Aristotle's Understanding of Metaphysics

"Aristotle's metaphysics of matter and form corresponds to a psychology of sense and insight."[1]

It is no easy task to move toward an understanding of Aristotle's metaphysics. Different approaches are possible.[2] In terms of the approach that we will use here, we will begin with two basic texts in Aristotle (*Physics*, Bk 1, Ch. 7; *Metaphysics*, Bk. 5, Ch. 1 & 2) to see how, in his own way, Aristotle derives his principles of potency, form, and act from his analysis of movement or change. In doing this, for the sake of a better understanding, as the need arises, we will look back to the earlier history of Greek philosophy to see what problems had been experienced by earlier philosophers who could not grasp principles of explanation for understanding the phenomenon of movement or change. We want to move from the principles of being or reality as this exists in metaphysics from its Greek roots to its foundations in Aristotle. How do we speak about basic metaphysical principles? More specifically, how do we speak about potency, form, and act which are foundational in any knowledge of metaphysics (the roots of these things existing in Aristotle) and how do we derive distinctions which speak about different kinds of potencies, forms, and acts?

For instance, we will look at Parmenides's poem and see the drama and excitement that he experienced (as if it were a revelation from God) which speaks about the nature of Being or Reality but which could not account for the existence of movement or change. We will look at the problems of Zeno in this regard. Then, we will look at Heraclitus who was fascinated by the omnipresence of movement (the

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1Lonergan, *Insight* 677/700, as cited by Giovanni B. Sala, *Lonergan and Kant: Five Essays on Human Knowledge*, trans. Joseph Spoerl (Toronto: University of Toronto Press, 1994), p. 160, n. 65; cited also by Michael H. McCarthy, *Authenticity as Self-transcendence: the enduring insights of Bernard Lonergan* (Notre Dame, Indiana : University of Notre Dame Press, 2015), p. 62.

2If we should decide not to begin immediately with some of Aristotle's text, a recommendable approach encourages engaging in a study of human cognition that attempts to identify the different acts or operations which exist within the order of our human cognition. First, advert to the self-transcendence of our human minds and the operations of our intellects (given an insight which comes to us from St. Thomas Aquinas) who had noticed, in the context of his self-reflection, that the basic metaphysical principles of potency, form, and act exist as correlatives of our human cognitional experience if we should refer to the experience that a person has of himself or herself when he or she gets an insight or an act of understanding into any data that is being asked about or questioned. We begin or we move to an inquiry which reflects on how we get an act of understanding. We distinguish sensible experience from an inquiry which grasps an intelligible pattern within data and we then distinguish these two activities from a second operation of the mind which occurs in judgment. A good source for doing this would be to attend to Fr. Brian Cronin's analysis of human cognition as we find this in his *Foundations of Philosophy*. Try to identify and verify the different activities which exist within us in our cognition. By grasping the meaning about what happens in our human cognition, we can then use this understanding as a basis for grasping the meaning of metaphysical principles. Then, in a second step, we identity or we correlate the threefold steps that are constitutive of human cognition (in our experiencing, understanding, and judging) with the basic metaphysical principles which exist as potency, form, and act. After these different things are done, we can move into an analysis of major texts in Aristotle that are foundational in understanding the form and shape of Aristotle's metaphysics.

constant experience of change in things) and who spoke about a principle of explanation in terms of the bed of a flowing river. In shifting from early Greek philosophy to Aristotle, we will try to distinguish or point out the differences which exist between descriptive or mythological thinking and abstract, explanatory thinking and analysis. For instance, Aristotle's notion of prime matter functions as an explanatory theory. It reveals both the limits of the human imagination and the power of the human mind. An explanatory principle is something that cannot be seen or sensed in any way. It can only be understood and grasped by us in a self-transcending act of understanding. It is a grasp of reality which ultimately brings us toward God. Note that truth can be communicated in different ways: through myth and symbol and also through theory and explanation. We try to resolve problems in interpretation by adverting to the difference which distinguishes a commonsense form of thinking and understanding from a theoretical form of thinking and understanding which moves beyond the more familiar interests and concerns of our human common sense. At the occasion permits, we might refer to developments in Greek culture that occurred prior to the birth of philosophy (developments which led to the birth of philosophy). For instance, Homer describes animals in terms of genus and species; and the Greek language employs articles (which are absent in Latin) which allow one to make distinctions between this thing and that thing. A good source is Bruno Snell's book about the Greek discovery of the human mind.

Part 1: two of Aristotle's texts

Physics, 1, 7

Citing Aristotle's text, from the *Physics*, book 1, chapter 7 (in all its fullness) before we attend to his *Metaphysics* in book 5, chapters 1 and 2:

> We will now give our own account, approaching the question first with reference to becoming in its widest sense: for we shall be following the natural order of inquiry if we speak first of common characteristics, and then investigate the characteristics of special cases.
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> We say that one thing comes to be from another thing, and one sort of thing from another sort of thing, both in the case of simple and of complex things. I mean the following. We can say (1) 'man becomes musical', (2) what is 'not-musical becomes musical', or (3), the 'not-musical man becomes a musical man'. Now what becomes in (1) and (2)-'man' and 'not musical'-I call simple, and what each becomes-'musical'-simple also. But when (3) we say the 'not-musical man becomes a musical man', both what becomes and what it becomes are complex.
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> As regards one of these simple 'things that become' we say not only 'this becomes so-and-so', but also 'from being this, comes to be so-and-so', as 'from being not-musical comes to be musical'; as regards the other we do not say this in all cases, as we do not say (1) 'from being a man he came to be musical' but only 'the man became musical'.
>
> When a 'simple' thing is said to become something, in one case (1) it survives through the process, in the other (2) it does not. For man remains a man and is such even when he becomes musical, whereas what is not musical or is unmusical does not continue to exist, either simply or combined with the subject.

These distinctions drawn, one can gather from surveying the various cases of becoming in the way we are describing that, as we say, there must always be an underlying something, namely that which becomes, and that this, though always one numerically, in form at least is not one. (By that I mean that it can be described in different ways.) For 'to be man' is not the same as 'to be unmusical'. One part survives, the other does not: what is not an opposite survives (for 'man' survives), but 'not-musical' or 'unmusical' does not survive, nor does the compound of the two, namely 'unmusical man'.

We speak of 'becoming that from this' instead of 'this becoming that' more in the case of what does not survive the change-'becoming musical from unmusical', not 'from man'-but there are exceptions, as we sometimes use the latter form of expression even of what survives; we speak of 'a statue coming to be from bronze', not of the 'bronze becoming a statue'. The change, however, from an opposite which does not survive is described indifferently in both ways, 'becoming that from this' or 'this becoming that'. We say both that 'the unmusical becomes musical', and that 'from unmusical he becomes musical'. And so both forms are used of the complex, 'becoming a musical man from an unmusical man', and unmusical man becoming a musical man'.

But there are different senses of 'coming to be'. In some cases we do not use the expression 'come to be', but 'come to be so-and-so'. Only substances are said to 'come to be' in the unqualified sense.

Now in all cases other than substance it is plain that there must be some subject, namely, that which becomes. For we know that when a thing comes to be of such a quantity or quality or in such a relation, time, or place, a subject is always presupposed, since substance alone is not predicated of another subject, but everything else of substance.

But that substances too, and anything else that can be said 'to be' without qualification, come to be from some substratum, will appear on examination. For we find in every case something that underlies from which proceeds that which comes to be; for instance, animals and plants from seed.

Generally things which come to be, come to be in different ways: (1) by change of shape, as a statue; (2) by addition, as things which grow; (3) by taking away, as the Hermes from the stone; (4) by putting together, as a house; (5) by alteration, as things which 'turn' in respect of their material substance.

It is plain that these are all cases of coming to be from a substratum.

Thus, clearly, from what has been said, whatever comes to be is always complex. There is, on the one hand, (a) something which comes into existence, and again (b) something which becomes that-the latter (b) in two senses, either the subject or the opposite. By the 'opposite' I mean the 'unmusical', by the 'subject' 'man', and similarly I call the absence of shape or form or order the 'opposite', and the bronze or stone or gold the 'subject'.

Plainly then, if there are conditions and principles which constitute natural objects and

from which they primarily are or have come to be-have come to be, I mean, what each is said to be in its essential nature, not what each is in respect of a concomitant attribute-plainly, I say, everything comes to be from both subject and form. For 'musical man' is composed (in a way) of 'man' and 'musical': you can analyze it into the definitions of its elements. It is clear then that what comes to be will come to be from these elements.

Now the subject is one numerically, though it is two in form. (For it is the man, the gold-the 'matter' generally-that is counted, for it is more of the nature of a 'this', and what comes to be does not come from it in virtue of a concomitant attribute; the privation, on the other hand, and the contrary are incidental in the process.) And the positive form is one-the order, the acquired art of music, or any similar predicate.

There is a sense, therefore, in which we must declare the principles to be two, and a sense in which they are three; a sense in which the contraries are the principles-say for example the musical and the unmusical, the hot and the cold, the tuned and the untuned-and a sense in which they are not, since it is impossible for the contraries to be acted on by each other. But this difficulty also is solved by the fact that the substratum is different from the contraries, for it is itself not a contrary. The principles therefore are, in a way, not more in number than the contraries, but as it were two, nor yet precisely two, since there is a difference of essential nature, but three. For 'to be man' is different from 'to be unmusical', and 'to be unformed' from 'to be bronze'.

We have now stated the number of the principles of natural objects which are subject to generation, and how the number is reached: and it is clear that there must be a substratum for the contraries, and that the contraries must be two. (Yet in another way of putting it this is not necessary, as one of the contraries will serve to effect the change by its successive absence and presence.)

The underlying nature is an object of scientific knowledge, by an analogy. For as the bronze is to the statue, the wood to the bed, or the matter and the formless before receiving form to any thing which has form, so is the underlying nature to substance, i.e. the 'this' or existent.

This then is one principle (though not one or existent in the same sense as the 'this'), and the definition was one as we agreed; then further there is its contrary, the privation. In what sense these are two, and in what sense more, has been stated above. Briefly, we explained first that only the contraries were principles, and later that a substratum was indispensable, and that the principles were three; our last statement has elucidated the difference between the contraries, the mutual relation of the principles, and the nature of the substratum. Whether the form or the substratum is the essential nature of a physical object is not yet clear. But that the principles are three, and in what sense, and the way in which each is a principle, is clear.

So much then for the question of the number and the nature of the principles.[3]

3Cf. http://classics.mit.edu/Aristotle/physics.1.i.html (accessed November 19, 2018).

In attending to Aristotle's discussion as this is given to us in the *Physics*, book 1, chapter 7 (and if we turn for help to a commentary that comes to us from Aquinas),[4] we find that Aristotle refers to the phenomenon of becoming or change and he analyzes it in a way which determines a number of basic principles that are fundamental to how we are to understand change when, in change or in the life of changing things, a condition of non-being is replaced by a condition of being. When we attend to the phenomenon of change, two kinds of being can be denoted in terms which speak, respectively, about substantial being and accidental being or, in other words, substance and accident. In accidental change, a given thing, on the one hand, continues to exist and to endure (it does not change) while, on the other hand, a given quality or property ceases to be or to exist. A given quality changes. It is replaced by some other quality (even if it is the negation of a prior quality) and, as noted, this type of change occurs or it belongs to a being which endures and which does not cease to be or to exist amongst this type of change.

Differences in being accordingly point to differences in change and, conversely, differences in change, to differences in being. In substantial change, a given thing or substance ceases to exist as it becomes some other kind of thing or substance. If accidental changes suppose the being of things which exist as substances and if substantial changes need not suppose the being of anything which would exist as an accident, then substantial change exists as a more primary kind of thing (it is the more primary kind of change). Accidental changes suppose substantial changes and not the converse since substances must exist before any accidents can possibly exist. If things exist first as substances before anything can exist as an accident, and if a substance emerges as an effect of substantial change where something is changed in a way which leads to the emergence of a substance, then that which is changed exists at a more primitive level as a species of substratum or as a principle of reception. A reshaping of this substratum or the reception of a new configuration or form into a specification of matter converts the matter in such a way that it participates in the being of something which first emerges as a substance before any accidents can possibly exist or emerge. Hence, with respect to the question and the business of reception, if changes are received by something which exists in a passive manner, the passivity of something which is changed points to how it exists as matter and not to how it exists as form (although, in Aristotle's aforecited text as this exists in the *Physics*, nothing is said in terms of a word or concept which refers to matter or potency although, in terms of meaning and significance, the passivity of that which is changed in a way which, in turn, leads to the emergence of that which exists as substance is that which exists as matter or that which exists as potency). In words that come to us from elsewhere in the *Physics* of Aristotle, "change is the actualizing of a potential being as such."[5] Matter or potency exists as that which can become something else in a way which does not destroy or obliterate the being of this matter or the being of this initial potency. In some way, the matter or the potency remains. In the *Physics*, 1, 7, we have a way of thinking and analysis which points to a number of primary metaphysical principles that belong to the being of our world if, in determining or adverting to the being of our world, we must refer in general to that which is subject to change or a becoming which belongs to the nature or the intelligibility of our world as we experience it in terms which would have to refer to determinations of space and time and alterations which would exist as determinations of space and time.

4Thomas Aquinas, *Commentary on Aristotle's* ***Physics***, trans. Richard J. Blackwell, Richard J. Spath, and E. Edmund Thirlkel (Notre Dame, Indiana: Dumb Ox Books, 1999), p. 55.

5Aristotle, *Physics*, 3, 1, 201a10-11, as quoted by Jonathan Lear, *Aristotle: the desire to understand* (Cambridge: Cambridge University Press, 2010, p. 60.

Metaphysics, 5, 1-2

"'BEGINNING' [starting point, principle, or first principle] means (1) that part of a thing from which one would start first, e.g a line or a road has a beginning in either of the contrary directions. (2) That from which each thing would best be originated, e.g. even in learning we must sometimes begin not from the first point and the beginning of the subject, but from the point from which we should learn most easily. (4) That from which, as an immanent part, a thing first comes to be, e,g, as the keel of a ship and the foundation of a house, while in animals some suppose the heart, others the brain, others some other part, to be of this nature. (4) That from which, not as an immanent part, a thing first comes to be, and from which the movement or the change naturally first begins, as a child comes from its father and its mother, and a fight from abusive language. (5) That at whose will that which is moved is moved and that which changes changes, e.g. the magistracies in cities, and oligarchies and monarchies and tyrannies, are called *archai* [principles or first principles], and so are the arts, and of these especially the architectonic arts. (6) That from which a thing can first be known,-this also is called the beginning of the thing, e.g. the hypotheses are the beginnings of demonstrations. (Causes are spoken of in an equal number of senses; for all causes are beginnings.) It is common, then, to all beginnings to be the first point from which a thing either is or comes to be or is known; but of these some are immanent in the thing and others are outside. Hence the nature of a thing is a beginning, and so is the element of a thing, and thought and will, and essence, and the final cause-for the good and the beautiful are the beginning both of the knowledge and of the movement of many things.

"'Cause' means (1) that from which, as immanent material, a thing comes into being, e.g. the bronze is the cause of the statue and the silver of the saucer, and so are the classes which include these. (2) The form or pattern, i.e. the definition of the essence, and the classes which include this (e.g. the ratio 2:1 and number in general are causes of the octave), and the parts included in the definition. (3) That from which the change or the resting from change first begins; e.g. the adviser is a cause of the action, and the father a cause of the child, and in general the maker a cause of the thing made and the change-producing of the changing. (4) The end, i.e. that for the sake of which a thing is; e.g. health is the cause of walking. For 'Why does one walk?' we say; 'that one may be healthy'; and in speaking thus we think we have given the cause. The same is true of all the means that intervene before the end, when something else has put the process in motion, as e.g. thinning or purging or drugs or instruments intervene before health is reached; for all these are for the sake of the end, though they differ from one another in that some are instruments and others are actions.

"These, then, are practically all the senses in which causes are spoken of, and as they are spoken of in several senses it follows both that there are several causes of the same thing, and in no accidental sense (e.g. both the art of sculpture and the bronze are causes of the statue not in respect of anything else but qua statue; not, however, in the same way, but the one as matter and the other as source of the movement), and that things can be causes of one another (e.g. exercise of good condition, and the latter of exercise; not, however, in the same way, but the one as end and the other as source of movement).- Again, the same thing is the cause of contraries; for that which when present causes a

particular thing, we sometimes charge, when absent, with the contrary, e.g. we impute the shipwreck to the absence of the steersman, whose presence was the cause of safety; and both-the presence and the privation-are causes as sources of movement.

"All the causes now mentioned fall under four senses which are the most obvious. For the letters are the cause of syllables, and the material is the cause of manufactured things, and fire and earth and all such things are the causes of bodies, and the parts are causes of the whole, and the hypotheses are causes of the conclusion, in the sense that they are that out of which these respectively are made; but of these some are cause as the substratum (e.g. the parts), others as the essence (the whole, the synthesis, and the form). The semen, the physician, the adviser, and in general the agent, are all sources of change or of rest. The remainder are causes as the end and the good of the other things; for that for the sake of which other things are tends to be the best and the end of the other things; let us take it as making no difference whether we call it good or apparent good.

"These, then, are the causes, and this is the number of their kinds, but the varieties of causes are many in number, though when summarized these also are comparatively few. Causes are spoken of in many senses, and even of those which are of the same kind some are causes in a prior and others in a posterior sense, e.g. both 'the physician' and 'the professional man' are causes of health, and both 'the ratio 2:1' and 'number' are causes of the octave, and the classes that include any particular cause are always causes of the particular effect. Again, there are accidental causes and the classes which include these; e.g. while in one sense 'the sculptor' causes the statue, in another sense 'Polyclitus' causes it, because the sculptor happens to be Polyclitus; and the classes that include the accidental cause are also causes, e.g. 'man'-or in general 'animal'-is the cause of the statue, because Polyclitus is a man, and man is an animal. Of accidental causes also some are more remote or nearer than others, as, for instance, if 'the white' and 'the musical' were called causes of the statue, and not only 'Polyclitus' or 'man'. But besides all these varieties of causes, whether proper or accidental, some are called causes as being able to act, others as acting; e.g. the cause of the house's being built is a builder, or a builder who is building.-The same variety of language will be found with regard to the effects of causes; e.g. a thing may be called the cause of this statue or of a statue or in general of an image, and of this bronze or of bronze or of matter in general; and similarly in the case of accidental effects. Again, both accidental and proper causes may be spoken of in combination; e.g. we may say not 'Polyclitus' nor 'the sculptor' but 'Polyclitus the sculptor'. Yet all these are but six in number, while each is spoken of in two ways; for (A) they are causes either as the individual, or as the genus, or as the accidental, or as the genus that includes the accidental, and these either as combined, or as taken simply; and (B) all may be taken as acting or as having a capacity. But they differ inasmuch as the acting causes, i.e. the individuals, exist, or do not exist, simultaneously with the things of which they are causes, e.g. this particular man who is healing, with this particular man who is recovering health, and this particular builder with this particular thing that is being built; but the potential causes are not always in this case; for the house does not perish at the same time as

the builder.[6]

In these texts that come to us from Aristotle, a discussion about principles or first principles precedes a discussion that pertains to causes (the nature of causes). All causes exist as principles or first principles although not all principles exist as causes. In a definition that comes to us from Aquinas who takes his meaning from Aristotle, a principle or first principle is "that whence another proceeds."[7] A principle is to be distinguished from a cause (a real distinction exists between the two)[8] since a cause suggests that a difference exists between a cause and an effect where an effect is something lesser than a cause and an effect depends or relies upon its cause. However, a principle possesses a wider meaning and significance since it refers to that which is first or that which is a point of origin for a given set, for an order or a sequence of things. As Aquinas notes as an example that is taken from Aristotle, "a point is the principle of a line." From a point, a line begins and, if a line exists as a series or as a continuum of points, then no line exists as some kind of lesser thing. No line is caused by a point though it begins from a point. From a principle as an originating first term, no subsequent term is of lesser importance or lesser value than that which exists as the first term. No difference in reality is to be postulated. If you select an apt principle as an initial point of departure for an order that you can begin to understand and speak about, you can create or you can indicate where an order exists among a large number of many variables and, by this ordering, we can find how we exist within it or where we exist within it, sufficient that it adds to our understanding of things and the wisdom that would exist within our understanding and, in a way, this helps us when later, in the context of our lives, we attend to moral questions and moral deliberations and the necessity of our having to make decisions in a way which moves into external actions which would exist as moral determinations (affecting others and ourselves). Great problems are caused if a bad decision is made about whatever is to be regarded as an apt first principle. As Aristotle noted (when referring in a critical manner to Plato's understanding of ethics and the human soul): make a small mistake at the beginning of things in the context of one's inquiry and one's errors will be multiplied later a thousandfold.[9]

To give an example: for Aquinas, reason is properly referred to as "the first principle [*primum principium*] of [our] human acts."[10] "The proper action (*actio*) or operation (*operatio*) of man as man is to understand, for by reason of this he differs from all other things."[11] From this, all else follows. To the actions of a human being comes an intentionality or a purpose which explains why a given act or action is what it is and why it exists.[12] The rationality which exists as our point of departure is

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6Cf. http://classics.mit.edu/Aristotle/metaphysics.5.v.html (accessed December 3, 2018).

7Aquinas, *Summa Theologiae*, 1a, q. 33, a. 1.

8Aquinas, *Summa Theologiae*, 1a, q. 33, a. 1, ad 1 & 3.

9Aristotle, as cited by Anthony McCarthy, "The Sexual Revolution's Strange Turn," *Catholic Herald* (September 2, 2016), p. 24: literally quoting Aristotle employing the following words in translation, "a small mistake at the beginning is multiplied later a thousandfold."

10Aquinas, *Summa Theologiae*, 1a2ae, q. 90, a. 1

11Aquinas, *Sententia super Metaphysicam*, 1, 1, 3; trans. as *Commentary on the Metaphysics of Aristotle* by John P. Rowan (Chicago: Henry Regnery, 1961), p. 7 (hereafter cited as the "*Sententia super Metaphysicam*" followed by technical reference to the original, and if a translation has been used, by the volume and page of the English translation). See also Aquinas, *Summa Contra Gentiles*, 2, 57, 15; 2, 60, 2 and *Sentencia Libri De anima*, 1, 2, 17.

12Daniel Westburg, "Good and Evil in Human Acts (1a 2ae, qq. 18-21)," *The Ethics of*

supposed to exist in all of our subsequent human actions if we distinguish between acts which are properly human from acts that are done by human beings in a purely physical or mechanical way. If we shoo a fly from us that is bothering us, we engage in an act which is not properly human since cows use their tails to shoo flies from them. To act with thought and deliberation is to act in a specifically human way. Through our reason, we successfully convert actions that are merely actions into acts which are intrinsically human (and so, because they are human, they enjoy a moral specification). Human action and moral action always refer to the same reality.[13]

Turning to the question and the reality of causes, according to Aristotle, as a strictly scientific species of activity and as a distinct species of inquiry, by its very nature, philosophy or philosophers must go from their experience of "mere facts" toward the experience of a "reasoned fact." In his Greek conceptuality, Aristotle distinguished between a first kind of knowledge which refers to "the mere fact" (*to hoti*) of a thing and a second kind of knowledge which refers to "the reasoned fact" (*to dioti*) of a thing.[14] In the wake of scientific or philosophic inquiry, our scientific or philosophic knowledge must transcend the givenness of our sense experience (if it is scientific or philosophic) where, here, causes or an understanding of causes distinguishes between the givens and terms of sense and the givens and terms which belong to us in our understanding of things. In the kind of transcendence which exists within the apprehensions of science or philosophy, four explanatory principles need to be distinguished in a way which refers to Aristotle's doctrine of four necessary causes that have always to be considered in the apprehension and in the elaboration of a scientific explanation. To understand anything which exists within the world of our ordinary experience (where everything is subject to change and which undergoes any kind of change), we need to attend to (1) a material cause, (2) an efficient cause, (3) a formal cause, and (4) a final cause. Simply put: a material cause is the "stuff" out of which something is made as in a chunk of marble from which a statue is carved. A formal cause is that which something strives to be (it exists both within our minds within our understanding and also within the potentiality which exists as matter, matter as material potentiality). Horses exist as distinct individuals; but "horseness" exists as a species of universal. It exists as a species of formal cause which exists within all horses or which pertains to the being of all horses. An efficient cause is the means, the instrument, or a force or action which is expended in order to effect a change in something which exists as an other (in some way). The hammering of a chisel to carve or make something is to be regarded as an efficient cause. Lastly, a final cause refers to why an action or an object exists. Why does this object exist with the formal cause which it happens to have? Why does this object exist in the way that it does or why does something behave in the way that it happens to behave? An understanding of these causes points to foundations or roots which exist in the prior history of scientific, philosophic thought and also to the

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Aquinas, ed. Stephen J. Pope (Washington, DC: Georgetown University Press, 2002), p. 91, citing *Summa Theologiae*, 1a2ae, q. 18, a. 2, ad 2.

13Aquinas, *Summa Theologiae*, 1a2ae, q. 1, a. 3. As Aquinas goes on to argue in the *Summa Theologiae*, 1a2ae, q. 18, a. 5, ad 3 and also in the *De Malo*, q. 2, a. 4, an act can be identical *as a purely natural act* but, as one attends to the different contexts within which acts occur, one finds significant moral differences. The absence of reasonableness in one context changes an act that is performed by human beings into an act that is less than human while the presence of reasonableness converts an act into an expression of human behavior which leads to many good consequences and results.

14Aristotle, *Prior Analytics* 2, 2, 53b9-10; *Posterior Analytics* 1, 13, 78a22-79a24; 1, 33, 89a15-22; 2, 1, 89b24-31, as cited by Patrick H. Byrne, *Analysis and Science in Aristotle* (Albany, NY: State University of New York Press, 1997), p. 25.

significance of Aristotle's contribution with respect to how he has been able to bring all these causes together in a way which points to an ordered whole.

To understand change or movement in terms of four necessary causes (the causes account for the movements and changes which exist in things or with respect to things), let us begin with a notion of nature which is a bit more preliminary or a notion of nature which is a bit more basic before we move toward a notion of nature which thinks in terms of four distinct necessary causes. We begin with a philosophy of nature which moves from φύσις [*physis*] or nature as an interior principle of movement which exists within the being of existing things toward φύσις [*physis*] or nature as an understanding of things which thinks in terms of a total of four necessary causes which should always be invoked if a larger number of variables is to be reduced to the unity of a more comprehensive form of explanation for the occurrences of change which exist in our world (as this exists when we think about an order which belongs to a relation of four distinct causes). In the wake of these two discussions about a meaning for φύσις, a third consideration emerges if, in Aristotle, we turn to φύσις [*physis*] or nature as a more general principle (as a most general principle) which points to how or why, between the being of our cognitional principles and activities and the being and significance of our metaphysical principles, a connatural unity exists between the two: an order which joins these two sets of principles with each other in a way which points to a species of mutual necessity if, from the perspective of this unity, a more adequate understanding of things is to be attained (an understanding which can link a greater number of variables with each other and so answer a larger number of questions). In discussing any given topic or question, all thorough forms of discussion require a form of analysis and a manner of composition or synthesis which can constantly move from cognitional principles to metaphysical principles and then, from there, back toward cognitional principles *ad infinitum* until, eventually, a satisfactory understanding of things is achieved or until, at a later date, new questions will be asked in the hope of moving toward possible increases in the extent and range of our understanding. An understanding of metaphysics does not entirely stand on its own; neither an understanding of the nature of our human cognition.

Nature as an Interior Principle or Cause of Movement

First then, with respect to φύσις [*physis*] or nature as an interior principle of movement within things (which is sometimes cited as the primary Aristotelian understanding of *physis* or as the most well known understanding of *physis* in Aristotle),[15] the nature (or, alternatively in words, the natural

15Robert M. Grant, *Miracle and Natural Law in Graeco-Roman and Early Christian Thought* (Eugene, Oregon: Wipf & Stock, 1952), p. 6. As Grant notes, Aristotle defines *physis* in different ways as he moves or as we move from one text and context to another text and context. We can argue that, in transitioning from the discussion about nature or *physis* in the *Physics* to the same kind of discussion in the *Metaphysics*, a development can be found. The later the analysis, the more differentiated the nuances in meaning. In the *Metaphysics* (4, 4, 1014b16-1015a19), seven definitions are allegedly indicated although, according to Grant, if we take these definitions and compare them to each other, we should find that they can be reduced or condensed into three definitions which allegedly refer to (1) the nature or essence of something, (2) the full being of a thing, and (3) a power or inclination which works within a thing to effect its change and self-movement. As a species of interpretive analytical principle that guides our thinking and understanding: how we understand *physis* in Aristotle depends on the particular kind of approach that we are using in our reading and interpretation of Aristotle, one kind of heuristic leading to a particular specification of meaning and another, to another. The better or more

potency) of a thing or the nature (or the natural potency) of an event is that which exists or that which refers to a general principle of motion and rest which exists within things as a constitutive inner principle: it determines who and what things are in their being and what they can do and experience as a consequence of who and what they happen to be ("nature" or "the natural" refers to whatever is capable of engaging in some type of self-organization since, given what is natural to a thing or what is the nature of a given thing, certain other things follow on the basis of this nature).[16] Citing Aristotle directly: "nature is a principle or cause of being moved and of being at rest in that to which it belongs primarily, in virtue of itself and not accidentally [accidental as unnatural, forced, or contrived]."[17]

In the definition of nature which thus comes to us from Aristotle, the nature of a thing is vital and pivotal if we should want to establish the identity and the life of any given thing. Hence, by means of this internally existing nature, "things have a principle of growth, organization, and movement [which belongs to them]...in their own right."[18] Something is natural to it if, in its development and growth, whatever happens or whatever is is that which is "most in keeping with the perfection of the nature of a definite thing."[19] Physical changes or physical motions exist in conjunction with other kinds of changes or other kinds of motions as these are given, for instance, in the being of meteorological and geological changes, and as we then move into chemical changes, biological changes, zoological changes, and human changes as these exist with respect to variations in our human subjectivity, in our "sensation, feeling, thought, habit, and action."[20] The existence of self-movement within things in turn determines or we would say that it demarcates a world which exists, in its collectivity, as that which is "the whole of the changing."[21] Our naturally existing world or Nature with a capital "N" is first known by us through our different acts of human sensing. From the principle of nature as an interior principle, as a derivative or as a secondary determination of meaning which is then grasped by us in an act of understanding, we have the external world of physical Nature – as noted, Nature in upper case. By adverting then to the internal principles or the "inner causes" which exist within things (as these can be grasped by us through our acts of understanding), these principles or these causes denote the nature, the

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nuanced our own approach, the deeper the extent of our intelligence and the wiser our judgments, then, from this, the more we will understand about of the possible meaning of *physis* in Aristotle as we move through Aristotle, through a form of analysis that is not troubled or baffled by differences in Aristotle's choice and use of words since differences in word choice do not always point to differences in meaning that are crucial if we are to move toward a comprehensive understanding of *physis* as this exists in the context of Aristotle's philosophy and thought.

16Aquinas, *Sententia super Physicam*, 1, 1, 3; 2, 1, 145; *Quaestio disputata De unione verbi incarnati*, 1 (as cited by Gilby, *Theological Texts*, pp. 286-287, n. 507); Robert Spaemann, *Essays in Anthropology: variations on a theme* (Eugene, Oregon: Cascade Books, 2010), p. 76. See also Patrick Byrne, "*Insight* and the Retrieval of Nature," *Lonergan Workshop* 8 (1980): 14, where Byrne explains the meaning of this definition after quoting what Aristotle gives as a definition in his *Physics*, 192b21-22.

17Aristotle, *Physics*, 2, 1; 192b21-23, as translated by R. P. Hardie and R. K. Gaye.

18R. G. Collingwood, *An Essay on Philosophical Method* (Mansfield Centre, CT: Martino Publishing, 2014), p. 81.

19Gottfried Wilhelm Leibniz, *Essais de Théodicée*, II, #220, in *Oeuvres Philosophiques*, ed. P. Janet (Paris: Alcan, 1900), vol. 2, p. 234, as quoted by Rémi Brague, "Are Non-Theocratic Regimes Possible?," *Intercollegiate Review* Spring 2006: 4.

20Byrne, "*Insight* and the Retrieval of Nature," *Lonergan Workshop*, p. 8.

21Byrne, "*Insight* and the Retrieval of Nature," *Lonergan Workshop*, p. 7.

reality, or the being of existing things and so things are natural to the degree that such a principle exists within them as a constitutive element and, in addition too, the activity or the behavior of these things is also natural or appropriate to the degree that it complies or that it conforms to the nature which exists within these different things or, in other words, both the natural being and the natural behavior of a thing reflects or, in some way, both flow from an inner natural principle which somehow exists within them (for reasons or by way of an ordering of different, distinct causes which have yet to be understood and identified in any given case).[22] The normativity or the objectivity of internally existing natures in terms of the truth and the reality of their being, while it directly points to the appropriateness or to the naturalness of certain types of behavior, conversely, it also points to the inappropriateness or to the unnaturalness which would belong to other kinds of behavior that would be lacking in normativity or in the correctness or the rightness which should belong to them.

The indwelling of an immaterial nature accordingly suggests that, normally or usually, a given thing has but only one nature or only one intelligible form: one whyness, one whatness, or one quiddity or one essence.[23] As noted, the nature of a given thing, in specifying what a given thing is, specifies what it is able to do and what is it is not able to do and what it is able to experience or receive from the being of other things, specifying also the identity of the causes or the movers which are needed if a given

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22Collingwood, *Idea of Nature*, pp. 81-82.

23Please note, however, that the having of only one nature for a given being is not always or necessarily an absolute rule. Exceptions exist. It is not always true since not everything which has existed in this world has had but only one nature or only one substantial form. In Christian belief, it is held, for instance, about Christ that the incarnate Christ possessed two natures at one and the same time: a divine nature and a human nature. What Christ could not do as a man, as a Son of Man, he did as God, as the Son of God. In addition also, if we look at the physical world as this exists for us within the common world of our ordinary experience, we find instances of metamorphosis where a living thing first exists with one kind of nature or form until it comes to have another kind of nature or form. Natures are shed, lost, or they are relinquished according to a higher order of meaning or a higher principle of intelligibility. Tadpoles become frogs and caterpillars, butterflies. However, if we look for a nature (an intelligible principle) that can identify how changes in nature occur within the being of a given thing, we cannot so easily speak about a being which first has one nature and then another nature which would totally differ from the first or which would be unconnected with the first. The purpose or the function of an understanding which wants to know about natures is to find an explanation that can account for a multitude of natures if different kinds of changes or different kinds of movements are to be adequately understood. In dealing with instances of metamorphosis, an understanding of change needs to understand how or why a succession of forms exists with respect to a given concretely existing thing in a way that needs to know about the being of a substantial form since, from the perspective of this central form, we can begin to understand and know about an intelligible order which exists with respect to a succession of different forms. If always, in moving toward an understanding which grasps the form of an intelligible nature, we engage in a species of activity which wants to move from an experience of multiplicity toward a condition of unity as this unity exists within the kind of oneness which belongs to the intelligibility of an understood nature, in the wake of this kind of desire, we can understand why a succession of forms points to forms which exist as accidents or as properties which come and go while the application and the inherence of these forms with respect to the being of a given thing points to the meaning of a central or a substantial form which explains the unity of a given thing as it exists through the many changes which it undergoes.

thing is to undergo the changes which specifically and typically belong to it.[24] If we should employ a more technical way of speaking that comes to us from how the principles of act and potency have been translated and put into terms and designations which have turned them into designations of capability or potency (distinguishing two different kinds of capability or two different kinds of potency): together, with each other, active potencies and passive potencies constitute the nature or the natural potency of a given thing or substance.[25] If we should know the nature or the intelligibility of a thing as a specification of act (hence, as a realization or as a determination; we can speak about how the nature or the intelligibility of a thing exists as a formal species of act), we should immediately know the identity of a corresponding potency: an adjacent or apt potency which is now known to exist, relative to the being of an act or determination which exists as the nature or as an intelligibility of a thing which can be received by the potency in question in a way which immediately reduces the being of this potency to a condition of act, extinguishing a given potency when, now, it exists within a condition of act. Act supplants or replaces potency in a manner which can point to the being or the identity of newly emergent potencies. No potency can be known outside of an act which can reduce a given potency to a condition of act.

To employ a somewhat trite example, if a given thing has legs, then the being of these legs points to a potency of its being able to walk or run. If, as human beings, we have acts of sensing and acts of understanding, then these acts point to how we are able to see and how we are able to understand. Potencies are designated and known through acts and they are known through the kind of determination which exists in acts (different kinds of determinations in acts pointing to different kinds of potencies).

Because, in Aristotle, a real distinction exists between a nature and an accident (the nature of a thing, as an explanatory principle, exists as a constant while what a given thing is doing at any given time differs from what it could be doing at some other time),[26] and because accidental attributes or accidental events come and go according to the kind of nature which individually belongs to them, by understanding and attending to the substantial nature or the substantial form of a given thing, we can understand why some accidents can be regarded as normal or proper and why others can be regarded as incidental or circumstantial (at some times, violent). Acts of cognition which are rational are seen to be proper to the life of human beings but not so our height, our weight, and the color of our hair.[27] With respect to the things of this world, the nature of a given thing cannot be simply identified with how a given thing actually exists nor with what a given thing is actually doing in a given act or operation. From a thing's nature, its existence, its being, or the existence of any of its operations cannot be simply derived. The being and existence of these other things is only suggested or hinted at since understanding a given limited, finite nature or essence does not mean that we will necessarily understand the actuality of its being or the actuality of its instantiated existence.[28] The determination of nature as intelligibility is not to be confused with the determination of an act which would exist as an act of being or as an act of existence.

24Byrne, "*Insight* and the Retrieval of Nature," *Lonergan Workshop*, p. 14.

25Aquinas, *De Potentia*, q. 1, a. 1 and *Summa Contra Gentiles*, 3, 23.

26Bernard Lonergan, *The Triune God: Systematics*, trans. Michael G. Shields, eds. Robert M. Doran and H. Daniel Monsour (Toronto: University of Toronto Press, 2007), p. 193.

27John Lawrence Hill, *After the Natural Law: How the Classical Worldview Supports Our Modern Moral and Political Values* (San Francisco, Ignatius Press, 2016), p. 41.

28Bernard Lonergan, *The Ontological and Psychological Constitution of Christ*, trans. Michael G. Shields (Toronto: University of Toronto Press, 2002), p. 11; p. 53; p. 164.

Hence, within this larger context of things, a nature (as Aristotle understands it) would have to exist as a limited form of explanatory principle. It explains a fewer number of things because it cannot be equated with the concrete being of an existing thing and all the things that, concretely, a given thing does, performs, or experiences. A certain fullness of reality is missing: a fullness which refers to the simple existence of concretely existing things or/and the activities and the receptions of these concretely existing things although, admittedly, in some way, the nature of a thing, as an explanatory principle, is such that it is ordered toward possibly receiving acts of being or acts of existence – acts which would refer to the existence of a given thing or being and which could also refer to the being of operations although, as noted, in the metaphysics of form which exists in Aristotle, the being of existing things is not explained by way of act but by the principle of form. With both Plato and Aristotle, form is being. Form exists as being. In apposite terms: form, nature, intelligibility exists as being. They exist as reality.

Nature as Four Explanatory Causes

Second, by way of a further understanding of motion or movement which comes to us if we move and work with the principles of potency and act in the context of Aristotle's philosophy, from potency and act or, alternatively, from matter and form, we can move toward the kind of teaching which Aristotle offers when he speaks about the necessary existence of four different kinds of causes (four necessary causes that are constitutive of the reality of nature in its self-movement)[29] if movement or change, as this exists within our world, is to have a fully adequate explanation where, for instance, in book 9 of the *Metaphysics*, Aristotle summarizes the adumbrations and speculations of Pre-socratic teaching as this refers to a general understanding of all the causal explanations which can possibly exist for us in our attempts to understand the being of our changing world. How to explain why something is changing in the way that it is changing if differing answers can be given about why something is changing in the way that it is changing (differing answers which do not conflict with what each is saying or offering as an explanation)?[30] What are these distinct causes and what kind of role do they individually play as heuristic tools if our larger, general object is always an understanding of everything that can undergo or initiate any kind of movement or change within the circumstances of our currently existing world as this world has always existed as a species of reality which, to some extent, is self-moving and self-causing?[31] On a basis which can be determined on the basis of potency and act, or on a basis which can be determined on the basis of matter and form, with respect to these first principles, four distinct causes can be determined where each exists as a relation or as a perspective which works from a slightly different point of departure that is grounded in how it can be said that potency and act (or matter and form) are related to each other.[32] As a fundamental point of departure however: the association of form and act with determinacy and matter and potency with indeterminacy suggests that none of these

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29Aristotle, *Metaphysics*, 1, 3, 10; *Physics*, 2, 7, as cited by Hill, *After the Natural Law*, p. 43; Byrne, "*Insight* and the Retrieval of Nature," *Lonergan Workshop*, p. 15. See Frederick D. Wilhelmsen, *The Paradoxical Structure of Existence* (*s. l.*: Routledge, 2017), p. 15, where Wilhelmsen notes that Aristotle's four causes are not to be understood as operating within nature or on nature but, instead, they are to be correlated with nature (nature as it exists). Nature exists as causality or nature exists as the causality which is constitutive of it. *Reality is causality* (Wilhelmsen's italics).

30Byrne, "*Insight* and the Retrieval of Nature," *Lonergan Workshop*, p. 15.

31Collingwood, *Idea of Nature*, p. 82.

32Byrne, "*Insight* and the Retrieval of Nature," *Lonergan Workshop*, p. 15.

contrasting terms is understood if its correlative is not also understood in a way which points to a dialectical but mutual form of determination. The meaning of one mediates the meaning of the other back and forth. One is positive while the other, negative and each cannot be entirely understood apart from its opposition or contrast with the other.

In a way which accordingly shows that Aristotle was the first person to speak about the necessary existence of four necessary distinct causes that must be invoked if we are to have a comprehensive understanding of anything which exists within the world of our ordinary experience, Aristotle notes as follows: (1) Thales, Anaximander, and Anaximenes discovered the kind of being which exists as a material specification of cause (hence, material cause); (2) the Pythagoreans to Plato, form as formal cause; (3) Empedocles and Heraclitus, respectively through the principle of Love and Strife and the principle of *logos*, the being of efficient or instrumental causes; and finally (4) Anaxagoras, Socrates, and Plato, the being of final causes which Aristotle accepted and which he further developed within the later context of his ethics when speaking about how our human movements are directed or intended toward that which would exist as a concrete good.

To understand Aristotle's four necessary causes, let us proceed by means of an order which exists chronologically but which exists according to a philosophical order as we move from material causes to formal causes and then, from there, to efficient causes and then to final causes. An order which exists in time manifests a chain of reasoning which moves from one species of cause to another species of cause.

Material Causality

To begin with the nature of material causes and the nature of formal causes, as our point of departure, to understand the causes of being as these causes would apply to the being or the existence of all things which exist within our world, let us begin with two metaphysical principles that are paired with each other. One is potency; the other, form. First, with respect to the being of potency and how we can understand what this is and where it sits within the context of Aristotle's thought, from the givens of sense which exist as an experience of sensibility (sensibility as that kind of being which can be sensed and which is known by us by how it is related or how it is revealed to us through our different acts of human sensing, existing as the term of our different acts of human sensing), within the order of reflection and the kind of reflection which exists within the *Physics* of Aristotle and also within his *Metaphysics*, from that which is given to us as sensibility, from that which exists as sensibility, we can understand potency as a particular species or type of being. In another way of speaking, matter as *hule* and potency as *dunamis* refer to the same thing.[33] That which is sensed exists as matter and, at the same time too, this matter (in its formlessness or indeterminacy) exists as potency. A commonly used simple example says that the clay of the earth points to how it exists as potency. It is bereft of any form or shape (relatively speaking, since clay is clay and not stone; hence, it does not exist as an instance of pure potency, as an unrestricted or as an ultimate, infinite kind of potency).

Hence, as something that is simply or merely given to us in our experience of it and as something that can be then used or taken up by us in a way that can confer on it a noticeable form or shape, for this reason, through an analogical form of reasoning that is given in this aforementioned cited example, it is

33Aristotle, *Physics*, A.6-7, 193b1, as cited by Byrne, "*Insight* and the Retrieval of Nature," p. 11.

argued or it can argued that, in its distinctiveness, matter or potency exists essentially as a passivity, as a species of passivity, or as a passive principle. It is that which can receive. It can become this or it can become that and, at the same time, it is not able to become this or it is unable to become that. In becoming this or in becoming that, it exists as the presupposition or the precondition for the being of any kind of becoming or change where this becoming or change exists as a reasonable, intelligible kind of thing. Hence, within the context of Aristotle's analysis and in his conceptuality, matter or potency technically exists, in Greek, as *hupokeimenon* (literally: as "that which is presupposed by" any kind of change or becoming which would refer to the reception of a specific determination where, typically, a previously existing determination is replaced by a newly existing, new determination).[34] In change, a potency moves into a condition of act or, more accurately, it is put or placed into a condition of act. The potency disappears or it ceases to be (in terms of how it has existed) whenever we speak about its realization or its actualization: the actualization of a potency in change (or, alternatively here, the "actualization of a potential" whenever changes occur of one kind or another in a way that is suited to the meaning or the identity of a given potency although, within our currently existing world, no potency exists without a degree of determination that, in some way, already belongs to it).[35] In our world, unrestricted potency does not exist. Prime matter or prime potency exists only, for us, as an explanatory principle where, through our knowledge of it, partial or relative potencies can be more clearly and exactly known.

To employ a trite but exact example which points to a temporal order of things within an order of spatial determinations and the relevance of a real distinction: the making of a chair as an act is preceded by potencies (be they materials, tools, or possible actions) and, as soon as a chair exists, nothing more needs to become, move, or change. The becoming ends where, here, a real distinction exists between act and term: the becoming and the being, the becoming of a chair versus the being of a chair. The term, the result, is not itself the act.

Hence, as potency and not as act, in its condition of potency (or as materiality), a potency cannot realize itself to become some other kind of thing. For purposes of illustration, we can distinguish between the being of a lump of clay and the being of an earthen clay pot. Notice, grasp the difference between them and we should understand why, to potency or matter, a condition of passivity is to be alluded to. All matter, all potencies exist with a passivity that is proper to potency in terms of the kind of being which belongs to potency. As a species of material cause, clay can be made into a clay pot or into a clay dish. The being of clay, as potency, can be converted or it can be turned into a realization which would exist as either a clay pot or perhaps a clay plate (among other possible realizations that can brought into being from a material substrate which would exist for us here as clay). From clay, we can have china. Nothing of clay, however, can receive a realization or be converted into a form or a shape which would refer to the kind of realization which exists if we should refer to the being of a bronze kettle, the being of a bronze pot, or the being of a bronze plate. In matter or potency, relative to form or the actuality and being of form, matter/potency exists as becoming or as the principle of becoming for the being of all things. It exists as that which can become or change into something else.

If, for instance, a material component exists within the being of any given thing, because this

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34Aristotle, *Physics*, A.6-7, 191a9, 193a2-193b22, as cited by Byrne, "*Insight* and the Retrieval of Nature," p. 10.

35Edward Feser, *Five Proofs on the Existence of God* (San Francisco: Ignatius Press, 2017), p. 18.

component can be moved or because it can be altered in some way, a given thing which has a material component is a kind of being which can be changed or altered in a way which is suited or which belongs to the kind of potency which exists if our point of departure here is the givenness of a certain type of material determination.[36] Conversely too, if a material component is absent or if it is found to be wanting in some kind of way, then the absence of materiality points to the absence of any kind of change or alteration which could exist as a material kind of change. If change were to exist, it would exist as some other kind of change. Conversely again, if something were to exist in a way that is fully actual (if no potency exists in it), its condition of realization would have to be described in a way which points to its completeness or fullness and so, from this completeness or fullness, its perfection.

Formal Causality

If we should now move toward an understanding of formal causes (the nature of formal causes): to account for change thus, to explain transitions where something is moved from a condition of potency to a lessening or an absence of potency (to explain why something receives a determination which makes it into a particular kind or type of existing thing since no potency, as potency, is able to bring itself into a condition of act), an active or agent principle needs to be determined and known and if we are to give this kind of principle a name that we can use to talk about it, on the basis of an analogy which refers to the being of a sensible form or shape and the reception of this sensible form or shape (how, in sensation, a form is received apart from its originating source and apart from the matter of this same source),[37] we can take this principle and then, by generalizing it or, in other words, by immaterializing it or by abstracting it, a principle or form is derived which exists simply as form (form as it exists apart from matter, having a kind of reality which differs from the kind of reality which belongs to matter). Form or formal cause as act or realization differs from matter or material cause as potency (it is not to be confused with the givenness of matter or potency) or, in other words, when matter is generalized in a manner which leads us toward a meaning for potency (as an apprehension of potency), form differs from potency (a formal cause from a material cause) since, if any given potency receives a determination which diminishes its potency or which lessens the potency which formerly it had possessed, the explanation for this is the entry or the ingress of something which exists as a specification or as a determination (a determination as opposed to the absence of a determination), a determination which exists as a structure or form (form as opposed to potency).

In other words, "matter exists in a potential state...because it may come to its form: and when it exists *actually*, then it is in its form."[38] Hence, in Aristotle's own words, through a negative species of predication: "by matter I mean that which in itself has neither quality or quantity nor any of the other attributes by which being is determined."[39] However, the being of things in our world, on the other hand, is explained by the entry and the reception of something which exists essentially as an order, structure, or form (albeit, form entering into a set of material conditions in a manner which points to the

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36Collingwood, *Idea of Nature*, p. 91.

37Collingwood, *Idea of Nature*, pp. 85-86. The rhythmic vibration of a sounding bell is received by a like rhythm which emerges and which exists within the hearing of a human hearer, a human listener.

38Joseph Owens, *A History of Ancient Western Philosophy* (New York: Appleton-Century Crofts, 1959), pp. 326f, as cited by Frederick D. Wilhelmsen, *Being and Knowing: Reflections of a Thomist* (Albany, New York: Preserving Christian Publications, Inc., 1995), p. 103, n. 18.

39Aristotle, *Metaphysics*, 1029a20, as quoted by Collingwood, *Idea of Nature*, p. 92.

being and the reality of an essence if here form is considered in terms of how it is united to a given set of material conditions).[40] An essence is more than just a form.

Instead of referring thus to the being of some other kind of principle in metaphysics which can explain why things exist in the way that they do and how or why they become and change in the way that they do, to the principle of form and the being of form a primacy exists and a centrality which explains why it has been said about the metaphysics of Aristotle that it is to be regarded as essentially a metaphysics of form. In Aristotle, *energeia* ("act") and *entelecheia* ("perfection") are used in order to refer to form (to the being of form or the act of form; form as primarily *actuality* if we should think about it in terms of its function and effect).[41] In comparison to the actuality of form as a principle of movement or change, potency lacks status or, if you will, it exists at a lower, lesser level (existing as becoming or more specifically, as the potentiality of becoming). Its indeterminacy more closely connects it with the principle or the privation of nothingness than with the being of something which is to be contrasted with the condition and the negation of nothingness. Potency is that which is somehow without this or that quality or characteristic. That which truly exists and which makes things happen is that which exists as form, as the act of form which, within matter or as informing matter, exists as the act of matter (act within matter).

From a knowledge of forms we move toward a knowledge of potencies. Forms specify potencies in a relation which explains why, within the order of being, the order of existing things, form precedes potency.[42] Simply put: first form, then potency (or, cognitionally, within the order of our human cognition, we begin with a prior understanding of things, we begin with intelligible determinations of some kind or other, something which we already understand and know; and then, from there, we can move toward that which we have yet to experience as a determination as this can be given to us within a new act of understanding that could be possibly given to us). A form explains what something is or why it exists in the way that it does and also or, simultaneously in Aristotle's understanding of things, the being or the existence of a given thing.[43] It also explains why a given thing can function in a certain way with respect to what it can do and achieve and what it can also receive and experience in a way which can bring into being new points of departure that can lead to the possible emergence of new realizations.

Since the being of existing things is explained by form, in a shorthand form of expression, with

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40To avoid confusion, please distinguish here between material conditions which exist as particular matter and material conditions which exist as common matter. Essences exist when form, as a universal, is joined to a universalized apprehension of matter which exists as common matter. The essence of a maple tree refers, for instance, to the unity which exists between, on the one hand, the nature or the intelligibility of a maple tree that is shared by all maple trees (participated in by all maple trees) and, on the other hand, a common materiality which belongs to the shared matter or the corporality which is common to the being of all maple trees. The intelligibility and the materiality both exist as abstractions that are known by us through as our acts of understanding as we individually move from our acts of human sensing toward our later acts of human understanding.

41Owens, *History of Ancient Western Philosophy*, pp. 326f, as cited by Wilhelmsen, *Being and Knowing*, p. 103, n. 18; Wilhelmsen, *Paradoxical Structure of Existence*, p. 15.

42Hill, *After the Natural Law*, p. 42.

43James Lehrberger, O. Cist., "Introduction to the Transaction Edition," *The Paradoxical Structure of Existence* (London: Routledge, 2017), p. xvi.

Aristotle, we would say or we simply reiterate that, ultimately, being is form and form, being. The being of a thing, its reality, its actuality is its form. The determinacy or the specificity of a form points to its stability or to its unchangeableness (hence, its transcendence or, in other words, its eternity), a form of existence that is not subject to any kind of change, any kind of impermanence, or any kind of variation since from any absence of being or from any kind of non-being, we cannot get being (since an absolute disjunction exists between being and non-being: in accordance with an insight that comes to us from Parmenides, from non-being, we cannot get being).[44] Hence, from the absence of indeterminacy or, more strongly, from the exclusion of any kind of changeableness, indeterminacy, or potency, in form we have a species of existence which always points to the eternal existence of forms (forms which exist apart and which are not conditioned by any conjugates or properties which would refer to any spatial temporal categories in determinations of space and time). As noted, that which changes and that which never changes necessarily exclude each other (in an absolute and total way) even as we should also realize and know that, within the world that we experience about us, nothing exists apart from a combination which exists between that which exists in a condition of potency and that which exists in a condition of form (the indeterminate being of potency being united or joined to the determinate kind of being which exists as form). A potency is informed by a form; a material cause, by a formal cause. No potency would exist in our world as if this potency were to exist as an unrestricted or as an unlimited kind of potency.

Efficient Causality

With respect now to the being of efficient or instrumental causes (given earlier discussions about the meaning of material and formal causes in Aristotle), an efficient or an instrumental cause refers to that by which something else is made. Hence, an efficient cause refers to some kind of instrument or means that is used in a given context. One does this in order to do that. This leads to that. A frequently employed example refers to an artist who carves a statue from a mass of stone. The hammer and chisel that he uses function as efficient or as instrumental causes. By their use, through an external kind of application and use, something else is brought into being which had not existed before.[45] An efficient cause accordingly exists as a catalyst: as an agent cause, as a moving cause, as an agent object, or as a moving substance. It moves matter or something other which exists as an other from a condition of non-being toward a condition of being.[46] In a definition which comes to us from Aristotle, it is "that from which change or rest first begins."[47] A parent, as a substance (*ousia*), through the form of the parent's humanity, takes something other which is not yet human and, by working with it, changes it into something which is now human.[48] More precisely in wording which can be used to define the

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44Lehrberger, O. Cist., "Introduction," *Paradoxical Structure of Existence*, p. xvi.

45J. Michael Stebbins, *The Divine Initiative: Grace, World-Order, and Human Freedom in the Early Writings of Bernard Lonergan* (Toronto: University of Toronto Press, 1995), p. 98.

46Joseph Owens, *Elementary Christian Metaphysics*, p. 76 & n. 19 citing Aquinas, *De Ente*, 4. See also Bernard Lonergan, *Understanding and Being: The Halifax Lectures on INSIGHT*, eds. Elizabeth A. Morelli and Mark D. Morelli (Toronto: University of Toronto Press, 2000), p. 8; and Stebbins, *Divine Initiative*, p. 41.

47Aristotle, *Physics*, 194b30, as quoted by Patrick H. Byrne, "Teleology, Modern Science and Verification," *Lonergan Workshop*, vol. 10, ed. Fred Lawrence (Boston: Boston College, 1994), p. 4.

48Byrne, "*Insight* and the Retrieval of Nature," *Lonergan Workshop*, p. 15.

nature of an efficient cause, it is that "*by which* something [other] is made."[49]

To understand the nature of an efficient cause, we begin by understanding how we can move from the nature of a formal cause to the nature of an efficient cause, an understanding of formal causes leading us toward an understanding of efficient causes. On formal causes: when a form exists within a given thing, as a formal cause, it accordingly exists as a distinct predicate, having its own effect. It indicates what a given thing is: why it exists in the way that it does, what this same thing is able to receive without destroying or violating its being and identity, and what this same thing is able to do as an extension or as a communication of its being and identity if, with respect to the being of a given thing, it exists with a measure of self-motion and self-movement which points to its animate, living nature. Living things or animate substances are characterized by varying degrees of self-motion; dead inanimate things, by a lack of self-motion. When the intelligibility of a formal cause accordingly indicates what a given thing is able to receive (when its passivity is indicated and understood), we can then understand what kinds of action can come to it from without (from external sources and causes): actions which can bring a given thing into a condition of being or actions which can bring a given thing into a specification of being which refers to the kind of fuller being which exists in context of its flourishing. It is one thing to simply be or exist. It is another thing to fully live and be. Then too however, by also understanding what a given thing is able to do, we can also understand how a given thing can also exist and function as if it is itself a species of efficient cause. By its own actions, it can bring something else into being: either a being which is totally other than the being who is the doer or the subject of efficient causality or something which exists within the life of the subject who is the agent or the doer of efficient causality. We can read a book in order to grow in our own understanding and knowledge of things or we can read a book in order to engage in actions which construct external objects. We might want to build a house, a computer, or some other external object. While substances (or things) exist with formal determinations which point to their distinctiveness (who and what they are), through their efficient causality, these same substances or things can pass on or they can communicate their whatness (their formal determinations) to things which would exist as new others (acting upon these others in a way which effects the being of something which, before, had not existed). In a point of difference or contrast with the formality or the immateriality of formal causes, efficient causes work with material means of one kind or another to effect the emergence or the being of other things even if, admittedly, in some circumstances, these other things or these other objects exist in an immaterial way (they have no spatial or temporal conjugates).[50]

Paraphrasing the kind of argumentation which we can find in the teaching of Aquinas:

49Mortimer J. Alder, *Aristotle for Everybody: Difficult Thought Made Easy* (New York: Macmillan Publishing Co., 1979), p. 42.

50As Hill notes in *After the Natural Law*, p. 43, the materiality of material and efficient causes is to be distinguished from the formality or the immateriality of formal and final causes and, in differing ways also, each set respectively refers to the being of internal and external aspects with respect to the being and the becoming of things. Matter exists as an internal component when we refer to the being of existing things. Form also exists as an internal component (matter and form go together) and so, with respect to material and formal causes, both exist as internal components with respect to the reality of existing things (things which exist as substances). However, as external causes, an efficient cause brings something which is other into being and, in an external way too, according to Aristotle's understanding of final causes, these act from without or externally to bring something which is other into a condition of fuller, more perfect being.

since contingent being cannot cause itself (since, in Aquinas, the form or the nature of a contingent being is not to be equated with the act of being or the act of existence which belongs to an actually existing contingent thing), the beingness or the existence of an actually existing contingent thing can only be explained if we should refer to an act or a cause of being or existence which comes from something other (externally), this other referring to the reality or the activity of an efficient cause. In a shift which moves toward the kind of truth which is expressed by a proposition which exists for us as an analytic principle (its truth is such that the form or the predicate of a thing exists within the meaning or the being of a given thing; a thing exists as a substance or it exists as a subject), a difference in internal relations distinguishes the causality and the reality of a formal cause from the causality and the reality of an efficient cause. In a formal cause, a form exists within a set of material conditions and, in the consequent internal relation which exists between form and matter as these exist together, as noted, in and by itself, a formal cause does not bring something other into a condition of being from a prior condition of non-being. The causality of a formal cause is limited to specifying why something exists in the way that it happens to be and exist. However, with respect to the being of efficient or instrumental causes: if, in another predicate of relation, an internal relation is constitutive of the being of another thing, if an internal relation brings a being into a condition of existence which before it had not enjoyed (moving from a condition of non-being to a condition of being), then, in this sense, we can refer to how this type of internal relation can be regarded as an efficient cause and not as a formal cause. The internal relation which exists within the being of an efficient cause points to a variable or a factor which explains how or why a given something which is other has been brought into a condition of being from a prior condition of non-being. On this basis then, if human beings can understand how they themselves can function as efficient causes, if they can understand how, in their efficient causality, they can effect or bring into being the being of other things (these things can refer also to the being or the existence of other human beings), then, they can begin to understand how efficient causes have functioned to effect the being of their personal existence. To some extent, they can understand and know these external causes, determining them and also possibly the order which can join these efficient causes with each other in a manner which is more effective than the being of some other kind of order.

Final Causality

With respect to the being of final causes, for Aristotle (in the context of his teleological biology, his teleological ethics, and his teleological physics): "nature does not act without a goal."[51] In asking why something exists or why it functions in the way that it happens to exist or function, implicitly, in the posing of this question, we would be asking about the existence of some kind of end or purpose, a realization of some kind: a "that for the sake of which,"[52] a "form which finally results when the motion continues on to completion,"[53] where here, in Greek, *telos* refers to the term of a realization or the term

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51Richard Osborne, *Philosophy for Beginners* (Danbury, Connecticut: For Beginners, 2007?), p. 19.

52Byrne, "*Insight* and the Retrieval of Nature," *Lonergan Workshop*, p. 15.

53Byrne, "*Insight* and the Retrieval of Nature," *Lonergan Workshop*, p. 15.

of a development which would exist as some kind of "end," "goal," "purpose," or "fulfillment."[54] In general terms thus: an "x" exists in the way that it does because of a "y." Hence, with respect to that which exists as "y," as an explanation, it imparts or it points to a possible direction or to an orientation which can exist with respect to that which exists as "x," informing the being or the nature of "x," belonging in a way to the fuller existence of that which exists as "x."

The "x" in question does not exist in some kind of isolation by itself (in a self-enclosed kind of way) but in a manner which points to a measure of self-transcendence which properly belongs to it. The self-transcendence exists initially as a species of passive potency although, in the case of living things, another species of self-transcendence can be identified if we should refer to the possible activation or the eliciting of active potencies which can be brought into a condition of act if we admit that, as a final cause, a given "y" exerts an enhancing, perfecting influence on that which exists as "z." Its causality is such that it functions as an immaterial kind of efficient cause through the attractiveness which it exerts on things which are other than itself,[55] at times drawing a lower order of being toward a realization of some kind which cannot be effected in any other kind of way (since, as we have previously noted, as a general principle, nothing which exists in a condition of potency is able to realize itself through a change which could be described as a species of self-actuation, a self-actuation of something which, in its potency, is bereft of that which exists in a condition of act). Realizations of potency come from acts and not from something which exists only as a "could be" or as a possibility (hence, as a potency). If, in the life of a given thing, stages of development can be noticed or if, say, the emergence of "x" makes for the possible emergence of something which exists as "z," then, in order to understand the nature or the being of a living thing or in order to understand a possible relation which can exist among a number of different living things, then the necessary conclusion is the value of pointing to a final cause of some kind which needs to be understood (an order of finality or entelechy) that is able to link these different stages and conditions with each other in a way which suggests that formal causes exist for the sake of an order of final causes (for the sake of realizations and perfections which have yet to be, exist, and emerge within the order of our world and universe).[56]

On a critical note: to avoid any confusions here and to determine the kind of final cause which is to be identified with Aristotle's notion of final cause, please note thus that this final cause is not to be identified with the possible being of some kind of inner tendency, a nisus, a conation, a desire, or an effort which somehow exists within things as a governing "inner impulse" that impels growth or which directs the life and growth of a given thing,[57] although, on the other hand, it is to be admitted that this type of understanding has been attributed to Aristotle or it has been postulated as a better understanding about how, in nature, teological causes function and operate in our world. In the first case, R. G. Collingwood speaks about final causality as an inner tendency which exists within things, a finality which does not have to be conscious in the manner of its operation in order for it to exist and function as an operative cause;[58] and, without qualification, this understanding is attributed or it has been attributed to the kind of understanding that comes to us from Aristotle. Similarly, in the thought of Bernard Lonergan, a like understanding of finality is given which suggests that, perhaps, Collingwood was its probable source or he exists as an accompanying, kindred source although, on the other hand, if

54Hill, *After the Natural Law*, p. 34; Collingwood, *Idea of Nature*, p. 83.
55Collingwood, *Idea of Nature*, p. 84.
56Byrne, *Analysis and Science in Aristotle*, p. 197.
57Hill, *After the Natural Law*, p. 34; Collingwood, *Idea of Nature*, p. 83.
58Collingwood, *Idea of Nature*, p. 83.

this understanding is to be attributed to Aristotle, it points to the necessity of a qualification since the finality which comes to us from Collingwood and Lonergan does not come to us from Aristotle in terms which refer to a *telos* or in terms which would refer to a final cause as an *archê hothen hê kinêsis* [as the source of movement].[59] Instead, the parallel in Aristotle exists in terms of how, in the *Physics*, Aristotle understands motion or movement as a species of inner principle or inner cause which exists within the being of things. If, in Aristotle, final causes resemble efficient causes in terms of an external causality which belongs to them (the externality of their operation), in Lonergan, the reverse applies: final causes resemble formal causes in terms of a form of internal causality (in their own way, they operate within the being of existing things). A formal cause indicates what a given thing is; a final cause, what the same thing can become given what it already happens to be. Citing Lonergan's own words on the identity of final causes as these indicate both an absence of Aristotelian origins and also a derivation from Aristotelian origins: "finality is not *principium motus in alio inquantum aliud* [a principle of movement in another thing insofar as it is other]; it is not *id cuius gratia* [that for the sake of which]; [instead] it is *principium motus in eo in quo est* [a principle of movement within the thing itself (in that in which the principle too has being)]."[60] In its dynamism and also its incompleteness, for both Aristotle and Lonergan, this inner tendency or this active potency is something which exists as a motion, movement, or change, and so it exists as a kind of in between. It exists as a departing or as a shifting from a prior condition of potency toward a later condition of act; or, perhaps more accurately and precisely, it exists as a departing or as a moving from a lesser condition of act toward a later, fuller condition of act.

To understand, however, how or why final causes differ from efficient causes and how they also differ from formal causes, in its simplicity, a useful point of departure refers to the example of a sculptor who works with stone, hammer, and chisel to carve a statue. In his thinking and understanding, the sculptor has a plan, an image, which exists within his mind. Within the mass of the stone that he is working with, he sees an image that he wishes to reveal and so he removes the obstructing stone to reveal the being of this image. The image, relative to the materiality of the stone, exists as a species of formal cause. It identifies the form of a statue. A statue is a statue because of the form which it has. However, in the work which is being done, material, efficient, and formal causes are being combined with each other in many and various ways and the intelligibility which specifies this combination of differing acts and potencies is itself a predicate (a species of predicate) which transcends the being of all the other causes or predicates which together are needed if we are to explain the being of existing things. The sculptor, in his own right, is a human being and the formal causality of his humanity is being combined with the being of other causes in a way which refers to the being and the finality of a larger, more general scheme of things. In finality, this exists for the sake of that, and in the correlation and interrelation of many different variables, in the context of a general order which exists among many different things, a given end or purpose or, in other words, a condition of perfection or a condition of realization which exists at one level of being is explained by the being of other ends or purposes (other, possible conditions of realization) through a chain of causes which moves through differing levels of being or reality toward higher orders of being or reality. If, for instance, we should look at the organic world of living things which surrounds us, we notice that without water and a cycle of events which make for a regular supply of water, no plant life can ever exist. But then, without the existence of certain kinds of vegetative life, certain other kinds of life form would not exist within the

59Aristotle, *Physics*, 2, 1, 192b21-22, as cited by Lonergan, *Insight: A Study of Human Understanding,* p. 476.

60Lonergan, *Insight: A Study of Human Understanding,* p. 476.

animal kingdom and then too, without the existence of life forms which exist among lower animals, higher animals would not be able to exist. Generically speaking: one type of being creates conditions of possibility for the emergence of other types of being. Hence, in Aristotle, the primacy of final causes is such that it points to why final causes are to be understood in a way which regards them as "the cause of causes" (*causa causarum*).[61] To repeat and reiterate what we have said and to try and give a fuller explanation about how, in our world, a finality exists with respect to the being of existing things:

> In the world of our experience, a final causality imparts a unity or it creates a comprehensiveness that is able to integrate the being of all lesser final causes and, at the same time too, all other primary causes (material, formal, and efficient). All other causes can be understood in terms of how they all relate to each other if we can point to an internal orientation or a vector which exists within the world of our ordinary experience, a world which cannot be or exist in the way that it does if certain levels of being or if certain kinds of being are not to be known in a way which recognizes the fact that certain things exist as points of departure for the possible existence of other things: higher things or higher levels of being even if the being of lower or prior things is without any kind of awareness which would know about the existence of this kind of order or this kind of ordination. As noted, a higher level of being or a higher kind of being can only exist if certain lower levels of being exist in some kind of preliminary way or if, similarly, lower kinds of being exist. Apart from our subjective considerations or apart from our subjective desires as these exist within the human order of things when we ask about the kind of order which exists among our many human actions and how our actions are orientated toward goals and objectives which are proper to them, within the external world of physical, chemical, biological nature (as this exists) an objective species of order is discoverable, a teleological order of some kind or other even if we would have to admit that the existence of this order is not so easily understood within a context of mind and a way of thinking which prefers to think that a teleological order of things is to be associated only with the human order of existing things and not with an order of things which exists apart from any kind of human intervention that would take up this world in a way that is suited to our refashioning of it ways that would seem to suit our human interests and desires.

By attending thus to the form of a thing (the form of a substance), from the principle of form and by understanding how it relates to the principle of matter as this exists in potency, the result should be an apprehension which knows about an order of being within our world and how finality exists within the being of our world. Consciously or unconsciously, a goal-oriented system strives for its own form of self-realization and for whatever perfection is possible within a context of limitations as these are allowed and permitted by the essence of a particular thing (perhaps according to how this essence is known by us initially through an understanding that knows about the being of its relevant form).[62] If, from the form of a thing, we understand the essence of a thing, from the same form (or, in other words,

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61Hill, *After the Natural Law*, p. 43, quoting D. Q. McInerny, *Metaphysics* (Elmhurst, PA: Priestly Fraternity of St. Peter, 2004), 266; Charles A. Hart, *Thomistic Metaphysics An Inquiry into the Act of Existing* (Englewood Cliffs, N.J.: Prentice-Hall Inc., 1959), p. 299.

62Donald Palmer, *Looking at Philosophy: the unbearable heaviness of philosophy made lighter* (Dubuque: McGraw-Hill Education, 2019), p. 79.

from the same principle), we should also understand how a thing best exists when it is realized a manner which points to the fullness of its being (the fullness of its reality).[63] For an example here that is often used: metaphysically speaking, an acorn is an actuality which exists as the potentiality for the later being (the later emergence) of a mature oak tree since its matter contains the potentiality for becoming a mature oak tree which is the acorn's eventual actuality in the course of time although, in metaphysical terms, we would say that an oak tree's being or that the oak's tree's existence is the actuality of an acorn: an actuality which would exist as the realization or as the kind of terminus which belongs to the life and being of an acorn. Throughout, a form exists as an operative, operating cause and the form of an acorn is such thus that its realization or its end is the reality of a fully existing tree.

An adequate understanding about the nature of a formal cause should always thus indicate the being and the operation of a final cause and the possible understanding that can be had if we should attend to the possible being and meaning of a final cause. This proceeding of an understanding of finality from a apprehension which first understands and knows about the intelligibility of a formal cause accordingly explains why these two causes exist together as respectively denoting internal and external aspects which belong to the intelligibility of things, an intelligibility however which refers to the "formal nature of things."[64] The form of a thing exists internally as one of its two components (the other component is matter) but, as an internally existing thing, the form or the intelligibility of a thing points to a species of external cause which is the term or the terminus of a formal cause with respect to its possible later realization within conditions that belong to the being of our world in terms of its spatial and temporal conjugates. Hence, the intelligibility of a final cause is other than the being of a formal cause although, from an understanding of formal causes, we move toward an understanding of final causes. Relative to the being of formal causes, final causes exist in an external manner as a higher principle of order. *Qua* externality, final causes resemble efficient causes (both exist in an external way) although the resemblance ends as soon as we advert to how they refer to different aspects or different parts that are constitutive of how change occurs within the world of our ordinary experience, or to a different kind of relation which can exist between act and potency, or to a different kind of relation which can exist between form and matter. Act stands to form as potency to matter. If, in Aristotle, every kind of change is a process of being moved or affected by something else which is other than itself in some way (whether changes occur within our souls or within the being of inanimate nature),[65] to explain every kind of movement or change which occurs, it is accordingly noted and argued that every kind of moving or changing involves a potential (a material cause) which receives a form (a formal cause) from an agent (an efficient cause) in a context which creates conditions that lead to the possible reception of new changes in a growth, a development, or a perfection of some kind which occurs within the being of that which had been potential (a final cause).[66]

To conclude with an example which attempts to explain how these four necessary causes exist together, we can distinguish between the plan of an architect to construct a building and the realization of this same building once it has been constructed. Very many events or causes need to occur before we can have the finished product, a completed building. Now, as an analytic principle (as a truth that cannot be doubted since the predicate exists within the subject), it can be said that, prior to the completion of a given building, the building in question, in fact, does not exist. Its lack of being or its lack of reality

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63Hill, *After the Natural Law*, p. 41.
64Hill, *After the Natural Law*, p. 43, n. 12.
65Aristotle, *Metaphysics* 11, 7, 1072b3, as cited by Hill, *After the Natural Law*, p. 44, n. 15.
66Byrne, *Analysis and Science in Aristotle*, p. 166.

explains why it cannot be or act within a currently existing context in order to effect or to bring about a given act or an activity which would contribute to the construction of the building in question. As we have noted, nothing which exists in a condition of potency is able to realize itself. However, if we should want to talk about how we are to advert to a possible application of different causes that can effect the construction of a given building, we can refer here to efficient forms of causality. An architect and subsequent builders work from a realized conception or a thought out plan which exists as a species of formal cause. This thought out plan is to be concretely realized in a manner which works from a set of architectural drawings, these drawings existing as a species of first principle for the generation of a series of efficient, instrumental causes. However, if, within this context, we should move to another point of view and if we should advert to an intelligible order which exists within a series or a succession of acts or causes that ultimately leads toward the realization of a building's construction, we will encounter an intelligibility which differs from the intelligibility or the form of efficient causality: an order of intelligibility which is denoted if we should refer to that which exists as the final causality of a realized intelligibility and why, from the standpoint of a realized accomplished intelligibility, we can go back and find an order which is to be distinguished from other kinds of intelligible order which exist because, here, its point of reference is the maturity of a completed form. Final causes differ from efficient causes because, in each case, a different base or a different point of departure is to be employed as a species of first principle for the determination of a given relation which exists as we move from the formality of one kind of cause to the formality of another kind of cause where, in the being of each cause, act and potency are related in a different way.

Nature as both Cognition and Being

As a third species of corollary, in referring to the principles of potency and act, we have metaphysical principles which are reflected and which are more fully understood through a correspondence which exists whenever we refer to the being of cognitional principles (the being of our cognitional acts) and how, conversely, our cognitional acts are more fully understood if our point of departure shifts and becomes the being and the reality of our metaphysical principles. Acts as activities or acts as operations presuppose acts which exist as acts of being or as acts of existence (cognition supposes being; our cognition, our being) where, in this type of situation, acts of being or acts of existence exist within a condition of potency, relative to acts or activities which refer to a species of reality which transcends the kind of being which is given if we should refer to the mere factuality of being or to the mere factuality of existence.

In other words, for a complete understanding of cognitional activities as these exist among human beings, we must refer to their conditions of possibility and hence, from this, to questions which can ask about the possibility and the reality of these conditions in the context of a metaphysics. If, for instance, our human cognition exists as an ongoing form of interaction between our acts of sense and our acts of understanding, is not the condition of possibility for the having of these activities a requisite species of being which would exist for us as the union of a corporeal body with an immaterial soul? The being of things both in the being of ourselves and in the being of other things leads us toward the being (or the realization) of our knowledge and our understanding of things even as we admit to ourselves that our knowledge and understanding of things leads us toward to the being of things, a greater knowledge about the actual being of things. To know about the primacy of being supposes, as a precondition, the factuality of our having an act of insight or an act of understanding.

Through our self-reflection, we come to know about apprehensions of being that are given to us as a

consequence of our later acts of inquiry and discovery although, through this same self-reflection, we can also begin to realize that apprehensions of being are already somehow given to us apart from the instigation of any inquiries that could lead us toward new apprehensions of being that would add to the sum of that which we already happen to know about the being of existing things. If it is argued thus, with Aristotle, that pedagogically, from what we already know, we move to that which we can come to understand and know, then, in a similar way, we can argue that being exists as a precondition, as a species of *a priori*. Knowing always supposes being if, from being, from the being that is already understood and known without our having to ask any questions, we move toward knowing and the kind of being that can be known by us through our various acts of cognition, one following on another in a way which moves from our acts of sensing through our acts of direct understanding on into our acts of understanding which would exist for us as our reflective acts of understanding.

The transcendence which accordingly exists in our human acts of cognition is explained by a greater transcendence which refers to how all these acts exist or how they are brought into being by a world that, in some way, already mysteriously exists in a way which transcends the being of our individual human cognition. A world exists which is proportionate to the kind of knowing which belongs to us in our human cognition; and the being of this world and the being of ourselves - if all this can be understood or grasped by us in some kind of limited way – this same world is something which transcends the kind of being which is ourselves in terms of how we happen to exist and, yet, this same world also belongs or exists within us (in our being) through a form of participation that is available to us (which is partially given to us) by way of the kind of agency which exists within us within the kind of awareness which also belongs to us within our human acts of cognition.

The primacy of being for Aristotle in conjunction with the self-transcendence of our human cognition or the proportionality of our cognition with respect to a greater world of existing things accordingly explains why, for Aristotle, metaphysics is best signified and known if we should refer to it as *First Philosophy* [*Prōtē philosophia*], or as *Wisdom* [*Sophia*], or as *First Science* [*Prōtē epistēmē*].[67] Begin our philosophic or scientific inquiry with a fundamental question which reflects the unrestrictedness of our curiosity and ask a very general question which asks about "What is being?" [*tí to on*], "what is its meaning?", and then, from there, in order to understand the nature or the essence of being in general (what it is for something to be), begin initially with a prior understanding of things that exist about ourselves, things that we know about whose existence we do not question or doubt. How do these things exist? How have they moved into a condition of existence from a prior condition of not existing? Why are the beings beings? Why are the beings that be things which be or things which exist?[68] Determine thus the first causes or the first principles of things which exist *qua* their existence and then, from there, apply or generalize these causes or principles to the entire universe of existing things (to the being of things that we do not directly know about, in a step which moves from a familiarity with known knowns to that which exists in general as known unknowns).

On the basis of this knowledge, as a further step, move then toward the kind of understanding which is applicable and which is possible for us if we should want to engage in the work of lesser, subsidiary sciences and disciplines where their object of study is always something which exists as a differentiation of being or, alternatively, in other words, as a specification of being. For instance, the science of botany studies the being and life of plants although, in the kind of being which belongs to

67Vasilis Politis, *Aristotle and the **Metaphysics*** (London: Routledge, 2005), p. 2.
68Politis, *Aristotle and the **Metaphysics***, p. 4.

plants, a kind of being exists which participates in that which is the beingness or the existence of all existing things. To study many different kinds of things best prepares us to move into a study of metaphysics as an encounter with many different kinds of things raises questions for us about what could be common to the being of all existing things. Through differences in our cognition, we move toward something which would exist in the most general kind of way and if we were to understand this most general kind of thing, we would have a general schema for organizing all subordinate sciences into a coordinate whole even if it is to be admitted that the differences which exist within being in turn explain why, for each science, a different method of inquiry is to be alluded to since, among all the particular sciences which exist, each science works from its own distinct set of first principles in a manner which is peculiar and proper to it. A given, restricted set of first principles points to a distinct mode of scientific procedure.[69]

If, for instance thus, a certain type of induction is peculiar to the science of biology and another type of induction is peculiar to the science of zoology, the kind of inquiry which belongs to the pursuit of mathematics points to a mode of inquiry which acknowledges the primacy of deduction (rather than induction). Instead of first principles which come from the data of our sense perception in a primary way (in some way, these principles are derived from the data of our sense perception), in the pursuit and practice of mathematics, first principles come from the inventiveness and the ingenuity of mathematicians exercising their mathematical minds when these minds exist in a condition of act.[70] The data of sense perception, in this context, play a lesser, more marginal role (an incidental or a subsidiary role within the discipline of mathematics) if, in contrast, we should attend to the kind of role which belongs to the methodology of induction and the emergence of the lesser sciences of man and nature which exist in a manner which differs from the kind of inquiry that belongs to the practice of mathematics).

However, because all distinct, different things participate in the condition and the quality of being, in general questions that can ask about the meaning of being in general, we can construct a heuristic that can unify all the different sciences and modes of knowledge that can exist together in the form of a unified, systematic whole. The discovering of this ordering in turn then acts upon ourselves as we can then begin to ask more intelligent questions (questions which are more apt and relevant) and then, in the wake of this kind of inquiry and knowledge, because we can encounter a series or a number of moral consequences, a growing knowledge of metaphysics leads us to a greater understanding and knowledge of ourselves. We exist too, in our own way, as instances of being. On the basis of a metaphysics, it is possible to move into an ethics and morality that would be grounded on that which exists as a true knowledge of existing things. Or, in other words, from the order of being, through the mediation of our understanding and knowing, we can move into the order of our human becoming as this applies to our human acts when we move from the order of understanding and knowing into an order that is then built and constructed when our actions move into a form of externality which transcends the kind of interiority which belongs to us when we advert to the order of our human cognition. Our knowledge of metaphysics grounds and contextualizes our understanding about what should be or what should exist as the living of a good moral life. From a metaphysics of being, we can construct and know about a metaphysics of history in an order of control that moves from the inquires and investigations which belong to science and knowledge into an order of control which belongs to us

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69John Herman Randall, *Aristotle* (Norwalk : The Easton Press, 1990), p. 33.

70Harold J. Berman, *Law and Revolution: The Formation of the Western Legal Tradition* (Cambridge, Massachusetts: Harvard University Press, 1983), p. 133.

in the stewardship of our human history. Supposedly, we become more wise in our understanding of things and more responsible in the actions that we do.

However, these things being said, even and as if we admit that, with Aristotle, the beginnings of metaphysics lie in the power or the force of our natural human wonder and a desire that wants to introduce clarity and understanding into an obscure puzzling situation (as we respond to a question which asks about "what is being?"), it is to be admitted also that, as given to us for our reading and study, Aristotle's metaphysics was experienced by very many persons to be something which was very obscure in all of its detailed elaborateness even if its purpose or function was to introduce a new clarity into the being of things that, previously, had not been well understood or known: functioning for us as an ordering principle for the pursuit of all our critical, scientific activities. In the context, for instance, of his own day and time, the Iranian philosopher Avicenna (d. 1037) noted that, though he had read the *Metaphysics* of Aristotle 40 times, he did not succeed in really understanding it. The understanding which he did have was, for him, somewhat limited: too limited for comfort or satisfaction. Hence, as a useful tool or as a point of entry for ourselves in terms of how we can possibly move toward an understanding of Aristotle's metaphysics, we best move into Aristotle's metaphysics if we can move from a viewpoint that is grounded in the realism and the dynamics of Aristotle's cognitional philosophy: from a critical realism which allegedly best explains the nature of our human understanding (if, indeed, in our desire and search for self-understanding, we understand the nature of our human cognition) and if we understand also how, from the human order of our knowing, we can pass or we do pass into the objectivity of a world of truly existing things (the realm of existing things which refers to the order of verifiable metaphysics. In other words, we best work from a basis which should allude to a kind of parallel or to a corresponding kind of unity which exists for us as we move from the order of our human cognition toward and into a similar or like order which exists with respect to the order of real objects which, together, constitute the order of being (in an order which exists independently of whether or not we could be knowing anything about anything which exists within this order at any given time).

By this means thus, in order to understand and know about a metaphysical principle or element, we best turn to how it is grounded in the being of cognitional principle or element. Attend to our experience of it and to our experience of other cognitional principles and elements if we are to come to an understanding of metaphysics that pretends to be well grounded. A primordial type of unity which exists between our knowing and the being of existent things gradually becomes an understood, a known, and an articulated unity to the degree that its basis is growth in the measure of our self-understanding and knowledge. The kind of critical role that was to be thus played by metaphysics within the corpus or the methodology of Aristotle's understanding of sciences becomes more critical or it becomes more accurate if its basis is an understanding of ourselves in the human cognition which we can have through the form of inquiry that exists in us through our self-questioning, through our self-understanding, and through our self-reflection. By this means, it can be argued that the implicit kind of priority which, in fact, belongs to Aristotle's understanding of scientific cognition (if there is no understanding, there can be no metaphysics) now becomes, for us, an explicit point of departure. No understanding leads to an absence of metaphysics even as we know, through our own understanding and knowledge of things, that apart from being there is no understanding. No being, no understanding. In the praxis of our inquiry in any given field, cognitional and metaphysical variables need to be alluded to in a way which points to a form of mutual enforcement or to a form of mutual causality as these two orders of meaning inform and add to what the other happens to understand and know. As much as we might try to move from cognition to metaphysics (from an understanding of cognition to

an understanding of metaphysics), an entirely adequate understanding of our cognition inevitable raises metaphysical questions and, in the end, we can only proceed in an entirely satisfactory way if, through the questions that we might ask about ourselves, we are open to asking questions about things that are quite other than ourselves. One cannot do without the other if each, in their own way, supposes the being of the other.