

ARISTOTLE (An Introduction)*

by
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I

Many, many years ago, I attended a series of lectures on Aristotle's philosophy. The lecturer began his exposition as follows: "As regards Aristotle himself, as regards the circumstances and the course of his life, suffice it to say: Aristotle was born, spent his life in philosophizing, and died". This beginning seemed to me then most appropriate: for Aristotle means to us, indeed, nothing but what we know of him, or fancy we know of him, as of a man engaged in that extravagant enterprise which, since Pythagoras (according to the tradition), has borne the name of "Philosophy". There is a difficulty, though. Whenever we try to understand what Aristotle is saying, we stumble upon something that we simply cannot ignore, and that is that his words bring up the words of another man who was his teacher and bore the name of Plato. There is no alternative: we have to face that peculiar circumstance in Aristotle's life.

It is pretty certain that, at the age of 17 or 18, Aristotle joined the community founded by Plato outside the walls of Athens and called (from its geographical location) the Academy. He stayed there until Plato died, that is, for about 20 years (367 - 347). In the following 13 years he taught for a while in Asia Minor and was invited to tutor a young Macedonian prince who later became known as Alexander the Great. In 334 he returned to Athens and established, again outside the walls of the city, a spot of leisure, that is of study, called the Lyceum. Not being a citizen of Athens, he could not own this place. He merely taught there. About a year before he died, it pleased the

city of Athens to accuse him of impiety, that is, of undermining the city's life. Aristotle decided to leave Attica rather than stand trial. He is supposed to have said on that occasion that he did not want the Athenians to commit a crime against Philosophy for the second time.

Table (with approximate dates)

Born in Stagira (Thrace)	Academy	Abroad	Lyceum	Death
384	367 - 347	347 - 334	334 - 323	322
	20	13	11	

Now, if we look at what is known as The Works of Aristotle, we cannot help being amazed by both their bulk and their diversity. These works have come down to us in nearly the same condition in which they were edited by Andronicus of Rhodes in the first century B. C. There are all kinds of stories concerning the way they came to be edited. I shall omit them. We do know, at any rate, that this edition did not contain a series of other works attributed to Aristotle and not available to-day, except for the book entitled "The Athenian Constitution" the text of which was found in 1880. Above all, that edition did not contain - and was not supposed to contain - a series of genuine works of Aristotle, Dialogues, Epistles, and also compositions in verse, already published and well known in antiquity. We possess only a few fragments of them. As to the body of Aristotelian works available to us, it consists, beyond any doubt, of some of the material directly related to the lecturing and studying which went on at the Lyceum and presumably also at other places where Aristotle taught. Parts of that material are lectures or treatises composed with great care; but other parts are more or less loosely conjoined treatments of topical themes,

notes, perhaps mere abstracts from, or comments on, more original compositions. There are, on the one hand, different and sometimes irreconcilable versions of one and the same theme, and, on the other hand, identical passages re-occurring in different contexts.

You have a sheet detailing the body of Aristotelian Teaching as it has come down to us since its publication by Andronicus of Rhodes. (Some of the listed works are of doubtful authenticity...; some are incomplete ...) It seems not unimportant to note that all these writings, the listed ones as well as the lost ones, can hardly have been produced in the 11 years of the Lyceum period, during which short period, incidentally, Alexander succeeded in conquering a world. The writings concerning the classification, the physiology and anatomy of animals alone must have required many, many years of study and observation on the part of quite a few people. It is even doubtful whether the tremendous effort to which the extant Aristotelian writings as well as the titles of the lost ones testify can be thought of as confined within the limits of the 24 year period between 347 and 323. It seems more reasonable to conceive of that effort as having begun in the Academy period, long before Plato's death. We have indeed, some evidence to that effect. It is undeniable, furthermore, that Aristotle and those who assisted him in his work utilized studies made before Plato's days. But it is still true that everything we read in that collection of Aristotelian writings bears an unmistakable stamp: the language and the peculiar terms in which it is written. Whatever the degree of incoherence or coherence in the body of Aristotelian writings, their language has always the same characteristic mould. And, what is more, the shadow of Plato is always perceivable in them.

As you undoubtedly know, classical scholarship, in the last 150 years, has concentrated on the task of finding the correct chronological sequence of the Platonic dialogues. This task has indeed been brought to a more or less successful end. Let us not forget, however: it is one thing to establish the chronological order of the dialogues and quite another to understand what they are about, what they represent, what they say and do not say, and why they do so. To interpret the chronology of the dialogues as mirroring the development of Plato's own thinking - even under the assumption that such a development did actually occur - is a sign of considerable naiveté or of no less considerable rashness. More recently, the attempt has been made to construct the development of Aristotle's thinking and to distinguish a so-called "Platonic period" in Aristotle's life from a post-Platonic and finally an anti-Platonic phase. Granted that Aristotle's thinking must have had a history, granted that what we call his philosophy did not spring out of him as Pallas Athena did out of Zeus' forehead, the evidence presented by his work, fragments and all, is far from sufficient for establishing and delineating with any degree of accuracy such stages of his thought.

Two things, however, are overwhelmingly clear: 1) the basic postulates of Aristotle's thinking are to be found in what we conceive to be Platonic - and Socratic - philosophizing; 2) there is an unshakable unwillingness on Aristotle's part to follow Plato's lead in certain crucial respects. It is safe to say, I think, that Aristotle's relation to Plato is a supreme example of the true pupil-teacher relationship: the pupil's unswerving loyalty to his teacher manifests itself in the pupil's commitment to Truth, even if that commitment makes the pupil reject the teacher's teaching. Let us hear Aristotle

himself on that subject. About to begin an investigation into what is meant when people talk about "The Good", Aristotle remarks that such an investigation is "distasteful" to him because it involves "men dear to him" (φίλοι ἄνδρες) who introduced the doctrine of "ideas" (τὰ εἶδη), that is - to use the Latin term - the doctrine of "species", or - to use the equivalent English term - the doctrine of "looks". These men are Plato and his followers. Aristotle goes on to say: "But - for those pursuing philosophy, at least - it would seem that it is probably better and, to safeguard the truth, even necessary to go against the grain; for, both one's friends and the truth, being dear to one, it is right and proper to give greater honour to truth". The companions in the Academy called themselves "friends" (φίλοι). In an Elegy, a fragment of which has been preserved, Aristotle speaks of an altar dedicated to "holy Friendship" and unmistakably refers to Plato (without naming him) as to a "man whom even to praise bad men have no right". Let us, then, keep in mind this exemplary relation of Aristotle, the pupil, to Plato, the teacher, in trying to understand Aristotle's own way.

II

It would be ridiculous, you will agree, to try to encompass, in a lecture like this one, the sum total of Aristotle's philosophy. All I can do is to point to - I should rather say, to hint at - some of the fundamental features of this vast edifice. Let me first put up a somewhat simplified table of Aristotle's main themes indicated by the following terms:

φύσις (nature) - ζωή (life)		ἄνθρωπος (man) - τέχνη (art) - λόγος (....)
ψυχή (soul) - νοῦς (....)		
τάξις (order) - κόσμος (world)		

None of these terms is specifically "Aristotelian". They are Greek words commonly used in a somewhat confused and ambiguous way. In Aristotle they acquire - to a large degree - an uncommon and unambiguous significance. Let us look at them.

Unavoidably, we have to begin with λόγος . The principal and inextinguishable meaning of this word is speech. We mean by speech (- you, and I, and everybody -) a sequence of sounds uttered by somebody in such a way as to be understandable to others. The verb "to understand" refers primarily - if not uniquely - to speech. Hearing somebody speak, we may say: I understand what you are saying. We may, in fact, misunderstand, but even misunderstanding involves understanding. But what do we understand in hearing somebody speak? Not the sounds by themselves, the audible and articulated, low and high pitched noises issuing from somebody's mouth (or some machine, for that matter). We hear these noises. But hearing is not understanding. That's why we do not understand speech in a foreign tongue. In a manner which, itself, is hardly or not at all understandable, the sounds carry with them - or embody - or represent - something else, precisely that which makes us understand, whenever we understand. This source and target of our understanding consists of units, to which single "words" correspond, as well as of combinations of those units, to which whole sequences of "words" correspond. The speaker and the hearer share - or, at least, intend to share - the understanding of those units and of those combinations of units. The speaker transposes what he means into sounding words and the hearer who under-

stands reverses that process in reaching back to the intended meaning. The intended meaning is what the Greeks call τὸ νοητόν, its single units are the νοητά (νοητόν being a verbal adjective of νοεῖν). Speech and Understanding are inseparable. Λόγος means inseparably both: speech and that which can be and is being understood in speech. It is in man and through man (ἄνθρωπος) that λόγος manifests itself conspicuously, so much so that Aristotle is able to say: man is a living being possessing speech, and that means possessing the ability to understand the spoken word (ζῷον λόγον ἔχον).

But what does speech "bespeak"? The answer is: everything man is familiar with - the sky and the earth, the rivers and the sea, the living beings around him, on land, in water, in the air - the things he himself builds and produces as well as the tools and appurtenances that his arts and skills require to produce those things - and furthermore the knowledge that guides his arts and skills, not only to satisfy his most elementary needs but also to establish customs and institutions in which his life flows from generation to generation, in misery or happiness, in friendship or enmity, in praise or blame, and to which customs and institutions he is attached beyond his most pressing wants. That's what his speech and his understanding are mostly about.

I just said: "... are about". What a loose way of speaking! Speech and the understanding that goes into it and can be gotten out of it are not just "about" something. To be sure, we can choose a theme and talk about it, circumscribe it, beat about the bush. But what we say, however circuitously or confusedly or loosely, is said in words and sentences each of which conveys immediate meaning. The λόγος cannot help moving in the medium of the immediately understandable. To be sure, words and sentences can be involuntarily or deliberately

ambiguous. But they can be that only because they carry with them several distinct meanings which, separately, are clearly understood. To be sure, speech can be obscure. But it can be obscure only because the clarity of some of its parts impinges or seems to impinge upon the clarity of others.

Speech, then, presents to the understanding of the listener what the speaker himself understands. It presents to the listener nothing but combinations of ~~w~~ords. In doing that, however, speech "bespeaks" all the things and all the properties of things that abound around us, all the special circumstances and situations in which we find ourselves. The question arises: do the words presented to us in speech stem from the speaker, whoever he might be, or do they stem from the things and circumstances spoken of? Does not any human speech translate the language of the things themselves?

Let me turn for a moment to the way the things around us are referred to in more recent times, in the 17th century. In Galileo's words: "The book of Nature is written in mathematical characters". Descartes: "The science contained in the great book of the world". Harvey: "The book of Nature lies open before us and can be easily consulted". The phrase "book of Nature" is a metaphor, to be sure, but why was this metaphor chosen by so many authors? Is it not because Nature is here understood as something that can be read, read like a book, provided we know how to read it? What have we been doing ever since but reading and decoding the book of Nature? But does not that indeed imply a language which is nature's own? Francis Bacon was of the opinion that Nature is subtly secretive, full of riddles, Sphinx-like. But secrets can be revealed, riddles can be solved - in words. We persist, as you can read every day, in solving the "riddles of

nature". In ancient times, the language of all that exists around us is taken much more directly (I was about to say: in a much more literal sense) as a spoken language, a language not written, yet visible, and if not visible, one to be guessed at. Human speech seems indeed to translate that visible or invisible language of things into the audible language of words. And just as the sound of human speech can be traced down to its ultimate components to which the letters of the alphabet correspond, things around us can be de-composed into their first rudiments, the "elements", the original letters of the language of things, as it were. Our speech, even our unguarded colloquial way of speaking, may reveal to the attentive listener the hidden articulations of the language of things. Aristotle - no less than Plato - is always bent on following up casually spoken words.

No doubt, speech can deliberately deceive us, distort and falsify the truth of things. The fireworks of the Sophists, for example, - and there are always sophists around - make things and relations of things assume a most unexpected, dazzling and puzzling aspect: things suddenly appear not to be what they are. But who is doing the lying - if it be lying -, the sophists or the things themselves? A critique of speech, a critical inquisition into speaking and arguing has to be undertaken - as it was undertaken by Parmenides - by Prodicus - by Plato - by Aristotle. The result of this critique can be stated as follows: to speak does not always mean to make things appear in their true light. For Aristotle, only one kind of speech, ὁ λόγος ἀποφαντικός, the declaratory and revealing speech, translates or interprets the language of things. To be able to use this kind of speech requires a discipline, the discipline of the λόγος. Everywhere in Aristotle's work one senses, to the annoyance of some and to the delight of others,

the effectiveness of that discipline, the effectiveness of what we call the "Logic" of Aristotle.

It is this emphasis on the λόγος, the λόγος ἀποφαντικός, which made Aristotle the great teacher through the centuries. But in this respect he is as much a pupil as a teacher. We have a significant passage in Plato's work which indicates that rather clearly. I mean the passage in the Phaedo where Plato makes Socrates meet Cebes' crucial objection concerning the deathlessness of the soul. Here, Socrates, after - silently - looking back into himself for quite a while, reaches - in speaking - far back into his own youth. He wanted very much, he reports, to find out, with regard to any single thing or occurrence, what was responsible for its coming into being, its passing away, its being the way it was. But he could not find any satisfactory answers. Nor could he learn them from anybody else, not even from the great Anaxagoras. He had to abandon the way in which questions like the ones he was asking were dealt with in the various versions of the "inquiry into nature" or the "story of nature" (περὶ φύσεως ἱστορία). He decided to embark upon a different journey, his second journey, his "next best try" (δεύτερος πλοῦς ἐπὶ τὴν τῆς αἰτίας ζητησιν). This is the presentation he makes of his new endeavor.

By looking directly at whatever presents itself in our familiar world, at things and their properties, at human affairs and actions, we run the risk of being blinded as people do who observe the sun during an eclipse if they do not look at its image on some watery surface. That may well have happened to those investigators of nature. To avoid being "blinded", Socrates thought he had to "take refuge in spoken words" (εἰς τοὺς λόγους καταφυγόντα), in exchanging questions and answers with himself and with others, and in them search for the

truth of things.

What Socrates implies is that the reasons for things being as they are and the truth about those things are to be found in the spoken - or, for that matter, silent - words and the νοητὰ they embody. That is not to say, Socrates warns, that the example of the sun, which can only be looked at through its image, is applicable here: if one compares a man who investigates things in words with one who investigates them directly, the former can hardly be said to be more concerned with images than the latter. On the contrary, we surmise, it is the former who sees things as mere images or copies of genuine originals, namely of the νοητὰ revealed to us in speech, in spite of the widespread opinion that "mere" words and their meanings at best mirror and usually do nothing but distort what we call "reality". "Reality" is an anglicized queer Latin term, the more adequate, if barbaric, English translation of which is "thinghood".

It is safe to say, I think, that in one respect at least, Aristotelian philosophy consists in the execution of that Socratic program. It is in speech, in searching for and finding adequate words, that the λόγος of things, the λόγος of nature (φύσις) becomes audible and capable of being understood. That's what constitutes the characteristic mould of Aristotelian language I referred to earlier. It is an unfortunate, if perhaps not surprising, historical accident that Aristotle's vocabulary acquired immeasurable weight and a fetish-like character in its Latin rendering perpetuated in almost all modern tongues. It is perhaps no exaggeration to state that something like three quarters of all existing scientific and philosophic terminology is either determined by Aristotle's latinized vocabulary or can be traced back to it. Quite a few times in the past a revulsion against

that gibberish set in. We witness some of it to-day. But the impact of Aristotelian terms endures: our common daily language bears witness to that.

On the other hand, Aristotle's execution of the Socratic program entails at least five interrelated modifications of some of the crucial Socratic-Platonic postulates. In trying to speak about this other aspect of Aristotelian philosophy, I shall have to consider some of the other terms in the table I put up.

III

Socrates, in the Phaedo decided, as he said, to take refuge in spoken words in order to find that which is responsible for any single thing or occurrence coming into being, passing away, being the way it is. The phrase "to be responsible for..." describes the αἰτία character of the νοητὸν presented to our understanding in speech. Aristotle firmly holds to this view. The νοητὸν are the εἶδη, the species, the invisible looks, on which the existence of things depends. They provide us with true answers to the question: why do things come into being, why do they pass away, why are they as they are. But the way of their having that responsibility is, according to Aristotle, not made sufficiently clear by Plato and those who follow Plato. In what sense has a νοητόν, an εἶδος being? What does it mean to assert that a νοητόν, an εἶδος "is"? The Socratic way of questioning persists. But Aristotle's answer brings the first decisive modification of the Socratic-Platonic view. What Aristotle has to say about his controversy concerning the objects of mathematical sciences is also applicable to his controversy concerning the εἶδη: "The dispute will not deny that they are but will be about the manner of their being" (οὐ περὶ τοῦ εἶναι, ἀλλὰ περὶ τοῦ τρόπου). The phrase

"manner of being" will be gradually clarified, I hope, as I proceed with this lecture.

The manner of being of an εἶδος is that it is altogether "at work" (the Greek neuter adjective is ἐνεργόν), that is: at work right now. Its being can, therefore, be characterized as ἐνέργεια. It is not certain whether Aristotle coined this term. But whether he did or not, it belongs to him as intimately as our skin belongs to our body. The being-at-work of an εἶδος makes it responsible for the work done. How it is done, what that responsibility entails, is a complex matter. For the work of the εἶδος is not done by the εἶδος (the way our hands, for example, do their work (although Aristotle, on one occasion, compares the functioning of the soul to that of a hand)). I shall have to come back to that point after a while. What is most noteworthy about "being-at-work" is that there has to be something else, that namely which is being worked on. This other something has to be capable of being worked on, that is to say, its character must be that of a suitable material, as wood or timber is suitable material for the work a carpenter has to perform. The characteristic name of that suitable material is ὕλη (actually derived from the Greek word for "wood"). Its manner of being consists in nothing but in its ability to play that role. Its manner of being is δύναμις. Nothing, I repeat, nothing is ὕλη except in relation to work it is subjected to, that is, in relation to an ἐνέργεια. Wood is wood. Bricks are bricks. Iron is iron. Wood can be called a material only with regard to some operation to be performed on it, an operation that would transform it, say, into a table.

Where do we get an inkling of the work involving εἶδος and ὕλη and their respective manners of being? The Aristotelian answer is: in the conspicuous phenomenon of generation, of γένεσις of "coming to

be". I mean the phenomenon, ever present before our eyes, of production and re-production, of generation and re-generation. Men generate men, cats generate cats, birds generate birds, fishes generate fishes; there are always young ones playing about; and this quite independently of any possible evolution stretched out over an exceedingly long period of time. Flowers and grass appear in the Spring, disappear in the Winter, only to reappear the next Spring; trees bud, then blossom and grow fruit, and fruit produces seeds, and seeds grow again into plants; every morning the sun rises, every year Spring is born anew; and even moisture condenses into clouds which in turn produce water again. That's what the word $\gamma\epsilon\upsilon\epsilon\sigma\iota\varsigma$ implies: it means both coming to be and becoming; the things which are generated are all things to come.

The old myths tell this story over and over again. In fact, genesis is the very soul of any myth. To understand the world the story of its genesis has to be told. To understand the gods the story of their genesis has to be told. Cosmogony and Theogony are the primary subjects of any myth. To understand properly any event in human life, or the character of a people, or a city, this event and this character has always to be related, it seems, to its mythical origins. To tell the myth of something means to tell how this something came to be. An enterprise of this kind does not make much sense unless one relates everything ultimately to beginnings which make any genesis possible. These are precisely the mythical origins. They contain, of necessity, these two elements: the Male and the Female. And however distant the sobriety of Aristotle is from the exuberance of those ancient tales, still the same aspect of the world as a chain or as cycles of generation dominates his thought.

One great and prime example of generation is the generation of living beings, of animals. Aristotle does not assume that all

generation requires the separate existence of the male and the female; he knows that in some cases it is very difficult to attribute the role of the male or of the female to any part of the generating process. But on the whole, the male and the female are distinct. This, then, is how Aristotle describes the process of generation in those cases in which he thinks that the male animal emits semen.

"Neither the male nor the female emits semen into the male, but they both deposit together what they have to contribute in the female, because in the female there is the material (ὕλη) out of which that which is being fashioned is made". (Aristotle uses the word δημιουργούμενον , which means that which is worked on by an artisan, a craftsmen, a δημιουργός) "... Hence, of necessity, it is in the female that parturition takes place. For the carpenter is close by his wood and the potter close by his clay, and, in general, the working on the material and the last motion which acts upon it is close by the material; for instance, housebuilding takes place at the houses which are being built. These instances may help us to understand how the male makes its contribution to generation; for not every male emits semen, and in the case of those which do, this semen is not a part of the embryo as it develops. In the same way, nothing passes from the carpenter into the pieces of wood which are his material, and there is no part of the art of carpentry present in the object which is being fashioned; it is the visible shape and the form (ἡ μορφή καὶ τὸ εἶδος) which pass from the carpenter and which come to be in the material by means of the movement that the carpenter executes. It is his soul, wherein is the form (τὸ εἶδος), and his knowledge which move his hands or some other part of his body in a particular way (different ways for different products and always the same way for

any one product); his hands move his tools, and his tools move the material (ὕλη). In a similar way, Nature, acting in the male of semen-emitting animals, uses this semen as a tool, as something that, by virtue of being at work (ἐνεργεῖα), has movement; just as when art, the tools are in movement because the movement which belongs to objects are being produced by any art is, in a way, in them".

The embryology implied in this passage as well as throughout Aristotle's work is faulty. We know much more about the mechanism of fertilization than he could have possibly known. (We should not forget, though, how incomplete this our knowledge is.) But there are elements in this description which are quite independent of any embryology. Let me first restate what I have just quoted in a more technical way. The material factor of generation is represented by what the female contributes to the embryo. It is the ὕλη. The motion which works on that material is the motion of the semen that is emitted by the male animal, and its semen corresponds to the carpenter's tools. But what, in generation, corresponds to the table that the carpenter, as we say, has in mind, and furthermore, to the purpose that determines the looks of the table? It is Nature, φύσις, on which the motions of the male animal and of its semen ultimately depend. It is φύσις which provokes in the living being the urge to generate: ἔρωσ, desire, overpowers the living being. And that is how life (ζωή) is perpetuated for ever.

This process shows the double aspect of what we call Nature, φύσις (which term is derived from the verb φύω meaning beget, engender, generate): φύσις must be understood as εἶδος and as ὕλη. It shares in both, in ἐνέργεια and δύναμις. But it is of utmost importance to Aristotle - and to us who are trying to understand Aristotle's thought - that ἐνέργεια (and, therefore, any εἶδος)

outweighs its correlate δύναμις (and, therefore, any ὕλη) in significance, in rank, in manner of being. Aristotle devotes an entire book (Book Θ of the Metaphysics) showing the "priority" of ἐνέργεια over δύναμις. The famous cliché question: what comes first, the chicken or the egg? is no puzzle to Aristotle. The chicken - I should say more precisely, the rooster - very definitely comes first. But this "coming first" has nothing to do with any sequence of time. "Coming first" means to be "first" in weight, in dignity, in efficacy, - in the ladder and order of being. We shall see in a moment what ultimate consequences Aristotle derives from this priority.

Aristotle's emphasis on generation carries with it the second decisive modification of the Socratic-Platonic view. The εἶδος is perpetually "at work", is perpetually ἐνεργεῖα, without ever undergoing any change. It is efficacious in the ever changing bodies of living beings, as it is effective in the motions of celestial bodies and also - but only analogously so - in the customs and institutions of men. No need, therefore, to assign to the εἶδη a "separate" existence, no need to characterize their manner of being as one of "separation" (χωρισμός). Their purity and eternity is not affected by all the changes they are responsible for. There is no need to duplicate the world. The things around us are, each one of those things has "being", has οὐσία, is an οὐσία. But each thing derives its being, its οὐσία, from the ἐνέργεια of its εἶδος. Each thing has being only inasmuch/^{as} it is the manifestation of the ἐνέργεια of its εἶδος. I am because I am "man". The cat that belongs to Mrs. Brown is because it is "cat". The tiger who, this year, April first, ate a man in India, is because he is "tiger". Much more important than the ὕλη, out of which I and the cat and the tiger are built, is,

in each case, the εἶδος that determines the growth of our bodies, that holds the body together as a unit, that makes us act the way we do. The priority of ἐνέργεια over δύναμις manifests itself conspicuously in the preponderance of what is "at work" over what is being worked on, in the preponderance which, in the ways of Nature, the εἶδος has over the ὕλη. And let us not forget: it is the very εἶδος presented to our understanding in speech, - τὸ εἶδος τὸ κατὰ τὸν λόγον .

IV

If the world need not thus be duplicated, there is indeed another duplication, an unavoidable one, which - ultimately perhaps - threatens the integrity of Aristotle's philosophizing, - the bifurcation of the direction in which the εἶδος "works". For it is remarkable, most remarkable, I should say, that the role of the εἶδος in the process of generation is repeated in the process of understanding. The same εἶδος which presides over the generation, the growth and the sustenance of living beings makes us witness this generation, growth and sustenance. We, men, - and apparently in varying degrees all living beings - are able to perceive what is around us. We have the capacity, the ability, the faculty, the power, the δύναμις, of receiving information (as we say in typical Aristotelian fashion) about so much that surrounds us. Leaving aside our cousins, the animals, we men see and hear and smell and taste and perceive by touch and furthermore understand and know quite a few things. That which makes us perceive and understand are ultimately the εἶδη . Each of us as a perceiving and understanding being is said to have a soul (ψυχή), the function - the proper work - the ἔργον of which is not only to sustain our life but also to enable us to sense and to understand beyond what

is necessary for our living. The ability to sense, that is the ability to be affected bodily by bodies around us, is called the power of αἰσθάνεσθαι (or τὸ αἰσθητικόν), the ability to be affected by the νοητὸν is called the power of νοεῖν (or ὁ νοῦς). With respect to what we perceive and understand, with respect to the αἰσθητὸν and νοητὸν, these powers have a manner of being similar to the manner of being the material, the ὕλη, of a thing has with respect to the εἶδος, the species, the invisible looks of that thing.

Let me try to describe these powers by avoiding all latter-day philosophical jargon. Consider - and reflect upon - the phenomena of sensing and understanding with which we are all familiar. Put aside the picture of something, as we say, "in" us that we call "mind", - a sort of closed container or box. What characterizes us inasmuch as we are able to perceive and to understand is our being awake. The state of wakefulness (ἐγρηγόρησις) has its degrees, as we all know. We can be drowsy and half-asleep. We can be inattentive to what goes on around us. But as long as we are not fully asleep we are awake, and we know that we are. (The fact that we might dream that we are awake does not refute that knowledge but confirms it. How else could we distinguish wakefulness from dream even in sleep.) This state and manner of being is a state in which we are not closed up but open. Wakefulness is openness, - the very openness of a huge open door. It is not a state of activity but rather a state of preparedness, of alertness. This state or manner of being is commonly called in Greek νοῦς or νοεῖν. It is a manner of being which corresponds to the manner of being of any material, any ὕλη, and, like the latter, it is only conceivable in relation to what transforms it into a finished product. This transformation and information is brought about by what we sense and by what we understand. The transformation and information

being completed, we are one with what we perceive, understand, know. It is not we, in our state of wakefulness, who grasp, actively, something that is prepared to be grasped. On the contrary, we, in our state of preparedness, are being grasped, moulded, formed by what is at work, by the ἐνέργεια of the εἶδη, sometimes, nay, mostly, through the intermediary of our sensing power. In our sensing we are not one with the natural thing perceived but with what works on our sensing power, with what Aristotle calls, quite consistently, the εἶδος αἰσθητόν. The relation of the εἶδη αἰσθητά to the εἶδη νοητά is comparable to the relation of the sounds heard in speech to what we understand in speech. The εἶδη αἰσθητά constitute, one might say, the very language of things that affects our waking souls. The process of understanding, the process of gaining an insight is, in Aristotle's eyes, also a process of begetting and generating. The δύναμις of any "natural" material, any ὕλη φυσική, is here replaced by the soul's capability of being awake and of receiving. This capability includes both the capability of sensing (αἰσθάνεσθαι) and the capability of being informed by the νοητά. We are commonly not aware of this capability as such, since it cannot subsist all by itself, cannot subsist without being worked on. The closest we can come to observing it is to look into the eyes of very small children.

This Aristotelian understanding of the process of understanding in our souls brings a third decisive departure from the Socratic-Platonic view. Since sensing, not unlike speech, makes us the material worked on by the εἶδη, it is important to revert to the πρῶτος πλοῦς, the first journey that Socrates, in the Phaedo, claims to have given up. There are two ways in which one is mastered by the εἶδη νοητά: one is the way of the λόγος, the way of speaking and understanding, the way of bringing together, in our understanding, the

νοητῶν presented to us in speech, the way of the syl-logismos; there is another, in which our teachers bring us face to face with the things to be understood. This latter way is called ἐπαγωγή . The term "induction" is an exact translation of the Greek word but has come to mean something quite different. The efficacy of an ἐπαγωγή rests on our being affected, through the observable sensible features of a thing, by its εἶδος . Ἐπαγωγή does not necessarily require many and varied experiences or observations. One case might be sufficient. But a mere glance at the titles of all the Aristotelian (and pseudo-Aristotelian) writings shows how intent Aristotle must have been on engaging in protracted observations, on listing all kinds of observable phenomena and on collecting information from all possible sources.

V

This activity, however, is altogether auxiliary. It serves the great and awe-inspiring goal of giving a nearly complete account of the world as a whole. This may be reckoned as the fourth radical departure from the Socratic-Platonic view. For Plato, it seems, did not believe it possible to reach that goal, although the philosophical enterprise he was engaged in, in its extravagance and divine immoderation, indeed demands that our efforts to reach it never cease. Aristotle undertook to satisfy that demand once and for all. Only a few after him made such an attempt.

The term "world" or κόσμος - in Greek as well as in English - does not mean - and never meant - simply the sum total of all existing things. It means rather the peculiar way in which diverse parts are suitably arranged to form one whole or, as we say, a "universe". An account of the wholeness of all that is implies of necessity an account of the intrinsic order (τῶν ἐξ ἑαυτῶν) which makes the whole a whole. An

account of this kind is what is called, though not by Aristotle, a cosmo-logy.

It seems that Aristotle's philosophizing culminates in, and rests on, a cosmology. You are all acquainted with some of its features. Within the huge sphere of the world (ridiculously small in modern terms) there is a tiny sphere - the sublunar sphere - encompassing the Earth. Not that the Earth is located at the midpoint of the world sphere, as if a mathematical point could determine any location within the world without regard to the body involved. It is rather the globe and the bulk of the Earth that determine where the middle region of the cosmos is. Beyond the sublunar domain a number of concentric, contiguous, rigid, and translucent spheres reach up to the limit of the world, to the sphere of the so-called fixed stars. Beyond that limit there is nothing, nay, not even nothing, not even "void". The world is, strictly speaking, nowhere.

The cosmic spheres are in perpetual regular motion, around diverse axes and at different rates of speed. Some of them carry the planets, including the Sun and the Moon. The combined motions of these spheres are responsible for the appearance of all the irregular motions of the celestial bodies which we observe from the Earth. This "saving of the phenomena", as the traditional phrase has it, is the task of a mathematical discipline "most akin to philosophy", namely the science of the visible, yet eternal, bodies, the science of ἀστρολογία, the science of the fixed and wandering stars. Aristotle follows here in the footsteps of Eudoxus and Calippus, trying to improve upon their hypotheses without presuming to have the last word as far as the number, the sequence, and the motions of all these spheres are concerned. Their combination and co-ordination, which remains to be decided upon by mathematical astronomers, can be represented - visibly and tangibly -

by a man-made model. The Lyceum seems to have possessed one.

Yet what, in Aristotle's cosmology, is more important than the proper encasement and number of the spheres is its intimate link with the highest discipline Aristotle propounds and to which he occasionally assigns the name of "First Philosophy" (πρώτη φιλοσοφία). This is the discipline which considers not particular and definite bodies of any kind that "are" or might be, but which considers Being as such (ὄν ἀπλῶς or ὄν ἢ ὄν). "Indeed", says Aristotle, "what is being (τὸ ὄν)? - that is, what is being-ness (οὐσία)? - that is the question of ancient times and the question now and the question always and always the puzzle one faces". "And so", he continues, "it is incumbent upon us, too, to consider - above all and first of all and uniquely, as it were, - what Being, taken in that sense, is".

It might not be inappropriate to assign to this most fundamental discipline a name coined in the 18th century, the name of onto-logy. It deals with what is ultimately responsible for the coming into being, the persisting, as well as the passing away of any single thing. It is within its province, therefore, to deal with what is ultimately responsible for the being and the intrinsic order of the world as a whole. That is to say, this highest discipline has to account for the "Highest", the divine, and can, accordingly, be characterized by Aristotle as the ἐπιστήμη or φιλοσοφία θεολογική, the knowledge or wisdom which consists in the comprehension of divinity.

Thus Aristotle's cosmological and ontological (or theological) considerations converge at the level which marks the beginning of the bifurcation I mentioned earlier. It is the level of the εἶδη . Their manner of being, as we have seen, is characterized by ἐνέργεια , by "being-at-work". It is indeed ἐνέργεια that, for Aristotle, answers the eternal question concerning Being as such. Whenever we say

that something is or exists we imply - without being always aware of this implication - that it owes its being or existence to *ἐνέργεια*. It is tempting to substitute for that Greek word the modern term "energy". This substitution would not necessarily falsify the statement I just made but would make it somewhat misleading. For "energy" has either a strict meaning adequately rendered only by a variety of mathematical expressions - the physical dimensions of which will always be: (unit of mass) X (unit of distance)² X (unit of time)⁻² - or a vague meaning associated with something like vigor, aggressiveness, vitality. We observe, though, that even for us to-day, both meanings of "energy", the strict one and the vague one, are tied to the notion or picture of work done or to be done. Traditionally the translations of *ἐνέργεια* are mostly derivatives of the Latin verb ago, to wit, "act", "action", "activity", "actuality". Note how curious it is that we say: "actually, Mr. Jones does not live in Washington" or "actually, the Earth is a planet". We may substitute for the word "actually" phrases like "in fact", "in effect", "in truth", "indeed". Such phrases are equivalent to stating: considering that which truly is, this or that is so or is not so. It is still an Aristotelian way of speaking, although the ontological assertion that being-ness means "being-at-work" or being "active" remains hidden behind the screen of our colloquial use of weighty words.

Aristotle merges cosmo-logy into onto-logy by distinguishing two aspects of the phenomenon of νοεῖν, more precisely, by reaching beyond the meaning commonly attributed to "what is called νοῦς" (ὁ καλούμενος νοῦς). Νοεῖν, as I tried to say earlier, is the state of wakefulness, a state of preparedness and alertness, which, in relation to what we perceive, understand, know, plays the role of the

material to be worked on. In that sense νοεῖν is "passive", is the state of being mastered by something (... τὸ νοεῖν πρῶχειν τὸ ἔστιν), namely be the impact of various εἶδη . Νοῦς in this sense is somehow the mere capability of becoming what is understood (δυνάμει πῶς ἔστι τὰ νοητὰ ὁ νοῦς) and nothing on its own. Νοῦς becomes what it truly is when it is one with what is understood, one with the νοητὰ , that is to say, when the εἶδη νοητὰ have done their work. Only then can the νοῦς be said to be wakefulness "at work", to be ἐνεργεῖα νοῦς , only then is the νοῦς "at its own end", is it ἐντελεχεῖα νοῦς. But Aristotle's thought - anticipated to a degree by Anaxagoras and by Plato - goes one crucial step further: the very being of this accomplished νοῦς is nothing but ἐνεργεῖα , and conversely, Being-at-work is νοῦς, - impartible (ἀμερῆς), indivisible (ἀδιαίρετος), impassive (ἀπαθής), unchangeable (ἀναλλοίωτος), undying (ἀθάνατος), eternal (ἀίδιος). It is eternally "at work", and it itself as Being-at-work is its own eternal life (ζωή) and its own eternal delight (ἡδονή). It is deity (ὁ θεός). The entire heaven (ὁ οὐρανός) and Nature (ἡ φύσις) hang upon (ἥρτεται) this kind of "Capital beginning" (ἀρχή).

Let us try to understand the full meaning of this solemn statement which echoes Anaxagoras' famous proposition about the νοῦς "ordering everything and being responsible for everything" (διακοσμῶν τε καὶ πάντων αἴτιος).

We have seen that the εἶδη νοητὰ are responsible for the being of everything and for all the changes that occur in the world. Now, the priority of Being-at-work over the manner of being manifested in the capability of being worked on, the priority of ἐνεργεῖα over δύναμις, on which Aristotle insists so much, demands that a

νοητόν be not only something understandable (δυνάμει νοητόν) but also something understood "in fact" (νοητόν ἐνεργείᾳ) so that it may be efficacious, may indeed be an αἰτία. The νοητά can play their generating role only when they are one with the νοῦς "at work", one with the productive state of wakefulness, one with the νοῦς ποιητικῶς, as Aristotle's ancient commentators name it (relying on Aristotle's own conjoining of τὸ αἰτιον and τὸ ποιητικόν). This identity of the νοῦς and the νοητόν, of the νοῦς and the νοούμενον - as well as of the accomplished state of knowing (ἡ κατ' ἐνέργειαν ἐπιστήμη) and the known object (τὸ ἐπιστητόν or τὸ πράγμα) -, characterizes a state of wakefulness which is not "empty" openness but complete "fullness". This state prevails only where all that can be has been realized, where there is no place for mere "possibility", "capability", "ability", δύναμις, in other words, where no material to be still worked on is in any way involved. The divine νοῦς - that is to say, the sum total of all εἶδη as comprehended by that νοῦς - is totally immaterial (ἄνευ ὕλης), or - since as ἐνέργεια it requires some material to be worked on - it can be said to be itself material for itself (νοήσεως νόησις). It is thus totally "separated" from everything else in the world and consequently outside of time, uncontaminated (ἀμιγῆς), pure (καθαρός). Strangely enough, in this understanding of the "separated" νοῦς - with all the εἶδη it "contains" - Aristotle seems to revert to the position of his teacher.

VI

First Philosophy or ontology is not confined to the consideration of νοῦς as ἐνέργεια. It has to take into account not

only the manner of being labelled δύναντις but also other manners of being and furthermore the different ways in which something can be said to be responsible for something else.

As far as this latter theme is concerned, Aristotle does not deviate from the Socratic-Platonic path. There are different meanings attached to the question "why?" and, correspondingly, there are different ways of answering that question. Why is this lectern such as it is? We might answer: because of the wood, the particular material, out of which it is made. We might also say: because the particular carpenter, the maker, made it this way. We might also say: because of the shape or form the maker had in mind. We might finally say: because of the purpose this thing is supposed to serve. However important and even indispensable the first three answers might be, it is not difficult to agree that the choice of the material (ἡ ὕλη) the shape or looks (τὸ εἶδος) of the thing, and the performance of the maker who initiated the transformation of the material into this lectern, - that all these depend on the purpose, the end for the sake of which the lectern has been made. It is that purpose which is decisively responsible for the lectern being as it is. Its purpose, its end (τὸ τέλος), is its true "beginning" (ἀρχή). - All those questions and answers are perhaps not possible with respect to every single thing or occurrence, but it is one of the most important tenets of Aristotelian - and Socratic-Platonic - philosophizing that, universally, the purpose - the goal - the end - the τέλος - provides the only satisfactory answer to the question "why". And this holds especially for the world as a whole.

There is a characteristic aspect of anything we call a purpose or a goal or an end, namely that it is an object of desire. The τέλος - in the making of a thing - in the contrivance of some device - in the

establishment of an institution - in the action of a man - is responsible for all the changes it brings about, and yet it itself remains unchangeably, "immovably", what it is. It does not manifest its efficacy the way an instrument does. It attracts - but does not get involved in the concatenation of changes which it originates. Such is the efficacy of an εἶδος, wherever Nature rules, - the generating efficacy that the εἶδος owes to its manner of being, which is Being-at-work. An εἶδος is "at work" as something striven for, as an object of desire, of ὄρεξις. And that is also true for the divine νοῦς as the "container" of all the εἶδη of the world. The whirling spheres of the world, including the last one, the one of the fixed stars, strive to become what the best of all, the νοῦς, beyond all time is: this desire of theirs holds them for ever in their never ending circular motions. Thus, for Aristotle, the eternity of the world in time is an inescapable consequence of the timeless ontological character of ἐνέργεια, which the εἶδη and the νοῦς possess.

As to the problem of manners of being other than that of ἐνέργεια a fifth departure from the Platonic view marks Aristotle's thinking. For Plato, it seems, being-ness is an εἶδος of the highest rank, an εἶδος embracing the entire family of εἶδη "within" it: it is a "genus". Everything that is, inasmuch as it is, falls "under" it, as it were. Whenever we face "being" we face one and the same kind of Being. For Aristotle, however, it is necessary to distinguish between "Being" in the strict and primary sense of ἐνέργεια and other manners or degrees of Being related to the former "proportionally", κατ' ἀναλογίαν. It is precisely the difference in the kinds of relation to the primary aspect of being, that of ἐνέργεια, which justifies our speaking of "manners of being". As Aristotle says: "... Being is

spoken^{of} in various senses, but in every case with some reference to one capital beginning" (... τὸ ὄν λέγεται πολλαχῶς μὲν, ἀλλ' ἅπαν πρὸς ^{ἀρχήν} μίαν ^). This holds not only for the manner of being which characterizes δύναμις , but also for the various attributes of things, such as their motion, their color and warmth, their number and size, their health, beneficence, and well-being. The τὰξίς , the hierarchy of the spheres with their specific ἐνέργεια is conceived as following an "analogical" pattern, too.

VII

Where, then, is the place of man in this order of things?

It is not too difficult to assess Aristotle's answer to this question. Man is said, on the one hand, to rank highest among the perfect, that is, viviparous, animals. Nature is said to have produced everything for his sake. Among all the animals man is the only one with an erect posture, "for his nature and his being are divine". And yet, on the other hand, he is not the most important, not the best being in the world, as becomes perfectly clear when we consider the celestial bodies which compose the cosmos.

This somewhat ambiguous position of man is rooted in the insufficiency of man's wakefulness, in the "incompleteness" and "passivity" of his νοῦς. Man is open to everything about him. Whenever this openness is filled with the εἶδη of the world he shares in the god-like manner of being, in the ἐνέργεια of the divine νοῦς . But this sharing is an intermittent one: ever so often man is overcome by fatigue, his wakefulness yields to sleep. He has to lie down. His divinity is but a passing shadow - as his very life is.

Still, he has to make the best of it. Since he is not a solitary

being but has to live with others of his kind, he establishes families rears children, acquires arts, learns and teaches, forms tribes, founds states, sets up institutions, rituals, customs and laws. In doing that, he has to have φρόνησις, has to exercise sound judgment in the conduct of his affairs. Aristotle provides the justification and the guiding rules for all these specific human activities in his teaching and writing on matters of the Household, on Ethics and Politics, on Rhetoric and Poetry. All these subject-matters fall within the jurisdiction of the λόγος, which is no attribute of divinity. Only to a few is given the happiness of a philosophical life, the immoderate, though intermittent, sharing in the timeless ἐνέργεια of the νοῦς .

Let me, by way of conclusion, report the preposterous, yet deeply significant, story told in ancient times about Aristotle's sleeping habits. When he went to bed, so the story goes, he used to hold in his hand a sphere of bronze - I presume the sphere representing the whole world -, while on the floor, close to the bed, beneath his extended hand, lay a pan. As soon as Aristotle would fall asleep, the sphere would slip off his hand, fall on that pan, and the ensuing noise would wake him up. This procedure was apparently repeated over and over again. Aristotle could have hardly survived such an ordeal for any length of time. But no story could more aptly relate his claim to immortality.

The Body of Aristotelian Teaching

as it has come down to us since its
publication by Andronicus of Rhodes
in the 1st century B.C.

Categories	} The "Organon"	Inquiries concerning Animals, 9 books
On Interpretation		Parts of Animals, 4 books
Prior Analytics, 2 books		Movement of Animals
Posterior Analytics, 2 books		Gait of Animals
Topics, 8 books		Generation of Animals, 5 books
Sophistic Refutations	
.....		
Physics, 8 books		On Colors
On the Heavens, 4 books		On the Audible
On Coming to be and Passing away, 2 books		Physiognomics
On Phenomena high above, 4 books		On Plants, 2 books
On the World	
On the Soul, 3 books		On Marvelous Things Heard
On Sensation and Sensibles		Mechanics
On Memory and Recollection		Problems, 38 books
On Sleep and Waking		On Indivisible Lines
On Dreams		Location and Names of Winds
On Prophecy in Sleep	
On Length and Shortness of Life		On Xenophanes, Zeno, Gorgias
On Youth and Age		Metaphysics, 14 books
On Life and Death	
On Respiration		
On Breath		
	
		Nicomachean Ethics, 10 books
		Great Ethics, 2 books
		Eudemian Ethics, 7 books
		On Virtues and Vices
		Politics, 8 books
		The Ordering of Households, 2 books
		The Art of Rhetoric, 3 books
		Rhetoric to Alexander
		Peotics