Jordan K. Skinner

THE CONCEPT OF CHANGE IN AQUINAS'S ONTOLOGY: AN ATTEMPT AT A PHILOSOPHICAL INTERPRETATION

MA Thesis in Comparative History, with a specialization
in Interdisciplinary Medieval Studies.

Central European University

Budapest

May 2017

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(USA)

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Accepted in conformance with the standards of the CEU.

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I, the undersigned, **Jordan Skinner**, candidate for the MA degree in Comparative History, with a specialization in Interdisciplinary Medieval Studies declare herewith that the present thesis is exclusively my own work, based on my research and only such external information as properly credited in notes and bibliography. I declare that no unidentified and illegitimate use was made of the work of others, and no part of the thesis infringes on any person's or institution's copyright. I also declare that no part of the thesis has been submitted in this form to any other institution of higher education for an academic degree.

Budapest, 18 May 2017

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Abstract

The task of this thesis is to provide a philosophical sketch of Thomas Aquinas's notion of change (*motus*, *mutatio*). To do so, I will also provide a philosophical and historical overview of Aquinas's philosophy of mobile being (*ens mobile*). In order to do this, I will examine the principles of nature—form, matter, and privation—and the kinds of changes brought by the becoming of substantial and accidental compounds. By highlighting the notion of change, my aim is to show the dynamic teleology of Aquinas's notion of being (*esse*).

Contents

Introduction 1

Aquinas's Legacy and the Legacy of "Thomism" 6

The Dynamic Twentieth Century 7

Brief Sketch of a Theory of Change 10

Creative Retrieval 16

Chapter 1 - De principiis naturae, or a Sketch of Aquinas's Philosophy of Nature 19

1.1 The Historical Considerations 20

1.2 A Brief philosophical exposé of De principiis naturae 23

Chapter 2 –Expositio in libros Physicorum, or Further Inquiry into Matter and Form 35

2.1 Historical Considerations 41

2.2 The study of mobile being 42

2.3 Form 45

2.4 Matter 49

2. 4 Conclusion 50

Bibliography 52

Primary Sources from Thomas's Writings 52

Introduction

Thomas Aquinas's life (1225–1274) and legacy, like his philosophy, was characterized by change—"a short life that fused the quiet of contemplation with the fever of activity."[1] An active advocate for philosophical and theological reason, Thomas was peripatetic in the double sense of the word: he moved between the burgeoning universities of the Latin world where his interpretations of Aristotle ignited scholarly debate and caused theological controversy. The following study is focused on this peripateticism by both exploring the ways in which Aquinas's natural philosophy comes out of his reading of Aristotle as well as highlighting those points where Thomas saunters away from Aristotle's conceptual path. My aim in doing so is to draw out the contours of Thomas's ontological description of change (*mutatio* and *motus*) in order to show the dynamic teleology of Aquinas's notion of being (*esse*). For Thomas Aquinas, following Aristotle, the study of the nature of change and its principles and causes is relegated to the science of physics (*physica*) also known as natural philosophy (*philosophia naturalis*).

Thomas' interest in physics early on while still a student when he composted the short opusculum called *De principiis naturae*. Later in his career he returned to questions of natural philosophy in his commentary on Aristotle's *Physics* titled *Expositio in libros Physicorum*. In the following chapters I will analyze these two texts but I will also turn at times to some of his other philosophical and theological works for contextualization or further elaboration. By

[1] James A Weisheipl, *Friar Thomas d'Aquino: His Life, Thought, and Works* (Washington: The Catholic University of America Press, 1992). x. See also Christian Trottmann, ed., *Vie active et vie contemplative au Moyen Âge et au seuil de la Renaissance ; [actes des rencontres internationales tenues à Rome, les 17 et 18 juin 2005, et à Tours, les 26 - 28 octobre 2006]*, Collection de l'École Française de Rome 423 (Rome: École Française de Rome, 2009).

reading these two texts together, I will focus on the ontological claims that Aquinas makes when offering his account of how something comes to be in the physical process of change. My claim, which reflects some of the interpretative gestures put forth by scholars in the last few decades, is that Thomas's physics, which places substantial and accidental change at the forefront of its investigation, produces an ontology of the material world characterized by continual activity and dynamism. In this ontology, natural being has been actuated toward the possibility of attaining its end through its activity toward being.

Even though the stated aim of this thesis is to explicate Thomas's ontology of change in his natural philosophy, it should be stated at the outset that the term 'ontology' itself is a modern philosophical invention. Etienne Gilson points out that the word ontology first appears in the 17th century. It became a wider philosophical notion after Leibniz's use of the term to refer to the philosophical study of being of becoming. The very word 'ontology' describes its definition: while the word first appeared in Latin in 1606, it is formed from the Greek word *on*, which can mean "being" or "that which is", and the present participle of the verb εἰμί, eimí, "to be, I am", and finally ending with -*logia*, or "logical discourse". While the focus of this thesis is confined to Aquinas's natural philosophy (*philosophia naturalis*), which itself is the science of the nature of change, 'change' and the usage of *motus* and *mutatio* exceed their natural-philosophical usage in Aquinas's work. Aquinas's own philosophy of nature, we will see in detail below, begins with the assertion that "some things can be, although they are not, and some things now are," and, as we will see, "change" is the way this being comes to be, making it the site of my ontological investigation of his natural philosophy.

In this way, the following study functions as a clear philosophical interpretation, but it is also functions as an intervention into the history of the reception of Thomism—a reception which has been as complicated and convoluted after his death as it was during his life. During his own

life, for example, Aquinas's complex reception was marked by an immense influence across the Latin world allowing him to exude authority on church doctrine and systems of church education, while, at the same time that he was fervently attacked by theologians, particularly Franciscans from across Christendom. Part of the necessity of returning to Thomas's physics, his interpretations of Aristotle, and his ontological claims rests in the fact that his contentious legacy has often closed down the possibility of such inquiry.

In fact, in 1277, only three years to the day after Thomas's death in 1274, Bishop Tempier called upon a number of theologians—many of whom Thomas had fervently attacked in his lifetime—to compile a list of condemnable views which they believed did not fit with Christian doctrine.[2] Among these rushed and poorly compiled articles can be found some of the very ideas that Thomas had argued for. That same year, the Archbishop of Canterbury denounced the addition of supplementary theses which were more directly related to Thomas's ideas (for example, his idea of substantial form which argued that God alone is simple and pure form, act of act). These condemnations were later endorsed by one of Thomas's adversaries, the Franciscan John of Peckham, who became archbishop of Canterbury two years later.

Within five years of his death, a text of corrections (*correctorium*), meant to undermine the authority of Aquinas's theological claims made in his *Summa theologiae,* was published by William de La Mare which later was given to theology students as an accompaniment to the *Summa*. This attempt to undermine Aquinas's ideas by widely disseminating the *correctorium*

[2] Much has been written on these 1277 condemnations so I will not spend much time on the matter here. See John F. Wippel, "Thomas Aquinas and the Condemnation of 1277," *The Modern Schoolman*, no. 72 (1995): 233–72; Wippel, "Bishop Stephen Tempier and Thomas Aquinas: A Separate Process Against Aquinas?" and the response to Wippel offered by Robert Wielockx, "A Separate Process against Aquinas. A Response to John F. Wippel," in *Roma, Magistra Mundi. Itineraria Culturae Medievalis: Mélanges Offerts Au Père L.E. Boyle À L'occasion de Son 75e Anniversaire* (Louvain-la-Neuve: Brepols Publishers, 1998), 1009–30. See finally John F. Wippel, *The Metaphysical Thought of Thomas Aquinas: From Finite Being to Uncreated Being*, Monographs of the Society for Medieval and Renaissance Philosophy 1 (Washington, DC: Catholic Univ. of America Press, 2000).

along with the *Summa theologiae*, however, paradoxically led more students to study Thomas's works intently, according to Porro who explains:

> In this paradoxical way, the *Correctorium* contributed, against its intentions, to the circulation of the *Summa*, and above all, contributed to a first nucleus of Thomas's doctrines that his followers had to begin to concern themselves with defending, and therefore, to make their own. To use the language of Jacques Lacan (if this is appropriate in the history of philosophy), we might say that William and the first Franciscan critics restored to the Dominicans the first truly definite image of "Thomism" that the members of Thomas's order wished to advocate.[3]

On the other hand, Thomas's supporters sought to counteract this affront on Thomas's authority by forging their own reactive "Thomism". For example, the same year that the *correctorium* was produced, 1279, the Dominican general chapter of Paris declared that the Order would not tolerate any attack on Thomas or his writings, and that anyone who does so—either provincials, priors, vicars, and visitators—should be punished.[4]

Furthermore, friars were forbid to "read, determine, respond or hear assertions contrary to the *senior et communior* doctrines of Aquinas" by the general chapter of Metz who met during Pentecost in 1313 and issued the statement that "since the doctrine of Friar Thomas d'Aquino is considered more sane and more common than any other, and since the Dominican Order is obliged in a special way to follow it, no one should dare teach, determine, or respond differently from what is commonly thought to be his teaching."[5] Consider, for example, the case of Durandus of Saint-Pourçain, who after criticizing Thomas in his commentary on the Sentences, was reproached by Hervaeus Natalis, a leading follower of Aquinas. Afterwards, Durandus had to rewrite a second commentary which more explicitly complied with Aquinas's ideas. In 1314, a commission of Dominicans censured a long list of propositions taken from Durandus's first

[3] Porro, *Thomas Aquinas, 385*.
[4] Weisheipl, *Friar Thomas d'Aquino, 342*.
[5] Elizabeth Lowe, *The Contested Theological Authority of Thomas Aquinas: The Controversies between Hervaeus Natalis and Durandus of St. Pourcain, 1307-1323.* (Routledge, 2014), 77. This is a great text for further assessing the legacy of Thomas Aquinas in the first half of the fourteenth century.

commentary.[6] Elizabeth Lowe writes that when Durandus attacked the teachings of Aquinas and Aristotle's philosophy, he did so in opposition to Natalis who, in turn, would eventually defend the truth of the natural order presented by Aquinas by proclaiming that, "even if the rocks at the bottom of the sea were unknown to any mind, they would still be basically and materially true because they have an essence independent of any intellect".[7]

In this way Thomism, or "what is commonly thought to be his teaching," became a rigid, ossified, and obdurate system by the time of his proclamation on July 18, 1323, by Pope John XXII. In 1325, all condemnations which related to "the doctrine of blessed Thomas" were revoked, further freeing Thomas from the careful eyes of his critic.

This canonization, therefore, functioned to valorize Thomas against his adversaries, but it also reified "Thomism" into an unquestionable doctrine.[8] Of course, many of his ideas were still being debated and criticized throughout the middle ages by subsequent figures such as Ockham, Scotus, or Suarez, yet Thomism largely remained an authoritative point of reference for church doctrine and university learning.[9] By the sixteenth century, this was made explicit when Thomas was added to the list of the "Doctors of the Church", seven centuries after the previous name on the list.[10] Through the Renaissance, therefore, the philosophical engagement with Aquinas remained fixed as the doctrine of the Catholic church and was intimately linked with the Church of Rome. This, of course, made him the target of both reformational voices, on the one hand, and critics such as Descartes, a disciple of the disciples of Suarez, on the other,

[6] By the time he was made bishop of Limoux, however, Durandus produced a third commentary which distanced his position from Thomas's. See Weisheipl, *Friar Thomas d'Aquino, 342-3*. Also see Elizabeth Lowe's *The Contested Theological Authority of Thomas Aquinas, 77-78.*
[7] Ibid, 74.
[8] On Thomism and the Thomistic school see Frederick Roensch, *Early Thomistic School* (Priory Press, 1964). Géry Prouvost, *Thomas d'Aquin et les thomismes: essai sur l'histoire des thomismes* (Paris: Les Editions du Cerf, 1996). Fergus Kerr, *After Aquinas: Versions of Thomism* (Malden, Mass.: Blackwell, 2002). Romanus Cessario, *A Short History of Thomism* (Washington, D. C: Catholic University of America Press, 2005).
[9] On the medieval philosophical reception of Aquinas see
[10] Stephen Louis Brock, *The Philosophy of Saint Thomas Aquinas: A Sketch*, 2015, 16.

who actively reconfigured—even renounced—many of the basic concepts of Thomism.[11] In spite of this, or even because of these critics, Aquinas himself was further ossified by Leo XIII who issued the encyclical *Aeterni Patris* in 1879 which contained the subtitle "On the Restoration of Christian Philosophy in Catholic Schools in the Spirit (*ad mente*m) of the Angelic Doctor, St. Thomas Aquinas". Perro writes:

> This undisputed privilege has, nevertheless, sometimes produces an opposite effect, suggesting indeed an image of Thomasm as a homogenous and rigid system—if not one that is also dogmatic and closed…[He was] a thinker who was, in fact, not at all dogmatic or conservative, as how own complicated and controverted legacy bears witness.[12]

According to Porro, to understand the state of Thomism at the beginning of the 20th century, one could simply examine the *vademecum* published by the Congregation of Studies on July 27, 1914 which listed twenty-four doctrines for adherence. Many of these doctrines are fundamental components, as we will see, of Thomas's ontology such as the composition of potency and act and being and essence; matter as principle of individuation; the unicity of substantial form; and the centrality that the act of being, as "act of all act."[13] On this point, Étienne Gilson writes that, "paradoxically enough, what was perhaps deepest in the philosophical message of Thomas Aquinas seems to have remained practically forgotten since the very time of his death."[14]

[11] See Étienne Gilson, *L' être et l'essence*, 3. éd., 3. tirage, Bibliothèque des textes philosophiques (Paris: Vrin, 1994), 155. On Thomism in the Renaissance see Kristeller, P.O. "Thomism and the Italian Thought of the Renaissance." In Paul Oskar Kristeller and Edward P. Mahoney, *Medieval Aspects of Renaissance Learning: Three Essays* (New York: Columbia Univ. Press, 1992). On Thomism and Luther see Denis Raymond Janz, *Luther and Late Medieval Thomism: A Study in Theological Anthropology*, Nachdr (Waterloo, Ont: Wilfrid Laurier Univ.Pr, 2012).

[12] Porro, *Thomas Aquinas xii*. For more on Aquinas as "authority" see the collection of essays in Mishtooni Bose and Paul van Geest, eds., *Aquinas as Authority: A Collection of Studies Presented at the Second Conference of the Thomas Instituut Te Utrecht, December 14 - 16, 2000*, Publications of the Thomas Instituut Te Utrecht, N.S., Vol. 7 (Leuven: Peeters, 2002).

[13] Porro, *Thomas Aquinas, 405*.

[14] Etienne Gilson, *Being and Some Philosophers* (Toronto: The Pontifical Institute of Medieval Studies, 1949), 154.]. Of course, I am not suggesting that there were not engaged and astute studies of his work throughout the seven centuries (that would be a bold claim). Gilson also recognized this when he wrote: "Thomas Aquinas has had an endless posterity of disciples, historians, and commentators; and let us not forget the editors of particular

The Dynamic Twentieth Century

In an attempt to dispel the rigid view of "Thomism" that has been prevalent since his death, a group of prominent Thomist thinkers in the twentieth century such as Etienne Gilson, his early disciple Gerald Phelan, and later W. Norris Clarke sought to further excavate many of these doctrines listed by the Congress of Studies including being, essence, and act in order to reevaluate the legacy of Thomism.[15] This resulted in a rather unorthodox retrieval and advocacy of Aquinas's notion of existence over essence. While the 'essence', for Aquinas, makes the thing to be what it is, the *actus essendi* or act of being, activates the thing and its 'essence' to form an actual existent being. Together they announced a "re-discovery" and a "retrieval" of an ontology of Thomism conceived around the act of being (*esse*) and around *esse* as striving for the act of all acts.[16] For them, Thomas Aquinas had developed a conception of being where the inner act of existence, which Thomas calls the *esse* or the "to-be" of being, was characterized by its activity. This means that all existing beings, by the very fact that they are, are dynamic in their actuality; furthermore, it is this "activity" which makes "actually" existing beings what they are.[17] In English this connection between "activity" and "actuality"

works, or even of Opera Omnia, who can hardly wait for the end of an edition before declaring it out-of-date and undertaking a new one." Etienne Gilson, "Forward," in *St. Thomas Aquinas 1274-1974 Commemorative Studies* (Toronto: Pontifical Institute of Medieval Studies, 1974).

[15] Gilson, *L' être et l'essence*; Gilson, *Being and Some Philosophers*; Etienne Gilson, *From Aristotle to Darwin and Back Again.* (University of Notre Dame Press, 1984); Etienne Gilson, *The Spirit of Mediaeval Philosophy: Gifford Lectures 1931-1932.* (Notre Dame: Univ. of Notre Dame Press, 1992); William Norris Clarke, *The One and the Many: A Contemporary Thomistic Metaphysics*, (Notre Dame: Univ. of Notre Dame Press, 2006).

[16] I say re-discovery after Clarke's 2009 book *The Creative Retrieval of Saint Thomas Aquinas* which was no doubt inspired by the words of Gilson who wrote, "it would be no less vain to look in the more immediate past for a more modern expression of the same truth, because paradoxically enough, what was perhaps deepest in the philosophical message of Thomas Aquinas seems to have remained practically forgotten since the very time of his death." Gilson, *Being and Some Philosophers*, 154. William Norris Clarke, *The Creative Retrieval of Saint Thomas Aquinas Essays in Thomistic Philosophy, New and Old* (New York: Fordham University Press, 2009), http://site.ebrary.com/id/10365073. W. Norris Clarke, "Action as the Self-Revelation of Being: A Central Theme in the Thought of St. Thomas," in *Explorations in Metaphysics: Being-God-Person* (South Bend: University of Notre Dame Press,).Tellingly, the idea of "discovery" also plays an active role in Aquinas's theory of education whereby science is already a potency able to be gained through the principles that the intellect is already able to understand.

[17] Thomas also developed notions of being which exists only in the mind (*ens rationis*), or beings of reason, but this goes beyond the scope and focus of this investigation because these never exist in actuality. Kenny also critically illustrated that Thomas Aquinas's account of being suffers from systematic confusion. Anthony Kenny, *Aquinas on Being* (Oxford: Clarendon, 2008).

is still preserved linguistically, just as Thomas suggests it is in Latin. *Actus* comes from the verb *ago, agere* meaning to do, act, make, behave, perform (among others), but also carries the meaning of 'actuality' as a rendering of Aristotle's Greek terms *energeia* and *entelecheia*.

Drawing the link between actuality and activity directly, Aquinas writes in his *Summa contra Gentiles* that "from the very fact that something exists in act, it is active."[18] A bit later in the same work he reiterates this point again by stating that "active power follows upon being in act, for anything acts in consequences of being in act."[19] Using this as the basis for reading Thomas's ontology, Phelan sums up this new Thomist project as such:

> Things which "have being" are not "just here" (*Dasein*) like lumps of static essence, inert, immovable, unprogressive and unchanging. The act of existence (*esse*) is not a state, it is an act and not as a static definable object of conception. *Esse* is dynamic impulse, energy, act—the first, the most persistent and enduring of all dynamisms, all energies, all acts. In all things on earth, the act of being (*esse*) is the consubstantial urge of nature, a restless, striving force, carrying each being (*ens*) forward, from within the depths of its own reality to its full self-achievement, i.e., fully to be what by its nature it is apt to become.[20]

What each of these twentieth century commentators sought to do, therefore, was to illustrate an active ontology which follows upon the actual existence of that being. This intransitive activity is true of all beings in reality, they argued. When talking about such extent beings, Thomas refers to them as substances. According to this reading, these substances are active, they strive to become what they are. For example, a person actively changes from an adolescent to an adult, but the same development occurs, according to Aquinas, with a rock which has the active principle of moving downward.[21] In fact, no substance is complete or perfect merely by being the substance that it is. Its full perfection needs additions: size, shape, qualities, relations.

[18] Summa contra Gentiles, I, 43.
[19] Ibid, II, 7.
[20] Gerald Phelan, *Selected Papers* (Pontifical Institute of Mediaeval Studies, 1967).
[21] This intransitive activity of being differs, of course, from the transitive action which is an action that is brought about by another agent other than that which suffers the effect. Gilson et al. do not seem to be referring to transitive action here as that would be accidental to the activity of the agent itself.

The rock, for example, acts by moving downward in its relation to the ground toward which it is directed. This movement downward, its nature, as Aquinas says, is what makes the rock be what it is.[22] To back up this dynamic reading, W. Norris Clarke S.J., scoured the entirety of Aquinas's oeuvre to deploy a number of decisive quotations, including those quoted above and the following:

> From the very fact that something exists in act, it is active. *Summa contra gentiles*, 1. 1, 43.
>
> Active power follows upon being in act, for anything acts in consequence of being in act. *Summa contra Gentiles*, 2. 2, 7.
>
> Each and every thing abounds in the power of acting (*abundant in virtute agendi*) just insofar as it exists in act. *De Potentia*, q. 2, art. 2.
>
> Every agent acts according as it exists in actuality. *De Potentia*, 1. 2, 1.
>
> Every substance exists for the sake of its operation. *Summa theologiae*, 1. 105, 5.
>
> Each and every thing shows forth that it exists for the sake of its operation; indeed, operation is the ultimate perfection of each thing. Summa contra gentiles, 3. 113.
>
> The operation of a thing shows forth is power, which in turn points to [*indicat*] its essence. Summa contra gentiles., 2. 94.[23]

While this decontextualized smattering of quotations provides what Clarke takes to be a well-grounded reading of Thomas's theory of being as the 'to be' (*esse*) of existence, other recent readers such as Anthony Kenny have showed that "there are no fewer than twelve different ways" in which Aquinas uses *'esse'* which produces an incoherent account of being. These disparate ways of being include: substantial being, accidental being, common being, actual

[22] By "nature", here, I mean the propensity to change which, after all, is the nature of all material substances for Thomas. Each natural being has by its nature the possibility of attaining to its end through its activity to be. Nature (*natura*) for Aquinas, however, is used in various technical ways either to refer to the category of Aristotle's substance or can be more generally applied to any distinct type of being, including God and prime matter. This makes the term a difficult and contradictory technical term, especially when it is used as an equivalent to 'essence' (*essentia*).

[23] Clarke, *The One and the Many*, *34*.

being, potential beings, absolute (divine) being, among others. Kenny's critique, therefore, is that Aquinas "failed to bring into a consistent whole the insights he displayed in identifying these different types of being and different senses of '*esse*'"[24] Kenny's critique holds if one's aim is to identify the definitions of each type of being. Instead, my task is to identify the relations and activities that being itself—in its multiple instances—performs both through its coming to be and in its continual striving to become what it is. To do this, my scope, as I expressed above, will be focused on only a part of Aquinas's ontology: his natural philosophy. This begins with the understanding that for Aquinas an actually existing being in nature, even a rock, is not immobile in the state of actuality; instead because it is a being it is mobile (*ens mobile*), and because it is mobile it is a being in actuality. In fact, writes Aquinas, "the word actuality was first referred to as motion (*motus*), and from motion the word was extended to other things."[25]

Brief Sketch of a Theory of Change

While the Latin word *motus* often gets translated as motion, it is important to note here that when Aquinas uses the word he does not only mean local motion (change with respect to place). Instead, *motus*—which is the Latin translation of Aristotle's *kinesis*—refers to any change whatsoever either in terms of qualitative alteration such as change of place, size, shape, and appearance; as well as processes such as changing from warm to cold, soft to hard, angry to calm, etc.; and also change of quantity. *Motus*, therefore, can refer to a change from one state of actuality to another state of actuality, as from white to black, but sometimes Aquinas also uses *motus* in a more substantial way when referring to the generation of a natural being when

[24] Kenny, *Aquinas on Being*. 192
[25] Thomas, Aquinas In Met, IX, 1805. (758)

it comes into being in act. I have called this a more "substantial change" precisely because Thomas himself refers to this kind of change this way. When referring to substantial change, however, he often uses the term *mutatio* or simply calls it generation and corruption (*generatio et corruptio*).[26] In his *Summa Contra Gentiles*,[27] Aquinas speaks of both *motus* and *mutatio* and even uses them interchangeably. Brian Davies, however, points out that these should be seen as conceptually different from each other.[28] While Aquinas often attempts to retain the common meanings of the words he uses—he is, after all, more concerned with being didactic rather than being pedantic—there are a number of key notions that are given a conceptual and technical meanings in his work. Here, for example, Aquinas takes *motus* generally to be a change in something that goes through various changes while continuing to be the thing that it is, while he usually thinks of *mutatio* as a more radical kind of change, as when something is generated or when something perishes, like when something acquires or loses a substantial form, which he calls *virtus essendi*, or the strength to be.

One way of differentiating these two is by understanding the difference between what Aquinas called accidental and substantial change, borrowing from the Aristotelian notions of accident and substance. The Latin word *substantia*—which etymologically refers to that which stands or maintains a ground under something—is used to translate the Greek *ousia*. Aristotle used *ousia* to mean being and substance while Aquinas takes *substance* (*substantia*) to refer to any

[26] I will provide a more detailed account of change later in this chapter. It is important to note that creation, for Aquinas, does not fit within either category of change (*motus* or *mutatio*) because creation is the radical and supernatural instantaneous production of the whole existence of whatever exists, not the generation of a being which comes about in accordance with its nature. Creation is not *mutatio* (*Creatio non est mutatio),* writes Aquinas. This means, that in the act of creation (which happens *ex nihil*) there is no underlying principle which is sustained through the process of change, which is why it is not properly called a *mutatio* or the movement from potentiality to actuality. Instead, it is an instantaneous creation where no progression of change can be found. The concept of change (*motus* or *mutatio*) also does not apply for in the case of divine incarnation because there is no prior human nature from which the incarnation comes out of. What's more, I will also not be examining transubstantiation and miracles. Thus, my analysis will be limited to the analysis of *motus* and *mutatio* in Thomas's philosophy of nature.

[27] Thomas, Aquinas. *Summa contra gentiles*, 2, 17.

[28] Brian Davies, *Thomas Aquinas's Summa Contra Gentiles: A Guide and Commentary* (New York, NY: Oxford University Press, 2016), 416.

created living thing (whether angel, animal, or plant) or element (earth, air, fire and water). In this thesis, I will not be discussing angels, the composition of other supernatural entities, nor the change that takes place in transubstantiation. Instead I will examine primarily material beings who undergo change as a definition of their being. In the following chapter I will offer an overview of the principles which are needed for a substance to be—one substantial form (pure act) which unifies prime matter (or matter with an absolute absence of form)[29]—but for now substance can simply be thought of as a being which comes about in accordance with its nature. Thus, substantial change is that by which a substance becomes a being in actuality. Aquinas states in his commentary on Aristotle's *Metaphysics*, "whatever things are according to nature, with respect to being, and constituted by nature, with respect to becoming, are true substances."[30]

Likewise, an accident can refer to an addition, augmentation, development, or process of perfection of an already existing thing (viz. a substance). Aquinas doesn't simply use the term "accident" in the same way we commonly do today to refer to a mistake, inaccuracy, or an unintended outcome. It can refer to those things, but for Aquinas an 'accident' primarily is used in a technical sense to refer to the alteration of a being through quantity—such as shape, size, color, etc.—or as an alteration of quality such as virtue or affect. Thus, an accident can refer to the color of dyed hair, or health brought about by a doctor's care, or yet again it can refer to virtue which is fostered in a virtuous person. Michael Rota explains:

> In contemporary philosophical usage it is common to call things like houses and axes 'artifacts.' Aquinas does sometimes use a Latin analogue of this term, *artificiatum*, which when used substantively means 'a thing wrought by art.' More commonly, though, he uses *res artificialis* (artificial thing) or the substantive adjective *artificialis* when he wants to designate things like houses and axes. His other examples of artifacts include a bed, clothing, a knife, and health. Aquinas's use of health as an example of

[29] A substantial form actualizes prime matter (which is pure potentiality) to be an actually existing substance.
[30] In Met, L. 7. 17.

> an artifact is less puzzling when one recalls that an artifact is just a thing produced by art (for health can be brought about through the art of medicine).[31]

The difference between *motus* and *mutatio* can, therefore, be conceived of as a difference between accidental change and substantial change. An accidental change, therefore, is the change of an already existing being (substance), or of the further change of an artifact which itself was brought about through accidental change. This change makes it be in a certain way, as heat makes water hot, dye makes blonde hair blue, or the artist makes a cube of bronze into a statue. In this way, accidental change further qualifies a being through quality, quantity or place.[32] Substantial change, on the other hand, happens not by adding or qualifying but by virtue of its own form, or by virtue of its natural potential *esse* becoming actualized. Aquinas writes:

> Any thing produced by art is an artifact. Art working through its own proper power cannot produce a thing that is a substance in virtue of its form. But art working through the power of natural principles can, and does. Therefore, some artifacts are substances in virtue of their form.[33]

In both of these changes something underlying is retained, either the subject or a potency of another kind. In the former, *motus*, a modification is done to an already existing being as it undergoes a process of change: from a child to a grown person, for example, there exist a temporal process of change. In his commentary on Aristotle's *Physics*, Aquinas again reiterates this difference by defining *motus* as a change which can be associated only with three of the ten Aristotelian categories: quantity, quality, and place.[34] When each of these three categories are enacted, they produce an accidental change of an already existing being. What happens in

[31] Michael Rota, "Substance and Artifact in Thomas Aquinas," *History of Philosophy Quarterly* 21, no. 3 (2004). See Aquinas's commentary on Aristotle's De anima (In DA), L. II, lect. 2, 237; L. II, lect. 1, 142; and his Metaphysics commentary (In Met), L. VII, lect. 6, 1406.
[32] Brock, *The Philosophy of Saint Thomas Aquinas*, 44.
[33] Aquinas, Thomas, *In duodecim libros Metaphysicorum Aristotelis expositio*, L. 7. 17.
[34] In Physic., 5.4.678-81

this change is that the form of that accident is added to an already existing subject which suffers that change. For example, the accidental form of the color blue is added to hair.

On the other hand, generation and corruption, which are characterized by *mutatio* are in themselves immediate changes. There is no development, no temporal middle ground, between a person's body and a corpse. This is because, Thomas thought, when a person dies, their soul (a human's sole substantial form) instantaneously leaves the body. [35] Thus, substantial change happens immediately when substantial form is joined with pure matter (generation) or when substantial form is disjoined from matter (corruption). In the following chapters, I will provide a more detailed explanation of these concepts and the interrelation between form, matter, actuality, and potentiality as the principles that bring about change.

Now that we briefly covered the notions of "substantial form" and "accidental form", I will introduce yet another way that Aquinas differentiates his notions of change. In his early text that lays out his philosophy of nature, titled *de principiis naturae,* where the central focus is on the principles which engender change, he writes:

> because generation is a *motus* to form, there is a twofold generation corresponding to this twofold form. Generation *simpliciter* corresponds to the substantial form and generation *secundum quid* corresponds to the accidental form. When a substantial form is introduced we say that something comes into being *simpliciter*.[36]

Notice that for Aquinas when substantial form is introduced in matter something comes into being *simpliciter* meaning absolutely according to its being—absolutely here is used to refer to something which comes to be without qualification. Accidental form, on the other hand, takes place according to something else, something in addition to its substantial being, for which it

[35] This is because there is no temporal duration between death and the soul's departure nor is there any ontological middle ground between a living being with a soul and a body without a soul. Duns Scotus, however, argued that a dead person's body was the same body as had existed when the person was alive, because the body's form is the same.

[36] Thomas Aquinas, *De Principiis Naturae*, trans. R.A. Kocourek and Joseph Kenny (North Central Publishing, 1948), http://dhspriory.org/thomas/DePrincNaturae.htm.

is reliant on for its being. What he is saying, essentially, is that a substance is that thing which truly is: it comes to be and passes away. But accidents do not have being outside the substance which they adhere to. Thomas gives the example of the human who comes into being or is generated but the same is true of our previous example of a body which becomes a corpse: there is no temporal nor ontological middle ground between being and non-being. He says that this person comes into being *simpliciter*, but because it comes into being *simpliciter* when substantial form is introduced, it shares the same definition that was just given for *mutatio.* Likewise, *generation secundum quid* corresponds to *motus* insofar as it is a modification of something that already exists and this modification is simply the introduction of accidental form in an existing being.[37] A further distinction should be made about another kind of change or *motus*. The first meaning has already been covered. It is that change which Aquinas calls the actuality of something imperfect—potentiality, for example, is not perfect because it is lacks being and is therefore associated with privation. This change occurs in a successive and temporal way such as the modification when an accidental form is introduced to an already existing entity. Another way that Aquinas uses *motus* is as an actuality of something perfect, as what take place with understanding or sensation. Another example would be the actualization of courage. These are said to be changes which exist in act (e.g. understanding, affect, willing, etc. including feeling pleasure). Such changes are neither successive nor per se temporal.[38]

Above, I had said that an accidental form has no being in itself but only confers being by inhering in a substance. Therefore, "courage" is not a being, only the hero who enacts it is.

[37] In this way, using the English terms motion for *motus* and change for *mutatio*, is many English commentators have done, retains the linguistic difference but often loses the conceptual intricacies. Furthermore, as was illustrated above, the multiple ways that changes occur are described in many different ways. In what follows, therefore, I have simply used the word 'change' for all of these changes but I will indicate which change I am referring to with the Latin word in brackets.

[38] See Summa Theologiae 1a-2ae, 31, 2 ad 1; Summa Theologiae 1, 18, 1

Nevertheless, accidents are not incidental; instead, they perfect the substance in which they are in. The person wouldn't be a hero without courage. The substance therefore need accidents for its further perfection. Thus, ontologically speaking, those beings which are actually existing beings are called substances. These substances act, they tend, rather, toward perfection as they strive toward the actuality of act. The further accidental actualization of a substance is the act of that *esse*. When a thing comes to be absolutely (*simpliciter),* it is still not yet absolutely good and therefore must strive to achieve its own end of perfection in order complete itself. The ontology of change put forward by Aquinas, therefore, moves from *mutatio* to *motus*—a being becomes what it is and continues striving for further perfection during its process of being. In this way, change is paramount for understanding the dynamism of Aquinas's ontology. Not only for understanding the perfection of substances but also for understanding the way these substances came to be in the first place. This ontological dynamism which can be seen when considering these two processes (*mutatio* and *motus)* together is precisely the insight which has largely been unacknowledged by the history of Thomism.

Creative Retrieval

The same, however, can be said of Gilson et al. who while providing what they call a "creative retrieval" of Aquinas, offer little commentary on the notion of change and what it means for the dynamic ontology they are attributing to Aquinas. Instead, their ontology begins and revolves around already existing substances and the activity that it undergoes, through its activity is only a modification of what it already is. Thus, they take as their starting point the assertion of existence.

My point of departure, in contrast, as I seek to understand the ontology of mobile being begins with Aquinas's philosophy of nature and specifically with the ontological claim that "some

things can be, although they are not, and some things now are." This, in fact, is the very first line of his early text on natural philosophy, *De principiis naturae*.[39] Here, in their investigation of Aquinas' ontology, these twentieth century commentators provide little account of how a substance itself comes to be as a result of a change; instead, they seem to take for granted the fact that the principle of substantial existence causes substantial existence in act, without peeling back the ontological layers that are bound up in the becoming of that substantial existence.

Therefore, my hope is to develop a contemporary ontological sketch of Thomas's dynamism, by providing a fuller account of the double meaning of change (*motus*, *mutatio*) and the principles which make this change possible. My task in what follows, therefore, will be to draw out the contours of Aquinas's general theory of change, both as the generation and corruption of a substance (*mutatio*) and additionally as the *motus* that happens in a being once it already is. Only after providing such an account of Aquinas's theory of change, will I seek to return to the question of ontology in order to provide a broader sketch of Aquinas's dynamic *esse*.

In investigating the ontological dimension of change in Aquinas's work, my project aligns with the recent series of publications by Jeffrey E. Brower, especially his 2014 book *Aquinas's Ontology of the Material World*. Because of this convergence, Brower's work has been helpful for laying out the theoretical components of Thomas's ontology. However, his research goes far beyond my scope by providing a complete inventory of all the different types of beings included in Aquinas's ontology. My project, therefore, departs from Brower's insofar as his book seeks to draw out a broader sketch of Thomas's ontological edifice in order to provide links with contemporary metaphysical debates, whereas my focus is only on the problematic of change in order to develop a broader picture of Thomas's dynamic ontology.

[39] Aquinas's *De Principiis Naturae begins, Nota quod quoddam potest esse licet non sit, quoddam vero est.*

Therefore, in the following chapters I will examine two texts where Thomas explicitly addresses questions of natural philosophy. The first chapter looks at the historical and philosophical dimensions of Thomas's first text on natural philosophy called *De principiis naturae*. Throughout the examination of this short *opusculum*, I will slowly draw out the conceptual contours of Thomas's argument. Once much of this technical-conceptual terminology has been covered in chapter one, I will move on in chapter two to address the ways in which he expands and refines these concepts in his later commentary on Aristotle's *Physics* titled *Expositio in libros Physicorum* as well as elsewhere in his mature works. By reading these two texts together, I will sketch out the ontological claims that Aquinas makes about how something comes to be in the physical process of change. My reading, which clearly pulls from some of the interpretative gestures offered by the above-mentioned scholars, seeks to show that Thomas's physics, which places substantial and accidental change at the forefront of its investigation, produces an ontology of the material world characterized by continual activity and dynamism.

Chapter 1 - *De principiis naturae*, or a Sketch of Aquinas's Philosophy of Nature

In seeking to draw out an ontology of change in Thomas Aquinas' work, my investigation will largely be confined to two of his texts which almost serve as bookends to his massive philosophical output. The first text, which will be the focus of this chapter, is one of his earliest works titled *De principiis naturae,* written during his studies in Paris.[40] The second text to be examined, which will be the focus of chapter 2, is Thomas's commentary on Aristotle's *Physics* titled *Expositio in libros Physicorum*. The *Expositio* is one of the first of many Aristotelian commentaries that he produced during the last years of his life. Reading these two texts together provides a broad scope of both his philosophical and pedagogical commitments and provides an entry into his vast ontology of the material world. This first document, *De principiis naturae,* where Thomas Aquinas began drawing out the contours of his philosophy of nature, takes as its starting point the idea that nature and everything that participates in *esse* is subject to change. Following from this premise, Aquinas then offers a brief exposition of the first principles of this change found in Aristotle's *Physics*—act and potency, form and matter, and the four causes. Therefore, Thomas's philosophy of nature follows Aristotle's example by examining the interactions and interrelations of the principles and causes which bring about this change.

[40] While this text is commonly referred to as *de Principiis Naturae*, and will be called this throughout this thesis, it has also had various other titles throughout its history: *De principiis rerum; De principiis rerum naturalium; De causis rerum naturalium; De principiis naturae ad fratrem Sylvestrem*.

Before diving deeper into the conceptual content of this work, I will briefly discuss its historical and textual conditions.

1.1 The Historical Considerations

De principiis naturae is believed to have been written early in Aquinas's career while he was teaching as a Bachelor of the *Sentences* and preparing to become a Master in Theology at the University of Paris between the years 1252-1256. While working on his obligatory commentary on Peter Lombard's *Sentences*, a requirement for all Master of Theology students in Paris at this time, Thomas also produced this *opsuclum* on natural philosophy. After having already spent seven years (or more) studying Aristotle's philosophy as the disciple of Albertus Magnus in Cologne, not to mention the years of prior study, the young and eager twenty-seven year old Thomas moved to Paris during the same year that the University of Paris officially allowed the teaching of Aristotle's texts. His deep understanding of Aristotle's ideas is illustrated by the fact that Thomas disproportionately cited him over any other figure in his commentaries on the *Sentences*, and it might explain his already erudite competency when writing this early short systematic study of nature. Commentators have called it a youthful *opsuclum*, but it certainly isn't the work of a beginner. Rather *De principiis naturae* is the work of a learned researcher seeking to condense difficult ideas into a readily accessible text for those wanting to grasp the conceptual terrain of natural philosophy.

What aids this view, that it was written as a pedagogical tool, is the fact that Aquinas produced his text at the request of a person referred to as Brother Sylvester—hence one the variation of the title being De *principiis naturae ad fratrem Sylvestrem*—an otherwise unknown friar who

presumably wanted Aquinas to share his knowledge of Aristotle and present his own philosophy of nature. It was common for Aquinas to begin his writing project at the request of another, and the fact that he did so with such frequency suggests that his intentions were congenial and didactic.[41] This fact exposes something much broader about Aquinas and his scholarly enterprise: he was committed to philosophical pedagogy and had intended this piece for that aim. I find Pasquale Porro's observations on this point insightful (even though it refers to Aquinas's later *modus operandi* as a magister):

> Thomas is not an inspired and isolated scholar. He was a teacher by profession, who understand the majority of his writings exactly in relation to this function (even if at times this aspect becomes secondary). Furthermore, he belongs to an order that makes study and teaching one of its central pillars. In the end, there is a danger of misunderstanding many of his writings and of his intellectual practice itself if we do not consitantly keep before us his social role, that of a magister as much charged with public functions—in the realm of the Paris theology faculty, for example—as he is with the formation of the intellectual elite of his order, in Paris and in the other studia where he will be sent to teach.[42]

The exact dating of the text is still being debated but it is largely believed to have been written around 1252-3 with Mandonnet proposing as late as 1255[43] (but certainly not any later then 1256 when he left Paris) and the Leonine edition suggesting an earlier date when Aquinas might have been intensely studying Aristotle's *Physics* in Paris before becoming a student there.[44]

It is also not clear what exact texts Thomas was pulling from when he was producing this work. This *opusculum* largely remains close to the material found in book one and two of Aristotle's *Physics* and *Metaphysics V*, where the principles of change are again taken up by Aristotle. For

[41] In fact, roughly one-third or 26 of his writings were produced for others, from his friends and colleagues to bishops and even the Pope and secular sovereigns. Jean-Pierre Torrell, *Saint Thomas Aquinas* (Washington, DC: Catholic University of America Press, 1996).88.
[42] Porro, *Thomas Aquinas*,82.
[43] P. Mandonnet, "Chronologie sommaire de la vie et des ectits de saint Thomas", RSPT 9 (1920), p. 152
[44] Leonine vol. 43, p.6.

this, it seems likely that he would have used the early Michael Scot translation of the *Physics* from 1235 (called the *translatio nova*) which also included a translation of the commentary by Averroes. It is also likely that he would have used Michael Scot's translation of the *Metaphysics* which likewise included a translation of Averroes's commentary (called *Metaphysica Nova*) from around 1220-24.[45] Thomas was working on this text during a period when many fragmentary Aristotle translations and copies of those translations were being circulated, making it difficult to know what exact text Thomas was pulling from. While this provides a further challenge for the historian today in the quest for determining the origin and history of the text, so much more compounded was the challenge faced by medieval scholars themselves who had to determine which translation expressed more clearly the genuine text of Aristotle and piece together various translations to get a better grasp of the original.[46] For the case of Thomas, who had little working knowledge of Greek, let alone Arabic, he needed to pull from as many translations and commentaries as possible to determine both the content, and, as was his professed aim, the intention (*intentio*) of Aristotle.

Aristotle, however, was not the only authority Thomas followed. It is also apparent that Thomas incorporated insights from Averroes's commentary on Aristotle's *Metaphysics*, sometimes acting as an almost literal summary.[47] On the other hand, it seems that Aquinas followed Avicenna's *Physics of the Healing, Book One*, known to Thomas as *the Liber primus naturalium*, both in the way that the principles were ordered, which differs from the way Aristotle laid them out in his Physics, [48] and the very content of some of the concepts,

[45] See Bernard Montagnes's The Doctrine of the Analogy of Being According to Thomas Aquinas, 2004 especially Appendix 1 "Literary and Doctrinal Sources of the "De principiis Naturae."
[46]For more on translations and the "alium litterae" used by Aquinas see James P. Reilly, "The Alia Littera in Thomas Aquinas' Sententia Libri Metaphysicae," *Pontifical Institute of Medieval Studies* 50 (1988): 559–83.
[47] The Doctrine of the Analogy of Being according to Thomas Aquinas, by Bernard Montagnes, OP. Translated by E. M. Macierowski. 2004. See also H. Dondaine, "Introduction," in Aquinas, De principiis naturae, Opera omnia 43 (Rome: 1976), 5-6
[48] Avicenna, Physics 1. See R.E. Houser, Avicenna and Aquinas's De Principiis Naturae.

specifically the notion of absolute matter, *hyle simpliciter*, which Thomas called prime matter (*materia prima*).[49]

With his immediate concentration on prime matter, which he calls the pure potentiality for substantial being, he also departs from Aristotle in so far as the Philosopher (as Thomas called him) did not intentionally theorize prime matter to this same extent and with the same theological and metaphysical usage. Additionally, Thomas blends together sections of the *Physics* and the *Metaphysics* in order to develop his own theories, for example his theory of causes which he himself admits pulls from the first book of the *Physics* and the eleventh book of the *Metaphysics*.[50]

What resulted, therefore, in his *De principiis naturae* was not so much a commentary on Aristotle's *Physics,* but instead a dialectical argument regarding change as the ontological foundations of nature which pulled from the insights of peripatetic commentators—"a sort of memento for the student, a summary introduction to the notions and the divisions used in books 1 and 2 of the Physics, along with an echo of the beginning of book 5 of the Metaphysics," writes Dondaine. [51]

1.2 A Brief philosophical exposé of De principiis naturae

In his *De principiis naturae,* Thomas takes up the Aristotelian analysis of physics by beginning with the immanent principles of change (*motus*, *mutatio*) before identifying the causal order

[49] In the following chapter I will analyze this notion of prime matter, which wasn't as robustly theorized by Aristotle himself, and draw out the historical and conceptual components which went into Aquinas's notion.
[50] Aquinas, *De Principiis Naturae*.. 22
[51] H. Dondaine, "Introduction", in Aquinas, De principiis naturae, Opera omnia 43 (Rome: 1976), 5-6.

which brings about specific differences within nature.[52] In order to do so, he postulates as given the Aristotelian principles of matter, form, and privation which act as prerequisite foundations for such an investigation. He begins with these axiomatic concepts because, Aquinas says, a science does not call into question the existence of its own subject matter and principles, instead it proceeds from them to reach its own conclusions. Once he identified each of these principles, he then sought to consider their conceptual content, interrelations, causes and effects.

In order to give an ontological account of change Thomas begins by analyzing material things—some of which can be, although they are not, while others are now, in actual existence. Take one of Aquinas's favorite example of the statue as a starting point. Imagine in the artists' studio there are a number of statues which have been finished and are ready for display. These statues have actuality, meaning they have been formed into a statue by the artist. However, the cube of bronze that is sitting on the artists' table is not yet a statue—it has the potential to be formed into one although it is not-yet.[53] To tweak Thomas's opening lines, this example shows us that in the artist's studios there are statues, some of which can be, although they are not (cube of bronze), while others are now, in actual existence and are ready for display.

Thomas begins with the premise that all beings in reality undergo this passage from the former, being in potency, or the not-yet of existence, to the later, being in actuality, or the already-*esse* of act. From this example, we can begin to grasp what Aquinas calls 'being in potency' (*ens in potentia*) and 'being in act' (*ens actu*). Both natural beings (like humans) and artifacts (like the statue) undergo this process. For a natural being suffering this change (*mutatio*) from potency to actuality, it is necessary that there be a being which comes into existence while still retaining

[52] Summa Theologicae 29, I ad 4: "*natura est unam quamque informans specifica differentia*"
[53] Of course, the cube of bronze is already something in actuality, which we will see to be a composition of matter and form, but for this example it is precisely not-yet a statue. He writes that "the bronze, before it receives the shape [of the statue], has existence in act and its existence does not depend upon that shape." Aquinas, *De Principiis Naturae*. 8.

its potency to be—this persistence through change is what makes it a change at all.[54] The process from potentiality to actuality is also what makes something a substantial being. An artificial object, on the other hand, modifies an already actualized being, bringing out a new actuality from its previous state in act. In the case of the statue, which is not a natural being, the bronze is already actualized as a cube of bronze but it is still only potentially a statute. The statue is brought into existence as a statue, but it still retains its potentiality to be altered into something else, for example a different statue. This means that some underlying principle remains throughout the generation from potentiality to actuality. The underlying principle which continues through a change (generation or corruption, in this case) can be called potency, but Aquinas is quick to tell us that it is also called "matter" (*matera*).

Because matter is that underlying principle which persists throughout a change in order to bring about the result of that change, it can be called the "result in potential." This makes matter fundamentally relative to that end toward which the change is directed and in some cases ontologically subject to that end. Thomas writes, "but matter has existence by reason of what comes of it because, of itself, it has incomplete existence."[55] In the case of the sculpture's workshop, when a statue is produced it is the bronze which continues through the change making it the matter out of which the statue is formed. During the duration when the bronze statue is being crafted, that cube of bronze is potentially a statue. "For example," writes Aquinas, "a statue comes to be from bronze which is a statue in potency and not in act."[56] In this same sentence Aquinas writes that "generation does not take place from just any non-being, but from the non-being which is being in potency."[57] In this way, matter is only matter when it has the power to become actualized. Matter in itself is no-thing; it is nothing actual, nothing in

[54] Ibid,: *Ad utrumque esse est aliquid in potentia.*
[55] Sed materia habet esse ex eo quod ei advenit, quia de se habet esse incompletum. Aquinas, *De Principiis Naturae*., 4.
[56] Aquinas, "De principiis naturae."7
[57] Ibid, 7.

reality, and has no *esse*. This is why matter is not just any cube of copper but that copper which becomes actualized into a statue. Thus, while it is the case, for Aquinas, that a statue comes to be because it is a statue in potency, this is not what makes the statue be what it is in actuality.

While it is the case that "in order that a statue comes to be, there must be the bronze [out of which it is made],[58] still the bronze on the artist's table is not-yet the form of a statue. This is why Aquinas also refers to matter as "privation" because it is lacking statue-shape (meaning it doesn't yet have the shape of the statue). What is needed, therefore, is for the cube of bronze to be given the shape of a statue. Only then will it change from a cube of bronze into a thing having the form of a statue. In this way, it will become a statue in actuality. In this way, Aquinas links form and actuality in the same way that potency was linked with matter.

Only because of this form, therefore, can the statue come into existence as a statue and make matter understandable as being in potency. This assertion carries two important claims: First, matter never is without form because by definition matter is only a potentiality which becomes actualized by form. Aquinas writes, "it can never exist by itself; because it cannot exist in act, since existence in act is only from the form. Rather it exists only in potency."[59] In fact, Thomas later polemically claims, not even God can produce matter without form because matter is only intelligible as such if it has form.[60] The second claim follows from the first which is that matter is only understandable as matter once it receives form. Thomas writes, "all knowledge and every definition comes by way of the form."[61] On the artists table the cube of bronze is an already actualized cube of bronze. It is understandable as a cube of bronze because of its form (cube-ness, copper-ness, etc.). However, it is not yet understandable as a statue because it does

[58] *Ad hoc enim quod fiat idolum, oportet quod sit aes.* Aquinas, *De Principiis Naturae*. 12
[59] Ibid. 17
[60] While Gods active power cannot be deemed insufficient, omnipotence has the principle of non-contradiction as its limit. Creating matter without form would produce a contradiction. Thus, not even God can create such a thing. In De potential q. 1, a. 3.
[61] Aquinas, *De Principiis Naturae, 14*. "*Et quia omnis definitio et omnis cognitio est per formam."*

not yet have the form of a statue. Once the statue has been crafted by the artist, only then can the bronze be said to have been the statue in potentiality. Thomas Aquinas writes:

> Matter is prior to form from the point of view of generation and time because that to which something comes is prior to that which comes to it. But form is prior to matter from the point of view of substance and completeness, because matter has completed existence only through the form.[62]

In this way, matter cannot properly be said to be (*esse*) because it only *is* in a qualified sense. That is to say, it only is as a disposition toward form (*habitudo ad formam*).[63] This is why philosophy of nature does not simply focus on the matter and the materiality of things, but on the change that matter undergoes and on the form that makes a being be what it is. But, in the same way that the matter can be known once it is actualized, form only exists in that which comes to be.[64] For created material beings, form can only take place with the act of existence.[65]

In this way, everything which has existence (*esse*) has form, and it is because of form that generation takes place. Generally speaking, therefore, this change from possibility to actuality is what we previously referred to as *mutatio.*[66] It should be noted, however, that the example of the statue is an example of *motus* because the cube of bronze already had existence in act and its existence does not depend upon it taking the shape of the statue.[67] This is why it was said above that matter is relative. The cube of bronze already was a being in actuality, sitting on the artist's table teeming with possibility of becoming a statue, but only once it morphed

[62] Ibid, 32.: Materia quidem est prior forma generatione et tempore: prius enim est cui advenit, quam quod advenit. Forma vero est prior materia perfectione, quia materia non habet esse completum nisi per formam.
[63] Ibid., 17
[64] Ibid., 18. forma enim non est nisi in facto esse
[65] This is different when considering God. God, for Thomas, is pure act, pure *esse*, and therefore does not need matter.
[66] Et quia generatio est quaedam mutatio de non esse vel ente ad esse vel ens, e converso autem corruptio debet esse de esse ad non esse. ("Also, because generation is a change [*mutatio*] from non-existence to existence, contrarily, corruption should be from existence to non-existence.").
[67] Aquinas, *De Principiis Naturae*.section 8

into a statue can it be said to be the matter, or potentiality, in which that statue becomes. In this way, the statue undergoes a change (*motus*) of an already existing thing into a statue.

The trouble Aquinas is faced with, therefore, is how to account for *mutatio*, or the change from non-being into being or vice versa, without it being simply the modification of something already existing. Another way of posing this aporia is by asking how something can be generated from something that had no form of its own? In order to address this, Aquinas pulls from Aristotle a concept which had not been fully activated in all of its metaphysical meanings in Aristotle's own work: the concept of primary matter as a pure potentiality. Substantial form is inscribed in prime matter to produce an actually existing being. Therefore, whatever exists in act cannot be called prime matter.[68]

Thomas writes:

> […] although it is the matter with respect to the statue, the bronze itself is composed of matter and form. Therefore bronze is not called prime matter, even though it has matter. However, that matter which is understood without any form and privation, but rather is subject to form and privation, is called prime matter by reason of the fact that there is no other matter before it. This is also called hyle. Also, because all knowledge and every definition comes by way of the form, prime matter cannot be defined or known in itself but only through the composite; consequently it might be said that that is prime matter which is related to all forms and privations as bronze is to the statue and the shapeless; and this is called first simpliciter. A thing can also be called prime matter with respect to some genus, as water with respect to aqueous solutions; this, however, is not first simpliciter because it is composed of matter and form. Hence it has a prior matter.[69]

Therefore, Aquinas expresses three principles of nature: matter (potency), form (act), and privation (lacking-a-would-be-form): "when a statue is made from bronze the bronze which is in potency to the form of the statue is the matter, the shapeless or undisposed something is the

[68] Ibid, 17
[69] Ibid., section 14

privation; and the shape because of which it is called a statue is the form."[70] When matter and form are combined, privation is no longer and in its stead is formed a compound which we refer to as a being in actuality; it is called a being in actuality precisely because it combines matter, which is a being-in-potentiality, with an actuality (form). In the example of the statue, the copper can be considered the matter in potency, but also the privation of the statue's form which is no longer accounted for when the statue actually exists. Still, even in the actuality of the statue, a potentiality of it becoming otherwise is still retained. It remains in potency, for example, because it could be melted down to form coins or jewelry and only once that happens will it be understood that the statue was a group of coins in potential.

Thus far there has only been two kinds of beings discussed: a being in act which is the statue once the matter is given the form of a 'statue', and a being in potency from which a statue comes to be. Privation, however, is not included in this list because it is only a principle in becoming but it is not retained with actuality. However, it was pointed out that in fact neither of these—form nor matter—themselves have being. Instead, their being comes by joining together to produce a composition of form and matter. In the literature of peripatetic commentaries this compound is also called a hylomorphic compound. The term hylomorphism itself was coined in the 19th-century combining the Greek words *hyle*, "wood, matter" and *morphē*, "form", but it has become widely used to denote this compound which comes to be through the combination of matter and form.

As we saw above, this copper statue could be melted down and made into another statue or into coins. Likewise, we have already pointed out that it came to be a statue from an already existing composition: the copper cube. This is why Thomas further differentiates substances and artifacts. Substantial beings exist in themselves and their coming to be is brought about by a

[70] Aquinas, *De Principiis Naturae*, section 8

form added to prime matter. An accidental thing, on the other hand, exists in another as its subject of being. Aquinas's ontology is comprised of these two kinds of beings, but while substances can be pointed out as beings around us—trees, rocks, humans, termites, copper—accidents, on the other hand, do not exist in themselves which is why we can only indicate them by pointing to them in other subjects, such as the brownness of a horse. This makes accidents ontologically dependent on substances. For Aquinas, this is not simply a philosophical problem because it also undergirds his theological claims as well. He is clearly wrestling with these distinctions in order to refine his own theology where they are expressed a bit clearer in his commentary on the Sentences (*Scriptum super libros Sententiarium*), which, recall, he was simultaneously working on at the time he was composing *De principiis naturae*. Here he defined accidents as "a thing to whose nature it belongs to exist in something else." What makes them accidental, therefore, is that they do not change the identity of the subject, but that they belong to something else for their own existence: a horse will continue to be a horse, for example, even if it's mane is dyed from brown to blue. A substance, however, such as the horse, is what it is precisely because of its substantial being. This is why Thomas says that a substance exists in itself (*per se*). What's more, because it does not depend on another for its being, Aquinas refers to it as absolute, from the Latin word *absolutus*, or free and independent from another. This follows Aristotle who writes, "to come to be absolutely is solely true of substance, while to come to be in a certain respect is true of other things," which we know to be called accidents.[71] This distinction then is between beings which truly are and things which are because of another.

The statue is an accidental thing because its actuality is given from outside itself, i.e. from the artist. Thus, the statue is an accidental unity of accidental form given to the already existing

[71] Aristoteles and William David Ross, *Aristotelis physica*, Nachdr., Scriptorum classicorum bibliotheca Oxoniensis (Oxford: Oxford Univ. Press, 2002). 190a32-3

cube of bronze. In this case, while the cube of bronze is called matter because it is out of which the statue becomes, it was already previously composed of matter and form as a block of copper. The copper, as a natural element, has a substantial form (which makes it copper, *per se*) but when it is formed into a statue it is given accidental form making it an artifact, "because", Aquinas writes, "all artificial forms are accidental."[72]

Thus, the copper cube sitting on the artist's desk is already a composition of prime matter and substantial form. We know this because the substantial form makes it what it is as copper in contradistinction to another metal or another shape. However, by the time the bronze was mined, moved, refined, and sold as a cube of bronze, it was given many accidental forms. Artificial form, therefore, already operates in a previously existing matter; substance, on the other hand, has no proceeding form.

Thus, Aquinas' philosophy of nature precedes by this double crossing of being—potency and act//substance and accident—which unfolds through a hexadic arrangement: being in act is either accidental act or substantial act; in potency it is either a positive potency which is potency for accidents or potency for substance; or it is a negative potency as privation for accidents or substance.

In this way, everything which has existence (*esse*) has form, and it is because of form that generation takes place. In fact, elsewhere Aquinas notes that form or actuality is a cause of being (*causa essendi*), because it is by way of form that anything is in act (*est actu*).[73] It is, however, not readily apparent how this generation is brought about, and even less apparent is how form could cause such a generation, especially seeing that form itself is not a being in itself but needs matter to be. Surely the form of the statue itself, therefore, cannot alone bring

[72] Aquinas, *De Principiis Naturae*. 8. *Omnes enim formae artificiales sunt accidentales*.
[73] Thomas Aquinas, *Sentencia libri De anima* 2.7, II. 176-181.

the statue into being. The statue, therefore, needs the artist to bring it into being. This is called the "motor cause" or the agent. Thomas describes it as the "efficient cause" which follows from Avicenna's use of the concept. After Hume, this has become perhaps the most common use of the notion of "cause" because it simply refers to the actor which brings something about. This fits with the way Aristotle had conceived of this *aitia*, but by the time Aquinas came on the scene, the scope of efficient causality was widened to include acts of creation. This follows closely from Avicenna's metaphysics which defined "the efficient cause or agent as that which gives being to something distinct from itself."[74] This efficient cause, however, is only one of the four causes proposed by Aquinas to bring about a change from potentiality into actuality. As was just noted, form or actuality is a cause of being (*causa essendi*) because it is by way of form that anything is in act (*est actu*). Likewise, matter is another cause because without matter—or potency—no actuality could be realized. Thus, already by identifying those two principles which are necessary to bring about *esse*, we can identify two additional causes. Here, privation, although it is a principle, does not register as a cause precisely because it does not bring about anything into actuality. Matter and form, of course, are not the only causes which bring something about because there would be nothing toward which the change is directed and there would be no way of determining the end of the change. Sheer becoming has no place in Aquinas's theory of change. Without an end, there would be no actuality and thus no way of understanding the change as change. For the artist, the fact that they set out to produce the statue is the reason why a statue is produced. Aquinas writes "the end is called the cause of the efficient cause, since the efficient cause does not operate except by the intention of the end.

[74] Kara Richardson, "Avicenna's Conception of the Efficient Cause," *British Journal for the History of Philosophy* 21, no. 2 (2013). Tad M. Schmaltz, ed., See also *Efficient Causation: A History*, Oxford Philosophical Concepts (Oxford: Oxford Univ. Press, 2014).

Hence the efficient cause is the cause of that which is the end, for example walking in order to be healthy. However, the efficient cause does not cause the end to be the end."[75]

In this way, Aquinas says that although the agent might intend the end, it doesn't always know the end itself.[76] A voluntary agent, like a person jogging to become healthy, knows the end towards which they aim. But Avicenna's example of the harpist does not have to deliberate about the notes in any particular chord, since they are already determined.[77] Likewise the rock, which by nature moves downward, according to Thomas, simply intends its end without deliberating.[78] In trying to convey the interrelation between all of these causes Aquinas writes:

> The end is the cause of the causality of the efficient cause, because it causes the efficient cause to be an efficient cause. Likewise, the end causes the matter to be the matter and the form to be the form, since matter receives the form only for the sake of the end and the form perfects the matter only through the end. Therefore, we say that the end is the cause of causes, because it is the cause of the causality in all causes.[79]

Thus, I will conclude this section by providing a brief summation of the ways the intertwining principles function to bring about a change.

In order for a general theory of material change—either *motus* and *mutatio*—there is needed: 1) A substratum which continues through a change from privation to actuality. This is what Aquinas and Aristotle call matter and in order for this matter to function as a substratum it must possess the power to receive a form. [material cause]

[75] Aquinas, *De Principiis Naturae*. 8
[76] Thomas writes, Again, we should notice that, although every agent, both natural and voluntary, intends an end, still it does not follow that every agent knows the end or deliberates about the end. *Et sciendum, quod omne agens tam naturale quam voluntarium intendit finem, non tamen sequitur quod omne agens cognoscat finem, vel deliberet de fine.* Ibid. 19.
[77] Ibid.
[78] In De caelo Aristotle writes: "and that which is moved is that which is potentially heavy or light, and the movement of each body to its own place is motion towards its own form." DE caelo IV 3, 310a30-35, trans. J.L. Stocks, in The words of Aristotle, Vol. II.
[79] Aquinas, *De Principiis Naturae*. 29.

2) It possesses this possibility to receive form precisely because of its lack [privation] of, and therefore disposition toward, form.

3) A form which has the activity to acquire matter. [formal cause]

4) An agent or efficient cause to bring this potency into act. [efficient cause]

5) An end toward which the actualization is directed and which provides the finality of the change. [final cause]

Chapter 2 –Expositio in libros Physicorum, or Further Inquiry into Matter and Form

These same themes and principles which were developed in Thomas's early *De principiis naturae* return throughout Aquinas' career and form the basis for many of his metaphysical and theological arguments found both in his mature Aristotelian commentaries as well as in his theological treatises. In this way, the ontology already at the germinal stage in his *De principiis naturae* can be seen to already comprise the contours for his entire dynamic philosophy of nature. Near the end of his career, Aquinas returned to, reiterated, and provided further nuance to these early philosophical principles found in this *opusculum*. In the remainder of this thesis, I will specifically turn to his commentary on Aristotle's *Physics*, which is customarily titled *Expositio in libros Physicorum*, to see how it conceptually relates to what was expressed above and further examine the intricate ways that Aquinas conceived of the principles of form and matter, act and potency as instigators of change. This will mean that unlike the earlier chapter, I will only hone in on those few concepts in order to understand how they were interpreted by Aquinas.

Here, I should note two striking features about reading these two texts in concert. The first is that although *De principiis naturae* was written by a young Thomas, who was still working through his own philosophical and theological positions, there is significant consistency between the two texts which illustrates that there is a strong continuity among his early and later works. The second striking feature of these two texts is the fact that they complement each other when read together, despite the difference in their genres. Where the former text condenses in order to make a short understandable argument, the latter expands in an expository way, word-by-word, the content of Aristotle's text.

The former, of course, was not a commentary, nor was it intended to be seen as one. As was indicated above, it was a didactic tool meant to express the key components of his early philosophy of nature. Although Aquinas draws from Aristotle and his commentators when developing *De principiis naturae*, it functioned as a presentation of ideas that Aquinas himself held to be true. The case of the *Expositio* is, of course, rather different insofar as it was a commentary. The intention was toward exposition as he moves from passage to passage to make every Aristotelian sentence coherent for his readers. This style of commentary earned Thomas the sobriquet the "Expositor" in subsequent glosses.[80] According to Galluzzo and Gauthier, however, when Aquinas first set out to compose his commentaries, of which his commentary of the Physics was among the first, they had a rather "private" character. They might have served as a way to develop a rich understanding of the entirety of the Stagirite's thought,[81] or they might have been instigated to aid his own theoretical productions. Some have further suggested that his commentaries were produced alongside parts of the *Summa theologiae* which helped to refine his own knowledge and ideas during that process. That might be the case, but by the time he commented on the *Physics*, the speculative part of the *Summa* was already finished. Additionally, it isn't clear why he would have needed to comment on such far afield topics as is found in Aristotle's works if it was only to be used for the *Summa*.[82] What's more, the style that Aquinas used in producing his *Expositio*, which carefully explained each sentence and its meaning, does not readily affirm the view that it was a private affair. Instead, it seems to fit with Aquinas's overall intention and motivation as a teacher and a scholar: *manuductio*, or leading by the hand, which was Aquinas's stated aim as a teacher,

[80] Ibid., 313
[81] Gabriele Galluzzo,"Introduction" in *A Companion to the Latin Medieval Commentaries on Aristotle's Metaphysics* (Leiden-Boston: Brill, 2013).
[82] Porro, *Thomas Aquinas*. 340.

fitting with the root of exegesis, "to lead out".[83] Weisheipl suggests that his commentaries were done because of Thomas's apostolic wish to help young masters correctly understand Aristotle's ideas, insofar as they fit with the guidelines of faith, and to admonish against heretical interpretations.[84] Some scholars have suggested that these commentaries could have been the outcome of his lectures to his students, but Weisheipl dismisses this by stating that Aquinas did not lecture his students on these books. That would have been the task of the teachers in the faculty of arts, where he was certainly not teaching. Because of this, Weisheipl writes, "there was no compulsion to write them other than a deep personal motive to help others in need, namely, the young masters in arts."[85]

There is not much evidence for either of these positions to have a definitive claim. Nevertheless, it is clear that Thomas actively sought to define Aristotelianism against the competing factions of his day. It seems that these commentaries help him achieve this task. Thus, regardless of his motivations, his commentaries directly came out of his sincere dedication to Aristotle's works and ideas. Like many of his contemporaries, Thomas saw himself to be an heir and a continuation of a long and revered intellectual tradition of philosophers.[86] When referring to the philosophers he was writing about, however, Thomas almost always adopts the past tense (*sciverunt*). For him, "the philosophers" are the Greeks and the Arabs, and both belong to an experience that is now a thing of the past. Of course, philosophers did once exist. From them useful and even true doctrines have come, while others can be corrected or refuted.[87] Still, in writing and thinking the way that Aquinas did—earnestly seeking to keep his teachings in accordance with those of Aristotle—his work functions as a

[83] Brock, *The Philosophy of Saint Thomas Aquinas*., XV; George Marie, "Mind Forming and Manuductio in Aquinas," *The Thomist: A Speculative Quartely Review* 57, no. 2 (1993): 201–13, doi:https://muse.jhu.edu/article/637654/summary.
[84] Weisheipl, "The Date and Context for Aquinas' De Aeternitate Mundi.", 280-85.
[85] *Ibid*., 282.
[86] *Ibid*., 4.
[87] Porro, *Thomas Aquinas*, 47.

dialogue with those he called *auctores.*[88] Elsewhere, Thomas shows a keen awareness of the task of doing historical exegesis. In 1274 Pope Urban IV asked Thomas to write about Greek theology for the Council of Lyons. Thomas writes in his prologue that the Greek Fathers and early church writers have a historical distance from the present and should be read with attention to the development that theology and doctrine has taken. Exposing these differences with reverence (*reverenter exponere*), Aquinas argues that one should begin by understanding that even with historical, cultural, educational, and doctrinal differences, these church fathers sought the same truth as those of his contemporaries at the Council of Lyons.

There has long been a debate about whether the philosophical ideas presented in Aquinas's commentary should be attributed as the philosophical positions that he himself held. On this debate, I find Elders' arguments compelling which argued that it was Thomas's desire to express the intention of Aristotle, *secundum intentionem Aristolelis*. By this he did not simply seek the intention (*intentio*) of what was said, word for word, but how each argument was related to those made in other parts of the text and further on in other texts themselves. It was to that end that he wanted to understand the entirety of Aristotle's texts in order to understand both the arguments in their contexts but also their results in the greater system. When faced with a contradiction or an error, Thomas, unlike other commentators, would seek to explain what was meant and how the *aporia* can be resolved. In many instances, therefore, Thomas's interpretations comprise a middle ground between the oppositional interpretations. Taking into account both the text of Aristotle, and the interpretive differences, Thomas would then proceed by trying to provide a rational response in favor of Aristotle's "intention". This is clear in such

[88] Brock, *The Philosophy of Saint Thomas Aquinas*., 47

remark like the following: "it is clear when one carefully considers the words of the Philosopher in this passage that it is not his intention".[89]

Torrell points out that this larger Thomistic hermeneutic strategy—to uncover the *intentio auctoris* where the end is to find what the author "wished to say"—motivated him to find the overall structure and program of Aristotle's thought in order to identify the truth that was expressed therein.[90] In doing so, Thomas saw himself to be exposing the truth which was given by Aristotle—the *auctor*. This title of *auctor* does not simply refer to Aristotle as an author or even as an authority figure—both usages, however, are expressed by the word. Instead, by using *auctor* Thomas also expresses that Aristotle is a teacher who articulates the truth of things. Aquinas's task, therefore, was to get at what was the true meaning of the text in order to expose the truth therein. To this end, Thomas finds it necessary at times to extend the thought of Aristotle in order to lead to the realization of the intention behind Aristotle's ideas.

Of course, at times when his own ideas, or the doctrines of Christianity, differ from Aristotle's, Aquinas is eager to make a distinction between the two. Elders writes: "He respects the text—the principle is *reverenter exponere*—[…] but he consistently interprets passages in the light of Aristotle's philosophy and principles, as he himself understands their implications. Christopher Kaczor, referring to M. -D. Chenu, observes that the medieval commentator accepts the doctrine of the author he is explaining, unless he states his difference"[91]

Because he usually accepts the doctrine of Aristotle as true, his relation with Aristotle's work is twofold: as we saw above, he refers to them in the past tense and understands their function

[89] Aquinas, Thomas. *De substantiis separatis*, chapter 14 reads *Patet igitur praedicta verba Philosophi diligenter consideranti quod non est intentio eius.*
[90] Torrell, 239
[91] Leo J. Elders, "St. Thomas Aquinas's Commentary on Aristotle's 'Physics,'" *The Review of Metaphysics* 63, no. 1 (2009): 29–53.; Christopher Kaczor "Aquinas' Commentary on the Ethics: Merely an Interpretation of Aristotle?" *American Catholic Philosophical Quarterly* 78 (2004): 353-78 and M.-D. Chenu, *Introduction à l'étude de saint Thomas d'Aquin* (Paris: Vrin, 1950), 177.

as historical philosophical sources; but in so far as they express the truth, Aristotle's ideas are current. Aristotle's *Metaphysics*, Brock explains, "was both a strange old tome for experts to interpret and a current textbook for everyone in the program to assimilate and argue about." This is the function of truth—truth is not a temporal category that can be relegated to the past. This is confirmed by Aquinas himself when, in a famous passage from his commentary on the *De caelo*, he says that the study of philosophy is not simply a historical or hermeneutical exercise done in order to know what people think or thought, but a practice in knowing how things truly are:

> Now, some claim that these poets and philosophers, and especially Plato, did not understand these matters in the way their words sound on the surface, but wished to conceal their wisdom under certain fables and enigmatic statements. Moreover, they claim that Aristotle's custom in many cases was not to object against their understanding, which was sound, but against their words, lest anyone should fall into error on account of their way of speaking. So says Simplicius in his Commentary. But Alexander held that Plato and the other early philosophers understood the matter just as the words sound literally, and that Aristotle undertook to argue not only against their words but against their understanding as well. Whichever of these may be the case, it is of little concern to us, because the study of philosophy aims not at knowing what people feel, but at what is the truth of things.[92]

By viewing the two texts together, *De principiis naturae* and *Expositio in libros Physicorum*, one finds a consistent commitment on the part of Aquinas to orient his philosophical commitments so that they are in accordance with the principals he finds in the philosophy of Aristotle in order to best understand "the truth of things".

[92] Aquinas, *Aristoteles librum de caelo*, XXII, §228.

2.1 Historical Considerations

Like the *De principiis naturae,* which was written during Aquinas's student years in Paris, the *Expositio* is believed to have been written in Paris roughly a decade and a half later when he returned for his second regency there. Gauthier followed by Elders date this the commentary at around 1268-1269, and Weisheipl suggests 1269-70. Gauthier make his assessment due to its use of a quotation in Physics VI, lesson 5, which came from the *De sensu at sensato* in a new Latin translation completed by William of Moerbeke, called the *recensio nova* (new recension), shortly before.[93] F. Pelster, however, argued that in the course of composition Thomas changed from an earlier version of Aristotle, the *Physica veteris translationis*, to the Moerbeke version.[94]

According to Gerard Verbeke, this *Nova* translation by Moerbeke was being completed between 1260-70 by revising the previous translation by James of Venice called the *translatio vetus* (ancient translation). [95] The idea that Moerbeke had undertaken his translation at the request of Aquinas, and even that the two had much of a convergence at Orvieto, has been argued against by Torrell.[96] Nevertheless, he certainly had such an in-depth knowledge of Aristotle's system of thought that he recognized the inadequacy of the *Vetus* translation and

[93] Elders, Leo J. "St. Thomas Aquinas's Commentary on Aristotle's "Physics"" The Review of Metaphysics 66, no. 4 (2013): 713-48. Introduction to Sentencia libri De anima, by Thomas Aquinas, Leonine ed., vol. 45/1 (Rome: Commissio Leonina-J. Vrin, 1984), 270a. Gauthier refers to a study by Mansion, A. *Revue Neoscolastique de philosophie* (1934), 304-5.

[94] Pelster, "Die Obersetzungen der aristotelischen Metaphysik in den Werkes des hI. Thomas v. Aquin," *Gregorianum 17* (1936), 393. See also Weisheipl, James A. Friar Thomas d'Aquino: His Life, Thought and Work, 2nd ed. Washington, D.C., 1983. Pp. 282

[95] Gerard Verbeke, "Saint Thomas et les commentaires grecs sur la d'Aquin (Citta del Vaticano, 1982), 134-54. See also Elders, Leo J. "St. Thomas Aquinas's Commentary on Aristotle's "Physics"" The Review of Metaphysics 66, no. 4 (2013): 713-48.

[96] See the section on William of Moerbeke (pp.174-178) in Torrell, Jean-Pierre, Saint Thomas Aquinas V.1: The Person and his Work, Washington, D.C. 1993.

the 1230 Michael Scot translation from Arabic (called the *translatio nova*) and therefore switched to the *Nova* translation by Moerbeke.

As I indicated in the previous chapter, Thomas's task when making his commentaries was to sift through the many fragmentary Aristotelian translations and copies of those translations which were being circulated.[97] Thomas, it should be keep in mind, had very poor working knowledge of Greek, let alone Arabic, and so he needed to decipher not only the letter of the text but also its spirit in order to draw out his conclusions. What is remarkable, given his lack of philological engagement with the text itself, is how often he intuits the philosophical content that is expressed in the original text. To do so, Thomas often pulled from many different sources and also many different translations. He often reported these alternative readings from other manuscripts in the margins.

2.2 The study of mobile being

Thomas Aquinas prepared his commentary on the *Physics* by deciding what the subject matter of natural philosophy fundamentally is. To do so, he immediately proceeded to draw a distinction between natural philosophy and metaphysics. While natural philosophy, for him, considers being, it does not study being as being—which is the realm of metaphysics—but as being mobile (*ens mobile*), or being which is characterized by its changeability. Because the principal concern of metaphysics is being qua being, it is not primarily focused on change as such. The reason for this, according to Aquinas, is that being is epistemologically prior to change. This may appear to be a strange arrangement, especially given the fact that metaphysics, literally means that which comes after physics, but it is helpful to think of it in

[97] See Reilly, James P. Jr. "The Alia Littera in Thomas Aquinas' Sententia Libri Metaphysicae", Medieval Studies 50 (1988) 559-83. Pontifical Institute of Medieval Studies

the same way that form is known prior to matter because, "all knowledge and every definition comes by way of the form."[98] It is from matter that form is brought into being, but it is because of form that matter is understandable conceptually. This is because form is what explains or makes intelligible the coming to be or the result of a change. This kind of priority is already suggested by Aquinas in his early *opsuclum On Being and Essence* where he says that being is among "the first things grasped by the intellect." In this final chapter, my aim is to draw out this relationship further; not the relation between physics and metaphysics but that between being and change. Therefore, in this final chapter my aim is to study the relation between being as *esse* and being which is characterized by changeability. It is for this reason that I have turned to Aquinas's commentary on the *Physics*.

In the case of the *Physics*, because it is a book of natural philosophy, the changeable beings which it investigates are those which depend upon matter not only for their existence but also for their definition. And because "everything which has matter is mobile", Aquinas writes, "it follows that mobile being is the subject of natural philosophy."[99]

Remember that for Aquinas, an actually existing being, even a rock, is not immobile in the state of actuality; instead because it is a physical being, it is mobile (*ens mobile*), and because it is mobile it is a being in actuality. That is to say, it is a being that is composed both of form and matter and it comes into being through the actuality of a possibility. As such, the study of potentiality and actuality is the focus of natural philosophy insofar as they are principles that bring about change.

[98] Aquinas, *De Principiis Naturae, 14*. "*Et quia omnis definitio et omnis cognitio est per formam."*
[99] In *Phys*., lib. 1 l. 3: *Et quia omne quod habet materiam mobile est, consequens est quod ens mobile sit subiectum naturalis philosophiae.*

In his *Metaphysics IX*, Aristotle points out that the strictest sense of potentiality refers to the "starting-point of change in another thing or in the thing itself qua other."[100] Likewise, it was pointed out earlier the Aristotelian claim that "the word actuality was first referred to as motion (*motus*), and from this the word was extended to other things."[101] *Motus*, therefore is a result of actuality while potentiality is its starting point. Of course, Aristotle and Aquinas are quick to expand these notions of possibility and actuality beyond their relation to change. In this sense, they are metaphysical principles because they do not need to bring about change for their definition. God, for example, who is pure act is not determined by change. Nevertheless, for natural philosophy both actuality and potentiality are connected to two other key principles of change: form and matter. Form is the actuality of the potentiality which is matter. Aquinas writes:

> Matter is that which of itself is not a determinate thing but is only in potency to be a particular thing. Form is that by which it is already a particular thing in act. Substance is the composite, which is a particular thing [...] complete in being and species [...]. There is, then, a difference between matter and form, because matter is being in potency, while form is entelechy, that is, act. Through it matter is actualized. The composite which results is being in act.[102]

In the previous chapter, where the content of *De principiis naturae* was discussed, these notions of matter and form were discussed in brief. In the remainder of this section, therefore, I will analyze these two notions more directly in order to further draw out the contours of Aquinas's theory of change and to underscore the relation to *esse*. Once I have expressed these principles,

[100] Meta. ix. 1, 1045b35-6
[101] Thomas commentary on Metaphysics, Book IX, 1805.
[102] In Aristotelis Librum de Anima, II, trans, by Herman Reith, in An Introduction to Philosophical Psychology, Englewood Cliffs, New Jersey, Prentice-Hall, 1956, lect. 1, n. 215, p. 46-47. As I indicated above, I will not be dealing with the composition of angels here nor with God. However, it should be stated that Angles, according to Aquinas, have no composition of matter and form but they do have actuality and potentiality. Thus, the difference between act and form or potentiality and matter is metaphysically necessary.

I will provide a brief sketch of how this theory of change relates to his broader ontological project.

2.3 Form

In English, the word form is often thought of as synonymous with shape. This is certainly one way Aquinas himself uses the term when it acts as a configuration and arrangement of matter. Yet, it is also a rather limiting way of describing form which carries multiples characteristics and functions in the work of Aquinas. Additionally, the idea of arrangement or shape does not expose that aspect of form which is dynamic and active. For Aquinas, form (*forma*) is the principle by virtue of which the material (*materia*) from which a thing come to be, a bronze cube for example, comes to be or is made into specifically that thing. Form, therefore, is Aquinas's concept for the capacity to be received by matter and the capability of actualizing the potentiality of this matter and therefore making it an actually existing substance. In his commentary on the *De anima*, Aquinas writes: "there is a difference between mater and form: matter is a being in potentiality, whereas form is an entelechy—that is, an actuality—by which matter is actualized. For the same reason, the compound itself is the being in actuality."[103] I find it noteworthy that Aquinas calls form an entelechy (*entelechia*) as it is the same word that Aristotle used (entelékheia) when referring to form in a compound as the realization of what is able to be. This is the activity of realizing being, for it has no end other than itself and is therefore fulfilled and completed in its very activity. Aryeh Kosman, in explaining the difficulty of this Aristotelian concept writes:

> I have used *realization* as a translation of Aristotle's *entelechia* for different reasons. For this translation incorporates an interesting ambiguity […] The term realization may refer either to a process or to the result of a process. In one sense, for example, *the*

[103] Thomas Aquinas, Sentencia libri De anima, 2.1.113-17.

> *realization of a person's hopes* may be said to be taking place in the unfolding of some event; but in another, it may be said to have come about as a result of that event. By making Aristotle say that motion is the *realization* of some ability, I mean to draw attention to that ambiguity in order to invite us to ask the following question: does Aristotle intend to define motion as a process or as a product?[104]

The crux that Kosman points out is precisely what is rendered in Aquinas's notion of form: it is both the end toward which an entity is directed and the activity of that being. This multiple meaning of the term is also why Aristotle uses, recurrently, the term *Energeia* when describing the act of form. Kosman posits that *Energeia* should be rendered 'activity' instead of simply 'actuality' which leaves aside the dynamic principle of the concept.

In its dynamic sense, therefore, form, when it is for a substance, is the actualization of an ability—it is an exercise of being's ability to be. Matter is the locus of ability and capacity. Form is the *virtus essendi*, it is the strength to be, Aquinas states in his *Commenterium in De caelo*: "therefore, to the extent and while any given thing has being, to that extent is the power of its form."[105] The *virtus essendi* of form is the power and activity of form—it is the power to be of a given being.

Form, then, is activation, but it also carries a more technical sense. Substantial form, for Aquinas's natural philosophy, expresses that toward which a thing is moved. It is the *terminus* of a change. This makes form the perfector of potency because perfection is that toward which potency is directed. As a consequence, form is desirable, "because", Thomas writes, "every thing desires its own perfection." This connection between form and perfection is also why

[104] Aryeh Kosman, *The Activity of Being: An Essay on Aristotle's Ontology*. (Cambridge, Mass: Hervard University Press, 2013), 45.
[105] Thomas Aquinas, *Commenterium in De caelo*, ed. Commissio Leonis, Sancti Thomae Aquinatis opera omnia iussu impenasque Leonis XIII P.M., iii (1886): "*unde tantum et tamdiu habet unaquaeque res de esse, quanta est virtus formae eius*." See also Étienne Gilson, "Virtus Essendi," *Medieval Studies* 26 (1964).

Thomas's God is said to be pure form, pure act (*actus purus*), which is the aim of all creatures.[106] This is why Thomas calls form "something divine in things." Thomas writes in his commentary:

> Form is something divine and very good and desirable. It is divine because every form is a certain participation in the likeness of the divine being, which is pure act. For each thing, insofar as it is in act, has form. Form is very good because act is the perfection of potency and is its good; and it follows as a consequence of this that form is desirable, because every thing desires its own perfection.[107]

This is also what, as we saw previously, makes form one of Aquinas's four causes, because it is the aim which brings about being. Aquinas also speaks of the beauty of being in act (*formositas actualitatis*). And yet, form cannot desire itself; it is the privation in matter that desires form. Privation desires form because it does not have form, but once it obtains its desire it is vanquished, destroyed. Thus, it is toward form that matter is directed. This is, of course, only true of substantial form. Accidental form, however, is ontologically dependent and has no autonomy outside of its subject. In the case of material beings, substantial form also is ontologically dependent insofar as it needs matter to become actualized. This brings about the second aspect of form, which is the composition of matter through the bringing about something in act. For something to come into being, it requires a form.

The other aspect of form is that it is a unifying principle. This does not simply mean "shape" as we indicated above. By unifying, Aquinas means that form introduces something continuous and indivisible into a potency which is necessarily divisible. It makes some being an individual being. Because of its divisibility, matter needs form to unify it into a continuous entity. For an

[106] God, according to Aquinas, is Subsistent Being Itself, whose essence is to exits. Unlike the creatures who participate in *esse*, God is *esse*.

[107] In *Phys. Lectio* 15, n 135: *Et quod privatio pertineat ad malum, ostendit per hoc, quod forma est quoddam divinum et optimum et appetibile. Divinum quidem est, quia omnis forma est quaedam participatio similitudinis divini esse, quod est actus purus: unumquodque enim in tantum est actu in quantum habet formam. Optimum autem est, quia actus est perfectio potentiae et bonum eius: et per consequens sequitur quod sit appetibile, quia unumquodque appetit suam perfectionem*. 135.

entity to be in act—a line, for example—it must not be infinitely divisible or else it could not be called a line but only points. For such a line to exist, therefore, it must have something indivisible to make it recognizable as a line. This, then, is why Aquinas suggest, everything that is known to us is through its form. Without form to make it indivisible, the line would have no definition as a line.

"A thing acts only insofar as it is in act," writes Aquinas, but it is not the form that is acting, rather it is the composite that acts.[108] In the same way, an inchoate state of form, apart from matter, where something is not yet in act, but instead only has a certain disposition toward act, cannot be called an active principle. This is why it is dependent on matter for its own ability to act. Only a being can act, but it must be a unit—meaning having unified form—to be able to act. This is why Aquinas calls act (*actus*) form, because it is through form that something becomes actual. Aquians explains that actus originally referred to activity, but form does not fully reveal this active sense until it fuses with matter. This is why substantial form is both an inner cause of unity but also an inner cause of motion, action, and change.

Kenny's critique of Aquinas's theory of being, as we saw above, is that Thomas produces a chaotic arrangement of different kinds of beings: there is substance, accidents, individuals, common beings, etc. While this is certainly an unwieldy way of thinking systematically about being, already by simply looking at change one comes to understand how these different kinds of beings are related. Already we have shown the difference between accidentals and substances and we have seen that substantial being is because its substantial form. In the next section, I will look at Aquinas's theory of matter to understand individuation. In this way, I will end by drawing together these different kinds of beings as different components of Aquinas's theory of change.

[108] In *Phys*., lib. 2 l. 143

2.4 Matter

Matter, like form, has many functions in Aquinas's philosophy. First, matter can either serve as proximate or as prime matter. Proximate matter is the relative relation that a composite of matter and form has with a higher-level composite. This relation is like that between the cube of bronze and the statue which is a higher-level composite to the proximate matter of bronze. Once a composite is given a new form, that composite becomes proximate matter for this new composite. Prime matter, on the other hand, is that which is not in a form. It is pure potentiality because it lacks all composure. Nevertheless, one key feature of matter as potentiality is its principle of dependency. Both as proximate matter and as prime matter, there is an implied dependency in something added to it for it to become what it potentially is.

Because it has no form to unify it, prime matter is infinitely divisible. Only prime matter, strictly speaking, can be designated as matter because it has no form in its concept. Proximate matter, however, has form already or else it could never be matter for another. But prime matter, because it is not matter for another, is able to become what it is substantially. Recall, that a substance is absolute, from the Latin word *absolutus*, or free from another. Because prime matter has no form and is therefore not potential matter for another, this means that only it can become a substance.

Another feature of prime matter is its intrinsic unity. For Aquinas, prime matter has a numerical unity because it is from prime matter that all beings come to be. Consider, for example, the statue in the artist's studio. Copper, in its elemental stage, is their prime matter and it is the same prime matter among all of them. But because prime matter is simply the pure potentiality of a given being, it means that not only the statue but the cube of bronze on the artist table, along with the wood of the desk, and the water used to clean the statue can be counted as numerically one. This numerically one is also what makes it infinitely divisible. Thomas writes

in his commentary on the *Metaphysics*, "Those things are one in number whose matter is one…Indeed, it is on account of matter that a singular thing is both one in number and divided from other things."[109]

Understanding the function of matter as an underlying principle of change, and that it performs the role of a sameness across generation, allows one to identify how prime matter functions in the process of individuation (*individuatio*). We saw above that substantial form provides a substance its identity but the problem for Aquinas's ontology of natural beings, where being comes into *esse* as a difference, is how to produce a theory of the distinct individuals. This is why Thomas expands his theory of prime matter beyond the role it plays in Aristotle's philosophy, because it is prime matter that provides the distinctions between material objects in order to form universal individuals who are free to strive toward perfection. Because substantial form is unitary, then the determinate dimensions that matter has is what produces individual beings. Prime matter itself does not have identity because it is infinitely divisible, but when it forms the compound with substantial form it is matter that makes a being become a distinct actuality. Thus, it is the activity of matter to individuate; if it were not for matter there would be no subsistent individuals.

2. 4 Conclusion

What we have seen throughout this work is the multiple ways that being (*esse*)—which is itself multiple in type—acts through its becoming to be. The critique leveled against Aquinas's theory of being by Kenny is that he failed to define a unified and compatible notion of being. The same, presumably, could be said of Aquinas's theory of change: there are a multitude of instances of change but little by way of a clear and unified notion. However, as I sought to

[109] In *Metaphysics*, 5.8.876

show in this thesis, Thomas's ontology of change functions as the unfolding of these disparate notions of being: from substances to accidents and from common being to individuals.

In fact, the problem with change is precisely the fact that it does not yet have a form, it has no clear definition. This is why it could be said that change itself (*motus*, *mutatio*), like form and matter, does not exist in itself. In fact, even during the change (*motus*), it is not properly said to be. Instead, it is in potency with respect to the end toward which it is headed. In this way, change is understandable as change because it has an end, it can be actualized. Change (*mutatio*) is instigated because being is striving; it is an activity toward perfection, toward the good. Thus, change (*motus*) occurs in order to perpetuate this striving. Change, therefore, is the result of being becoming what it is and an ontology of change is precisely the descriotion of how a being comes to be.

A substantial change, for example, occurs because prime matter seeks its substantial form. However, no substance is complete or perfect by way of itself. This is, for Aquinas, due to the fallibility of creatures. Thus, a substance must continue to strive once it has come into being. Further perfection needs additions and for the substance these are not predicamental "accidents" but are components which aid in its activity of being. Thus, a substance seeks not only its own becoming but also its continued striving. That which came to be through change (*mutatio*) continues to strive for further change (*motus*). Only by way of additional accidental form added to an existing subject can this take place. This means that a being which is formed through *mutatio* needs *motus* to continue to become what it is. This, by way of a conclusion, is the way that I have sought to draw out an ontology of change: it is by way of change that a being becomes what it is and it is by way of additional change that it acts, relates, feels, strives. This, to close, is the dimension of Thomas's ontology of mobile being (*ens mobile*).

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