

University of Windsor

Scholarship at UWindor

Electronic Theses and Dissertations

Theses, Dissertations, and Major Papers

1-1-1964

Nothing is reduced from potency to act except by some being in act.

K. L. McGovern
University of Windsor

Follow this and additional works at: <https://scholar.uwindsor.ca/etd>

Recommended Citation

McGovern, K. L., "Nothing is reduced from potency to act except by some being in act." (1964). *Electronic Theses and Dissertations*. 6359.

<https://scholar.uwindsor.ca/etd/6359>

This online database contains the full-text of PhD dissertations and Masters' theses of University of Windsor students from 1954 forward. These documents are made available for personal study and research purposes only, in accordance with the Canadian Copyright Act and the Creative Commons license—CC BY-NC-ND (Attribution, Non-Commercial, No Derivative Works). Under this license, works must always be attributed to the copyright holder (original author), cannot be used for any commercial purposes, and may not be altered. Any other use would require the permission of the copyright holder. Students may inquire about withdrawing their dissertation and/or thesis from this database. For additional inquiries, please contact the repository administrator via email (scholarship@uwindsor.ca) or by telephone at 519-253-3000ext. 3208.

NOTHING IS NECESSARY FROM POTENCY TO ACT
BY SOME BEING IN ACT

A Thesis
Submitted to the Faculty of Graduate Studies
through the Department of Philosophy
in Partial Fulfillment of the
Requirements for the Degree of
Master of Arts at the
University of Windsor

by

K. L. McGOVERN
M.A. University of Windsor, 1962

Windsor, Ontario, Canada
1964

UMI Number: EC52540

INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

UMI[®]

UMI Microform EC52540

Copyright 2008 by ProQuest LLC.

All rights reserved. This microform edition is protected against unauthorized copying under Title 17, United States Code.

ProQuest LLC
789 E. Eisenhower Parkway
PO Box 1346
Ann Arbor, MI 48106-1346

ABF 5157

Approved by:

John N. Oade
.....
A. B. Cunningham
.....
Montezzo
.....

93391

ABSTRACT

The proposition, "nothing is reduced from potency to act except by some being in act" seems to be implied in the writings of Aristotle and is often found in the works of St. Thomas Aquinas. The aim of this thesis is not to give a full textual study of this proposition, but rather to establish whether or not the proposition is true and, consequently, whether it is a principle or a conclusion.

The thesis begins with an examination of the proposition as it is implied in the writings of Aristotle. Although Aristotle does not explicitly make wide use of the act and potency proposition, he does frequently use related, but more specific propositions, as for example, 'whatever is in motion is moved by another'. It is, however, generally difficult to determine whether he regards these propositions as principles or conclusions, although in one place, he indicates that the proposition 'that which is in motion is moved by another' must follow from a consideration of the order in the universe. Thus Aristotle may have considered the act and potency proposition as demonstrated from our knowledge of order in the universe.

St. Thomas Aquinas does not seem to attempt to demonstrate the act and potency proposition in spite of his

frequent use of it. For the most part, he seems to assume the relationship of a being in potency to a being in act.

Now if this proposition is to be accepted as a conclusion, that prior principle from which it is demonstrated must be disclosed. Or, if we are to accept this proposition as a first principle, then the relationship between a being in potency and a being in act must be more clearly seen.

The demonstration begins with an examination of the relationship between a being at rest and a being in motion, a relationship similar to that between a being in potency and a being in act. Although this specific potency (potency for motion) is defined in terms of its corresponding act (actual motion), it is not clear from this that the reduction from potency to act demands a being in act. Whatever moves from potency to act does so as it is determined by its nature. Now the nature determines the motion of the thing in accordance with some particular end. Consequently, any movement determined by nature has a final cause. Since nothing can exist that is not a nature, then all motion and ultimately all activity must have a final cause.

Although the act and potency proposition is thus true in respect to final causality, it does not immediately follow that it is true in respect to efficient causality, as is seen from the objections of Hume. From Hume's

objections one might infer that when we say that a being in motion is moved by another or by itself, we are ignoring the real possibility that it might not be moved by anything whatsoever.

This objection is answered in this way. All things in motion move towards an end. The end is a final cause of motion because it gives the moving thing direction. But the direction of the thing in motion cannot be solely caused by its end because the final cause lacks the efficacy of itself to direct the thing in motion towards its end. Thus where there is a final cause, there must also be an efficient cause. It follows from this that everything in motion must be moved by another, or, more generally, that no being in potency can be reduced to act except by a being in act. Finally, since the proposition is demonstrated from a prior principle, it follows that it is a conclusion and not a principle.

CHAPTER ONE

A certain proposition, widely used by St. Thomas and Aristotle as a premise in scientific demonstrations will be the subject of this thesis. From an examination of the proposition as used by these two philosophers, the purpose of this inquiry should become clear.

Let us look first to the works of Aristotle. The Physics of Aristotle leads ultimately to an unmoved movent. Books VII and VIII deal mainly with the problem of demonstrating the existence of this movent. Aristotle begins with moving things: "Now the existence of motion is asserted by all who have anything to say about nature."¹ To show that moving things need a movent, Aristotle supplies this further premise: "everything that is in motion must be moved by something."² The truth of this second proposition is not evident, however, and must be established by a demonstration.

Aristotle does this in a number of ways. It is in this context that the proposition, about which this thesis

¹Aristotle, Physics, in The Works of Aristotle, ed. W. D. Ross (Oxford, 1930), vii.1 (250b 15). All quotations of and references to Aristotle in this paper are from this edition.

² Ibid. vii.1 (241b 24).

is concerned, arises. After stating the above proposition, Aristotle offers as proof: "For if it (that which is in motion) is not the source of motion itself it is evident that it is moved by something other than itself."³ His justification of this becomes clear in the beginning of Book VIII of the Physics. It is that which is "capable of motion" which is moved. For if a thing begins to move "it follows that before the motion in question, another change or motion must have taken place in which that which was capable of being moved or causing motion had its becoming." And a similar line of reasoning must apply to a thing which comes to rest.⁴

The proposition here expressed, which is used to justify the statement that everything which is in motion must be moved by another, simply states that a being capable of motion must be acted upon by "another change or motion." Later in the same book, Aristotle speaks on the same subject in terms of potentiality and actuality.⁵ That which is capable of being moved is potentially in motion. The movent, that is, that which moves, is already in activity: "in fact, that which produces the form is always something that possesses it." The potentially moveable,

³ Phys. vii.1 (242a 1).

⁴ Ibid. viii.1 (257b 7-19).

⁵ Ibid. viii.5 (257b 7-11).

therefore, must be moved by something actual. Hence the fact that every being in motion must be moved by another is clear. It is argued that (a) things are in motion; but (b) things capable of motion must be moved by something in a state of actuality; therefore, (c) whatever is in motion is moved by another.

St. Thomas begins his first proof of the existence of God in the same tone as Aristotle's proof of the existence of the first mover.⁶ It is evident from the senses that some things are in motion. Here he adds that "omne autem quod movetur, ab alio movetur." St. Thomas' first problem in the first part of the proof is the same as Aristotle's: to show that everything that is in motion is moved by another. It is not surprising that he uses a similar proposition to the one used in the Aristotelian demonstration previously examined. A thing which is moved is moved according as it is in potency. That which moves, moves according as it is in act. Indeed, motion is the reduction of a being from potency to act; "de potentia autem non potest aliquid reduci in actum, nisi per aliquod ens in actu." St. Thomas actually duplicates the Aristotelian demonstration on this point, though he seems to give a more

⁶ Saint Thomas Aquinas, Sancti Thomae Aquinatis... Summa Theologiae . . . Matriti [Madrid], Bibliotheca de Auctores Christianos, [1951] [. . . e textu critico leoniano . . .]. I, q. 2, a. 3, c.

precise form to the proposition: nothing can be reduced from potency to act except by a being already in act.

Although Aristotle, in the Physics, does not seem to formulate the proposition in terms quite as general as those of St. Thomas, it is evident that his formulation, i.e. "that which produces the form is always something that possesses it," certainly implies the proposition as stated by St. Thomas. Moreover, as will be seen in the next chapter,⁷ Aristotle, in Book IX of the Metaphysics, in an extensive discussion of the nature of the potential and the actual, does formulate the proposition in terms which are almost identical to those used by St. Thomas Aquinas.

From the foregoing, it is evident that the philosophies of both of these men coincide in that both of them are attempting to demonstrate the existence of an unmoved mover. Each of them accepts motion as an observed fact. Further, both attempt to demonstrate the proposition that "everything that is in motion is moved by another." To achieve this end, each brings in a proposition which states that a being potentially in motion must be moved to actuality by a being which is already in act. This latter proposition is intricately involved in an important demonstration of the existence of a first mover. This, in

⁷ See below, p. 11.

itself, is enough to testify to the inherent importance of the proposition, for to deny the validity of this statement is to deny the validity of the proofs.

This proposition is more than a tool in a demonstration of an unmoved mover. It is a unique expression of nature as seen by each of these men. The whole of the Physics and the Metaphysics of Aristotle can be regarded as a presentation of the order of things, from the lowest inanimate object, to the highest--the unmoved movents. In an absolute sense, the higher has more being than the lower. In relation to activity, it is the higher than acts on the lower. For the higher possesses actually what the lower possesses only potentially. Hence, to be reduced to actuality, the lower must be acted on by the higher. The same line of reasoning applies to the philosophy of St. Thomas Aquinas. Most of his great works, such as the Summa Theologiae and the Summa Contra Gentiles, begin with God and show how all other being is ordered to this God. The relationship between the higher and the lower is one in which the former is always acting on the latter and the highest being, God, would in effect act on all things. Thus, the proposition, "no being in potency can be reduced to act except by a being in act" is at the very core of the philosophies of St. Thomas and Aristotle.

Now, it is necessary that the proof of the proposition be established; for without it, order in

philosophy has little reason. That is, if things are not related through higher beings actualizing the potencies of lower beings, it is difficult to see how there could be an order in things. To deny any relationship between the lower and the higher is to make every individual thing a little 'island' of being responsible for its own actuality. For, if no being is dependent for its activity on another, all things must be said to be self-subsistent in regard to their activity. A universe of self-subsistent beings, however, is not a universe which implies order. It would, in fact, imply the opposite: the activity of one being would be completely random in relation to the activity of another. Hence the truth of the aforementioned proposition is not only important, but necessary for the development of order in philosophy.

The purpose of this thesis is to consider whether the proposition 'that which is in potency can be reduced to act only by a being in act' is demonstrable or not; and if so, how it is to be demonstrated; if not, how the truth of the proposition may be seen more clearly. This is not a textual study of the proposition as it appears in the writings of the two aforementioned philosophers. It is rather an attempt to judge whether an important philosophic statement is, or is not, true.

In the second and third chapters we will consider this proposition as it is found in the works of Aristotle and St. Thomas Aquinas respectively. The nature of demonstration from first principles will be the subject of the fourth chapter. In the fifth chapter, I will examine the act and potency proposition in respect to final causality. Separating this from the final chapter, in which the proposition will be considered from the point of view of efficient causality, will be an examination of certain objections encountered in the writings of David Hume.

CHAPTER TWO

Since the proposition in question concerns act and potency, we will begin the more detailed examination of Aristotle with a consideration of what he has to say on the potential and the actual. Although there are frequent references to act and potency throughout the works of Aristotle, perhaps his most explicit statement on the subject comes in the Metaphysics where almost all of Book IX is devoted to a consideration of the nature of potency and act.

Aristotle opens Book IX of the Metaphysics with his discussion of the potential. He begins by pointing out that potency can be understood in several ways.¹ He adds that many of these may be neglected in his discussion of the meaning of potency, although they are all related to a primary type:

But all potencies that conform to the same type are originative sources of some kind, and are called potencies in reference to one primary kind of potency, which is an originative source of change in another thing or in the thing itself qua other.²

For instance, a potency for being acted on well must be

¹ Aristotle, Metaphysics ix.1 (1046a 4 ff.).

² Ibid. ix.1 (1046a 8-13).

referred to a "prior kind of potency, that is, a potency for being acted on, for the former assumes the latter."³ The fundamental meaning of potency for Aristotle is, therefore, the capacity to change or to be changed. A body at rest is said to have the capacity to move; a cold body is able to be warm. Potency signifies the capacity of a thing to change or be changed.

Aristotle describes the activity of a thing by developing a contrast with potency.⁴ A man who is capable of studying science is contrasted to the man who is studying science. From this, it is evident that the act is the fulfilment of the potency.⁵ Involved in the transition from potency to act is change or motion.⁶ For example, building is required in the construction of a house. It is not, however, the motion which is described by the term 'act': "for every motion is incomplete--making thin, learning, walking, building." In the building of a house, the act is the end; that is, the house itself, rather than the motion, i.e. the building, which is an incomplete act. There are cases in which the motion and

³ Metaph. ix.1 (1046a 17).

⁴ Ibid. ix.6 (1048a 25 ff.).

⁵ Ibid. ix.6 (1048a 35). "The thing that stands in contrast to each of these / a man capable of studying, etc.,⁷ exists actually. There the actual is the fulfilment of the potential, in that the contrast to a capacity must always be the fulfilment of that capacity."

⁶ Ibid. ix.6 (1048b 18 ff.).

and are one. Such is the case with seeing, (the motion) and sight (the act) which occur simultaneously. Only in cases such as this can the motion be referred to as an act.⁷

It follows that in the very definitions of the terms 'act' and 'potency', a kind of relationship is set up between the two. That is, in defining a potency, one must do so with the recognition of a corresponding act. For instance, to say that an object is capable of motion demands a prior knowledge of actual motion. It is for this reason that Aristotle can say that actuality is by definition prior to potency:

. . . for that which is in the primary sense potential is potential because it is possible for it to become active . . . so that the formula and knowledge of the one must precede the knowledge of the other.⁸

Hence, Aristotle regards act as prior to potency in the sense that the knowledge of the potential depends on a prior knowledge of the actual.

Though the truth of this statement is apparent, it does not illumine the proposition that no being can be reduced from potency to act except by a corresponding act. Simply to say that we know an act before we know its corresponding potency, and that we speak of the latter in terms of the former, does not necessarily indicate a causal

⁷ Metaph. ix.6 (1048b 33).

⁸ Ibid. ix.8 (1049b 13).

connection between them. What Aristotle has developed in this place is a contrast between act and potency and very little more. For, because our knowledge of the actual is first in the order of understanding, this does not mean that the actual is first in the real order of things. To assert this would be imposing the order in which the mind functions, that is, a logical order, on the real order, an imposition for which there may be no justification. It is knowledge that must conform to reality, not reality to knowledge. Hence, the problem of a causal relationship between potency and act is, as yet unsolved.

Aristotle goes on to show that act is not only prior by definition, but that it is also prior in sequence or in time. He wants to show that before a being in potency can be reduced to act, there must be a real being in act. To explain this, Aristotle points out that a man must be produced by another man:

From the potentially existing the actually existing is always produced by an actually existing thing, a man by a man . . . there is always a first mover and the mover always exists actually.⁹

Here we find Aristotle using the proposition that a potential being is made actual by an actual being; that is, it is reduced to act by a being in act. It seems in this instance that Aristotle is using a causal proposition, "from the

⁹ Metaph. ix.8 (1049b 23).

potentially existing, the actually existing is always produced by an actually existing thing," to demonstrate that act must be prior to potency in time. For if, as the causal proposition states, act is by nature prior to potency it must also be prior in sequence or time.

Aristotle does not seem to attempt to prove this causal proposition, but merely uses it as a premise in another proof. Is he justified in his use of this proposition? It would seem that a proposition, which states a relationship between two things, should point to something on which this relationship is based. The problem here is that Aristotle, in allowing this proposition to stand on its own terms, seems to be assuming the relationship. Or, because he does not refer it to anything prior for its justification, the possibility of the proposition being self-evident arises. Aristotle does not, however, show how the relationship is evident. And thus the original problem remains: Is the statement, 'every being in potency can be reduced to act only by a being in act', true?

This problem applies not only to the proposition stated above but it also applies to a number of more specific propositions used by Aristotle that derive their validity from the one based on act and potency. For example, "everything that comes to be, comes to be by the agency of something," a proposition widely used in Book VII

of the Metaphysics, is simply a more specific use of the act and potency proposition;¹⁰ that is, it is the same proposition but in less universal terms. Similarly in Books VII and VIII of the Physics, we have seen that Aristotle employs the act and potency proposition to show that whatever is in motion is in motion because of the agency of the movent.¹¹ Since the proof of this proposition depends on the truth of the act and potency proposition, a truth which has not yet been made clear, judgment concerning the existence of a prime movent must be deferred for the present.

Let us turn to Aristotle's discussion of motion in Book VIII of the Physics for the purpose of justifying the proposition, 'a being in potency can be reduced to act only by a being in act'. Aristotle, in his proof of the existence of a first mover, begins by saying that a being in motion requires a mover. To show the validity of this statement he points out that a being which comes into motion must be brought into motion by a being which is already in act, that is, by a moving thing or movent. Aristotle defines motion as "the fulfilment of the moveable insofar as it is moveable."¹² For the Stagirite this

¹⁰ Metaph. vii.7 (1032a 12).

¹¹ Phys. vii.1 (241b 24 ff.).

¹² Ibid. viii.1 (251a 9). See also Phys. viii.5 (257b 7).

statement means that "in each kind of motion it is that which is capable of motion that is in motion."¹³ He later adds that,

. . . the moveable is moved and this is potentially, not actually, in motion, but the potential is in process to actuality . . . the movent, on the other hand, is already in activity.¹⁴

In support of these statements, Aristotle offers a proposition that we have already seen: "that which produces the form is always something that possesses it."¹⁵

This argument gives a good insight to Aristotle's view on act and potency. By examining a being which at one moment lacks motion and then in another moment acquires motion, Aristotle points out that in the former case the being must have had the capacity for motion, that is, it must have been potentially in motion, whereas in the latter instance we have an actually moving being. Aristotle must go on to show how this change took place. There would seem to be two possible conclusions to this problem: that the acquired motion was caused by the thing itself that moved or that it was caused by another being.¹⁶ However, it is

¹³ Phys. viii.1 (251a 13).

¹⁴ Ibid. viii.5 (257b 7).

¹⁵ Ibid. viii.5 (257b 9).

¹⁶ Ibid. vii.1 (241b 25).

unthinkable that a thing "should in its entirety move itself . . . : thus it would at the same time be both teaching and being taught, or restoring to and being restored to the same health."¹⁷ The thesis that a thing might be responsible for its own motion then falls into absurdity¹⁸ and it would appear that the second thesis must be chosen: that everything that is in motion must be moved by another.

Let us examine this argument closely. It states that since a being must be considered incapable of moving itself, it must be moved by another. Furthermore, the reason that a being is incapable of moving itself is that it lacks motion.¹⁹ Hence it would seem apparent that the being which is the cause of its motion must already possess motion; that is, a mover must be a movent.

Is this argument satisfactory? If it is, by showing that every thing in motion demands a movent, it

¹⁷ Phys. viii.5 (257b 2).

¹⁸ See Phys. viii.5 (257b 12). It is important to remember here that the moveable is only potentially moveable and must derive its fulfilment from something actually in motion. Hence even if a thing appears to move itself, it is clear that one part of this thing must move another.

¹⁹ This is the key question in the argument of Aristotle: that motion can only be caused by that which is in motion. If this statement is true, then the rest of the argument follows.

may easily be argued that the actualization of a being in potency demands a being in act.²⁰ But, does every being in motion demand a mover? We must further inquire into the reason behind this statement. For, to state that a thing is potentially in motion simply points out that the thing can move. Similarly, to state that a being has the corresponding act merely means that the being is in motion. But, to state that a being in potency can be reduced to act only by a being in act connects act and potency causally. The first two statements are matters of observation, but the final proposition, which connects the two terms, demands some sort of justification. In regard to things which move (from potency to act), Aristotle gives two possibilities: that the thing either moves itself or is moved by another. However, in view of what has just been said, it would seem that there is a third possibility: that there is no causal relation between act and potency; i.e. that a being can be in motion with no mover at all.²¹

Aristotle does not entirely ignore this problem in the Physica. In the first chapter of Book VIII, he attacks the notion held by some of his predecessors that motion is not eternal, but rather can vanish and reappear.²² "Nature,"

²⁰ See below, p. 58.

²¹ See below, p. 50.

²² Phys. viii.1 (252a 9 ff.).

Aristotle points out, "is everywhere the cause of order;" that is, "that which is produced or directed by nature can never be anything disorderly." Aristotle goes on to show that to hold that a motion may come to be without there being a previous motion is incompatible with the above statement:

But if we say that there is first a state of rest for an infinite time, and then motion is started at some moment, and that the fact that it is this rather than some previous moment is of no importance, and involves no order, then we can no longer say that it is nature's work."²³

In this text, Aristotle is examining the possibility that a thing may begin to move without there being a preceding activity to account for this motion, in which case, there would be no order involved. This would not be a natural movement, for "nature is everywhere the cause of order."

Whether Aristotle regards this as a demonstration of the eternality of motion or not is not explicitly indicated. An examination of the text which follows, however, would seem to indicate that the eternality of motion is demonstrable. He points out that:

It would be better, therefore, to say with Empedocles and anyone else who may have maintained such a theory as his /that a motion may come to be with no preceding motion/ that the universe is alternately at rest and in motion:

²³ Phys. viii.1 (252a 13 - 17).

for in a system of this kind we have at once a certain order. But even here the holder of the theory ought not only to assert the fact: he ought also to explain the cause of it: i.e. he should not make any mere assumption or lay down any gratuitous axiom, but should employ either inductive or demonstrative reasoning."²⁴

Although this text is primarily intended as a criticism of Empedocles, one fact seems clear: the solution to the problem can be reasoned to. Aristotle later adds in the same critique that,

. . . while his theory is right insofar as it is applied to certain individual cases, he is wrong in making it of universal application. Thus, a triangle always has its angles equal to two right angles, but there is nevertheless an ulterior cause for the eternity of this truth, whereas first principles are eternal and have no ulterior cause."²⁵

There are then certain truths which are eternal but should not be laid down as first principles; the reason for this being that these truths have an ulterior cause and hence, can be demonstrated from that cause.

In view of what has just been said, it would seem that Aristotle's proposition, that every motion which comes to be requires a preceding motion, is such a truth; that is, it is eternally true but it is not a first principle since there is an ulterior cause for its truth. And this ulterior cause would appear to be order or its cause, nature. Since every reduction from potency to act is a kind of motion, then

²⁴ Phys. viii.1 (252a 20).

²⁵ Ibid. viii.1 (252b 1).

It would seem that every such reduction demands a preceding act.

This may, however, be pushing the Aristotelian text too far, for as we have seen, he does not seem to use such a proof in his specific references to act and potency. It, since, in this instance, Aristotle is referring to motion and since the reduction from potency to act is so closely connected with motion, it would be reasonable to conclude that the act and potency proposition was not regarded by Aristotle as a first principle. It would further appear that the key to this problem might be found through a study of nature and order. We will first, however, turn to the writings of the great mediaeval philosopher and theologian who also made constant use of the principle 'no being in potency can be reduced to act except by a being in act'.

CHAPTER THREE

In the first chapter, it was seen that St. Thomas' philosophy, like that of Aristotle, was very much dependent on order. While realizing on the one hand that the world is full of different grades of beings, St. Thomas saw on the other that these beings were all related in some way and that all of them bore some resemblance to beings of other orders.¹ As a result his philosophy accounts for all beings in one order. Intricately involved in his philosophy are certain propositions which are expressive of this order. The proposition in question, that nothing can be reduced from potency to act except by a being in act, is one of these propositions.

It is now necessary to inquire in detail into the writings of St. Thomas in order to discover in what way he makes use of the proposition and, of even greater importance, to ascertain whether there is, in his writings,

¹ Sum. Theol. I, 47, 3, c. ". . . dicendum quod ipse ordo in rebus sic a Deo creatis existens, unitatem mundi manifestat. Mundus enim iste unus dicitur unitate ordinis, secundum quod quaedam ad alia ordinantur." See also Sum. Theol. I, 11, 3, c. "Omnia enim quae sunt, inveniuntur esse ordinata ad invicem, dum quaedam quibusdam deserviunt." And also Sum. Theol. I, 21, 1, ad 3. "Est autem duplex ordo considerandus in rebus. Unus, quo aliquid creatum ordinatur ad aliud creatum . . . Alius ordo, quo omnia creata ordinantur in Deum."

any indication of whether this proposition can be demonstrated, and if so, how it is to be demonstrated. With regard to his use of the proposition, it has been seen that it was employed by St. Thomas in his proof of the existence of God in the Summa Theologiae,² a passage that closely

² Joseph Owens, C. Ss.A., "The Problem of the Prima Via," Modern Schoolman, XXX (1952), pp. 33-53 (Part I). Father Owens, when he considers the first premise in the first way of demonstrating the existence of God, i.e. that which is moved is moved by another, states that St. Thomas does not accept this proposition in any "a priori way", but rather that he concludes it from "what is seen happening in the sensible world." St. Thomas, he points out, uses the example of "wood which is cold . . . being heated by fire," to derive this proposition: "Insofar as the wood is being moved from cold to heat, it is in potency to being hot. This is at once seen to be a necessary condition for being moved. The thing that is being moved has to be in potency to that towards which it is being moved. That which is imparting the motion, on the other hand, must be actual in this respect."

It is at this point that the problem arises. While it is true that a moving thing is changing from potency to act and that before a thing can actually have a certain act, it must have the capacity for that act, there is still no grounds for relating potency to act causally. The act and potency proposition not only expresses the meaning of potency and act, but it also relates them in a special way. If we assume this relationship, then any analysis of the proposition need only be a definition of the terms. And this is what Father Owens seems to have done. He analyzes motion in terms of potency and act assuming that potency is related to act causally. Hence the basis for the solution of the problem is, for Father Owens, that act must be "something over and above potency, something more than potency," and also that act "has to come from something which already has or is that act." The problem with this is the same as above: that act is something above potency is clear from a definition of the terms but the final statement is one that implies a relationship, and does not necessarily follow from a definition of the terms.

It must be seen here that in a very real sense the statement that Father Owens analyzes as the basis of the proposition that 'everything that is in motion is moved by another' is no more than that proposition in terms of

parallels a similar demonstration in Aristotle's Physics.³ St. Thomas, however, does not by any means restrict his employment of this proposition to this question. For example, we find the proposition used in answering the question: "Whether God is a Body?"

Secundo, quia necesse est id quod est primum ens, esse in actu, et nullo modo in potentia. Licet enim in uno et eodem quod exit de potentia in actum, prius sit potentia quam actus tempore, simpliciter tamen actus prior est potentia: quia quod est in potentia, non reducit in actum nisi per ens actu. Ostensum est autem supra quod Deus est primum ens. Impossibile est igitur quod in Deo sit aliquid in potentia. Omne autem corpus est in potentia: quia continuum, in quantum huiusmodi, divisibile est in infinitum. Impossibile est igitur Deum esse corpus.⁴

This proof is a very simple and a very convincing one. God is known to be the first of all beings (primum ens). And since act is prior to potency, it must be said that there can be no potency in God. It follows therefore that, since every body is in potency, God cannot be considered to be a body. The only part of this proof that seems

act and potency. In this sense then the 'basis' and the proposition are one. Hence if we assume this basis or this relationship between potency and act to arrive at the proposition 'that which is in motion is moved by another', then we are actually assuming this latter proposition in the beginning. Because Father Owens in fact has not explained the relationship between potency and act, the problem remains unsolved.

³ Phys. vii.1 (241b 24 ff.).

⁴ Sum. Theol. I, 3, 1, c.

to require explanation is the statement that in the absolute sense, act is prior to potency, St. Thomas explains this by saying that in the reduction from potency to act, there must first be a being in act: "quod est in potentia, non reduclitur in actum nisi per ens actu."

Again, as in the demonstration of the existence of God, St. Thomas uses the act and potency proposition as the sole basis for a demonstration.⁵ Without the use of this proposition there is no demonstration at all. There is also, as in the aforementioned demonstration, no explanation given concerning the use of this proposition. Can it be concluded from this that no explanation is necessary? That is, since, in these two important demonstrations, the proposition stands on its own, it would seem that it might be regarded by St. Thomas as a self-evident or per se nota proposition. Let us first, however, consider some other instances in which this proposition is used.

St. Thomas makes use of the act and potency proposition in his treatise on the intellectual powers of the soul in the Summa Theologiae on a question concerning the agent intellect. He has previously shown that in order to understand a thing it is necessary that we have a possible intellect;⁶ that is, a knowing power which is capable of

⁵ See Sum. Theol. I. 2, 3, c.

⁶ Ibid. I, 79, 2, c.

knowing prior to the act of knowledge. The problem now becomes to show that we also need an agent intellect to actualize the possible intellect. The possible intellect arrives at knowledge by acquiring the forms of natural things. But since the forms of natural things do not themselves exist apart from matter, there must be an active principle to raise these forms to the possible intellect:

. . . formae autem in materia existentes non sunt intelligibiles actu: sequebatur quod naturae seu formae rerum sensibilium, quas intelligimus, non essent intelligibiles actu. Nihil autem reducitur de potentia in actum, nisi per aliquod ens actu: sicut sensus fit in actu per sensibile in actu. Oportebat igitur ponere aliquam virtutem ex parte intellectus, quae faceret intelligibilia in actu, per abstractionem specierum a conditionibus materialibus. Et haec est necessitas ponendi intellectum agentem.⁷

This demonstration provides an excellent example of the absolute necessity given to this proposition. We know that we have the capacity to know various things. It is, however, necessary to explain how we acquire these things as knowledge. That is, it is necessary to explain how what is potentially known becomes actually known. And since the object of knowledge is itself, prior to the act of knowing, not actually intelligible, then the object itself cannot be the sole cause of knowledge. For the acquisition of a form by the intellect is a reduction from potency to act, and since "nihil autem reducitur de potentia in actum, nisi

⁷ Sum. Theol. I, 79, 3, c.

UNIVERSITY OF WINDSOR LIBRARY

per aliquod ens actu," then there must be posited a power which is in act which can cause the sensible species to become intelligible. It should be noted here that although the demonstration is pointing to a power of which most people would be entirely unaware, St. Thomas is not positing simply a guess or a probability, but rather a necessity: "Et haec est necessitas ponendi intellectum agentem."

The whole demonstration rests, as did the one in which it was seen that God could not be a body, on the proposition that nothing can be reduced from potency to act except by a being in act. As in the other demonstration, it is used as though it were a first principle or per se nota proposition. If the proposition is true then the conclusion must be true; but if the proposition is either not true, or if the truth of the proposition is not yet properly established, then the demonstration cannot be regarded as true or at least as properly established.

Are these demonstrations offered by St. Thomas sound? In other words, is he justified in positing the existence of an active power simply because he is aware of a potential one. It would seem, from the way in which St. Thomas uses the proposition, that he is accepting it as evident. At least, the absence of any explanation for his use of the proposition would lead one to conclude that he supposed that no explanation was needed.

UNIVERSITY OF WINDSOR LIBRARY

93391

Is St. Thomas justified in treating this as a per se nota proposition? It might be objected that the real reason for the acceptance of this proposition is that without it, the reduction from potency to act would, in a sense, defy intelligibility. For instance, without positing an agent intellect the process of knowing is not intelligible, for it cannot be seen how the object potentially known becomes actually known. To posit an active power in this case renders the process intelligible. However, this, in itself, does not justify the use of the proposition. For, simply, because something must be true according to the order in which the intellect functions, it is not necessarily true outside of that order, that is, in the physical order. Therefore the relationship between this proposition and the physical order is not yet established. What is clear is that the proposition is closely linked with St. Thomas' view of the real order.

We see evidence of this in his demonstration of the existence of God. In the first proof,⁸ he points out that there is an order of movers and things moved. That which is in act moves that which is in potency to a state of actuality. In another proof,⁹ he speaks of order in terms of causality. That which has being is the cause of being.

⁸ Sum. Theol. I, 2, 3, [Prima Via].

⁹ Ibid. I, 2, 3, [Secunda Via].

And again, in another proof,¹⁰ he sees an order of perfection in things. Certain things are more perfect and other things are less perfect. The use of the terms more and less indicates a relationship between things, and hence, order. In fact his 'proofs' for the existence of God can be taken as comprising a whole; that is, one proof, in which an order in things is seen, an order which leads to a first mover or first cause or a first in whatever particular order may be under consideration.

In the writings of St. Thomas, as in the works of Aristotle, order seems to be that which opposes random activity of any sort.¹¹ Random activity implies that activity of a being which has no relation to any other being. In this sense then, a motion can be considered random if it is caused by nothing, and if it is moving towards nothing. Order, on the other hand, in opposing random activity, implies an activity which bears a relation to some other. In this way, St. Thomas' proof of the existence of God is a proof based on order: the relation of moved to movent, effect to cause and less perfect to more perfect.

¹⁰ Sum. Theol. I, 2, 3, Quarta Via7.

¹¹ See p. 20, footnote 1. In these texts we can clearly see that for St. Thomas order implies relation: "Secundum quod quaedam ad alia ordinantur." In the highest sense, order can be considered, "quo omnia creata ordinantur in Deum." These texts seem to express clearly the idea that order is opposed to anything random.

In an article concerning the unity of God, St. Thomas has occasion to refer to the order in nature. In this particular article he wants to show that God, the cause of all things, must be one. To this end, he points out that,

Omnia enim quae sunt, inveniuntur esse ordinata ad invicem, dum quaedam quibusdam deserviunt. Quae autem diversa sunt, in unum ordinem non convenirent, nisi ab aliquo uno ordinarentur.¹²

It must, therefore, be said that God is one.

This particular article bears some examination. St. Thomas begins with the statement that all things are ordered. He does not attempt to prove this statement, but merely says that: "omnia enim quae sunt inveniuntur esse ordinata ad invicem, dum quaedam quibusdam deserviunt." Secondly, it is seen that these things are 'diverse'. Again, this is presumably an obvious fact that needs no demonstration. But diverse things need to be ordered by some cause. This, for our purposes, is the important statement in this text. For we have here, it would seem, an application of a proposition, similar to the act and potency proposition, as a cause for order in diverse things. To be a cause of order is to give something an act, that is, to move something from potency to act. Hence the reduction from potency to act is the cause of order.

¹² Sum. Theol. I, 11, 3, c.

This is, admittedly, a rather liberal interpretation of the text. It does, however, imply that there must be a cause for order. And how else could one arrive at this conclusion without regarding 'ordering' as the giving and reception of some activity. At least this much is clear: the proposition that 'all things are in order' is dependent on a prior proposition, for it is evident that order is caused. Since order is the giving of an act or the reducing from potency to act, it can be seen that this prior proposition must say that 'every reduction from potency to act is caused'. It further follows that the cause must itself be in act for nothing can cause that which it itself lacks. It would seem then that St. Thomas would regard the act and potency proposition as prior to the statement that "all things that exist are ordered."

Let us conclude with a brief resume of the positions of Aristotle and St. Thomas. Although Aristotle made very little use of the proposition in question in terms of act and potency, he did make frequent use of a number of other propositions which could be referred to as particular instances of the more general statement. It was further seen that in most instances, Aristotle used these propositions without demonstrating them, although in one text he did indicate that from a knowledge of order it could be seen that

every motion must be caused.¹³

Unlike Aristotle, St. Thomas makes frequent use of the proposition, 'no being can be reduced from potency to act except by a being in act'. In most cases, however, he does not make any attempt to justify the usage of this proposition, beyond defining the terms. And in the text which we have just examined, he indicates that order, rather than being prior to the act and potency proposition, is caused by it.

In general, there is, I believe, one criticism that could be justly levelled at these two philosophers: both failed to consider as a serious possibility the challenge of the sceptic, i.e. the reduction from potency to act which is uncaused. That this problem does not occur to them as a serious one is evident in the statement used by both of these men that 'whatever is in motion is either moved by itself or is moved by another'. This statement rests on the assumption that the motion of anything that is in motion is caused. Can this assumption be made? We must first take into consideration that the motion might be uncaused.

The second problem was how do we arrive at the knowledge of this proposition? Is it a first principle or can it be demonstrated? As we have seen, this question does not seem to have been answered clearly by either Aristotle or St. Thomas.

¹³ See above, pp. 16-17.

CHAPTER FOUR

That the act and potency proposition plays an important role in the philosophies of Aristotle and St. Thomas is evident from the texts we have considered. Both of these philosophers seem to infer that in describing an ordered universe, a proposition of this nature must be accepted. It has not been seen, however, whether either of them regarded this proposition as a first principle or a statement susceptible of demonstration. For the most part they seem to accept the proposition on its face value.

There is, in the Physics of Aristotle, a case in which motion seems to be the necessary result of order.¹ Order implies relation or connection. That is, what is ordered is not random. It can be seen, however, that random motion (or any random activity) cannot be caused activity, for causality relates an effect to a cause. Hence, every motion, indeed every activity, must be caused. From this, it follows that every reduction from potency to act must be caused by a being in act. In this way, then, it follows that since the universe is ordered, any change or motion must be referred to a cause.

This argument, however, could be reversed. If we

¹ See above, p. 17.

begin with any reduction from potency to act, it follows that there must be some kind of motion or change and, if we say that in any reduction from potency to act, there must be a cause which is itself in act, then it follows that every motion or change in the universe is related to another motion or change. But this is the type of activity which is referred to as ordered. Hence, we may begin with the act and potency proposition and arrive at the fact that things must be ordered.

This argument, seems to take on a circular character. If we begin with order, we are inevitably led to the formulation of the act and potency proposition. We can, however, begin with the act and potency proposition and, in the same way, arrive at order; i.e. the act and potency proposition demonstrated in the first argument can be turned around and used to demonstrate the very thing that was used to demonstrate it.

Before concluding as to the worth of this argument, let us first consider what Aristotle says concerning circular arguments in the Posterior Analytics. It is quite clear from the beginning that a circular argument does not constitute a demonstration:

Now demonstration must be based on premisses prior to and better known than the conclusion; and the same things cannot simultaneously be both prior and posterior to one another: so circular demonstration is clearly not possible in the unqualified sense of demonstration.²

² Aristotle, Posterior Analytics, 1.3 (72b 25).

Furthermore, it follows that if neither the premise nor the conclusion is prior to the other, this "theory reduces to the mere statement that if a thing exists then it must exist--an easy way of proving anything."³ What actually happens in a circular argument is that the premise must inevitably be identified with the conclusion.

Consequently, insofar as the relation of act and potency to order is concerned, we are left with the following problem: can either one be demonstrated from the other? For it is clear from what Aristotle has said that both cannot be at the same time demonstrated from and used to demonstrate the other. We are, therefore, left with three possibilities of which only one can be chosen: first, that our understanding of act and potency is prior to our understanding of order and that the latter must be demonstrated from the former; or secondly, that our understanding of order is prior to our understanding of act and potency and can be used to demonstrate the act and potency proposition; or thirdly, that neither act and potency nor order are prior to the other in which case they must be identified.

Before going into this problem at greater length, let us again inquire into the Posterior Analytics and consider what Aristotle says on propositions and demonstrations. Towards the beginning of this work, Aristotle summarizes his

³ Post. Anal. 1.3 (72b 34).

own position concerning demonstration: "our own doctrine is that not all knowledge is demonstrative: on the contrary, knowledge of the immediate premisses is independent of demonstration."⁴

Concerning premisses which cannot be demonstrated, Aristotle points out that "an immediate proposition is one which has no other proposition prior to it."⁵ Further, "the premisses of demonstrated knowledge must be true, primary, immediate, better known than and prior to the conclusion."⁶ To be better known can be understood in two senses: better known in the order of reality and better known to man. The former is more universal and furthest from sense while the latter is particularly nearest to sense.⁷

We must distinguish between realities in the world and propositions in the intellect. Simply because a certain proposition seems to facilitate explanation does not necessarily mean that it truly explains the world of reality. For instance, the proposition 'all things are ordered', may lead to conclusions which are invalid because the proposition may not be a correct expression of order in the world. On

⁴ Post. Anal. 1.3 (72b 18).

⁵ Ibid. 1.2 (72a 8).

⁶ Ibid. 1.2 (71b 20).

⁷ Ibid. 1.2 (71b 34).

the other hand, if the proposition in the intellect is an expression of things in the world, then its conclusions must follow as true. Similarly, act and potency may be found both in the world or in a proposition in the intellect. Hence a proposition is an intellectual expression. Before it can be used in a valid demonstration its truth as expressive of the real world must be established.⁸

Consequently, with regard to order vis-a-vis act-and-potency, if one is to be demonstrated from the other, it must be shown that the proposition of one is prior to and better known than the proposition of the other; that is, one proposition must be more universal than the other. And in this context, that which would seem to be referred to is that which is prior and better known in the least qualified way.⁹ If neither of these propositions can be regarded as immediate, it would seem that there must be another proposition prior to these from which each may be demonstrated.

How do we arrive at the first and immediate premisses? Our knowledge of these is, according to Aristotle neither innate nor is it derived from any higher state of knowledge. We must, then, arrive at our knowledge of these

⁸ Post. Anal. 1.2 (71b 24).

⁹ Ibid. 1.2 (72a 1). ". . . objects nearer to sense are prior and better known to man; objects without qualification prior and better known are those further from sense. Now the most universal causes are furthest from sense and particular causes are nearest to sense."

through sensation.¹⁰ Sense knowledge, however, is the knowledge of the particular. With regard to this point, Aristotle states that "though the act of sense perception is of the particular, its content is universal--is man, for example, not the man Galias." These, according to Aristotle, are very fragmentary universals, and must be used to arrive at more universal concepts such as the concept of the genus animal. This process must be continued until indivisible universal concepts are reached. And these are the first principles of demonstration.¹¹

For Aristotle demonstrative arguments cannot be circular. The premisses must be more universal and better known than the conclusion. Hence, if we want to demonstrate the act and potency proposition from our knowledge of order, it is necessary to show that our knowledge of order is prior to the act and potency propositions. That is, one of these must be understood as a first principle or more closely related to a first principle than the other.

We must, at this time, attempt to discover what the nature of a first principle is. Aristotle has pointed out that it is that which cannot be referred to an anterior principle.⁷ In order to gain further insight into this matter, let us return briefly to the writings of St. Thomas Aquinas.

In the Summa Contra Gentiles, St. Thomas mentions that there are certain universal principles, 'quae nihilus

¹⁰ Met. Anal. II.1. (1004^a-10).

¹¹ Ibid. II.3 (1004^a 14 ff.).

ignorat, sed sunt ab omnibus eodem modo et naturaliter cognita."¹² He then explains the difference between an indemonstrable principle and a conclusion. If a man is questioned on matters closely related to these principles,

. . . respondebit veritatem de his quae sunt propinqua principiis, habito respectu ad principia; et sic deinceps quousque virtutem primorum principiorum ad ea de quibus interrogatur, applicare potest. Ex hoc igitur manifeste apparet quod per principia prima, in eo qui interrogatur, causatur cognitio de novo.¹³

This shows clearly that St. Thomas agrees with Aristotle that the principles are the cause of the truth of, and are therefore prior to, the conclusions.

In the above text, St. Thomas indicates that a man can naturally know certain principles from which he derives his other knowledge. In fact, St. Thomas points out that it is the knowledge of principles rather than of conclusions which is most truly natural to man:

Si ita esset animae naturalis cognitio conclusionum sicut principiorum, eadem esset sententia apud omnes de conclusionibus sicut de principiis: quia quae sunt naturalia, sunt eadem apud omnes.¹⁴

Since, however, not all people agree as to conclusions, but only as to principles, it follows that principles alone are

¹² Saint Thomas Aquinas, S. Thomae de Aquino . . . Summa Contra Gentiles, Torino /Turin/: Casa Editrice Marietti, 1934 /Editio Leonina Manualis/, Liber 11, Cap. 83 [p. 1997].

¹³ Summa Contra Gentiles, 11, 83 [p. 1997].

¹⁴ Ibid. 11, 83 [p. 1997].

natural to us.¹⁵

Scientific knowledge, then for St. Thomas comes as a result of our knowledge of first principles, the knowledge of which we have naturally. His point here is similar to Aristotle's. For Aristotle, scientific knowledge demands a starting point, an indemonstrable principle which is the cause of truth in all of the conclusions which fall under it. This type of knowledge as we have seen St. Thomas refer to it, finds its starting point in indemonstrable principles which are naturally known by the intellect and in turn are the cause of the truth in scientific conclusions.

In addition, as we have seen in Aristotle, the first principles, in order that they may be the cause of their conclusions, must be the most universal, which as we have seen entails having the least qualifications. St. Thomas reiterates this position when he points out that,

Intellectus igitur, cum sit una vis, est eius unum naturale obiectum, cuius per se et naturaliter cognitionem habet. Hoc autem oportet esse id sub quo comprehenduntur omnia ab intellectu cognita: sicut sub calore comprehenduntur omnes calores, qui sunt per se visibiles. Quod non est aliud quam ens. Naturaliter igitur intellectus noster cognoscit ens, et ea quae sunt per se entis in quantum

¹⁵ Summa Contra Gentiles, II, 83 [p. 1997]. By the expression 'natural', St. Thomas seems to mean that which is initially present. This becomes clear from his references to the non-natural which "acquirimus per id quod est naturale:" The natural is that initial 'state' from which the non-natural is produced.

huiusmodi; in qua cognitione fundatur primorum principiorum notitia, ut non esse simul affirmare et negare, et alia huiusmodi.¹⁶

The above text serves to point out St. Thomas' view of the nature of first principles. We know because of the power of our intellect, but since the intellect is only one power, it can have only one proper object. Yet, in another sense, since all existing things are knowable, all of these things are objects of the intellect. Hence, the one natural object of the knowing power must at the same time contain under it, as it were, all things knowable by the intellect. But since the intellect can know all things, the natural object of the intellect must be that under which is contained all things, that is, being. For of all that we know, being is the most universal. The first principles are founded on this knowledge of being. Scientific knowledge is the result of first principles. St. Thomas refers to them as the cause of the conclusions which fall under them. He states his own position clearly in the Summa Theologiae, when he points out that,

Et propter hoc etiam circa illas propositiones errare non potest, quae statim cognoscuntur cognita terminorum quidditate, sicut accidit circa prima principia: ex quibus etiam accidit infallibilitas veritatis, secundum certitudinem scientiae, circa conclusiones.¹⁷

¹⁶ Summa Contra Gentiles, II, 83 [p. 197].

¹⁷ Sum. Theol. I, 85, 6, c.

It is evident from the texts we have seen that, for Aristotle and St. Thomas, truly scientific knowledge results from first principles or indemonstrable propositions. And it is further agreed by these two philosophers that these principles cannot themselves be reached by demonstration, nor are they known by some sort of innate idea or concept. Aristotle states that we must arrive at them through some inductive process, while St. Thomas declares them to be known naturally.

It can be seen from this that the act and potency proposition must be either a first principle or a conclusion from some first principle. We must, therefore, inquire into our knowledge of being, upon which all first principles are related to discover whether either the order proposition or the act and potency proposition can be considered a first principle or how they can be demonstrated from a first principle.

CHAPTER FIVE

The solution to the problem with which we are concerned in this thesis rests in establishing a causal relation between potentiality and actuality. It has been seen¹ that potency and act are related in that we know the potency of a thing in terms of some corresponding act; i.e. a potency is always the potency of some specific actuality. In this way potency may be said to be related to act. It is also clear² that this type of a relationship cannot be used to establish a relationship between effect and cause.

Hence we must go beyond the mere definition of the terms 'potency' and 'act', to establish whether the one is related causally to the other. To accomplish this, let us first consider how we come to know potency in a thing. It is clear that as regard to all things that we know, we must know their activity, for we know the activity of a thing through its act.

Now, although we can have a concept of being which can be extended to all things, we cannot say that being can be univocally predicated of all things.³ For

¹ See above, p. 10

² See above, p. 10 - 11.

³ See Sum. Theol. 1, 13, 6, c.

a thing is only insofar as it acts. And the activity of the thing depends on the form of the thing.⁴ That which has not the form of a dog can not have the act of a dog. Or, that which has not the form of motion can not actually be in motion. Moreover, since nothing exists of which you cannot ask the question, 'what is it?', it is clear that all things which are have forms. In fact, it is upon the acquisition of a form that a thing begins to exist. Thus, when one animal generates another, another form is produced, and hence another being.⁵ In this sense, form is the vehicle of being. And since a thing is only insofar as it is in activity, then form is also, in this sense, the vehicle of activity. That which has the form has the activity. Thus that which has the form of motion has the actual motion. And conversely, that which lacks the form of motion cannot have the motion. Now, since all things do not have the same activity, as for instance, the activity of one animal differs from the activity of another, then activity cannot be univocally predicated of all things, but must be predicated upon consideration of the form of the thing. Similarly, being, which is in a sense dependent on the form of the thing, cannot be predicated

⁴ See Summa Contra Gentiles, 11.55 [p. 147]. "Essa autem per se consequitur ad formam."

⁵ See Ibid. 111.65 [p. 297]. Here St. Thomas mentions that man is NOT the cause of human form but is just the cause of the form coming to be in matter. Nonetheless, the man begins to be when the form begins to be.

univocally of all things.

Now, that all things are not pure being and pure act is evident from a study of motion. That things are in motion is evident to the senses. As Aristotle has said: "the existence of motion is asserted by all who have anything to say about nature."⁶ Against the objection of the skeptic who might say that there is no motion, there seems to be no argument.⁷ Motion is not an assumption that need be proved. It is rather a fact that need merely be recognized.

Now from the fact that things are in motion, it is evident that things change. Motion is between contraries. That which is in motion must move from something to something. And that from which it moves cannot be identified with that to which it moves, for in this case it is obvious that there would be no motion. But since motion, as has already been pointed out, is evident, it follows that motion must involve contraries.⁸

A motion from one contrary to another is a change.⁹ In every change new form is acquired. For example, when a

⁶ Phys. viii.1 (250b 15).

⁷ See Ibid. 1.1 (184b 25 - 185a 7).

⁸ See Ibid. v.5 (229a 30 - 229b 9).

⁹ Ibid. v.5 (229a 30). "Motion is a change from a particular subject to a particular subject."

man's hair changes from black to gray, the form of grayness replaces the form of blackness. Similarly, when something begins to move, it acquires a new form of motion and loses the form associated with rest. Something in motion is continually acquiring and losing forms as it changes its position. For a thing is and acts through its form, and to acquire a new activity is to acquire a new form. But to acquire motion, or to be in motion, demands the acquisition of a new activity for the activity of a body in motion is different from the activity of a body at rest. Moreover, the activity of a mover changes as the mover moves, and, since the position of the mover is always changing, the mover must be continually acquiring and losing forms in relation to its position. Consequently, it follows that motion necessitates the acquisition of a form, and, therefore, motion is a change.

Let us now examine the process of change. Change, as we have already seen, involves contraries in that it is always from something to something. As Aristotle has pointed out, a thing changes insofar as it is capable of changing. In this sense change involves potency. For a change is movement from potency to act.¹⁰ An example of this can be found in the examination of the thing which changes from the state of rest to the state of motion.

¹⁰ Sum. Theol. I, 2, 3, c. Prima Via.

Because the thing has changed from rest to motion, we can say that this thing while it was at the state of rest, was capable of motion, that is, potentially in motion.

We cannot deduce from this knowledge, however, that the thing must have been acted upon in order that it be actually in motion.¹¹ For to say that a thing is potentially in motion is to say that it is capable of acquiring a new form. To say that it is actually in motion means only that it actually possesses this form. From our knowledge of potency based on change alone, there seems to be no principle causally relating potency to act.

We must go beyond this first impression of potency to discover how a thing in potency can be reduced to act. It is clear that nothing has a potency for all things. For all beings which change are limited as to what which they can become. An animal, for instance, without wings, has no potency to fly. Nor has a fish the capability of breathing. In this sense it is clear that the potencies of things are limited. And, by limited we mean not limited in the sense of a potency not being fulfilled because of some external

¹¹ Etienne Gilson, The Christian Philosophy of St. Thomas Aquinas, trans. L. K. Shook, C.S.B. (New York, 1956). Gilson considers motion in terms of act and potency, particularly in his discussion of the Prima Via. His discussion, however, seems to be of little value to this work. Rather than being critical, it simply appears to be a re-statement of what St. Thomas says. The act and potency proposition is not questioned here but seems to be accepted on its face value. (See pp. 59-60).

power preventing its fulfilment, such as inactive senses might prevent the fulfilment of the potency of the intellect; we mean rather the limitations of the thing itself, for as we have seen there are certain things for which some beings have no potency.

It follows from what has been said that the potentiality of the thing is determined by its nature. The reasons for this can be more clearly seen in the following. All things act according to their nature. A dog acts as a dog because it is its nature to do so. And because the nature is limited to 'dog', a dog has no potency to take on the activity proper to another animal. Now, with regard to a being which is in act, to know the nature of the thing is the same as to know the activity.¹² In relation to motion, when the nature of a thing in motion is understood, its activity is also understood.

Nature is not, however, simply expressive of the activity. For, as we have seen, things are not always in activity. A boy, for instance, is not actually an adult since he lacks the accidental form required to become an adult. He is, however, potentially an adult because it is his nature to become one. Nature, in this sense, is expressive of the end of the thing. That is, to know the nature of

¹² See above, p. 12.

the thing is not merely to know the activity of thing, but it is also to know the potentiality of the thing.¹³

Now we have seen that a thing can change only insofar as it is capable of changing. It is also clear that that to which the potency of the thing extends is determined by its nature. Nature is, in this way, the cause of the change in the thing. It exercises causality in that it is according to it that the thing changes. Nature, as the cause of the potentiality of the thing, is, in a way, the cause of the reduction of potency to act. A boy becomes a man because it is his nature to do so. In this sense, nature is the cause of change: change is the movement from potency to act; that which is in potency is capable of being in act, and is determined to certain acts because of the nature of the thing, as a heavy body, because of its nature, is potentially in downward motion; since that which the thing is capable of becoming is determined by nature, then the becoming or change is in this way caused by nature.

Nature is the cause of all activity insofar as it orders the activity of all things. For order means simply that all things act according to their natures. It is in this way that order is related to nature: all things move

¹³ Metaph. v.4 (1015a 17). "And nature in this sense is the source of movement of natural objects, being present in them somehow, either potentially or in complete reality."

according to their natures; and since all things move according to their nature, nature is a cause of motion of things. Nature does not cause the motion itself but rather causes the ordering of the motion.¹⁴

In terms of activity and potency, this can be explained as follows. A thing is in activity insofar as it possesses the form of the activity; a thing is in potency insofar as it is capable of possessing the form of the activity. Now we have already seen that the potentiality of the thing is determined by its nature. In this sense, the acquisition of a new form, that is the reduction from potency to activity, is caused by the nature. Now the nature itself does not supply the form which is acquired in a change, but rather directs the thing which undergoes change as a final cause.¹⁵

It may be argued that a motion can be caused in respect to finality and uncaused in respect to efficiency; i.e. that the same motion can be at the same time caused and uncaused in respect to different causes. For example, when we perceive any ordered motion, of which an efficient

¹⁴ *Phys.* viii.1 (252a 12). ". . . nature is everywhere the cause of order.

¹⁵ *Metaph.* v.4 (1015a 10). Here nature is identified with essence as the "end of the process of becoming." Nature by directing the thing to its end, acts as a final cause; i.e. the end of every natural change is the fulfillment of the nature.

case is not apparent, both as we soon noticed about the
order, we conclude that the motion is caused. For order is
the effect of nature; and nature is the cause of motion.¹⁶
Therefore, insofar as this motion is ordered, it is caused
by the nature of the thing.

Therefore, the proposition, that 'no being in
potency can be reduced to act except by a being in act',
is true since nature causes every reduction from potency
to act. However, since nature is a final cause, it was only
shown that this proposition is true in regard to final
causality. According to this viewpoint there is no way of
knowing whether the motion has an efficient cause or not,
where a moving cause is not apparent.

¹⁶ Sheila Brennan, "The Meaning of Nature," The Thomist,
1961, (pp. 383-401). In this article, it is seen that
there can be a number of meanings of the term 'nature'.
It is concluded, however, that in every instance, "nature
is considered . . . in one way or another as principle of
movement." Moreover, insofar as the nature determines
the motion to an end, it is also the cause of movement.

CHAPTER SIX

Concerning the view that it is possible that a thing in motion may have no efficient cause whatsoever, let us examine the classical objection formulated in the philosophy of David Hume. In A Treatise on Human Nature, one of the central themes is causality.

Hume begins the Treatise with an explanation of human knowledge.

All perceptions of the human mind resolve themselves into two distinct kinds, which I shall call Impressions and Ideas. The difference betwixt these consists in the degree of force and liveliness, with which they strike upon the mind, and make their way into our thought or consciousness. Those perceptions which enter with most force and violence, we may name impressions; and, under this name, I comprehend all our sensations, passions, and emotions, as they make their first appearance in the soul. By ideas, I mean the faint images of these in thinking and reasoning¹

To clarify the relationship between impressions and ideas, he later adds,

. . . that all our simple ideas in their first appearance, are deriv'd from simple impressions, which are correspondent to them, and which they exactly represent.²

In this way Hume established the fact that all of our ideas are related to impressions. They are, in fact,

¹ David Hume, A Treatise of Human Nature, ed. L. A. Selby-Bigge (Oxford, 1888). I, I, I [p. 1].

² Ibid. I, I, I [p. 47].

distinguished as different kinds of perception merely because of their vivacity and because the one is always prior to the other.³ Although impressions and ideas can be distinguished in this way, there is a more important way in which they are related to each other: "That idea of red which we form in the dark, and that impression which strikes our eye in sunshine, differ only in degree, not in nature."⁴ From this it is clear that Hume's ideas are related to his impressions as an image is related to a sensation. These impressions and ideas make up as we have seen, "all the perceptions of the human mind."

When examining the content of the mind, we sometimes find that the representation of an impression "retains a considerable degree of its first vivacity." This leads Hume to posit the existence of the memory, which "preserves the original form in which its objects were presented."⁵ A second principle, which finds in the mind, is the imagination to which he gives the liberty "to transpose and change its ideas."⁶

". . . All simple ideas may be separated by the imagination and may be united again in what form it

³ Hume, I, I, I [p. 27].

⁴ Ibid. I, I, I [p. 37].

⁵ Ibid. I, I, III [p. 87].

⁶ Ibid. I, I, III [p. 107].

pleases."⁷ Concerning this separation and uniting of ideas, Hume points out that chance alone could not account for this. There is, behind this activity, a 'uniting principle' which acts as a "gentle force" on the imagination. The force behind the uniting of ideas acts according to certain qualities by which the ideas are related:

The qualities, from which this association arises, and by which the mind is after this manner convey'd from one idea to another, are three, viz. Resemblance, Contiguity in time or place, and Cause and Effect.⁸

It is the relation of our ideas in terms of cause and effect that we must now consider.

While the resemblance and contiguity of ideas are relations that lead nowhere, with regard to cause and effect there is "a necessary connexion to be taken into consideration." The problem which Hume sets up for himself, then, is: "For what reason [do] we pronounce it necessary, that everything whose existence has a beginning, should also have a cause."⁹

Hume answers the problem in this way:

But here is an argument, which proves at once, that the foregoing proposition is neither intuitively nor demonstrably certain. We can never demonstrate the necessity of a cause to

⁷ Hume, I, I, IV [p. 107].

⁸ Ibid. I, I, IV [p. 117].

⁹ Ibid. I, III, II [p. 78].

every new existence, or new modification of existence, without shewing at the same time the impossibility there is, that any thing can ever begin to exist without some productive principle; and where the latter proposition cannot be proved, we must despair of ever being able to prove the former.¹⁰

Hume points out that some philosophers argue that since all objects come into existence at a certain time and in a certain place, there must be some cause to fix its beginning in time and place, or else it will always remain in "eternal suspense." He asks, however,

Is there any more difficulty in supposing the time and place to be fix'd without a cause, than to suppose the existence to be determin'd in that manner? The first question that occurs on this subject is always, whether the object shall exist or not; The next, when and where it shall begin to exist. If the removal of a cause be intuitively absurd in the one case, it must be so in the other: And if that absurdity be not clear without a proof in the one case, it will equally require one in the other.¹¹

That is, in order to use space and time to demonstrate that every thing which begins to exist must have a cause, it must also be demonstrated that time and place have a cause. Since the latter can be supposed to be fixed without a cause, then the former may also be supposed to be uncaused.

Similarly, if it is argued that, if the existence of a thing is not caused by another, then it must be caused

¹⁰ Hume, I, III, III [p. 72].

¹¹ Ibid. I, III, III [p. 80].

by itself, Hume replies:

But to say that anything is produc'd, or to express myself more properly, comes into existence, without a cause, is not to affirm that 'tis itself its own cause; but on the contrary in excluding all external causes, excludes a fortiori the thing itself which is created. An object, that exists absolutely without any cause, certainly is not its own cause; and when you assert, that the one follows from the other, you suppose the very point in question, and take it for granted, that 'tis utterly impossible any thing can ever begin to exist without a cause, but that, upon the exclusion of one productive principle, we must still have recourse to another.¹²

Those who hold this position are, according to Hume, evading the real problem. Hume's position is, then, that the proposition "that nothing can ever begin to exist without some productive principle," cannot be demonstrated.¹³

In regard to the act and potency proposition, it is clear that it falls against the argument of Hume. Both the proposition against which Hume is arguing and the act and potency proposition state that prior to any change in the activity of anything there must exist something which

¹² Hume, I, III, III /p. 817.

¹³ A number of Thomists take refuge in this argument. Gardell, for instance, states that all we must do is consider the logical possibilities of "whatever is moved": in this case, he states, three possibilities avail themselves; that "whatever is moved" is moved by nature alone, or by itself alone, or by nature and by itself simultaneously. Although this is a valid reconstruction of St. Thomas' argument, it nevertheless fails to take into account this cogent objection of Hume. See H. D. Gardell, O.P., Introduction to the Philosophy of St. Thomas Aquinas, trans. John A. Otto (St. Louis, 1958), p. 138.

is causally responsible for that change. Therefore, if Hume's objection is valid, the act and potency proposition cannot be demonstrated.¹⁴

How then, are we to regard the demonstration of this principle as given in the previous chapter? This demonstration, stated simply, argues that because the activity of all things is toward an end determined by their nature, the act and potency proposition must hold true, at least in regard to final causality. Hume argues that we cannot know that any particular activity demands a cause. The explanation for this obvious contradiction lies in the fact that Hume refuses to take into consideration an all/

¹⁴ Brother Benignus has an interesting objection against the Humeian position that things might be "naturally in motion without any cause of their motion". His position is based on the idea that such a statement contradicts Aristotle's definition of motion: it "must deny that motion is the continuing actualization of potency". Although Hume himself does not speak of motion in terms of potency and act, a "Humeian" position might be stated in those terms, i.e. motion is the actualization of potency without a cause. In other words, Hume's position would simply state that a being can move from potency to act without the aid of any being in act. Brother Benignus' objection then is nothing else than the assumption of the validity of the act and potency proposition, an assumption we have seen, which is not necessarily justified. See Brother Benignus, F.S.C., Nature, Knowledge and God, (New York, 1947), p. 80.

Herman Reith, C.S.C., The Metaphysics of St. Thomas Aquinas, (Milwaukee, 1958). See pp. 158-160. Reith errs in the same way. Against the objection that there might be no causality, he assumes a causal relationship between potency and act which is true but cannot be demonstrated. It is clear that neither of these objections solve the problem set up by Hume.

important premise: that the activity of a thing is determined by the nature of the thing.

To say that activity is determined by nature indicates that the nature of a thing can be known. To know the nature of a thing is to know that towards which the activity of the thing necessarily tends. For instance, when we say that fire necessarily produces heat, we purport to have some understanding of the nature of fire. According to St. Thomas, because things are naturally determined to some ends, man may, in a limited way, predict the future.¹⁵ Hence, to know the nature of the thing, is to know the final cause of the activity of the thing.

It is this very knowledge of the nature of the thing that Hume will not allow:

There is no object, which implies the existence of any other if we consider these objects in themselves, and never look beyond the ideas which we form of them.¹⁶

There cannot be, for Hume, a certain knowledge of a thing as directed towards an end. Since no idea considered in itself implies anything else, then there is no basis in Hume for talking about things as natures. To speak of a thing as a nature must be in terms of its finality, and

¹⁵ Sum. Theol. I, 86, 4, c. "Sed prout sunt in suis causis, cognosci possunt etiam a nobis. Et si quidem in suis causis sint ut ex quibus ex necessitate proveniant, cognoscuntur per certitudinem scientiae; sicut astrologus praecognoscit eclipsim futuram." This could also apply to predicting that heat will be produced by fire.

¹⁶ Hume, I, III, VI [p. 86].

Therefore, in terms of something which it may not actually have. Hence, to know a nature is also to know, by necessary implication, an end or, in Hume's terms, another existence. It must be concluded then that the writings of Hume bear out the fact that he does not regard things as living natures, or, at least, he does not act as though we do know the natures of things.

It would serve no purpose here to attempt to argue against Hume's position as such. The difference lies in the very principles of philosophy. Nature must be seen in things and accepted. If it is not seen or accepted no amount of argumentation will change this. We must conclude, therefore, that insofar as it has been shown that every movement from potency to act has a final cause, Hume's argument has no bearing.

It does, however, have a bearing on whether an activity may take place without there being an efficient cause. What Hume has really pointed out is the fact that there is a real possibility of an activity being uncaused. He does not prove that any activity is in fact uncaused, but simply indicates that it might be uncaused. Hence, it remains to discuss whether a change which moves towards a natural end can be random with reference to an efficient cause.

CHAPTER SEVEN

In order to show that final causality cannot operate without efficient causality, it is first necessary to go more deeply into the nature of final causality. We have seen that things which move move towards some end. And we have also seen that this end is the final cause of the motion. Now, then, does the end, or final cause, effect that which is in motion? We have seen that the answer to this question is that the final cause gives order to the motion. It remains, however, to determine the way in which order is given to the thing that is in motion. It would seem that the effect of final causality could be adequately expressed here by the term 'direction'.¹ The final cause, as the end of the activity, effects the motion by giving it direction. Thus in the case of a projectile, such as an arrow, it is the target rather than the archer which is most properly responsible for its direction.

It can be argued here that since the archer is quite obviously responsible for the projecting of the arrow

¹ Since all motion is to a particular end (see p. 47) then the effect of the final cause may be considered as 'directing' the motion of the thing to its proper end.

he is also responsible for the direction. In addition, it would seem that in certain cases, for instance if the archer shot the arrow blindly in the air, when there is no intended end, the archer surely must be solely responsible for the direction of the arrow.

Against this argument, it must be pointed out that even leaving aside the causality of the archer, this does not mean that there is no final causality involved in such an action. It must be remembered that the arrow is not simply an instrument of the archer. That is, the arrow is itself an entity,² and as such, has a nature of its own. Consequently, the end of the motion of the arrow will be according to the nature of the arrow. That is, because of its nature as arrow, an arrow in motion follows a certain path. It follows that, the end of a moving arrow is that to which the arrow according to its nature tends. Furthermore, it can be seen that to achieve its end the arrow naturally assumes a certain direction. In this way, then, it is clear that that which is most responsible for the direction of a motion is the end or the final cause. In the case where the archer aims the arrow at a target, it is a matter of the archer using the arrow as an instrument, attempting to project the arrow in such a way so that that at which he is

² In reality, the end of the motion of the arrow must always be considered in relation to the end of the archer. However, if you consider only the arrow itself, as a thing in motion, it still is in motion towards an end.

aiming and the end of the natural movement of the arrow,³ coincide. It follows, therefore, that the final cause affects the thing in motion, by giving direction to its motion.

In regard to what has been said above, that the final cause is responsible for the direction of the motion, the following problem arises. Can the final cause be responsible for the direction without being the efficient cause of the motion? That is, to cause direction is, in a sense, to cause motion; to direct is to move. And in this sense, the final cause actually becomes an efficient cause. In answer to this problem, it would appear to be perfectly true to assert that that which actually directs a motion is an efficient cause. However, we must here make a distinction between direction and directing. The final cause, as the end of the motion is the cause of the direction of the motion. This final cause, however, qua final cause must by its nature lack efficacy. Hence the final cause cannot itself be the cause of the directing of the thing.⁴ In order, therefore, that a thing in motion assume a direction towards its end it must be directed to this end by an efficient cause.

³ Every physical thing, because of its size and shape, will assume a motion which is proper to it, or natural.

⁴ See Metaph. xii.6 (1072b 4). "The final cause, then, produces motion as being loved." It cannot therefore be confused with moving cause.

And it is in this way that we see the necessary coincidence of final and efficient causality. As we have seen, efficient causality by itself can only account for random motion. And we have further seen in the preceding paragraph that while final causality can account for the direction of the motion, it lacks the efficacy to itself direct the motion.⁵

Thus, it follows that in every instance of a thing moving towards an end, there must be present both final and efficient causality. For as soon as the motion of the moving thing assumes a direction towards an end, final causality becomes evident. The final cause can only be responsible for this direction as a final cause. That is, it lacks the efficacy to itself move the thing in any direction. Therefore, it necessarily follows that a motion which has direction cannot be due entirely to the final cause of the motion.

Moreover, from this it may be concluded that there is an efficient cause for all motion. For, it has been seen that in every motion which assumes a direction towards an end, there must be something which has the efficacy to direct the motion towards the end. And that which gives

⁵ Phys. 111.2 (202a 9). We have already seen that an object in motion is continually acquiring new forms. Although this thing moves 'for the sake of' an end this end cannot give the form: "The mover or agent [efficient cause] will always be the vehicle of a form."

the thing the motion towards the end is the efficient cause. There is, however, no instance of motion which is not directed towards an end.⁶ For, as we have seen, all things operate according to their natures. But, to operate according to a nature is to move towards an end. Thus, only things which are not natures could be capable of moving in random motion. It is evident, however, that there can be no thing which is not a nature; for all motion is ordered and intelligible, and, as Aristotle has shown, order demands nature.⁷ There can be, therefore, no such thing as random motion, that is, uncaused motion, either in terms of finality or efficiency.

Further, it can be seen that with respect to both efficiency and finality the motion is one.⁸ That is, the directing of the motion, and the direction of the motion, and the motion itself, are all one. From this it can be seen that there must be a relationship between the final and efficient cause. And it can further be seen that the first cause

⁶ Summa Contra Gentiles, 111.3 [p. 225]. "Omnis actio et motus est propter aliquam perfectionem."

⁷ See above, p. 17.

⁸ Sum. Theol. I, 44, 4, c. "Eat autem idea finis agentis et patientis, inquantum huiusmodi, sed aliter et aliter: unum enim et idea est quod agens intendit recipere."

of motion is the final cause. That is, the final cause causes the efficient cause to cause the activity.⁹

The necessity of efficient and final causality and their interrelation is seen quite clearly in the example given above--in the case of the archer shooting the arrow at the target. The archer is obviously the efficient cause and the target is the final cause. The presence of the end moves the efficient cause to put the object in motion. There are, however, other cases in which the causality is not quite so evident. I will discuss briefly two of these.

The first of these is generation: that is, the coming to be of a thing, for example, an animal. In generation, the first thing which is obvious is that one animal produces another; that is, the parent is the efficient cause of its offspring. What is not so evident, however, is the final cause of the end of generation. In regard to this problem there are two possible solutions. The one is that that which is first produced, the fetus, is the end of the act of generation. The other is that the fully grown mature animal is the end. If we say that the end of generation in animals is the fetus, then we must explain the change from fetus to maturity. That is, we must explain this latter change in terms of efficient and final causality. What is

⁹ Summa Contra Gentiles, iii.17 [p. 242]. "Finis inter alias causas primatum obtinet, et ab ipso omnes alias causas habent quod sint causae in actu: agens enim non agit nisi propter finem."

the final cause; that is, what gives direction to the growth? It is evident from sense observation that that to which all animals naturally tend is maturity. In other words a puppy grows into a mature dog, a calf into a cow, etc. That, then which gives direction to growth is fulfilment, that is a fulfilled nature.

What is the efficient cause of growth; that is, what is the efficient cause of the fetus growing to maturity? Could it be the food and nutrition which appear to be a cause of growth? This does not appear likely because there is no apparent relationship between nutrition as an efficient cause and maturity as a final cause. In this sense, the growth imparted by the nutrient would be seemingly random as was the motion of the arrow shot blindly by the archer seemingly random. In the latter case, however, the nature of the arrow prevented the motion from being random. Could this argument be applied to the case under consideration? That is, could it be that the nature of the fetus directs the growth given by the nutrients toward maturity?

To answer this question it must be remembered that the mature animal is a fulfilled or complete animal, and that a fetus is, in this sense, only an incomplete animal. It follows from this that the nature of a fetus is also incomplete. The nature of a fetus stands to the nature of the

mature animal as a being in potency to a being in act. Therefore, the nature of the fetus cannot be a cause of the growth to maturity. That is, since the fetus is only potentially fulfilled, it cannot be responsible for its own fulfilment. It follows therefore, that since the fetus cannot direct itself towards maturity, that which produces the fetus must itself direct it towards maturity. Therefore the end of generation is the mature animal. The fetus, rather than being the end of generation, is, in a sense, the beginning of generation. The generator, which is actually fulfilled, directs the fetus, which is potentially fulfilled, towards actual fulfilment. The growth from fetus to fulfilment is, in this sense, one motion imparted by the generator with the fulfilled animal nature as the end.

The second difficulty which will be discussed here is that of circular or rotary motion. Let us take for example the motion of the moon around the earth. It is clear that the moon is moved according to its nature by a final cause. The problem here is that the motion of this body is apparently uncaused, i.e. not efficiently caused. Could this not be a case of a thing in motion which is not moved by another? In light of what we have said, this cannot be true. A body moving in such a manner is continually assuming new directions and new positions. But that to which the body is tending, as a final cause lacks the efficiency to be itself solely responsible for these changes. There must, therefore, be an

efficient cause of these changes. However, it might be objected that the motion of the moon, being circular, is the end of its nature; that is, that the motion is the activity of the moon. In this case, however, there would be no change, i.e. no movement from potency to act since the motion would be the end of the thing. What we would have here would be motion but without change; that is there would be no transition from potency to act. It can be seen, therefore, that even if motion and end are one, a highly unlikely position, the act and potency proposition remains true: no being in potency can be reduced to act except by a being in act.

In conclusion, it has been established that the act and potency proposition must be true in order to explain motion. And it can be seen further that this proposition can not properly be regarded as a principle, in that it can be demonstrated. It follows from this that one should be able to arrive at this conclusion through a scientific demonstration. That is, beginning with certain truths one should, through the use of the syllogism arrive at the act and potency proposition as a conclusion.

The argument may be put in syllogistic form. We are attempting to show that every motion requires both a final and an efficient cause. We will begin by demonstrating the necessity of a final cause. From observation we see that

every motion is a change. And we see also that every change is orderly:

A Every change is orderly
 Every motion is a change
 Therefore, Every motion is orderly

By observing the way in which things operate, it is evident that order is caused by the nature of the thing. And in the same way, it is clear that nature tends towards an end:

B Everything natural tends towards an end
 Every orderly motion is natural
 Therefore, Every orderly motion tends towards an end

By using the conclusion from syllogism A as the minor premise and the conclusion from syllogism B as the major premise:

C Every orderly motion is to an end (Concl. of B)
 Every motion is orderly motion (Concl. of A)
 Therefore, Every motion is to an end

But the end of a motion is, by definition, the final cause:

D Every end is a final cause
 Every motion is to an end (Concl. of C)
 Therefore, Every motion has a final cause

It is concluded, therefore, that every motion has a final cause. Moreover, by definition again, it is known that every reduction from potency to act is a motion. Therefore, the following demonstration is true:

Every motion has a final cause (Concl. of D)
 Every reduction from potency to act is a
 motion
 Therefore, Every reduction from potency to act has a
 final cause

Therefore, that no being in potency can be reduced to act except by a being in act is demonstrated scientifically in relation to final causality.

It remains then, to demonstrate that every reduction from potency to act has an efficient cause. We begin by observing the fact that every ordered motion is in a direction:

F Every orderly motion is in a direction
 Every motion is orderly motion (Concl. of A)
 Therefore, Every motion is in a direction

We have further seen by a dialectical argument that direction requires a director. That is, in order that a thing assume a direction there must be something which has the efficacy to move it in that direction:

G Everything with direction has an efficient
 cause
 Every motion has direction (Concl. of F)
 Therefore, Every motion has an efficient cause

And it follows from this therefore, as in syllogism E, that every reduction from potency to act has an efficient cause.

In this way the basic objection as voiced by Hume and others is answered. There is no way in which a motion could exist without having an efficient and a final cause. Since all motion assumes a direction towards an end, it is quite clear that all motion has a final cause. However,

since final causality cannot itself be responsible for the direction because it lacks the efficacy to impart motion, then all motion needs an efficient as well as a final cause. And since all motion is a reduction from potency to act it necessarily follows that 'no being in potency can be reduced to act except by a being in act'.

The proposition is therefore true and can be demonstrated. It is necessary but not per se nota. It may be itself used in demonstration, for as we have seen, a true proposition in a premise leads to a true conclusion. And because of this, the act and potency proposition, since it is itself expressive of order must assume an important role in any philosophy of order.

BIBLIOGRAPHY

- Aristotle. The Works of Aristotle, ed. W. D. Ross, 3d ed. Oxford: Oxford University Press, 1949-1956.
- Benignus, Brother, F. S. C. Nature, Knowledge and God. New York: Bruce Publishing Co., 1947.
- Brennan, Sheila. "The Meaning of Nature," The Thomist, XXIV (1961), 387-404.
- Gardeil, M. D., O.P. Introduction to the Philosophy of St. Thomas Aquinas, trans. Joan A. Otto. St. Louis: E. Herder Book Co., 1958.
- Gilson, Etienne. The Christian Philosophy of St. Thomas Aquinas, trans. L. K. Snook, O.S.B. New York: Random House, 1956.
- Hume, David. A Treatise of Human Nature, ed. L. A. Selby-Bigge. Oxford: Clarendon Press, 1888.
- Owens, Joseph, C.Ss.R. "The Problem of the Prima Via," Modern Schoolman, XXX (1952), Part I, 159-171.
- Reith, Herman, C.S.C. The Metaphysics of St. Thomas Aquinas. Milwaukee: The Bruce Publishing Co., 1958.
- Thomas Aquinas, Saint. Sancti Thomae Aquinatis . . . in Metaphysicam Aristotelis Commentaria, Cura et Studio M. R. Cathala . . ., 3 ed. Turini [Turin]: Marietti, 1935.
- _____. Summa Thomae de Aquino . . . Summa Contra Gentiles, Editio Leonina Manualis. Torino [Turin]: Casa Editrice Marietti, 1934.
- _____. Sancti Thomae Aquinatis . . . Summa Theologiae, [. . . e Textu critico leoniano . . .] [Madrid]: Biblioteca de Autores Cristianos, 1951.
- _____. Commentary of the Metaphysics of Aristotle, trans. J. P. Rowan. 2 vols. Chicago: Henry Regnery Co., 1961.

Thomas Aquinas, Saint. Exposition of the Posterior
Analytics, trans. Pierre Conway, O.P. Quebec:
M. Doyon, 1956.

VITA CURRICULUM

- 1941 Arrived in Canada from Europe in Toronto, Ontario, Canada, on September 21, 1941.
- 1943 In September, 1943, he entered St. James School, Toronto, Ontario, where he completed his elementary education.
- 1944 In September 1944, he entered St. Michael's College School, Toronto, Ontario, where he received his secondary education.
- 1948 In September, 1948, he entered Assumption University of Windsor, Windsor, Ontario, where, in 1952, he was graduated with a Bachelor of Arts degree.
- 1958 In September, 1958, he entered the University of Windsor, Windsor, Ontario, to study for a Master of Arts degree through the Department of Philosophy.