

A R I S T O T L E ;
in the light of a lamp.

by
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Aristotle.

Introduction.

Aristotle is difficult. Any one who has attempted the study knows that. The difficulty lies in a strange confusion, a confusion which Aristotle himself points out in reference to knowing a concrete object like this desk lamp before me as against knowing some abstract metaphysical principle. The thing which by its nature is most knowable is in fact hardest to understand, as the metaphysical principle for it is exact and authoritative. But the desk lamp is by nature less knowable for it is not exact, yet in a sense a child can know it. In a similar manner Aristotle's discussions contain the apparently complex but really simple along with the apparently simple but really complex.

That he discusses what is apparently complex but really simple, in the sense that a first principle is simple, is denied by no one who has found him difficult to understand. But the apparently simple element, which can be known as easily as this desk lamp, is not at first so obvious. Along with his profound thinking there goes a naive acceptance of the world as it appears. And our scientific sophistication obscures the import of what must have been for his pupils the most obvious of implications. His technical phraseology half conceals half discloses concrete illustrations. The former is the larger half. But in places we see his mind at work. There is one passage where he is laboring to explain the many ways in which things may differ, as opposed to Democritus who limited differences to three. One of the illustrations is the wind, which he says differs in place. Wind qua wind is of course the same, but the north wind differs from the east, south or west wind in place, since the north is where it resides.

This illustration not only shows the concrete meanings he had in mind, but also leads to another introductory remark which it is important to consider in reading Aristotle. He clung tenaciously to the common opinions of

men. It is a banality to draw attention to the fact that in order to understand a system one must understand the preceding systems out of which it grew and the succeeding systems which it caused. But an element sometimes forgotten and especially prominent in Aristotle is the substratum of common opinion, language and customs which a man must use even though he try to free himself from them. Aristotle rather than trying to free himself, strove merely to bring out their essential truth. Thus when you ask the ordinary man what things are truly real, he will answer, this desk-lamp, this pen. So Aristotle in opposition to Plato whom he constantly attacks will by virtue of the answer of the ordinary man cling to the reality of the individual sense object; now will any subtle argument about Matter or Form or Idea attempting to define what is meant by reality and sense object, drive him from the conclusion that this lamp is real.

Destructive Work.

Before constructing his system, Aristotle must clear the ground of Plato's. Aristotle may have misunderstood Plato, again he may have not; for he was no nincompoop incapable of contemplating philosophic belief, nor was he a stranger whose information was unreliable. No one had a better opportunity to understand Plato than he unless he was unqualified by disposition. At any rate, Aristotle uncompromisingly attacks what he thought was Plato's doctrine. A complete analysis of the attack is unnecessary, but a summary of the arguments used may not be out of place.

1. The arguments for Plato's Ideas do not prove their independent existence.
2. If they did, they would prove too much.
3. The Ideas are a purposeless duplication of things; for they are not the cause of motion, nor the cause of the existence of things, nor the cause of our knowledge of things.
4. If the Idea is the essence of the thing, it cannot exist apart from it.
5. Participation, a necessary part of the theory, is a mere figure of speech.

6. The common property of the thing and the Idea requires a higher Idea and soon to infinity.

7. The reduction of Ideas to numbers is still more preposterous.

To balance this destructive criticism is the constructive element that nevertheless the concept or idea in a non-Platonic sense has objective reality. This is dictated by epistemological considerations, for if the concept is purely subjective how can an object be known? It also involves ontology since reality is that which exists. Thus, not too strictly, the explanation of how the concept has objective reality may be said to constitute his system of philosophy.

Presuppositions of a Science of Ontology.

This desk lamp is green; also it is heavy; and again it is useful in shedding light on what I am writing. Thus the word "is" and therefore "the existent" have many meanings, nevertheless the investigation of them belongs to one science, for the various meanings have a common element in that they are all related in one way or another to reality.

In pursuing the study of existent we must state two axioms, which tho they cannot be demonstrated in the strict sense of demonstration must be established in some manner. The first axiom is the law of contradiction, which may be established by refuting its opponents ~~thru~~ a reductio ad absurdum. This is done in two ways, $\Lambda\omicron\gamma\iota\kappa\tilde{\omega}\zeta$ and $\Phi\upsilon\sigma\iota\kappa\tilde{\omega}\zeta$.

$\Lambda\omicron\gamma\iota\kappa\tilde{\omega}\zeta$. First, Lamp must signify a single thing both in the real world and in consciousness. If it signify a definite number of things such as a piece of furniture, an ornament or a paper-weight, a special name may be given to each signification and so each name would signify one thing. But if the significations be infinite, as those who deny this axiom must hold, then this lamp is also not a lamp, and since not a lamp it is a calendar and also not a calendar, as well as both book and not book. That is to say, since it designates nothing in particular, it designates nothing at all.

Second, Further implications may be urged against rejecting this axiom. For instance all statements regarding my lamp would be accidental and the underlying reality would not be there for the accidents to attach to. Again, if my lamp is not a lamp, it is also neither lamp nor not lamp. That is, he who rejects the law of contradiction must also reject the law of excluded middle, which we will discuss presently. The result is that all judgements become purely subjective and man is the measurer of all things. Everything then is true, and that everything includes our axioms. Of course the opponents with their usual insistence on the laws of logic might call the above reasoning a *petitio principii*.

ΦΥΣΙΧΩΣ. We may find another method of establishing our axiom in seeing how some are led to deny it by virtue of their physics. This leads to a discussion of subjective idealism and sensationalism. That truth is determined by the senses, which makes everything true, is deduced from two false doctrines. First, that only sensible objects exist, and second, no statement made of them is true for they are constantly changing.

Some have arrived at this first doctrine by identifying the judgement of the intellect with sense impression. But if this is logically followed out, it will result in waving good-bye to philosophic discourse as was the case with Kratylus. Now sense perception proper, free from all interpretation is infallible. It is an awareness of something not itself. The object of the awareness is a *παθός* of a real subject, *ὑποκειμένου*. The object of sensation, i.e. the greenness or the hardness, the distinct from the perception is dependent on the perceiver as well as on the real thing. For if either the percipient or the real thing changes, a different sensum is produced. That is to say, if ink splashes on my lamp I will no longer see green but blue, or if I become color blind I will no longer see green either. The mistake is to make a judgement about the thing, but the perception per se, that I see green, is infallible. Yet because the sensum depends on me as well as on the lamp, it does not follow that the thing does not exist, nor that man is the measurer of all things,

for I have not chosen to see green, or have any perception. It is stimulated within me by something without, and altho the stimulator, the lamp, and the stimulated, ^{myself} are relative terms, it does not prove that the lamp is non-existent when I no longer perceive it.

And even if sensible objects are continuously changing, the very continuous change implies an existent of which a portion changes and of which a portion does not. If in the literary zeal which produces this paper, my ink splashes on the desk lamp so that it becomes blue rather than green, the lamp thruout the change possesses something of the quality which is being lost. When it no longer possesses any of that quality, the change has ceased. Then too, all during the change it has some of the quality it is acquiring. If not, the change would not have been begun. Thus on the lamp we distinguish a portion which has and a portion which has not changed. Both exist.

Again the change itself requires a cause. The blue lamp will be caused by the splashing of ink, and this by the literary zeal, which may have another cause, but the series cannot be infinite.

Besides, qualitative changes are not continuous. The portion of the lamp which becomes blue becomes so immediately, and if the final result is a still deeper shade of blue, it is attained by discontinuous splashes. If those who hold the theories we are refuting reply that in nature the deepening blue sky of evening is continuous, in opposition to our illustration, we say the case is the same and the degree of instantaneous change is the minimum perceptible.

Lastly, if nothing but presentations to consciousness exist, then the existence of the lamp depends on that of myself. But on what does my existence depend? For my sensations are not the objects of themselves; rather, they imply the existence of something prior which is not mere sensation. (Note. Berkeley would reply, there can be no idea of spirit. Spirit perceives or produces ideas but is not one. With the same assurance that Berkeley has when he denies he can conceive of spirit, abstract ideas and a few other things, I would reply, I can.)

*Dr. Singer makes an inference
each step ~ Berkeley*

Conclusion. Therefore both by logical and physical analyses it has been shown that the law of contradiction is the most indisputable of all beliefs; from which follows the truth that contradictory attributes cannot attach to the same subject.

The second axiom which is prerequisite for a science of ontology is the Law of Excluded Middle. As long as judgements are true or false, the axiom holds, and to make it clearer there may be adduced the following considerations.

If there were a logical intermediate between x and x' , (let x' be precisely not x) it would be either homogeneous or heterogeneous. (We notice that the discussion cannot take place without assuming the law in question.) If the second alternative be chosen and one say lamp is intermediate between calendar and writer, it is simply not an intermediate in the logical sense. On the other hand if the intermediate be homogeneous, as grey between white and not-white, then there could be a change to white from something that was not not-white and everyone agrees that this could never be. Therefore grey cannot be a logical intermediate between white and not-white.

But if nevertheless, this were maintained, there would be an intermediate for every pair, existent, and non-existent, genesis and dissolution et c.; and the intermediate in turn would require another intermediate with each extreme and so on to infinity.

Finally the denial of the law of excluded middle implies that all things are false. Therefore the denial itself is false. Or if the denial alone be excepted and called true, then one true statement implies an infinity of truths.

Having thus established his axioms, and before going on with the study of the existent, Aristotle adds a final conclusion with reference to the nature of the universe. In the dialogue "Sophist" Plato, possibly spurred on by the insistencies of his obstreperous pupil, finds that the World of Ideas cannot be immutable in every sense of the word. He argues that since knowing is

a form of action and being known therefore a form of passion, since Reality or Being can be known it suffers passion. Therefore the totality of existents (or perfect Being = $\pi\alpha\nu\tau\epsilon\lambda\acute{\alpha}\varsigma\ \acute{\omicron}\nu\tau\acute{\alpha}$) is not entirely devoid of motion, life, soul and thought. On the other hand if everything moves, intellect is impossible, for it requires a permanence which in turn requires rest. Therefore the All is neither all immutable nor entirely mutable. Here Aristotle draws the same conclusion. If all things are at rest, the statement, this lamp is green, will always be true, for no ink will splash. If everything is in motion all statements will be false and knowledge will be impossible. Nor can this be interpreted to mean that each thing is sometimes at rest and sometimes in motion. For the First Mover must be unmoved.

The Objects of First Philosophy.

Metaphysics, or what Aristotle calls First Philosophy, has undisputed possession of its field; both because other sciences will have nothing to do with this sort of investigation and because, especially, of the nature of the subjects involved. Science is divided like all Gaul; there are the cognitive, the poietic and the practic sciences. The last two, since they contain subjective determinations are inferior to the cognitive sciences, the objects of which are certain orders of the existent objectively determined.

Cognitive science also is similar to the land of Caesar. It comprises Physics, mathematics, and a third science, which unlike Physics does not investigate the mutable and unlike mathematics does not investigate that which is dependent on matter. This third science is First Philosophy or Theology. It may be called theology because the independent and the immutable must be divine if anything is, and because, ~~xxxx~~ it investigates the highest objects in the rank of existents of which God is the very highest.

Counseling of V I p 73

Can V I explain I nature of sense No?

No Xs 7 participate in V I. General begins (n
V I is received 7 a. V = participate by J. J.
> Plato does tell us participate is, why
P I participates in V I?

∴ Participate is) satisfactory.

Paradigm? No are copies of V I.

> a generic I would be a model) only P I
> a specific I as well. And for a V I who
have several models as P I is
modeled after man, animal, biped.

∴ Paradigm is) satisfactory.

Bethel Presbyterian Church
Nineteenth and York Streets
Philadelphia

REV. DAVID S. CLARK, D.D., Pastor

Thanksgiving Day Services

November 29th, 1923, 10.30 A.M.

Organ Prelude

Holy, Holy, Holy

-----Ashford

Choir

No Shadows Yonder(Holy City)

-----Gaul

Prayer

Hymn No. 655

Quartette

When I Can Read My Title Clear

-----Thomas

Scripture

Psalm 65

Thanksgiving Offering

Offertory

My Faith Looks up to Thee

-----Lorenz

Notices

Sermon

Thanksgiving Sermon

Hymn No. 658

Benediction

Quartette

The Lord's Prayer

-----Lorenz

Organ Postlude

Onward Christian Soldiers

-----Ashford

The Ministry of Music

The Bethel Sunday School Choir

J. Lawrence Ross, Director

Elizabeth A. Myers, Guest Organist

Assisted by

Mary H. LoRee

Soprano

David Houston

Tenor

Adella V. Francis

Contralto J. Lawrence Ross, Baritone

God, and the other existents, which First Philosophy considers, are both objectively existent and also the highest universals. They are universals because they are first in the scale of existents, not first because universal.

Just how a science can be first because it investigates the highest rank of existent and because it investigates the highest universals is not quite clear, unless we assume that the highest universals are concepts in the mind of the highest Being. Plato does this explicitly. But Aristotle hardly gives so much as a vague hint.

There are four possible divisions of the existent. We may say, this lamp is a paper-weight. The use of "is" here is accidental. But the accidental is not an object of any science and really does not exist, for though the statement is true, it is also true that this lamp is not a paper weight. Second, we may say, this lamp is perfectly useless, illustrating the True or False. This so-called division of the existent belongs strictly to judgments and not to things. Since then it attaches to thought, it does not constitute an order of the objectively existent. The third may be termed, the existents corresponding to the designations, or for short, the categorical existents. The lamp is green, it is metal, it weighs six pounds, it is low. To these various meanings of the word "is" which we call the categories, there correspond various kinds of existents. It is obvious that some of these meanings are dependent and that one is probably first. This first we will call Reality, and our problem is now, What is Reality? After examining this we will return to the fourth kind of existent, the Potential and the Actual.

We do not say, Green is the lamp, or, metal is the lamp. Evidently then without much consideration we see first that the reality must be the subject of which other things or attributes are predicated. But this is an insufficient account of reality, for if we suppose that reality is identical with matter, which the above permits, it fails to give reality any positive content, for to get matter, all positive qualities must be abstracted. Now since matter is not a particular thing nor a certain

quantity, reality cannot be identical with matter, for second, everyone is agreed that independence and individuality are chief traits of reality. These qualifications permit form to be reality. We tacitly omit the possibility that reality is form plus matter, for the what is composite is individual and independent, it is posterior and reality must be prior. Since then form, or what is the same thing, the conceptual being, seems to have a prima facie claim to reality, let us first consider this solution.

Our first method will be ΛΟΓΙΚΩΣ, i.e. by examining the usages of speech. By conceptual being or form, we mean that phrase or concept which can form a judgement of identity with the name of the thing. Let the exact definition of lamp be, "furniture for lighting." This then will be the conceptual being of lamp for it is what we mean by the word lamp. But what sort of things can have a conceptual being or exact definition? Strictly speaking, and we must speak strictly, all accidents are barred. Therefore nothing but species have a conceptual being. And still more strictly only the first category, existent quā existent, has a conceptual being and may be said to be. Therefore only realities can have a conceptual being of definition.

Next we must ask, is the conceptual being identical with the thing? Here too we exclude accidents and use words in their strictest sense as above indicated. As a preliminary observation, we point out that the common tacit opinion is that they are identical, and moreover the identity seems to be implied in the statement of the definition, for we say the lamp is so and so. We maintain in opposition to Plato that this identity must be asserted, for otherwise knowledge would be impossible and nothing would exist.

It is obvious that what applies to one conceptual being holds for all. Thus if the conceptual being of Goodness is not an attribute of a good thing, or if the thing's being good is not an attribute of the conceptual being of goodness, then the conceptual being of the existent is not an existent thing. i.e. it does not exist, and if one conceptual being does not exist, neither does any other.

Heinrich says ↓
ambiguous, since
we are trying to find
what reality is +
we call it form

bec. sp. = gen. + d.
why? bec. sp. =
only sp.?

To deny this identity makes knowledge impossible, for we know a thing only when we know its conceptual being. Whether you are asked to prove that you know this lamp, or the conceptual being of this lamp, your answer must be the same, namely furniture for illumination. So we are forced to assert the identity of the thing and its conceptual being, or, accept the consequences that knowledge is impossible and stop talking - which no one cares to do.

omit
But here arises a peculiarly interesting problem. This real and individual object before me is defined as desk-lamp, and lamp is furniture for illumination. It is one object; yet it has several elements in its definition. Now if reality is the same as conceptual being, will the parts of the latter correspond ^{to} parts of the thing? For surely the whole is the sum of the parts. At first glance it seems to in some cases and in others not. The circle does not contain the definition of its arcs, but rather vice versa. Yet on the other hand, the definition of a given syllable does contain the letters. Now we know that a definition is not merely the enumeration of the parts, but it would have to be if a part of the conceptual being corresponded to a part of the thing. The base of this lamp is indeed a part of the lamp, but it is not a base until there is a lamp of which it is the base. We mean, as also in the case of circle above, that the parts are defined by the whole, and that the wholes can exist without the parts, but not vice versa.

Besides, the problem is really illusory, for "part" is ambiguous. It may mean a unit of measure or a constituent part, which again may be either matter or form. Strictly speaking the definition refers only to the form and does not contain the parts of the matter.

So far we have said,

1. Reality and conceptual being are identical.
2. In a secondary sense, the composite is reality.
3. In the case of ultimate realities, the conceptual being is the thing.
4. In composites the conceptual being is not the thing.

7
 But really we have left unsolved the problem of parts and wholes. For the form is a single unitary whole, yet the definition implies parts. How then can the genus "lamp" and the difference "desk" blend into the logical unity of the species, "desk-lamp?" Certainly they cannot be blended ab initio. For what is true in one case must be true in all. Then lamp would have to be blended ab initio both with desk and with floor. Whence it would follow that two contraries, desk and floor, would coexist in the same species and every desk-lamp would be a floor-lamp.

Nor can a series of descending differences blend, as furniture, lamp, desk; for these too are logically distinct. Yet the definition of form is unitary and must have a unitary object.

Let us examine the question by taking a definition with two terms as desk lamp. One term then must refer to the genus and one must be the difference. Now the genus lamp has no existence apart from the species, and is related to species as matter is to form. Then since the definition refers only to the form and the last difference is the form of any species, we have a unitary definition of a unitary form. Thus the problem has proved an illusion.

Need it be mentioned that it is Aristotle's solution that is the illusion, or delusion. He himself recognizes this, for in other places he gives three more solutions to the same question.

In our search after reality we have now examined the subject, and the conceptual being. Let us turn to the universal. Now if anything in the world is real, these things around us are. Since then reality in its primary sense is peculiar to an individual, and the universal is common to many things at once, and is therefore no more the reality of one of them than of all, the universal cannot be reality. Besides we have shown that reality is never a predicate but that to which all predicates are attached. The universal however is always a predicate. If the universal term lamp is the reality of this object before me, and the reality of lamp a higher genus, the higher genus will be the reality of many things. But if

the individual is the reality the universal cannot be, for it is a mere quality. Similarly since reality is individual it cannot have other realities as components, for then it would not be one. But this brings us to another difficulty. If reality has no components and is an individual it cannot be defined, altho we agreed that nothing but realities can be defined.

No individuals can be defined. For all components of matter and form suffer genesis and dissolution, but no definition does. This lamp now exists, but owing to the labor of illuminating this rather dark paper it may ^{collapse} dissolve and no longer be a lamp. Since then any concrete object is contingent and uncertain it cannot be the object of definition or demonstration. For the object of demonstration is necessary and a definition conveys true knowledge. Yet a so-called definition of an individual object will soon become false.

Again there is a still deeper criticism which applies to necessary individuals as well as to concretes. The words of a definition express universals, as desk and lamp or circle and man. Nor could one coin a new word to express the individual for such a word of unique meaning would be unintelligible. Nor does the combination of two, or any number of, universals as desk plus lamp and so on designate an individual.

Further in our search for reality we must concede that most of what goes by that name is not true reality, but merely a power or function. Illustrations are the organs of animals and the four elements.

Neither is existence nor unity reality. For tho they may be said to have better claims to reality than other attributes, yet the same criticisms hold here as against universals.

Since beginning our discussion on parts and wholes we have shown that

1. No universal is reality
2. No reality consists of realities.

But these two conclusions conflict with the four points of the preceeding summary. We must therefore undertake to harmonize them.

This can be done, thinks Aristotle, by pointing out a reality which is independent of sensible realities. The Cause is Reality.

For in asking why these pieces of metal before me are a single lamp, why these bricks are a house, we seek the cause. Now the cause, when expressed in logical terminology is none other than the conceptual being or formal cause, tho it may also be the final cause or the efficient cause accidentally. The latter, efficient cause, explains only genesis and dissolution, but the first two, formal and final causes, explain existence as well.

The final cause is the purpose anything serves, and appears to be Aristotle's substitute for the Idea of the Good in Plato. The formal cause is [sometimes] the same as the final. The final cause of this lamp is to give light; but this was also the formal cause in the mind of the maker. Or, the final cause of this boy is to be a man, but man is his formal cause, viz. his father. By products, such as using this lamp as a paper weight, have no final cause and are explained mechanically by reference to a moving cause. Even that which is due to a final cause is also due to a mechanical cause. For the lamp has both purpose and manufacturer.

Let x and y be the components of an object. Then the form is not identical with the components, for these may be resolved and still exist tho the form would not. Therefore form is a distinct something. If the form is a component of the object so that $\text{Object} = x + y + F$, the same argument which inserted the F will insert an F' and so on ad inf. If the form itself is a compound, then it is similar to the object and has components as $p + q$ which require an F' and so on ad inf. Therefore this form is not an element of the object nor composed of elements, but is the cause, the reason why these elements make a unity. It is ^{alone} the reality for it is the proximate cause of the being of the thing.

Indeed the only true realities are dynamic forces, so Aristotle seems to imply. The highest reality must be that which is the ultimate cause of all. Lower realities descend then in rank.

Let us now consider the whole question from a different viewpoint. We shall ask what makes an individual reality, is it matter or form, since in sensible realities we distinguish beside the composite these two. This discussion in Aristotle is rather unsatisfactory for it is nowhere wholly treated ⁱⁿ systematic fashion but bits of the matter are in one place and bits of the form in another.

Sometimes, says Aristotle, the distinction between form and matter is obvious, as is the case with this lamp, for the form of lamp may be imposed not only on the matter bronze as here but on many other kinds of matter. But when a form always occurs connected with the same matter, as is the case with the form man on the matter flesh, the distinction is difficult to make. In one sense the form man includes the matter, for it implies the notion of parts of a definite kind capable of producing the functions the form requires. Everything but pure form has that kind of matter which is capable of locomotion; other kinds of change are change in quality, in quantity, genesis and dissolution. These last three cannot exist without the first, tho in the case of the heavenly spheres the first exists without the others.

Usually however when we say matter we do not mean the primary matter but rather the proximate matter appropriate to the object in question. So, loosely speaking there may be many matters of any one thing, each underlying the succeeding one. Descending from the matter bronze of this lamp, thru the matter of which bronze is but the form, to the primary matter, we find that this too is further resolvable, mentally at least if not objectively. We will call it intelligible matter as distinct from primary matter which is yet capable of locomotion. We arrive at it by abstraction for it has no separate existence. To quote, 1086a

ὅλη δ' ἄγνωστος καθ' αὐτήν. ὅλη δ' ἡ μὲν αἰσθητή ἐστὶν ἡ δὲ νοητή, αἰσθητή μὲν ὅλον χαλκὸς κτλ, νοητή δὲ ἡ ἐν τοῖς αἰσθητοῖς ὑπάρχουσα μὴ ἢ αἰσθητά, ὅλον τὰ μαθηματικά.

This gradation in existents implies the abolition of any real ultimate distinction between matter and form. The intelligible matter he again mentions in K 1059b15 and calls it the matter of the objects of mathematics. If we are to insist literally on his statement in Z 1086a9 that intelligible matter is present in sensible objects

but not qua^A sensible, and consider it to be space as it seems it might be, then empty space would be a contradiction, and if there were a distance between two proximate bodies there would be a space in which there was no space. Yet Aristotle differs from Plato who in Tim¹50c-52a says that space is the stuff or matter things are made of.

This lamp and the other one on the counter which I did not buy have the same form but are differentiated by matter. Cf. 1034a5-8 and 1035b30, 31. But if matter is the principle of individuation in composites, what differentiate forms? If one form be distinct from another, that is, if each be individual, they must possess unique differentiae and each will be a sole member of a lowest species. But then in fact it may be the sole member of that class, how may it be distinguished from other thinkable members of that same class? It can be by neither matter nor form. The problem is difficult enough with composites, for we have rested on that which is unknowable. 1036a8. Then that which we have said to be the most real of all objects, namely this concrete thing, is unknowable. In other words we arrive at the same difficulty mentioned in the preceding search after reality- individuals cannot be defined. Since Aristotle is forced to omit definitional knowledge of individuals, he must give us something to take its place. This is intuitive thought or perception. 1036a2-8. And this applies to the unitary form as well as to the composite of matter and form. The nature of the individual is grasped by a single act.

Neither matter nor form passes thru the process of genesis and dissolution. If then matter is eternal, is form also? In a sense, yes; but sometimes not. Form is like a point or a contact. It either exists or does not, and the change from one state to the other is not a process but occurs instantaneously. Form never exists apart from the individual. Therefore it is eternal in the sense that there are always some individuals which have that form. It is the composite of matter and form which has gone thru the process of genesis or dissolution. But to explain why the composite is so requires a knowledge of the causes. And a cause is also individual, for universal causes do not exist. Man in general is the cause of the universal man to be sure, but then the universal man does

not exist. The individual is always the cause of the individual. Therefore as he will say later, the prime cause of the universe is not a general principle but an individual spirit.

Potentiality and Actuality.

Bosanquet in his History of Aesthetic begins one section with the sentence, "It is difficult to get a net result out of Hegel." This might also be said without impropriety of Aristotle's discussion of potentiality and actuality.

Sm This or some other principle has been necessary. Thruout the preceding discussions he has been referring to a solution which would solve all the difficulties he has raised. Form and matter are not sufficient; these distinctions hold of an object at a given moment in time. But in considering that which is relatively formed or unformed; that is, things in the process of manufacture, a distinction between potentiality and actuality becomes necessary.

But the difficulties attending may be sensed when it is known that the only word which is more ambiguous than potentiality is actuality. The two meanings of potentiality with which we have to deal are 1) a power to do something or to produce a change in another thing; 2) the power to be changed.

My friend and I come to this desk. Neither of us sees anything for it is dark. I push the button and light my lamp. Then I see the desk, but he does not for he is blind. Tho there was apparently no difference between us in the dark, in that neither could see, the fact that later I see but he does not, indicates that in the preceding state appearances were deceitful. In other words, I had a potentiality which he had not. But potentiality is not the whole explanation. To use another illustration; to say this bronze metal was potentially a lamp does not entirely explain why it is now an actual lamp. There must be a cause which initiates the change, and this cause must be an actuality. We cannot define actuality, but we can show what it ^{is} means by means of a mathematical propo-

tion. As he who is awake is to him who is asleep; and, as he who is seeing is to him whose eyes are shut, (but not blind); and as that which is wrought is to that which is unwrought, so is actuality to potentiality. Therefore, logically and temporally as well, actuality is prior to potentiality. The chicken is prior to the egg. It is prior in definition, for the potential or power is defined by the actual or the activity. It is prior in time, for the potential is preceded by something exerting the same kind of activity, though this actuality is in another individual. But most important of all, actuality is prior to potentiality in reality. For it has been shown that things posterior in genesis are prior in form and reality; that is, the completely manufactured lamp, which is the last step in the genesis process, is the form which preceded the process of manufacture, it was in the maker's mind before he began his work.

Permit me to state that this section, especially 1050a8 - 1050b1, is somewhat overburdened with contradictions, which do not render material assistance in interpreting it. But the conclusion is that actuality is prior to potentiality in reality.

Analogous to a primary matter, there is also a first actuality which is prior to all others. Each actuality is preceded by a cause which is also actual and since this regress cannot continue for ever we end in an eternal first mover. This first mover will for similar reasons be prior in reality to all others. For the eternal is prior to the perishable. Nothing is eternal by virtue of potentiality. Therefore God is pure actuality and has no unrealized potentiality. Form is also actual. No specific form ever passes thru genesis, but only is actualized again in new individuals. Even matter which in one sense is pure potentiality is actual in that it is incapable of not existing, and so eternally existent.

Book @ chapter 10, at which we have now arrived, presents peculiar difficulties. Beginning Book E, Aristotle sketched his problem of the existent and named the four uses of the word. He has now about completed discussing the fourth

the fourth, potential and actual. The first two meanings of existent were accidental and true and false, both of which he discarded as being figures of speech and not real existents. (But here he seems to introduce a fifth sense of the existent which he calls κυριώτατον. This strictest sense of existent appears to be truth and falsity, the same which he rejected in Book E. True he does not discuss it very fully in E, true he says he will discuss it later (in Θ) but he does say, οὐ γὰρ ἐστὶ τὸ ψεῦδος καὶ τὸ ἀληθὲς ἐν τοῖς πράγμασιν ἀλλ' ἐν διανοίᾳ. And he also calls this existent lower in the scale than the existent in things. In other words there seems to me to be a [blatant] contradiction between E 4 and Θ 10.

In this latter book he calls truth and falsity existent in the strictest sense. In the case of things this consists in conjunction or disjunction, so that he is true who thinks the disjoined to be disjoined and the conjoined to be conjoined. This does not mean that this lamp is green because I truly think so, but I truly thinks so because it is green. Since then some things are eternally conjoined, others always disjoined and still others sometimes conjoined and sometimes disjoined, their existence is: their conjunction their non-existence their disjunction. If the connection be contingent the judgement will sometimes be true and sometimes false; if the connection be necessary the same judgement will always be true or always false.

So much then for those things which are conjoined or compounded, but what of the simple and non-compounded? In what does their existence consist? In this case, truth consists in "touching" or uttering them. This is true of simple rational elements and non-compounded realities. They all exist in actuality and not potentially. And it is impossible to be in error about them, one may only think them or not think them. To think them is truth, not to think them is not falsity but merely ignorance,

In spite of the dense fog, this chapter is very important as a necessary step to his theology. He is trying to show that existence in actuality is existence in consciousness. His problem is to get from a mechanical to an intelligent first cause and this is accomplished thru the ambiguity of ἐνέργεια. If the first cause is the highest existent and therefore the highest actuality, and the highest actuality

is existence in consciousness, Aristotles has found an intelligent first cause. But in my opinion, in showing that existence is existence in thought, he is somewhat inferior to Berkeley.

Aristotle's Theology

Bits of Aristotle's theology are found in E 1026 and K 1064. But the most important section is Book A and of this book especially chapters six to ten. The first five chapters rehearse some of the important conclusions on reality, matter and form, actuality and potentiality. Chapter six begins that proof for the existence of God ^{the main point of} which neither Kant nor anyone else -so far as I can see- has shown to be invalid. The argument as Aristotle puts it is as follows.

There must be some sort of eternal immutable reality, for of all the existents reality is the first. If all realities were destructible, all things would be destructible. But it is impossible that motion be either generated or destroyed for it always was. Similarly time must be eternal. Motion in the same manner as time is continuous. For time is motion, or at least an attribute of it. The only continuous change is locomotion, and that circular. (Circular it must be, because Aristotle believed that space was finite and a circle of finite radius was the only possible path for continuous eternal motion.) But if that which is capable of producing motion is not functioning there will be no motion. This is the trouble with Plato's Ideas. They are indeed eternal realities but they cannot produce motion. But even if it does function, it is not enough, for perhaps its nature is mere potentiality. Then motion would not be eternal, for that which exists potentially may possibly not be. There must be therefore such a principle existing in actuality. Moreover these realities (he here uses the plural, later he will show that there is more than one) must be immaterial.

Early philosophers had only potential causes. Leucippus and Plato however introduce eternal motion. But they do not sufficiently explain it, they do not tell its cause. For nothing moves by chance. All motion requires a cause. So far, Anaxagoras has given the best solution by introducing mind, which is an actual cause.

Chaos has not always existed, but rather the world process is an eternal succession of cycles, or something on that order. But if the same things always exist, going thru the changes of the cycles, there must be something constant which always acts in the same way. Yet genesis and

dissolution require a cause which acts in different ways, that is, it must act in one way by its nature and in another way due to something else. This something else may be a tertium quid or the first cause. As a matter of fact it is the first cause. These two principles are necessary and also sufficient to explain the universe. One is the cause of eternal motion, one of variety; both together cause eternal variety. Study the stars and the truth of this explanation will be evident. τί οὖν ἄλλας δεῖ ζητεῖν ἀρχάς;

In passing note that this "sufficient" explanation of the universe is a purely mechanical one, depending on the cog-wheel arrangement of the orbits of the planets and stars. No mind or purpose is yet evident. Briefly the argument so far is; If all realities are perishable, all things are perishable. Change and time are not perishable but eternal; therefore there must be an eternal reality capable of producing motion.

There is then something that moves unceasingly in a circle. This is true both in theory and in fact. Merely look up and see the stars revolving about the earth. The first heaven therefore is eternal. And something must cause, this motion. This something, which must be eternal reality and actuality, must cause change without changing. There are any number of such causes, motionless causes of motion, viz, any object of desire, they all so act on the thinker.

We have seen how Aristotle posited two mechanical principles which he said were sufficient to explain the universe. And such a mechanical explanation seems to be in harmony with the general tone of the Metaphysics. But, for what reason we do not know, whether it be because he had not fully emancipated himself from Plato's influence and common opinion, and therefore could not give up the idea of God, or whether it be because he was forced into a mechanistic conception of the universe which he would have preferred to explain away in favor of a theistic conception; he felt himself compelled to introduce thought and goodness into the being of the Unmoved Mover.

The line of argument is not logically continuous from beginning to end, I mean, it is fallacious.. We have mentioned the ambiguity of ἐνέργεια; further gaps in the reasoning appear here. And for this reason it is quite difficult to follow the argument unless one have clearly in mind the purpose of the author.

We had followed to the point where it was pointed out how a thing could cause motion without moving, by being the object of thought or desire. If we reduce the objects of thought and desire we find that they ultimately coincide. That which seems good is the object of desire; that which is good is the object of will. For we desire a thing because it seems good to us, not vice versa. Therefore an intellectual apprehension - νόησις - is the first principle.

Now mind is moved by the thing thought, but thinkable things are found in the positive column of opposites, in which reality, in all its purity and actuality, stands first.. Therefore such causes are actual.

The good and that which is intrinsically preferable are in the positive column also and therefore the first member of this column is the best, or the absolute good, since the good is a subsidiary to it.

We have shown that the end or aim is something motionless, tho there is a sense in which the end or final cause is not motionless, for it has two meanings. It is either someone's aim and therefore relative to the actor, in which case it is not motionless; or it is the thing aimed at, in which case it is motionless for it is independent of the actor.

This final cause then causes motion by being loved, and the objects which it immediately causes to move in turn cause other things to move.

Whatever changes, might be otherwise than as it is. Locomotion is the first of all changes. Therefore in respect to place at least the first heaven changes. But the Unmoved Mover, an existent actuality, since it does not itself have, but only produces locomotion, is absolutely immutable.

This Mover exists of necessity, and in so far as necessary, it exists καλῶς. And thus it is a first principle.

So far we have shown that the Immutable Mover which causes motion by being the object of thought is absolutely actual, intrinsically preferable, the absolute good and necessarily existent!

Aristotle now wishes to discuss the consciousness of God. But the Greek language furnished him with no such term. So he uses words like διαγωγή = course of life, ἐγρήγορος = waking, αἴσθησις = perception, νόησις = thinking! We shall translate the combination by "consciousness."

Man attains to a certain state of consciousness which he calls the highest for a short time only. But God is always in such a state. Man sleeps and is unconscious or even in waking hours loses himself. But God always thinks is always alert, and this actuality is pleasure, for consciousness is the most pleasurable of states! And the more worthy the object toward which thought is directed, the more pleasurable is that state.

Mind minds itself by participating in the thing thought, for by the act of thinking the mind itself becomes an object of thought. Thus mind and the thing thought are the same. For mind only is capable of receiving the object of thought and its reality and when mind has this object it is functioning. The mere capability of reception is not, while the functioning or actuality is, the divine element in mind. With us contemplation is most pleasant and best. Now if God were a being who was always contemplating it would be wonderful, but in fact he contemplates not only always, but in a way so superior to ours that he is transcendent! Moreover God is living for the actuality of thought is life and God is that actuality, and that actuality in the sense of being life most good and eternal. We define God therefore as a perfect eternal being who possesses life and continuous duration. Φαμέν δὲ τὸν θεὸν εἶναι ζῶν ἀίδιον ἄριστον, ὥστε ζῶν καὶ αἰὼν συνεχῆς καὶ αἰδῖος ὑπάρχει τῷ θεῷ ταῦτο γὰρ ὁ θεός. A 1072 b 29, 30.

The Pythagoreans and Speusippus who claim that perfection and beauty did not exist in the beginning because they are the final terms of an evolutionary process are mistaken. For the egg is posterior to the chicken, and perfection is the first (as well as the last) term.

We have shown now that there is an eternal motionless reality independent of sensible objects. This reality is without extension, without parts and indivisible. It causes motion thru infinite time and nothing finite can do this. (Note, The argument for the first mover does not depend on a temporal series of causes leading back to a first before the world began, but it is an ascending series possibly quite short compared to any temporal series, and this permits the world to be eternal which a temporal series would not do.) Since every extended object is finite - for infinite extension does not exist - and God is infinite, he cannot be extended. He suffers neither passion nor change, for all other changes are posterior to change of place. These then are the attributes of God.

Now we must not omit the question, as our predecessors have done, whether there is a number of such realities or only one, and if a number how many. Since there are other spacial movements besides that of the sphere of the fixed stars which the first mover moves, there must be just as many other unextended realities to move them. The planets, the sun, the moon, each require a mover.

When we consider that the first heavens are moved by loving or thinking God, and therefore must possess a soul but that the motions of the other spheres can be accounted for by mere cog-wheel machinery, the postulation of movers for the planets seems unnecessary. But Aristotle is trying to say that there are more motions in the sky than can be accounted for by a first circular motion plus cog wheels, and therefore the other movers are needed to explain these motions. But why the soul of a planet should wish to move that body any other way than in imitation of the first and perfect motion of the first sphere is not quite evident. However this astronomical portion is not so important for metaphysics and may be passed over briefly.

Since each planet has more than one motion, the number of movers must be more than the number of planets. The number of moving spheres and therefore the number of movers is estimated by the astronomers to be forty-nine or fifty-five. All ultimate locomotion contributes to the motion of the stars and all ultimate realities must be an end or a cause of motion ὡς ὁπερ τὸν. Now since there are precisely the number of motions we have mentioned there can be no more realities than these.

If there were more than one universe there would be more than one prime mover and this would not differ in form but in matter only since matter is the principle of individuation. But the first mover has no matter and is therefore one both in definition and in number. Therefore there can be only one universe.

The traditions of the ancients in the form of myths teach us that the stars are gods. To this tradition have been added various elements with the view of advancing the welfare of the state. But we see that the essential element of the tradition is true, (the commonly received opinions τὰ δοκούντα are always true); and the cycles of civilization have come and gone, this inspired belief has always been preserved.

But let us return to the more important question of the nature of divine consciousness. First why is thought regarded as the most divine thing we know? If mind thinks nothing it might be called unconscious, and if it thinks something then the object of thought is superior to it. For in this case its reality would be a potentiality, i.e. the power to think if an object be presented to it, and not, as the most divine thing must be, an actuality.

But (God's) mind must think that which is most divine and most honorable, nor can it suffer any change. For if that which is best changes, it is for the worse, and change is motion but the divine mind cannot move. The reality of the divine mind cannot be a potency, for then continuous thinking would tire it. Thus the object would be superior to the potency, and thinking an object of higher rank would be better than thinking a mean object, in which case it is not the thinking per se but the object which is highest. Therefore it must be itself that the

divine mind thinks, which means that its thinking is a thinking about thinking. αὐτὸν ἄρα νοεῖ εἰπερ ἐστὶ τὸ κράτιστον καὶ ἐστὶν ἡ νόησις νοήσεως νόησις.

But usually cognition has some foreign object and itself only incidentally. And again thinking and being thought are different; which causes the good to attach to thought? To the first objection we reply that in the case of the productive sciences, abstracting the matter, the reality and the conceptual being is the object of thought, and in the case of theoretical sciences the definition and the thinking is the object of thought. Aside from matter the object and the mind are the same and in the divine mind we need not consider matter.

Finally is the object of thought a composite? If it were, the divine mind would change in passing from one part to another. But it is impossible that the divine mind change at all. As human thought at a given moment when it is in a state of unitary apprehension, so is the divine mind thruout eternity.

Book A, the theology, is concluded with a chapter on the highest good of the universe. Is the good of the universe something separate from it, or is it simply the order of the parts, or is it both, as is the case with an army where both the general and the discipline are said to be good? The universe is similar to the army, tho it must be noted that in the army the general is more strictly the good than the order, for the order depends on him and not vice versa. But we must here point out that Aristotle's God whom we have been discussing is in no sense a general of the universe. This section is quite inconsistent with the rest. Perhaps it was part of an early discussion which was left among his notes and when he died the editors published along with the other notes. But before discussing Aristotle's God it is right to mention that the chapter ends with a brief critique of all rival systems. This critique is and must be identical with the attitude of every honest philosopher: all other theories are mistaken, I alone have found the truth, (For if one does not believe this, why write?)

But one cannot pass over Aristotle's theology with a mere exposition. Anyone who is the least interested is forced to make some criticism.

The first set of criticism is directed against God's knowledge. That God is immaterial and his activity therefore mental and mental without requiring a process such as a syllogism i.e. it must be direct and intuitive knowledge, cannot be objected to; but that mind has no character of its own and is therefore characterized by what it knows at the moment, leaves the divine mind which knows only itself quite characterless.

Then since the sole object of God's knowledge is himself he is ignorant of the universe. Aristotle's God is not omniscient. When Aristotle says that God must either know himself or something else and rejects the something else he implicitly denies to God a knowledge of things. Explicitly he states ~~that~~ that there are some things which it is incredible that God should know. A 1074 b 25-32.

Thus God has a knowledge which is not a knowledge of the universe. He has an influence on the world that does not proceed from his knowledge— Indeed his influence on the world can hardly be called an activity at all for any inanimate object could exert this influence on a person as a statue does on an admirer.

This leads to the criticism that Aristotle's God is in no sense theistic. First there is no creation. This is expressly stated. Of course one might say that matter though not created is eternally sustained by and dependent on God, but Aristotle does not say so, and besides there are other gods uncreated and independent. The movers of the celestial spheres are beings of the same kind as the first mover. Though inferior in rank, Aristotle never shows their dependence on the Supreme Being. God then is transcendent and deistic, but not immanent, except in that last section of Book A. If the god is God and God exists both separate from and within the whole then he is also immanent. This section, even if not an early draft and therefore to be discarded, does teach the immanence of the god but there is no reason given for identifying this god with God. God, according to Aristotle, is the first cause which introduces order into the world by sitting apart and letting

things love him. He has as little to do with the world as possible.

Second, God is not theistic because there is no providence in Aristotle. There is teleology aplenty. Everything has an end, but in what sense is one thing an end for another? Is history the fulfilment of a divine plan, or is it the conscious working of individuals, or is it a blind unconscious tendency? The first possibility is decidedly out of keeping with the whole tone of Aristotle's philosophy. It is a decidedly religious viewpoint and Aristotle never betrays being burdened by religion. Aristotle has no providence of God, no definite belief in rewards or punishments, no interest in justifying the ways of God to man.

The second interpretation of teleology, that of the conscious working of individuals, is ruled out because teleology in nature is opposed to the workings of thought. (Phys. 119 b 26) And so the third is the only one left, unconscious purpose. To me this is well nigh meaningless. If an action is to be viewed as not merely producing a result but aiming at it, there surely must be some conscious purpose. ~~Dr. Edgar A. Singer Jr. does not feel the force~~ of this criticism and says he is quite willing to bear the onus of supporting unconscious teleology and so he is in the class with Aristotle and Leibniz. The average common result of an action, as a statistical method for determining unconscious purpose, appears to me to be a failure, for what is to prevent a number of average common results to the same action. Why should the production of an apple tree be the purpose of the apple any more than the production of apple sauce? The average common result determines the use, to be sure, but to call use purpose is to run the ~~risk of ambiguity.~~

To me the purpose of no mind is no purpose. If we hesitate to say that the apple has a mind and consciously aims at producing apple trees, then we must say it has no purpose at all - except in a metaphorical sense - and the purpose we attribute to it, is the purpose of a transcendent immanent, omniscient God. Such is the God of Abraham but not Aristotle.