

## Aristotle's Understanding of Metaphysics

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“Aristotle's metaphysics of matter and form corresponds to a psychology of sense and insight.”<sup>1</sup>

It is no easy task to move toward an understanding of Aristotle's metaphysics. Different approaches are possible.<sup>2</sup> 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 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

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<sup>1</sup>Lonergan, *Insight* 677/700, as cited by Sala, *Lonergan and Kant*, p. 160, n. 65; cited also by McCarthy, *Authenticity as Self-transcendence*, p. 62.

<sup>2</sup>If 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 identify 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.

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.

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.

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.<sup>3</sup>

In attending to Aristotle's discussion as this is given to us in the *Physics*, book 1, chapter 7 (and if we

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

turn for help to a commentary that comes to us from Aquinas),<sup>4</sup> 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 aforementioned 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."<sup>5</sup> 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.

*Metaphysics*, 5, 1-2

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<sup>4</sup>Thomas 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.

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

"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.<sup>6</sup>

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

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.”<sup>7</sup> A principle is to be distinguished from a cause (a real distinction exists between the two)<sup>8</sup> 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.<sup>9</sup>

To give an example: for Aquinas, reason is properly referred to as “the first principle [*primum principium*] of [our] human acts.”<sup>10</sup> “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.”<sup>11</sup> 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.<sup>12</sup> The rationality which exists as our point of departure is

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<sup>7</sup>Aquinas, *Summa Theologiae*, 1a, q. 33, a. 1.

<sup>8</sup>Aquinas, *Summa Theologiae*, 1a, q. 33, a. 1, ad 1 & 3.

<sup>9</sup>Aristotle, 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.”

<sup>10</sup>Aquinas, *Summa Theologiae*, 1a2ae, q. 90, a. 1

<sup>11</sup>Aquinas, *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 *Sententia Libri De anima*, 1, 2, 17.

<sup>12</sup>Daniel Westburg, “Good and Evil in Human Acts (1a 2ae, qq. 18-21),” *The Ethics of Aquinas*, ed. Stephen J. Pope (Washington, DC: Georgetown University Press, 2002), p. 91, citing *Summa Theologiae*, 1a2ae, q. 18, a. 2, ad 2.

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.<sup>13</sup>

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.<sup>14</sup> 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 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.

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<sup>13</sup>Aquinas, *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.

<sup>14</sup>Aristotle, *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.

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).

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),<sup>15</sup> the nature (or, alternatively in words, the natural 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).<sup>16</sup> Citing Aristotle directly: “nature is a principle or cause of being moved and of being at rest in that to which it belongs

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<sup>15</sup>Robert 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 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.

<sup>16</sup>Aquinas, *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); Spaemann, *Essays in Anthropology*, 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.

primarily, in virtue of itself and not accidentally [accidental as unnatural, forced, or contrived].”<sup>17</sup>

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.”<sup>18</sup> 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.”<sup>19</sup> 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.”<sup>20</sup> 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.”<sup>21</sup> 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 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).<sup>22</sup> 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.<sup>23</sup> As noted, the nature of a given thing, in specifying what a given thing is, specifies what

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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.

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

it is able to do and what 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 thing is to undergo the changes which specifically and typically belong to it.<sup>24</sup> 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.<sup>25</sup> 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

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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.

<sup>24</sup>Byrne, "Insight and the Retrieval of Nature," *Loneragan Workshop*, p. 14.

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

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),<sup>26</sup> 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.<sup>27</sup> 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.<sup>28</sup> 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.

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 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.

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<sup>26</sup>Lonergan, *Triune God: Systematics*, p. 193.

<sup>27</sup>Hill, *After the Natural Law*, p. 41.

<sup>28</sup>Lonergan, *Ontological and Psychological Constitution of Christ*, p. 11; p. 53; p. 164.