deeply than he disagrees with every other author that he names. One need only try a very little of this to find a great deal beginning to fall into place. And they do not in any way help either towards the knowledge of the other things.. Aristotle says that positing the Forms explains no single thing that one wants to know. Again, everyone knows that the Platonic Socrates claimed that the forms were separate from the things in the sensible world, off by themselves, while Aristotle insisted that the forms were in the things. Does not Socrates say that the cause of heat in a hot thing is not heat itself but fire? Where, then, is the form for Socrates? Aristotle taught that the causes of characteristics of things were to be looked for not in a separate world of forms but in the primary instances of those characteristics right here in the world. Again, Aristotle teaches that form is to be understood as always at work, never static as is the Platonic form, or is it? Do not the Stranger and Theaetetus agree in the Sophist that it would be "monstrous and absurd" to deny that life, motion, and soul belong to the intelligible things? They set forth a way to get started with the work of philosophic inquiry, and Aristotle moves altogether within that way. And this brings me to a third assumption: Aristotle claims that it is the same as the question, What is being? The translators give us the word substance only because earlier translators and commentators did so, while they in turn did so because still earlier translators into Latin rendered it

assubstantia. Early modern philosophy, in all the European languages, is full of discussions of substance which stem from Latin versions of Aristotle. Augustine lived, only two remained in use: And so a word designed by the anti-Aristotelian Augustine to mean a low and empty sort of being turns up in our translations of the word whose meaning Aristotle took to be the highest and fullest sense of being. It is already a quirky, idiomatic word in ordinary use when Plato gets hold of it. By a quirk of our own language one may say indeed that it means substance, but only, I repeat only, in the sense in which a rich man is called a man of substance. You may safely allow your daughter to marry him because you know where he will be and what he will be doing tomorrow and twenty years from now. Ousia meant permanent property, real estate, non-transferable goods: A man of substance who has permanent wealth is who he is because of what he owns. A bee is to his permanent and his variable characteristics as a man is to his permanent and his spendable wealth. The metaphor takes a second step when applied to virtue: There must be some single meaning to which we always refer when we pronounce anything a virtue. This is the step Socrates continually insists that Meno must take. But remember, in the slave-boy scene, Socrates twice entices the slave-boy into giving plausible incorrect answers about the side of the double square. Socrates uses the word not as the result of an induction or abstraction or definition, but by stretching an already strained metaphor. People have disposable goods which come and go and ousiatic goods which remain; bees have some characteristics in which they differ, and others in which they share; the virtues differ, but are they the same in anything but name? Even if they are, must it be a definition that they share? Ordinarily only a few men do. The rest of us work for them, sell to them, marry them, gather in the hills to destroy them, but do not have what they have. Perhaps there are only a few virtues, or only one. If virtue is not simply a meaningless label used ambiguously for many unconnected things, that does not mean that it must unambiguously name the same content in each of the things it names. If a poor man has a hut and a cow and some stored-up food, are they his wealth? He is certainly not wealthy. On the other hand, King Lear says that "our basest beggars Are in poorest thing superfluous"; no human life is cut so fine as to lack anything beyond what satisfies bare need. The beggar, like the family on welfare, does not have the means to satisfy need, but need not for that reason forego those possessions which give life comfort or continuity. His wealth is derived from the wealth of others. The small farmer may maintain something of the independence a wealthy man enjoys, but one bad year could wipe him out. He will either accumulate enough to become wealthy himself, or his life will remain a small-scale analogy to that of the wealthy. There is an ambiguity at work in the meaning of the word "wealth" which is not a matter of a faulty vocabulary and not a matter of language at all: Wealth of various kinds exists by derivation from and analogy to wealth in the emphatic sense. Indeed Meno, who spontaneously defines virtue by listing virtues, is equally strongly inclined to say that the power to rule over men and possessions is the only virtue there is. He cannot resolve the logical difficulties Socrates raises about his answers, but they are all resolvable. To on simply means whatever is, and includes the color blue, the length two feet, the action walking, and anything at all that can be said to be. For Aristotle, the inquiry into the nature of being begins with the observation that being is meant in many ways. Suppose that there is some one core of meaning to which we refer whenever we say that something is. What is its content? Hegel says of being as being: Leave aside all those characteristics in which beings differ, and what is left behind? To Aristotle, this means that being is not a universal or a genus. If being is the comprehensive class to which everything belongs, how does it come to have sub-classes? It would have to be divided with respect to something outside itself. Beings would have to be distinguished by possessing or failing to possess some characteristic, but that characteristic would have to be either a class within being, already separated off from the rest by reference to something prior, or a non-being. Since both are impossible, being must come already divided: The Doctrine of Categories The categories have familiar names: The question Socrates asked about things, What is it? I could continue telling you what it is in this fashion for as long as I pleased and you would not know what it is. It is an Irish setter. What is different about that last answer? To be an Irish setter is not to be a quality or quantity or time or action but to be a whole which comprises many ways of being in those categories, and much change and indeterminacy in them. The redness, three-foot-high-ness, respiration and much else cohere in a thing which I have named in its thinghood by calling it an Irish setter. What happens when I try to articulate the being of a thing such as an Irish setter? I define it as a dog with certain

properties. But what then is a dog? It is an animal with certain properties, and an animal is an organism with certain properties, and an organism is a thing with the property life. I set out to give an account of what makes a certain collection of properties cohere as a certain thing, and I keep separating off some of them and telling you that the rest cohere as a whole. Our speech, no matter how scientific, must always leave the question of the hanging-together of things as things a question. The question that was asked of old and will always be asked by anyone who is alive enough to wonder about anything is, What is being? What is a thing? What is the thinghood of things? What makes our world a world of things at all? We are here at the deepest postulate of Aristotelian philosophizing: We are taught that a moving thing, if nothing disturbs it, will continue moving forever. Do you believe that? It is certainly true that a heavy thing in motion is as hard to stop as it was to set in motion, and that we cannot step out of moving automobiles without continuing, for a while, to share their motions. But these are evidences of persistence of motion, not at all the same thing as inertia of motion. There is no evidence of the latter. In principle there cannot be, because we cannot abolish all the world to observe an undisturbed moving thing. There is a powerful and in its way, beautiful, account of the world which assumes inertia, appealing to those experiences which suggest that motion at an unchanging speed is a state no different from that of rest. The hidden premise which leads from that step to the notion of inertia is the assumption that rest is an inert state.

**Chapter 7 : Aristotle: Ethics**

*Whenever Aristotle explains the meaning of being, he does so by explaining the sense of the Greek verb to be. Being contains whatever items can be the subjects of true propositions containing the word is, whether or not the is is followed by a predicate.*

In this system, heavy bodies in steady fall indeed travel faster than light ones whether friction is ignored, or not [47] , and they do fall more slowly in a denser medium. Four causes Aristotle argued by analogy with woodwork that a thing takes its form from four causes: His term *aitia* is traditionally translated as "cause", but it does not always refer to temporal sequence; it might be better translated as "explanation", but the traditional rendering will be employed here. Thus the material cause of a table is wood. It is not about action. It does not mean that one domino knocks over another domino. It tells us what a thing is, that a thing is determined by the definition, form, pattern, essence, whole, synthesis or archetype. It embraces the account of causes in terms of fundamental principles or general laws, as the whole *i*. Plainly put, the formal cause is the idea in the mind of the sculptor that brings the sculpture into being. A simple example of the formal cause is the mental image or idea that allows an artist, architect, or engineer to create a drawing. Representing the current understanding of causality as the relation of cause and effect, this covers the modern definitions of "cause" as either the agent or agency or particular events or states of affairs. In the case of two dominoes, when the first is knocked over it causes the second also to fall over. The final cause is the purpose or function that something is supposed to serve. This covers modern ideas of motivating causes, such as volition. History of optics Aristotle describes experiments in optics using a camera obscura in *Problems* , book The apparatus consisted of a dark chamber with a small aperture that let light in. He also noted that increasing the distance between the aperture and the image surface magnified the image. Accident philosophy According to Aristotle, spontaneity and chance are causes of some things, distinguishable from other types of cause such as simple necessity. Chance as an incidental cause lies in the realm of accidental things , "from what is spontaneous". History of geology Aristotle was one of the first people to record any geological observations. Empirical research Aristotle was the first person to study biology systematically, [60] and biology forms a large part of his writings. He spent two years observing and describing the zoology of Lesbos and the surrounding seas, including in particular the Pyrrha lagoon in the centre of Lesbos. He describes the catfish , electric ray , and frogfish in detail, as well as cephalopods such as the octopus and paper nautilus. His description of the hectocotyl arm of cephalopods, used in sexual reproduction, was widely disbelieved until the 19th century. For Aristotle, accidents, like heat waves in winter, must be considered distinct from natural causes. He was correct in these predictions, at least for mammals: Aristotle did not do experiments in the modern sense. It does not result in the same certainty as experimental science, but it sets out testable hypotheses and constructs a narrative explanation of what is observed. Among these correct predictions are the following. Brood size decreases with adult body mass, so that an elephant has fewer young usually just one per brood than a mouse. Lifespan increases with gestation period , and also with body mass, so that elephants live longer than mice, have a longer period of gestation, and are heavier. As a final example, fecundity decreases with lifespan, so long-lived kinds like elephants have fewer young in total than short-lived kinds like mice. Scala naturae Aristotle recorded that the embryo of a dogfish was attached by a cord to a kind of placenta the yolk sac , like a higher animal; this formed an exception to the linear scale from highest to lowest. His system had eleven grades of animal, from highest potential to lowest, expressed in their form at birth: Animals came above plants , and these in turn were above minerals. Those with blood were divided into the live-bearing mammals , and the egg-laying birds , reptiles , fish. Those without blood were insects, crustacea non-shelled " cephalopods, and shelled and the hard-shelled molluscs bivalves and gastropods. He recognised that animals did not exactly fit into a linear scale, and noted various exceptions, such as that sharks had a placenta like the tetrapods. To a modern biologist, the explanation, not available to Aristotle, is convergent evolution.

**Chapter 8 : Metaphysics (Aristotle) - Wikipedia**

*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.*

But this does not mean the branch of philosophy that should be studied first. Rather, it concerns issues that are in some sense the most fundamental or at the highest level of generality. Rather, his description involves three things: A study of *x qua y*, then, is a study of *x* that concerns itself solely with the *y* aspect of *x*. Rather it is a study of being, or better, of beings—of things that can be said to be—that studies them in a particular way. Of course, first philosophy is not the only field of inquiry to study beings. Natural science and mathematics also study beings, but in different ways, under different aspects. The natural scientist studies them as things that are subject to the laws of nature, as things that move and undergo change. That is, the natural scientist studies things *qua* movable *i*. The mathematician studies things *qua* countable and measurable. The metaphysician, on the other hand, studies them in a more general and abstract way—*qua* beings. So first philosophy studies the causes and principles of beings *qua* beings. We will explain this connection in Section 3 below. Whereas natural science studies objects that are material and subject to change, and mathematics studies objects that although not subject to change are nevertheless not separate from *i*. Characteristic of these perplexities, he says, is that they tie our thinking up in knots. They include the following, among others: Are sensible substances the only ones that exist, or are there others besides them? Is it kinds or individuals that are the elements and principles of things? And if it is kinds, which ones: Is there a cause apart from matter? Is there anything apart from material compounds? Are the principles limited, either in number or in kind? Are the principles of perishable things themselves perishable? Are the principles universal or particular, and do they exist potentially or actually? Are mathematical objects numbers, lines, figures, points substances? If they are, are they separate from or do they always belong to sensible things? But it is not always clear precisely how he resolves them, and it is possible that Aristotle did not think that the *Metaphysics* contains definitive solutions to all of these perplexities. According to this account, beings can be divided into ten distinct categories. Although Aristotle never says so, it is tempting to suppose that these categories are mutually exclusive and jointly exhaustive of the things there are. They include substance, quality, quantity, and relation, among others. Of these categories of beings, it is the first, substance *ousia*, to which Aristotle gives a privileged position. Substances are unique in being independent things; the items in the other categories all depend somehow on substances. That is, qualities are the qualities of substances; quantities are the amounts and sizes that substances come in; relations are the way substances stand to one another. Each member of a non-substance category thus stands in this inherence relation as it is frequently called to some substance or other—color is always found in bodies, knowledge in the soul. Neither whiteness nor a piece of grammatical knowledge, for example, is capable of existing on its own. Each requires for its existence that there be some substance in which it inheres. In addition to this fundamental inherence relation across categories, Aristotle also points out another fundamental relation that obtains between items within a single category. So the genus *e*. The same holds in non-substance categories. There has been considerable scholarly dispute about these particulars in non-substance categories. For more detail, see the supplementary document: Each category thus has the structure of an upside-down tree. The individuals in the category of substance play a special role in this scheme. Indeed, Aristotle offers an argument [2a35a–2b7](#) to establish the primary substances as the fundamental entities in this ontology. For these secondary substances are just the ways in which the primary substances are fundamentally classified within the category of substance. As for the members of non-substance categories, they too depend for their existence on primary substances. A universal in a non-substance category, *e*. Similarly, particulars in non-substance categories although there is not general agreement among scholars about what such particulars might be cannot exist on their own. The Role of Substance in the Study of Being Qua Being The Categories leads us to expect that the study of being in general being *qua* being will crucially involve the study of substance, and when we turn to the *Metaphysics* we

are not disappointed. As we noted above, metaphysics or, first philosophy is the science which studies being qua being. In this respect it is unlike the specialized or departmental sciences, which study only part of being only some of the things that exist or study beings only in a specialized way e. So the universal science of being qua being appears to founder on an equivocation: There are dining tables, and there are tide tables. A dining table is a table in the sense of a smooth flat slab fixed on legs; a tide table is a table in the sense of a systematic arrangement of data in rows and columns. Hence it would be foolish to expect that there is a single science of tables, in general, that would include among its objects both dining tables and tide tables. Neither of these has a single definition that applies uniformly to all cases: Not all of these are healthy in the same sense. Exercise is healthy in the sense of being productive of health; a clear complexion is healthy in the sense of being symptomatic of health; a person is healthy in the sense of having good health. But notice that these various senses have something in common: Other things are considered healthy only in so far as they are appropriately related to things that are healthy in this primary sense. The beings in the primary sense are substances; the beings in other senses are the qualities, quantities, etc. But a horse is a being in the primary sense—“it is a substance”—whereas the color white a quality is a being only because it qualifies some substance. An account of the being of anything that is, therefore, will ultimately have to make some reference to substance. Hence, the science of being qua being will involve an account of the central case of beings—substances. Thus, first philosophy must also concern itself with the principle of non-contradiction PNC: This, Aristotle says, is the most certain of all principles, and it is not just a hypothesis. It cannot, however, be proved, since it is employed, implicitly, in all proofs, no matter what the subject matter. It is a first principle, and hence is not derived from anything more basic. What, then, can the science of first philosophy say about the PNC? Those who would claim to deny the PNC cannot, if they have any beliefs at all, believe that it is false. For one who has a belief must, if he is to express this belief to himself or to others, say something—“he must make an assertion. He must, as Aristotle says, signify something. But the very act of signifying something is possible only if the PNC is accepted. Without accepting the PNC, one would have no reason to think that his words have any signification at all—they could not mean one thing rather than another. So anyone who makes any assertion has already committed himself to the PNC. One might have thought that this question had already been answered in the *Categories*. This would seem to provide us with both examples of, and criteria for being, primary substances. He does not seem to doubt that the clearest examples of substances are perceptible ones, but leaves open the question whether there are others as well. Before answering this question about examples, however, he says that we must first answer the question about criteria: But even if we know that something is a substance, we must still say what makes it a substance—“what the cause is of its being a substance. This is the question to which Aristotle next turns. To answer it is to identify, as Aristotle puts it, the substance of that thing. Presumably, this means that if *x* is a substance, then the substance of *x* might be either i the essence of *x*, or ii some universal predicated of *x*, or iii a genus that *x* belongs to, or iv a subject of which *x* is predicated. This characterization of a subject is reminiscent of the language of the *Categories*, which tells us that a primary substance is not predicated of anything else, whereas other things are predicated of it. Candidate iv thus seems to reiterate the *Categories* criterion for being a substance. But there are two reasons to be wary of drawing this conclusion. First, whereas the subject criterion of the *Categories* told us that substances were the ultimate subjects of predication, the subject criterion envisaged here is supposed to tell us what the substance of something is. So what it would tell us is that if *x* is a substance, then the substance of *x*—“that which makes *x* a substance”—is a subject that *x* is predicated of. Second, as his next comment makes clear, Aristotle has in mind something other than this *Categories* idea. For the subject that he here envisages, he says, is either matter or form or the compound of matter and form. To appreciate the issues Aristotle is raising here, we must briefly compare his treatment of the notion of a subject in the *Physics* with that in the *Categories*. In the *Categories*, Aristotle was concerned with subjects of predication: In the *Physics*, his concern is with subjects of change: But there is an obvious connection between these conceptions of a subject, since a subject of change must have one predicate belonging to it at one time that does not belong to it at another time. Subjects of change, that is, are also subjects of predication. The converse is not true: In the *Categories*, individual substances a man, a horse were treated as fundamental subjects of predication. They were also understood, indirectly, as

subjects of change. These are changes in which substances move, or alter, or grow.

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*is a static plenum of Being as such, and nothing exists that stands either in contrast or in contradiction to Being. Thus, all differentiation, motion, and change must be illusory. Thus, all differentiation, motion, and change must be illusory.*

Lennox and Robert Bolton eds. *Being, Nature, and Life in Aristotle: Essays in Honor of Allan Gotthelf* Published: September 18, James G. The second group consists of what are essentially commentaries on select chapters from the middle books of the *Metaphysics*: The volume is recommended to the following people: Although it is unlikely that every essay will be of equal interest to everyone working in the increasingly specialized field of Aristotle studies, it is undeniable that this volume contains a great cast of contributors, and even if not every essay offers a bold new interpretation as a few indeed do, they all display inventiveness and insight in their approach to, in some cases, very well worn issues. The volume should therefore be considered a necessary addition to any library of Aristotle studies. I thank the editors for seeing through such a wide-ranging and even exciting volume of essays on Aristotle. The first difficulty here, of which Sedley is well aware, is that "the explanation of purposive structures in the world" is ambiguous between: Sedley readily concedes that it is difficult to find explicit statements supporting a global teleology in Aristotle: But when we turn to his explanation of specific organisms and their organs, we here find even less evidence of global teleology, or rather none at all. Aristotle never explains the parts or activities of organisms as being for the sake of other species, human beings, or the gods. But even that single passage does not in any way support a global teleology. But then the problem is, as Sedley himself noted earlier, that "Aristotle does not very often stand back to view the matter panoramically in this way" 8. But one could also cite passages in which there is a strong contrast between their views. Natural things, and nature herself -- to use the mistaken terminology of our opponents -- will be secondary products from art and reason". But in the context of natural philosophy at least, Aristotle praises Democritus more frequently and more highly than Plato, for example: I recommend both essays as models of clarity and analytical precision. And it seems most reasonable to think that the explanation of human bipedalism, for example, will come as a result of the sciences of psychology, ethology, biology, etc. In no case should one permit "kind-crossing" explanations for example, explaining biological facts by means of metaphysical or theological considerations, except where there is an official relationship of one science being "under" another and thus subordinate or subalternate to another. Passages in *Theta 8* are then commented on less systematically and more selectively without block translations. He concludes with a paragraph oddly entitled "Interim Conclusions" suggesting this paper is part of a larger commentary on the middle books: I have tried to understand why Aristotle sought to conceptualize matter and form in terms of actuality and capacity or potentiality in parts of *Theta* My suggestion is that he did so to capture the importance of teleology for a proper understanding of the required ontology. Further, Lennox argues, applying a line of argument developed in an earlier essay, ch. This is useful, but perhaps a more pertinent comparison would be to the kind of unity one expects to find in a philosophical dialogue, a form of writing that Aristotle, following Plato, actually practiced and there have been recent attempts to reconstruct some of his lost dialogues. Like reading a plot, one cannot jump around randomly in the text and hope to fully understand what is going on Lennox offers convincing reasons to think that this section did not originate as a separate work that was put where it now stands by a later editor, despite the radical stylistic differences between it and the rest of the book. The male is supposed to actively provide the form, while the female only passively provides the matter. Kosman shows that the view that according to Aristotle the male provides the active and substantial form while the female provides the passive matter i. Those surprisingly few cases in which Aristotle does say that the male provides the form must be interpreted with the utmost caution. Aristotle sees the male contribution as being the "initiator" of action in a way that Kosman compares to how we now say that the zygote is a fertilized egg "rather than, for example, a fertilized sperm, or perhaps an egged sperm" Why do biologists and everyone else tend to think of the sperm as doing something to the egg, and not the other way around? Kosman offers some interesting speculations as to why this might be, and why Aristotle might have thought so too. The only criticism I have is that I would have liked to have heard more about the rival views

that Aristotle aims to replace. Certainly, they are not, strictly speaking, morally virtuous yet" Several of the individual authors have dedicated their contributions to him. I would like to take this opportunity to thank him for some of his work that does not come up in the present volume, but is nevertheless a very important contribution to the field of Aristotle studies: I hope that I have been able, in the limited space I was allocated for this review, to give some impression of the wide-ranging and interesting material contained in this anthology. I encourage anyone that is interested in as broad and diverse a set of subjects as Being, Nature, and Life in Aristotle to check it out. For the authentication of these passages, see: Hankinson , "Aristotle on Kind-Crossing," in R. Sedley in the present volume and the works cited in note 1 above follows the influential argument of D. For the former, see: