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**MATTER AND THE HUMAN BODY ACCORDING TO
THOMAS AQUINAS**

BY LINDA L. FARMER

**A DISSERTATION PRESENTED TO THE SCHOOL OF GRADUATE
STUDIES AND RESEARCH IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY**

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ABSTRACT

The aim of this dissertation is to provide an accurate, concrete and complete account of the human body in St. Thomas's mature texts in order to show that St. Thomas ascribed to the human body a rich and important causality which contributes positively to human existence.

An accurate, concrete and complete account of the human body requires that misconceptions regarding St. Thomas's anthropological doctrine be clarified and that the human body be examined both from the 'viewpoint of soul' (which provides an 'abstract' account of the body) and from the 'viewpoint of body' (which provides a 'concrete' account of the body).

As St. Thomas inscribes his anthropology in an Aristotelian framework, a first section (Chapters 1 and 2) is devoted to an examination of Aristotle's views on matter and the body. Chapter 1 examines Aristotle's general hylomorphic theory, in particular, how the matter/form analysis is relative to substance, the manner in which matter and form are related, how matter and form are to be conceived and how they are applied to man. Chapter 2 looks at matter's role in each of the Stagirite's three analyses of substance: the metaphysical analysis (where substance is discussed in terms of potency and actuality), the physical analysis (where material substances are discussed in terms of matter and form)

and the logical analysis (where substance is discussed in terms of subject/'matter' and predicate/'form').

The second section is, then, devoted to the human body in St. Thomas's anthropology. Chapter 3 examines St. Thomas's general anthropology from the 'viewpoint of soul', outlining his adoption of Aristotle's hylomorphic theory as regards human beings and paying particular attention to points on which his analysis differs from that of Aristotle. Chapter 4 sets forth the methodology we employ in our examination of the human body in St. Thomas's philosophy. Outlining each of the two complementary approaches to the study of man, we argue that the 'viewpoint of soul' approach provides only an 'abstract' account of the human body but that the 'viewpoint of body' offers a more concrete account, examine the different senses of the term 'body' distinguished by St. Thomas and, having examined the body from the 'viewpoint of soul' in the previous chapter, set forth how the examination of the human body from the 'viewpoint of body' should proceed.

Before studying the human body from the 'viewpoint of body', we first address, in Chapter 5, the issues of human individuation in St. Thomas's philosophy and of Aquinas's views on the elements. In regards to the question of matter being the principle of individuation, we argue that St. Thomas distinguishes two sorts of 'individuation' and that, although *materia signata* is the cause of our being *unum de numero* (which is one kind of 'individuation'), it is not the cause of our being *unum numero* (*esse* being the principle of this kind of 'individuation'). Regarding elemental change and the composition of the

elements, we show that, according to St. Thomas, elements are composed of substantial form and prime matter, that their changes are not accidental but substantial (i.e., involve generation and corruption) and that the qualities or powers of a corrupted element remain virtually in the composite.

Chapters 6-8 then study the human body from the 'viewpoint of body', examining the causality of matter in each level of life: vegetative (Chapter 6), sensitive (Chapter 7) and intellective (Chapter 8). At the vegetative level, the role of matter in generation, nutrition and growth is discussed, as is St. Thomas's doctrine regarding the necessary qualities of the human body. In Chapter 7, the causality of matter in sensation is examined in regards to (a) organs and faculties; (b) the exterior senses (of which the sense of touch is primary and, for this reason, will be the focus of our discussion); (c) the functions of the human heart with respect to our vital operations, movement and erect position; (d) the interior senses and their relation to the structure of the human brain; and (e) appetites and emotions. The final chapter, Chapter 8, then examines the causality of matter at the level of intellective life. There we show that the human soul requires matter (more precisely, a human body) to acquire knowledge, exercise its acquired knowledge and to make particular decisions. As St. Thomas's views regarding the nature of man and the causality of matter have important implications for the separated state of the soul and, also, as regards the resurrection of the body, we discuss these implications, examine the consistency of St. Thomas's position with the assumptions of his anthropology and his theory of knowledge and argue that causality he ascribes to the material

dimension of human beings is truly significant, extending even to our final beatitude.

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Patet autem quod isti philosophi posuerunt animam esse in corpore et mouere corpus; cum ergo loquatur de natura anime, uidetur etiam necessarium quod aliquid dixissent de natura corporis, propter quam causam uniatur corpori, quomodo se habeat corpus ad eam et quomodo comparetur corpus ad animam. Non ergo sufficienter determinant de anima dum conantur dicere solum quale sit anima et negligunt ostendere quale sit corpus suscipiens ipsam.

— Thomas Aquinas, *In De anima*, I, lect. 8 (Leonine edition, p. 42, l. 329-338).

INTRODUCTION

The human body is one of the most philosophically interesting and yet, also, one of the least discussed aspects of St. Thomas's anthropology. The reason or reasons why St. Thomas's account of the human body has rarely been the focus of study may be due to the fact that there is no work by St. Thomas exclusively devoted to the human body and/or it may be due to the fact that Aquinas was a Christian theologian of the Middle Ages, the assumption being that such a person would either be a dualist or, at least, almost exclusively interested in the nature, role, causality and destiny of the human soul, not the human body. St. Thomas's extensive discussions of the human soul may, also, further the impression that he had little interest in and little to say about the human body.

Or, perhaps, the reason for the neglect of his account of the human body is due to a prevalent misconception regarding his anthropology, namely, that he believed the human soul to be a substance in its own right. If the human soul is a substance in its own right, regardless of whether the body is also held to be a substance, then there really is no need to account for the human body, except perhaps the manner in which the soul is related to the body, if such a relation is said to exist at all.

Whatever the reason(s), there are few studies devoted to St. Thomas's views on the human body and, moreover, even these fail to provide an accurate, concrete and complete account of the human body in Thomistic anthropology.

Review of Previous Work in the Field

There are numerous works on Aquinas's philosophy as a whole and on his general anthropology/psychology. Although these works at least mention the body, they do not explore the topic at any length or depth. Often, moreover, these works focus almost exclusively on the nature and role of the human soul, as is, for instance, the case in Anton C. Pegis's *St. Thomas and the Problem of the Soul in the Thirteenth Century*, a work considered *de référence* for Aquinas's anthropology/psychology.¹

There are, also, a few works devoted to the issue of the *resurrected* body in Aquinas's thought. We think here, for instance, of Montague Brown's article "Aquinas on the Resurrection of the Body"² and of Emilio Sauras's article "Thomistic Soteriology and the Mystical Body".³ However, the analyses presented in such works are concerned, for the most part, with the nature of the human body in its resurrected state, not its present-life state.

¹ Anton C. Pegis, *St. Thomas and the Problem of the Soul in the Thirteenth Century*, Toronto: St. Michael's College, 1934. É.-H. Wéber's recent work *La personne humaine au XIII^e siècle* (Paris: Vrin, 1991), which devotes 41 pages to St. Thomas's anthropology (pp. 146-187), should be included in this category.

² Montague Brown, "Aquinas on the Resurrection of the Body," *Thomist* 56/no.2 (April 1992): 165-207.

³ Emilio Sauras, "Thomistic Soteriology and the Mystical Body," *Thomist* 15 (October 1952): 543-571.

There are, still further, a few works which focus on a particular issue related to human corporeality, for example, Marcel Sarot's "God, Emotion, and Corporeality: A Thomist Perspective".⁴

However, to our knowledge, there are only six works which focus on Aquinas's views of the human body and not just to a topic related to corporeality. These are: (1) Sister Evangeline Anderson's doctoral dissertation entitled *The Human Body in the Philosophy of St. Thomas Aquinas*;⁵ (2) David H. Kelsey's article "Aquinas and Barth on the Human Body";⁶ (3) Gerald F. Kreyche's "The Soul-Body Problem in St. Thomas";⁷ (4) Norbert Luyten's article "The Significance of the Body in a Thomistic Anthropology";⁸ (5) B. C. Bazán's "La corporalité selon S. Thomas";⁹ and (6) another article by B. C. Bazán entitled "The Highest Encomium of Human Body".¹⁰

This literature on the human body is, however, unsatisfactory for several reasons. First, the human body is not thoroughly and fully discussed in any of these five works. Items (2) through (6) of the above list of works are articles and, as such, do not provide a detailed analysis of the ontological status, nature, role

⁴ Marcel Sarot, "God, Emotion, and Corporeality: A Thomist Perspective," *Thomist* 58 (January 1994): 61-92.

⁵ Sister Evangeline Anderson, *The Human Body in the Philosophy of St. Thomas Aquinas*, Doctoral Dissertation, Washington: Catholic University of America, 1953.

⁶ David H. Kelsey, "Aquinas and Barth on the Body in a Thomistic Anthropology," *Thomist* 50 (October 1986): 643-689.

⁷ Gerald F. Kreyche, "The Soul-Body Problem in St. Thomas," *New Scholasticism* 46 (Autumn 1972): 466-484.

⁸ Norbert Luyten, "The Significance of the Human Body *Philosophy Today* 7 (1963): 175-193.

⁹ B. C. Bazán, "La corporalité selon S. Thomas," *Revue philosophique de Louvain* 81/no.15 (1983): 369-409.

¹⁰ *Ibid.*, "The Highest Encomium of Human Body" *Littera Sensus Sententia: Studi in onore del Prof. Clemente J. Vansteenkiste O.P.* vol. 33 (Milan, 1991): 99-116.

and causality of the human body but, rather, either discuss what the nature of human corporeality and the proper conception of the human body is (as does Bazán's "La corporalité selon S. Thomas"), indicate how rich and as yet unexplored the topic of the human body is (as does Bazán's "The Highest Encomium..."), explore similarities and differences between Aquinas's conception of the human body with that of another philosopher (as does Kelsey's article), address the issue of the relation of the soul to the body in Aquinas's thought (as does Kreyche's article), or attempt to give a phenomenological reading of Thomistic anthropology (as does Luyten's article). Even Anderson's doctoral dissertation devoted to the issue of the human body in Aquinas's philosophy remains at a very general level of discourse, looking at the nature of the body, the union of the soul and body, the dignity of the body and the limitations and possible dangers of the body.

The second reason why these works are unsatisfactory is because in each of them, with the exception of Bazán's articles, the discussion of the human body is based upon two serious misinterpretations of Thomistic anthropology, namely: (1) that the human soul is a substance in its own right rather than an essentially incomplete subsistent substantial form whose subsistence is not equivalent to substantiality and either (2a) that man's essence is a composition of soul and body rather than of soul and prime matter *or* (2b) that man's essence is a soul/body composite as well as a soul/(prime)matter composite.¹¹

¹¹ We place the 'prime' in brackets here because matter and prime matter are very rarely distinguished by these authors and, in some cases, even when distinguished, the author persists in stating that the correlate of the human soul is matter rather than prime matter (see, for instance, Anderson, pp. 1-2, where they are distinguished and prime matter is stated to be the determinable

A third reason why these works are unsatisfactory is because in each of them the analysis presented is from only one of the two complementary approaches to the question and, hence, cannot provide a complete account of the human body. The two complementary approaches distinguished by St. Thomas are the 'viewpoint of soul' and the 'viewpoint of body'. According to him, the 'viewpoint of soul' considers the human being 'abstractly'¹² and the 'viewpoint of body' considers the human being concretely.¹³ Whether this distinction of 'viewpoints' was made by St. Thomas at the beginning of his career or whether it was posited only later on will, of course, need to be examined in the proposed dissertation.¹⁴ However, that he made the distinction and considered the two 'viewpoints' complementary, at least by the time he wrote his commentary on Aristotle's *De sensu*, is significant and should not be overlooked by analyses of his anthropology. For, it implies that accounts of the human body from only one of the two complementary 'viewpoints' are incomplete and, thus, that a complete account of the human body requires analysis from both 'viewpoints'.

principle which is joined to the human soul to compose man, and p.3 where she says that the soul is joined to matter).

¹² See the Prohemium of *In De sensu et sensato* (Leonine edition, p. 4, v.40-44) where St. Thomas argues that after the 'abstract' consideration of the soul in the *De anima*, there must also be a consideration of the soul's corporeal powers with respect to their 'application' to the body (*secundum quandam concretionem siue applicationem ad corpus*).

¹³ *Summa theologiae*, I, q. 75, intro.: "Naturam autem hominis considerare pertinet ad theologum ex parte animae, non autem ex parte corporis, nisi secundum habitudinem quam habet corpus ad animam." See also, *In De sensu et sensato*, Prohemium (Leonine edition, p. 7, v.167-170), where St. Thomas states that the consideration of corporeal powers with respect to their 'application' to the body is from the point of view of the body itself (*ex parte corporis*) so that the bodily dispositions required for the operations common to the soul and the body might be known (*ut sciatur qualis dispositio corporum ad huiusmodi operationes uel passiones requiritur*).

¹⁴ See, regarding this, the section on methodology in this introduction.

Another reason why these works on the human body in Aquinas's thought are unsatisfactory is that the analysis presented in each of them is from the 'viewpoint of soul' alone and, hence, offers only an 'abstract' account of the human body.

The last reason why these works are unsatisfactory is because the analysis presented in them fails to fully recognize the causality ascribed by St. Thomas to the human body.¹⁵ Analysis from the 'viewpoint of soul' emphasizes the causality of the soul rather than of the body: the soul makes the body to be, to be a body, to be a living body, etc. From that 'viewpoint' alone, the human body seems hardly to have any causality whatsoever. However, the 'viewpoint of body' emphasizes the causality of the body rather than of the soul: the soul requires the body (and a very particular sort of body) in order to be and to act. Because, therefore, the analysis presented in these works fails to analyze the human body from the 'viewpoint of body', they also fail to fully recognize the causality St. Thomas ascribed to the human body.

The Aim of the Present Work

The aim of this dissertation is to provide an accurate, concrete and complete account of the human body in St. Thomas's mature texts in order to show that St. Thomas ascribed to the human body a rich and important causality which contributes positively to human existence.

As we just saw, the research conducted on St. Thomas's views of the human body is unsatisfactory for one of more of the following reasons: (1) the

¹⁵ Ibid.

analysis presented is based on misconceptions of St. Thomas's anthropological doctrine; (2) the analysis presented (from the 'viewpoint of soul' alone) does not provide a complete account of the human body; (3) the analysis presented (from the 'viewpoint of soul') offers only an 'abstract' account of the human body; (4) the analysis presented (from the 'viewpoint of soul') fails to fully recognize the causality ascribed by St. Thomas to the human body.

In order to provide, then, an accurate, concrete and complete account of the human body in St. Thomas's mature texts, three things are required: for the sake of accuracy, that misconceptions of Aquinas's anthropological doctrine be clarified; in order to provide a concrete account, that the question of the human body be approached from the 'viewpoint of body'; and, in order to provide a complete account, that the question of the human body be approached from both 'viewpoints' (the 'viewpoint of soul' and the 'viewpoint of body').

Furthermore, through examining the human body not only from the 'viewpoint of soul' but, also, from the 'viewpoint of body', the causality St. Thomas ascribed to the human body will be more fully disclosed. For, the 'viewpoint of body' emphasizes the causality of the human body rather than that of the human soul.

From that 'viewpoint', the human body exercises a rich and important causality. Now, the material dimension of human beings is, at least by scholars of St. Thomas's thought, usually held to be responsible for only two things: death and individuation. Although the corruption of human life is certainly due to a disruption of the body's complex and delicate equilibrium, ontological unity is not, on St. Thomas's view, caused by matter (which is only the cause of numerical multiplicity) but by *esse* (the act of being). Matter is not, for that, limited to being the cause of numerical multiplicity within a species and of death. As our research will demonstrate, the causality of human matter extends to almost every human

activity, *conditioning* such activities as nutrition, growth, sensation, memory, emotion and, even, the most fundamental human act, that of being. This 'conditioning' is not, moreover, a mere *limitation* imposed by matter on the acts or activities of the soul but a positive *contribution* to the quality and nature of human existence.

This causality of human *matter* can be appropriately ascribed to the human *body* because, according to St. Thomas, the proper correlate of the human soul is not *matter* (determined prime matter) but *prime matter* (pure potentiality). This means that the human body, which is *what it is* through the human soul, is not the proper correlate of the human soul (i.e., is not prime matter) but, rather is the composite of soul/prime matter and, thus, is human *matter*.

Yet, the human body is often spoken of in opposition to the human soul in St. Thomas's works. How can this be if the human body is a human soul/prime matter composite, i.e. is already informed by the soul? As our dissertation will show, St. Thomas does not contradict his own doctrine that the human body is a soul/prime matter composite when he speaks of the human body as though it were separate from the human soul. For, when he speaks of the body as though it were separate from the soul, St. Thomas implicitly takes the term 'body' in its precise rather than generic sense and, understood precisely (*cum precisione*), 'body' is taken as a *part* of the human being and, hence, legitimately spoken of *as though* separate from the soul.

To summarize, the aim of our dissertation is to show that St. Thomas ascribed to the human body a rich and important causality. To demonstrate this, we shall provide an accurate, concrete and complete account of the human body in St. Thomas's mature texts, examining closely St. Thomas's analysis of the body from the 'viewpoint of body', for it is in that analysis that the causality of the

human body is most fully disclosed. It is our contention, moreover, that St. Thomas ascribed a rich and important causality to the human body, one which *contributes* to the quality and nature of human activities and existence.

The Structure of the Present Work

As St. Thomas inscribes his anthropology in an Aristotelian framework, we devote a first section (Chapters 1 and 2) to the examine of Aristotle's views on matter and the body. In Chapter 1, we examine Aristotle's general hylomorphic theory, discussing how it is an analysis relative to substance, the manner in which matter and form are related and how they are to be conceived, as well as examine the application of hylomorphism to man in Aristotle's *De anima*, clarifying the role of both matter and the body in Aristotelian psychology and how the human body is to be conceived within hylomorphism.¹⁶

Chapter 2, then, looks at matter's role in each of the Stagirite's three analyses of substance: the metaphysical analysis (where substance is discussed in terms of potency and actuality), the physical analysis (where material substances are discussed in terms of matter and form) and the logical analysis (where substance is discussed in terms of subject/'matter' and predicate/'form').

Section II is devoted to the human body in St. Thomas's anthropology and our discussion is divided into six chapters. Chapter 3 examines St. Thomas's

¹⁶ As these chapters will show, the body is neither a substance nor prime matter but animated matter, where 'matter' is not understood as something opposed to soul but, rather is a hylomorphic composition of soul and prime matter which is considered, through a 'total' abstraction, as an indeterminate genus of substance.

general anthropology from the 'viewpoint of soul', outlining his adoption of Aristotle's hylomorphic theory as regards human beings, paying particular attention to points on which Aquinas's analysis differs from that of Aristotle.

Chapter 4 sets forth the methodology we employ in our examination of the human body in St. Thomas's philosophy. Outlining each of the two complementary approaches to the study of man, we argue that the 'viewpoint of soul' approach provides only an 'abstract' account of the human body but that the 'viewpoint of body' offers a more concrete account. Having already discussed the human body from the 'viewpoint of soul' in Chapter 3, we argue that the human body must now be examined from the 'viewpoint of body'. After examining the different senses of 'body' distinguished by St. Thomas, we then set forth how the examination of the human body from the 'viewpoint of body' should proceed.

Before studying the human body with the methodology outlined in the previous chapter, we first address, in Chapter 5, the issues of human individuation in St. Thomas's philosophy and of Aquinas's views on the elements, two issues raised in our discussion of Aristotle in Section I. In regards to the question of matter being the principle of individuation, we argue that St. Thomas distinguishes two sorts of 'individuation' and that, although *materia signata* is the cause of our being *unum de numero* (which is one kind of 'individuation'), it is not the cause of our being *unum numero* (*esse* being the principle of this kind of 'individuation'). Regarding elemental change and the composition of the elements, we show that, according to St. Thomas, elements are composed of

substantial form and prime matter, that their changes are not accidental but substantial (i.e., involve generation and corruption) and that the qualities or powers of a corrupted element remain virtually in the composite.

Chapters 6-8 then study the human body from the 'viewpoint of body', examining the causality of matter in each level of life: vegetative (Chapter 6), sensitive (Chapter 7) and intellective (Chapter 8). At the vegetative level, the role of matter in generation, nutrition and growth is discussed, as is St. Thomas's doctrine regarding the necessary qualities of the human body. In Chapter 7, the causality of matter in sensation is examined in regards to (a) organs and faculties; (b) the exterior senses (of which the sense of touch is primary and, for this reason, will be the focus of our discussion); (c) the functions of the human heart with respect to our vital operations, movement and erect position; (d) the interior senses and their relation to the structure of the human brain; and (e) appetites and emotions. The final chapter, Chapter 8, then examines the causality of matter at the level of intellective life. There we show that the human soul requires matter (more precisely, a human body) to both acquire knowledge and exercise its acquired knowledge. The human body's causality and importance does not, however, end with man's present-life, i.e. with death. According to St. Thomas, the human soul is outside its nature (*praeter naturam*) when separated from its body and, further, requires its body to fulfill its ultimate end. A discussion of Aquinas's teaching regarding the separated soul and of his theological doctrine of the resurrection of the body will, in order to show their consistency with his philosophical principles, conclude the dissertation.

The Place and Contribution of the Present Work

The present work extends the research of B. C. Bazán. His work on St. Thomas's anthropology sets the stage for our own research in two important ways. First, by providing the first and, to our knowledge, only accurate analysis from the 'viewpoint of soul' of corporeity in Aquinas's anthropological doctrine. In his "La corporalité selon S. Thomas," the ontological status of the human soul as a subsistent substantial form is clarified and the essence of the human being is appropriately said to be a human soul/prime matter composite.¹⁷ Second, by indicating, in his "The Highest Encomium of Human Body," the research still required on St. Thomas's views of the human body and the potential fruitfulness of such research.¹⁸

The research presented in this work contributes to the knowledge of St. Thomas's philosophy in several ways. It is the first accurate, concrete and complete account of the human body in St. Thomas's philosophy. It is, also, the first examination of the human body from the 'viewpoint of body'. Furthermore, it clarifies fundamental but often misinterpreted aspects of Aquinas's anthropology, provides a detailed analysis of the causality of matter in St. Thomas's anthropology, and clarifies St. Thomas's position on human individuation.

This dissertation also contributes to further philosophical research by providing a basis for comparing Aquinas's views on the human body to those of other authors, both ancient and medieval, as well as modern (for example, Descartes). With the renewed interest of contemporary thinkers in the human body, our research will also be able to provide a basis for comparing Aquinas's views on the human body to those of, for instance, Merleau-Ponty and Jacques Lacan.

¹⁷ For full citation, see footnote 9.

¹⁸ For full citation, see footnote 10.

Methodology of the Present Work

The basic methodology of my proposed dissertation is textual analysis, taking into consideration two important points: (1) St. Thomas's distinction between the 'viewpoint of soul' and the 'viewpoint of body' and (2) a limitation of our claims to St. Thomas's mature texts.

As St. Thomas distinguishes two complementary approaches to the study of man, the 'viewpoint of soul' and the 'viewpoint of body', our textual analysis could be undertaken from either or both of these viewpoints and, hence, it should be noted here that our intention is to utilize both approaches in order to provide as complete an account of the human body in St. Thomas's works as possible.

We restrict our claims and, for the most part, our attention to St. Thomas's mature writings because St. Thomas's reflections on the human body may have evolved over the course of his works but tracing that evolution goes beyond the scope of this dissertation.

Furthermore, it should also be noted that we will not devote as much time to the study of the human body from the 'viewpoint of soul' as we do that from the 'viewpoint of body'. The reason for this is that an analysis of the human body from the 'viewpoint of body' has never been conducted and involves a detailed examination of many different aspects of materiality (elements, tissues, organs, etc.). The analysis of the human body from the 'viewpoint of soul' does not require such detailed study. Moreover, many points raised in the analysis of the human body from the 'viewpoint of soul' are familiar and, hence, do not require lengthy explanation.

A few other methodological points should be noted. Although I have a basic grasp of ancient Greek, I am not proficient and, thus, think it best to rely on established translations and only cite the Greek text when an important point

seems missed by the translation. Greek citations will either be from the Loeb edition of Aristotle's works or from Gignon's re-edition of the *Aristotelis opera*, which reproduces Bekker's work.¹⁹ For all citations from the works of Aquinas, on the other hand, an English translation will be used in the body of my text so that the dissertation reads with ease, but the Latin will be provided in footnote. Where possible, the Leonine edition of St. Thomas's works will be used, with one notable exception: the *Summa theologiae*. Although that work is available in the Leonine edition, the Ottawa edition is generally considered preferable and, hence, we will cite from that edition instead.²⁰

¹⁹ See the Works Consulted list for more details.

²⁰ Ibid.

PART I

MATTER AND THE BODY IN ARISTOTLE'S HYLOMORPHISM

The theory of hylomorphism is arguably the most important philosophical contribution of Aristotle. It is, at the least, the very cornerstone of Aristotelian thought. With it, Aristotle sought to establish a science of this world, a world composed of corporeal substances which come into existence, move, change, go out of existence and, sometimes, even think. With it, too, Aristotle challenges the Platonic vision of man whose fundamental tenet, that the soul is distinct and separate from the body, can still be found, in modified versions, today.

In this section comprised of two chapters, we examine Aristotle's hylomorphic theory mainly as an introduction to St. Thomas' thought but also to get a first idea of what sort of causality may be ascribed to matter within a hylomorphically composed substance. In Chapter I, we examine Aristotle's hylomorphic theory, discussing how it is an analysis relative to substance, the manner in which matter and form are related and how they are to be conceived. This general discussion of hylomorphism is then followed by a brief exposition of Aristotle's application of hylomorphism to man as it is found in his *De anima*, clarifying the role of both matter and the body in Aristotelian psychology. In Chapter II, we look at matter's role in each of the Stagirite's three analyses of

substance: the metaphysical analysis (where substance is discussed in terms of potency and actuality), the physical analysis (where material substances are discussed in terms of matter and substantial form) and the logical analysis (where substance is discussed in terms of subject/matter and predicate/form).

CHAPTER 1

HYLOMORPHISM

Aristotle's hylomorphic theory is at the very foundation of our investigation into the causality of matter. It is, thus, with an exegesis of this theory that we must begin. Our discussion will be divided into three parts: in the first, we will discuss why Aristotle introduced his hylomorphic theory; in the second, will look at the central concepts involved (substance, matter and form) and how they are to be understood; and, in the third, we will outline how this theory is applied to man in *De anima*.

I) Aristotle's Hylomorphic Theory and the Problem of the Possibility of Movement

Aristotle introduced the structure of matter and form, i.e. his hylomorphic theory, as an answer to the problem of change or becoming.²¹ Simply stated, this problem (at least in its Parmenidian form) reasons as follows: If anything

²¹ *Physics*, I, 7, 190b10 (tr. R. P. Hardie and R. K. Gaye): "[...] whatever comes to be is always complex". Please note that all citations from the works of Aristotle, unless otherwise indicated, are from *The Basic Works of Aristotle*, ed. Richard McKeon, New York: Random House, 1941. See also François Nuyens' *L'Évolution de la psychologie d'Aristote*, (Paris: Vrin, 1948), 60: "En ces notions [matière et forme] se trouve la contribution fournie par Aristote (contribution qui paraît bien être une solution définitive), à l'explication du monde du devenir".

comes to be, it does so either from what is (being) or from what is not (not-being); from what is not (not-being) nothing can come to be; but neither can anything *come* to be from what is (being), for it would then have already been *before* coming to be; thus, all coming-to-be is illusory.²²

Before dismissing this view, Aristotle argued against it and his assessment revealed that his predecessors mistakenly believed that the being / not-being disjunction is absolute and exclusive.²³ There are in fact *three*, not *two* (being & not-being) principles of reality: being (actuality), not-being (privation) and ability-to-be (potency):

The underlying nature is an object of scientific knowledge, by an analogy. For as the bronze is to the statue, the wood to the bed, or the matter and the formless before receiving form to any thing which has form, so is the underlying nature to substance, i.e. the 'this' or existent. This then is one principle (though not one or existent in the same sense as the 'this'), and the definition was one as we agreed; then further there is its contrary, the privation.²⁴

In all change or movement, what comes to be neither comes to be from that which is not (privation) *qua* that which is not,²⁵ nor from that which is *qua* that which is:

Thus, suppose a dog to come to be from a horse. The dog would then, it is true, come to be from animal (as well as from an animal of a certain kind) but not as animal, for that is already there. But if anything is to become an animal, not in a qualified sense, it will not be from animal: and if being, not from being — nor from not-being

²² For the original statement of the problem by Parmenides and Melissus, see G. S. Kirk and J. E. Raven, *The Presocratic Philosophers*, (Cambridge: Cambridge University Press, 1960), pp. 263-285 (Parmenides) and pp. 298-306 (Melissus).

²³ *Physics*, I, 8, 191a24 - 191b34, particularly 191b10-26. See also *De generatione et corruptione*, I, 3, 317a32 sqq.

²⁴ *Physics*, I, 7, 191a8-14 (tr. by R. P. Hardie and R. K. Gaye). We reserve a discussion of this 'analogical way' of knowing the underlying substratum for Chapter 2.

²⁵ *Physics*, I, VIII, 191b12-18.

either, for it has been explained that by 'from not-being' we mean from not-being *qua* not-being.²⁶

According to Aristotle, the originative source of movement is *ability to be* or, in other words, *potency*:

[...] all potencies that conform to the same type are originative sources of some kind, and are called potencies in reference to one primary kind of potency, which is an originative source of change in another thing or in the thing itself *qua* other.²⁷

Furthermore, it is precisely as potency that matter is defined and, so defined, it is both an immanent and non-accidental element of generation.²⁸ For, only thus can it be the primary substratum of change and, hence, resolve the Eleatic problem:

Now we distinguish matter and privation, and hold that one of these, namely the matter, is not-being only in virtue of an attribute which it has, while the privation in its own nature is not-being; and that the matter is nearly, in a sense is, substance, while the privation in no sense is. [...] The matter comes to be and ceases to be in one sense, while in another it does not. As that which contains the privation, it ceases to be in its own nature, for what ceases to be — the privation — is contained within it. But as potentiality it does not cease to be in its own nature, but is necessarily outside the sphere of becoming and ceasing to be. For if it came to be, something must have existed as a primary substratum from which it should come and which should persist in it; but this is its own special nature, so that it will be before coming to be. (For my definition of matter is just this — the primary

²⁶ *Physics*, I, VIII, 191b21-26 (tr. by R. P. Hardie and R. K. Gaye).

²⁷ *Metaphysics*, IX, 1, 1046a9-12 (tr. W. D. Ross). See also, *ibid.*, V, 12.

²⁸ The nature of matter as immanent and non-accidental is not clearly brought out in the English translation. The Greek text, especially at 192a32-33, should be consulted: "— λέγω γὰρ ὕλην τὸ πρῶτον υποκείμενον ἕκαστω, ἐξ οὗ γίνεται τὸ ἐνυπάρχοντος μὴ κατὰ συμβεβηκός —" (*The Physics*, Greek text with English translation by Philip H. Wicksteed and Francis M. Cornford, 2 Volumes, Loeb Classical Library, London: Heinemann, 1963). All citations from the original text (i.e., in Greek) will be, unless otherwise indicated, from the Loeb Classical Library series. Rather than provide a full citation in our footnotes for each different volume (*Physics*, *Historia animalium*, etc.) utilized, we will simply indicate "Loeb edition". Full references for each of the volumes we consulted in this series can be found in our *Works Consulted* list.

substratum of each thing, from which it comes to be without qualification, and which persists in the result.)²⁹

Thus, in every change or movement what comes to be does so from *potency* (from matter) rather than from either being or not-being (privation). Let us take as an example the coming to be of a candle. A candle can come to be from wax only if the wax has the *ability* to be shaped into a candle. If the wax is already a candle (is a candle), it could not be said to *come* to be one. Although the wax must lack the determination in question before receiving it (in order for a change to be said to occur), it will acquire the determination only if it is *able* to: wax could never become a bone or a nail, even though it is deprived of these determinations.

A couple of points should be noted. First, Aristotle does not violate the principle that 'nothing comes out of nothing'. Although all change requires privation (for without it nothing could be said to *come* to be), change does not come out privation (the lack of a certain determination) but out of potency (the ability to acquire a certain determination). The wax does not become a candle from its *lack* of being a candle but from its *ability* to become a candle. Otherwise, as we noted above, we would be committed to saying that it could become bone or nail.

Second, it is granted that being *qua* being does not *become*. The point being made, however, is that becoming is never in respect to absolute being but, always, in respect to a particular determination of being: being a candle, being red, being angry. Even the coming to be of a new individual of a certain species (a black, 2 pound, Labrador retriever) is still a coming to be of a being and not 'Being' simpliciter.

²⁹ *Physics*, I, 9, 192a2-33 (tr. by R. P. Hardie and R. K. Gaye).

Thus, Aristotle's answer to the problem of becoming is that movement is possible because of potency. Potency neither *is* nor *is not* unqualifiedly but, rather, is *ability-to-be*.³⁰ Although this presupposes that potency is real (i.e., that there exist potentialities in the world), any view to the contrary is, according to the Stagirite, absurd.³¹

Since there can be no movement without potency, potency must enter the composition of substances subject to movement. All substances subject to movement will be analyzable in terms of potency and actuality. Although best exemplified in hylomorphically composed substances, the structure of potency and actuality also holds between a substance and its accidents (the substance being in potency in regards to its accidents).³² In each case, what is in potency is a real, though non-actual, subject in regards to a certain determination or actuality: the bronze is in potency in regards to the determination of being a statue and my friend Charles is in potency in regards to being tanned. According to Aristotle, the potential is always reduced to act by the actual and exists for the sake of the actual. The potentiality of the bronze to be a statue is reduced to act by the form of the statue (and the artist); Charles' ability to be tanned is actualized by the agency of the sun.

Furthermore, the concrete thing is given in the mutual relation of potency and act. A house considered in its actuality would be defined as 'a receptacle to shelter chattels and living beings', but considered in its potentiality would be

³⁰ Aristotle distinguishes different types of potency: of acting, of being acted upon and possibility of existence (either in the world actually or for the mind only). On these senses, see *Metaphysics* IX, especially chapters 1, 2, 4 and 6.

³¹ *Metaphysics*, IX, 3, 1046b28-32. Note that *Metaphysics* IX, 3 is devoted to a defense of potency against the attack of the Megaric school.

³² As we shall see later, Thomas Aquinas will hold that the relation between essence and *esse* is also one of potency to act, essence being in potency to the act of existence.

defined as 'stones, bricks, and timbers'.³³ A house, however, is neither of these definitions or 'components' but this particular wooden, brick and stone shelter.

Turning now to the structure of matter and form of sensible substances, we shall see that matter and substantial form are related as potency to act and that the concrete substance (this man, this horse, this tree) is neither of these 'components' alone but given in their mutual, intimate relation.

II) The Structure of Matter and Form

In hylomorphically composed substances, matter is the principle of potency and substantial form the principle of actuality.³⁴ As the hylomorphic analysis is an analysis of sensible substance (relative to sensible substance), we should first determine what qualifies as a sensible substance.³⁵ Once we have done so, we will be better able to determine what, precisely, form and matter are and how they are related.

(a) Substance

According to Aristotle, many things may be said to be substances: parts of animals, animals, etc. What sort of thing, however, truly and unqualifiedly deserves the title of substance? He poses the question in the following way:

³³ *Metaphysics*, VIII, 2, 1043a12-17.

³⁴ *Metaphysics*, VIII, 1, 1042a24-32; *Physics*, I, 9, 192a2-33; *De generatione et corruptione*, I, 3, 317b16-34.

³⁵ As we are here only concerned with this sort of substance (and not, e.g., intelligible substance), we will not specify 'sensible' every time we mention 'substance'.

Substance is thought to belong most obviously to bodies; and so we say that not only animals and plants and their parts are substances, but also natural bodies such as fire and water and earth and everything of the sort, and all things that are either parts of these or composed of these (either of parts or of the whole bodies), e.g. the physical universe and its parts, stars and moon and sun. But whether these alone are substances, or there are also others, or only some of these, or others as well, or none of these but only some other things, are substances, must be considered.³⁶

Although substance can be (and is) said in many senses, many of the entities just listed would not qualify as substances in the primary sense of the term because they are 'only potencies':

Evidently even of the things that are thought to be substances, most are only potencies — both the parts of animals (for none of them exist separately; and when they are separated, then too they exist, all of them, merely as matter) and earth and fire and air; for none of them is a unity, but as it were a mere heap, till they are worked up and some unity is made out of them.³⁷

This text illustrates the two criteria Aristotle uses to determine whether an entity is a substance or not: separability and unity. The parts of animals are potencies rather than substances because (1) they cannot exist separately: a severed finger is not actually a finger and is unable to be a finger on its own, that is, in separation from the hand of some being; ; and (2) they do not have a unity of their own: a finger has to be a finger *of* some animal (a severed finger, again, is not a finger but a 'mere heap').³⁸

However, confusion can quite easily arise over whether something has the unity required to be a substance: a heart and a hand at least seem to have a certain unity of their own. But, if the heart or the hand is separated from the

³⁶ *Metaphysics*, VII, 2, 1028b8-16 (tr. by W. D. Ross). See, also, *Physics*, I, 3, 186b-4-13.

³⁷ *Metaphysics*, VII, 16, 1040b5-10 (tr. by W. D. Ross).

³⁸ We will discuss these points in more detail in Chapter 2.

organism, it cannot continue to exist.³⁹ In fact, according to the Stagirite, nothing other than substance is separable:

If [...] it is asserted that all things are quality or quantity, then, whether substance exists or not, an absurdity results, if indeed the impossible can properly be called absurd. *For none of the others can exist independently: substance alone is independent: for everything is predicated of substance as subject.*⁴⁰

Although separability is certainly key, both separability and unity are conditions of primary substance. They are characteristic of *individuals* and, hence, it will be individuals that are substances in the primary sense of the term:

Substance, in the truest and primary and most definite sense of the word, is that which is neither predicable of a subject nor present in a subject; for instance, the individual man or horse.⁴¹

If other entities are called substances, they are substances only in a secondary, derived sense, that is, only as relative to primary substances (i.e. individuals):

[...] in a secondary sense those things are called substances within which, as species, the primary substances are included; also those which, as genera, include the species. For instance, the individual man is included in the species 'man', and the genus to which the species belongs is 'animal'; these, therefore — that is to say, the species 'man' and the genus 'animal' — are termed secondary substances.⁴²

³⁹ Unless, of course, the severed part is provided the conditions which at least simulate its being part of an organism (mechanically or through a transplant). This is an interesting issue which, unfortunately, we can barely touch upon here (but would like to pursue eventually).

⁴⁰ *Physics*, I, 2, 185a28-32 (tr. by R. P. Hardie and R. K. Gaye) (emphasis mine). Italicized text is a translation of 185a31: "οὐθέν γὰρ τῶν ἄλλων χωριστόν ἐστι παρὰ τὴν οὐσίαν" (Loeb edition). See also *Metaphysics*, XII, 1, 1069a25.

⁴¹ *Categories*, 5, 2a11-13 (tr. by E. M. Edghill). See also *Metaphysics*, 1037b3.

⁴² *Categories*, 5, 2a14-18 (tr. by E. M. Edghill).

Hence, only individuals are primary substances.⁴³ All other entities are "either predicable of primary substance or present in a primary substance".⁴⁴ This not only means that species and genus are not primary substances but, also, that essence or substratum cannot be either: these can only be substances in a secondary, derived sense.

(b) Matter and Form

As we just explained, the analysis of sensible substances in terms of matter and form is relative to what they are an analysis of: sensible substance. Hence, neither matter nor form is, properly speaking, a substance. As F. Nuyens explains, matter and 'entéléchie' (actualization or, simply, substantial form) are the intrinsic principles of substances, but not themselves substances:

L'entéléchie est, en effet, une cause intrinsèque de l'être (ou de la substance); elle ne peut, à son tour, être dite un 'être', sinon dans un sens affaibli, analogique. L'entéléchie (et de même la puissance) n'existe pas en elle-même, mais seulement en fonction de la substance.⁴⁵

According to Aristotle, the form of a substance (or substantial form) is that which makes the substance the sort of substance that it is:

[...] the word 'nature' is applied to what is according to nature and the natural in the same way as 'art' is applied to what is artistic or a work of art. We should not say in the latter case that there is anything artistic about a thing, if it is a bed only potentially, not yet

⁴³ Although we cannot engage this issue, many scholars are of the opinion that Aristotle further restricts the status of primary substance, at least in the sensible realm, to *animate* beings. See, for instance, Cherniss, *Aristotle's Criticism of Plato and the Academy*, (Baltimore: John Hopkins Press, 1944), 328; Ross, *Metaphysics*, (Oxford: Clarendon Press, 1924), cxiv; and Haring, "Substantial Form in Aristotle's *Metaphysics Z III*," (*Review of Metaphysics* 10, 1956-57), 311.

⁴⁴ *Categories*, 5, 2a34.

⁴⁵ F. Nuyens, *L'Évolution de la psychologie...*, 68-69.

having the form of bed; nor should we call it a work of art. The same is true of natural compounds. What is potentially flesh or bone has not yet its own 'nature', and does not exist 'by nature', *until it receives the form* specified in the definition, which we name in defining what flesh or bone is. [...] The form indeed is 'nature' rather than the matter; for a thing is more properly said to be what it is when it has attained to fulfillment than when it exists potentially.⁴⁶

An elm tree, for example, is what it is because of its substantial form. This is, in fact, one of the sorts of causality ascribed by Aristotle to form.⁴⁷ Another sort is that of end or 'that for the sake of which':

[...] since 'nature' means two things, the matter and the form, of which the latter is the end, and since all rest is for the sake of the end, the form must be the cause in the sense of 'that for the sake of which'.⁴⁸

However, form also, and more fundamentally, is that which makes the substance not only be of a certain sort but *be*: "for in everything the essence is identical with the ground of its being".⁴⁹ Substantial form is, thus, both a necessary condition of a substance's *being* and of its being *the sort* of substance that it is.

Although not for the same reasons, matter is also both a necessary condition of a substance's *being* and of its being *the sort* of substance that it is. It is a necessary condition of a substance's being *of a certain sort* because being a substance of a certain kind requires matter(s) of a certain sort. An elm cannot be

⁴⁶ *Physics*, II, 1, 193a32-193b8 (tr. by R. P. Hardie and R. K. Gaye) (emphasis mine).

⁴⁷ See, for instance, *Physics*, II, 3-9; *Metaphysics*, V, 2, 1013a24-34; I, 3-10; VI, 2-3; VII, 17; VIII, 2-4; IX, 8; XII, 4-5. The form of an attribute (or accidental form) is that which makes the substance *the way it is*: this elm tree has a knot, this other elm is drooping.

⁴⁸ *Physics*, II, 8, 199a30-33 (tr. by R. P. Hardie and R. K. Gaye). See also the references in preceding footnote and, of keen interest to our thesis, two texts claiming that the soul is the final cause of the body: *De partibus animalibus*, I, 5, 645b15-19 and *De anima*, II, 4, 415b15-21.

⁴⁹ *De anima*, II, 4, 415b12. This principle was, as we shall see, nuanced by Thomas Aquinas through his famous distinction between that *by which* a substance *is* (*esse*) and that by which it is the *sort of substance* it is (*essentia*).

an elm if it has the roots, trunk and branches of another sort of tree. A dog cannot be a dog if it has the flesh and bones of a cat. Further, it is a necessary condition of a substance's *being* because substantiality requires *materiality*.⁵⁰ Being an elm tree requires being material: without roots, a trunk and branches, there can be no tree whatsoever; without flesh and bones, there can be no animal.

Matter and form are, thus, intrinsic co-principles of substance or, put differently, *co-institutive* principles of substance: substantial form is that which *determines* the matter to be a substance of a certain kind and matter is that which *is determined* by form to be a substance of a certain kind.⁵¹ They are, thus, also *correlative* principles of substance:

La seule substance complète dans l'ordre sensible est une matière déterminée par une forme, ces deux principes étant corrélatifs et donc insuffisants l'un sans l'autre pour fonder la substantialité, non toutefois pour les mêmes raisons. La forme est la détermination essentielle de quelque chose; la matière est le quelque chose à déterminer, à organiser.⁵²

To briefly summarize, Aristotle's hylomorphic theory explains sensible and corruptible substance as structured ontologically. The two ontological constituents of sensible substances, matter and form, are the correlative, constitutive principles of sensible substances but not, themselves, substances (in the primary sense of the term). Substantial form determines matter to be a certain sort of substance and matter, determined by form, is that of which the

⁵⁰ This statement is limited, however, to substances subject to generation and corruption. The being of such substances requires matter because matter is one of the explanatory principles of substantial change.

⁵¹ L. De Raeymaeker called the relation between matter and form 'transcendental' because it is a relation in which neither of the members can exist without the other while yet remaining distinct. See his *Philosophie de l'être*, 3rd ed., (Louvain: Éditions Nauwelaerts, 1970), 123-126.

⁵² Suzanne Mansion, "Les substances sensibles chez Aristote," (in *Philomathes: Studies and Essays in the Humanities in Memory of Philip Merlan*, ed. Robert B. Palmer and Robert Hamerton-Kelley, The Hague: Martinus Nijhoff, 1971), 85.

substance is made. Neither matter nor form can exist without the other and both are essential to substantiality:

We are in the habit of recognizing, as one determinate kind of what is, substance, and that in several senses, (a) in the sense of matter or that which in itself is not 'a this', and (b) in the sense of form or essence, which is precisely in virtue of which a thing is called 'a this', and thirdly (c) in the sense of that which is compounded of both (a) and (b). Now matter is potentiality, form actuality [...] That is why we can wholly dismiss as unnecessary the question whether the soul [the form of a natural body having life potentially within it] and the body are one: it is as meaningless as to ask whether the wax and the shape given to it by the stamp are one, or generally the matter of a thing and that of which it is the matter. Unity has many senses (as many as 'is' has), but the most proper and fundamental sense of both is the relation of an actuality to that of which it is the actuality.⁵³

III) The Application of Hylomorphism to Man: *De anima*

Aristotle decided to apply his hylomorphic theory to man rather late in his career. Having first adopted a dualistic conception of the relations between the soul and the body, he slowly constructed his own psychology, one based on his fundamental theory of hylomorphism. This decision to examine man within the domain of natural science, as a hylomorphically composed substance, not only allowed Aristotle to elaborate a general psychology, one which applied to all living beings (not only man) but, also, to overcome both ontological dualism and instrumental dualism.⁵⁴

⁵³ *De anima*, II, 1, 412a7-412b9 (tr. J. A. Smith). The definition of the soul as 'the form of the natural body having life potentially within it' is given at 412a21.

⁵⁴ Nuyens discusses the different stages of the Stagirite's psychology at length in his *L'Évolution de la psychologie d'Aristote*. See also B. C. Bazán's remarks in his "La corporalité selon saint Thomas," *Revue philosophique de Louvain* 81 (1983): especially 369-370.

Aristotle's hylomorphic theory was key in redefining the very notion of soul and, consequently, in formulating his conception of the soul's nature and relation to the body. As a hylomorphic composite, man must be composed of a substantial form and matter. The soul, then, cannot but be a substantial form. It cannot be a substance (a primary substance), nor material, nor a harmony, nor a self-moving number.⁵⁵ Rather, the soul is, according to Aristotle, "the form of a natural body having life potentially".⁵⁶

Man is, on this view, a sensible substance and, like other sensible substances, composed of a substantial form and matter. The study of man is, thus, the domain of natural science, which considers both inanimate substances subject to movement and animate substances.⁵⁷ The principle of determination of an inanimate substance is a (substantial) *form*, that of an animate substance, a (substantial) *form which is also the principle of life* or, more simply, a *soul*.⁵⁸

The soul makes the body to be the sort of body that it is or, in other words, is "the first grade of actuality of a natural body having life potentially".⁵⁹ For, according to Aristotle, "matter is a relative term: to each form there corresponds a special matter".⁶⁰ This means that the body is not a body unless determined by the soul. Without any actuality (as a body) of its own, the body is not a 'this' distinct from the soul and, hence, there cannot arise any ontological duality

⁵⁵ Aristotle discusses the views of his predecessors concerning the soul in book I, chapters 2-5, of his *De anima*. Against the view that the soul is a self-moving number, see 408b32-409b18; against the view that the soul is a spatial magnitude, see 407a2-407b25 and 467b14; against the view that it is a harmony, see 407b27-408a33; and against the view that it is composed of elements, see 409b19-411a6.

⁵⁶ *De anima*, II, 1, 412a20.

⁵⁷ Richard Bodéüs discusses this point in his *Aristote: De l'âme*, tr. R. Bodéüs, (Paris: GF-Flammarion, 1993), 12-17.

⁵⁸ See *De anima*, II, 2, 413a20-21. See also, from the same text, I, 1, 402a6 and II, 4, 415b8-28, as well as, *De partibus animalium*, I, 1, 641a18-20.

⁵⁹ *De anima*, II, 1, 412a27.

⁶⁰ *Physics*, II, 2, 194b9: *Ἐπὶ τῶν πρὸς τί ἢ ὕλη· ἕλλω γάρ εἶδει ἕλλω ὕλη* (Loeb edition).

between them. Although this passage has already been cited, it is worth repeating:

[...] we can wholly dismiss as unnecessary the question whether the soul and the body are one: it is as meaningless to ask whether the wax and the shape given to it by the stamp are one, or generally the matter of a thing and that of which it is the matter. Unity has many senses (as many as 'is' has), but the most proper and fundamental sense of both is the relation of an actuality to that of which it is the actuality.⁶¹

As the first actuality or act of the natural, organized body,⁶² soul is the principle of both the being and the activity of the living being. It is that "by or with which primarily we live, perceive, and think".⁶³ And the correlate of this principle of actuality is matter.⁶⁴ This is an important point. The soul's correlate is not the organized body, for the body owes its very organization to the soul. Its correlate is *that which can be* the organized body (the *potentiality* of the organized body), i.e. matter. "We must not understand by that which is 'potentially capable of living' what has lost the soul it had, but only what still retains it".⁶⁵

Although Aristotle had certain hesitations regarding the consequences of the application of hylomorphism to man,⁶⁶ it is clear that in generalizing the field of application of this theory that he rigorously affirmed the unity of the human

⁶¹ *De anima*, II, 1, 412b6-9 (tr. by J. A. Smith).

⁶² *De anima*, II, 1, 412a28-29 (see also, II, 1, 412b4-6). This definition is, according to the Stagirite, *analogical*: it is a general definition which, although applying to different sorts of soul, does not express the peculiar nature of any of them (*De anima*, II, 3, 414b22-27).

⁶³ *De anima*, II, 2, 414a12-13.

⁶⁴ See, *De anima*, II, 2, 413a14-27. See, also, *Aristote: De l'âme*, tr. R. Bodéüs, (Paris: GF-Flammarion, 1993), 139, note 3; 140, note 1.

⁶⁵ *De anima*, II, 1, 412b25-26. According to R. Bodéüs, "Aristote distingue trois 'substances': a) l'âme, b) le corps et c) les vivants qu'ils composent" (*opus cit.*, 45). This, however, is not only incorrect but misleading. The three senses of substance distinguished by Aristotle are soul, *matter* and the composite of the two (*De anima*, II, 2, 414a14-15). Soul is joined to matter, not to the 'body' (which, precisely, is already made to be what it is by the soul).

⁶⁶ We are referring, of course, to the famous noetic problem raised by *De anima*. See F. Nuyens' discussion of it in his *L'Évolution de la psychologie...*, especially chapter 7.

being. For, neither soul nor matter is, properly speaking, a substance. It is the plant, dog and man which are substantial, matter and soul being their constitutive, correlative ontological principles. Moreover, on this view, the body has no existence outside the matter-soul relation. For, it is the soul which makes the body the body that it is (which organizes matter to be a body of a certain sort) and matter is that from which and out of which the body is made.

In this perspective of man, matter is of fundamental importance: it is the constitutive, correlative principle of human nature, without which the soul cannot attain its reality as substantial form. Clarifying its causality and importance will, we believe, not only bring out more fully the value of Aristotle's hylomorphic theory but, also, the significance of the human body.

CHAPTER 2

THE CAUSALITY OF MATTER IN ARISTOTLE'S HYLOMORPHISM

The aim of this chapter is to determine what is, according to Aristotle, the causality proper to matter. As we explained in Chapter 1, the hylomorphic structure of matter and form is relative to substance subject to movement. Aristotle, however, offers three different analyses of substance: a metaphysical, a physical and a logical analysis. Each separate treatment of matter corresponding to these different analyses of substance will, thus, need to be examined.

Before examining these treatments of matter, however, we should first establish the legitimacy of discussing matter as a cause. To achieve this end, we will sketch the Stagirite's theory of the four causes, placing particular emphasis on matter in this theory. This will, then, lay the foundation for a detailed discussion of the causality ascribed to matter in each of the three analyses of substance.

1) Aristotle's Theory of the Four Causes

According to Aristotle, to know the first principles of a thing is to know its primary causes.⁶⁷ Whatever is a necessary condition of a thing's *being, coming-into-existence* or *being known* is a cause:

That from which a thing can first be known — this is also called the beginning of the thing, e.g. the hypotheses are the beginnings of demonstrations. (Causes are spoken of in an equal number of senses; for all causes are beginnings.) It is common, then to all beginnings to be the first point from which a thing either is or comes to be or is known; but of these some are immanent in the thing and others outside. Hence the nature of a thing is a beginning, and so is the element of a thing, and thought and will, and essence, and the final cause — for the good and the beautiful are the beginning both of knowledge and of the movement of many things.⁶⁸

In both the *Metaphysics* and the *Physics*, Aristotle considers the views of his predecessors on the number and nature of the first principles or causes of reality and concludes that there are four such causes:

'Cause' means (1) that from which, as immanent material, a thing comes into being, e.g. the bronze is the cause of the statue and the silver of the saucer, and so are the classes which include these. (2) The form or pattern, i.e. the definition of essence, and the classes which include this (e.g. the ratio 2:1 and number in general are causes of the octave), and the parts included in definition. (3) That from which the change or the resting from change first begins; e.g., the adviser is a cause of the action, and the father a cause of the child, and in general the maker a cause of the thing made and the change-producing of the changing. (4) The end, i.e. that for the sake of which a thing is; e.g. health is the cause of walking [...]⁶⁹

⁶⁷ *Physics*, I, 1, 184a9-14; I, 3, 194b16-22; *Metaphysics*, I, 2, 982a5-30; I, 3, 983a24 - 983b8.

⁶⁸ *Metaphysics*, V, 1, 1013a15-23 (tr. by W. D. Ross).

⁶⁹ *Metaphysics*, V, 2, 1013a24-34 (tr. by W. D. Ross). Other texts dealing with the four causes are: *Physics*, II, 194b16-195b30; II, 7, 198a22 sqq.; *De anima*, II, 4, 415b8-11; *Metaphysics*, I, 3, 983a25-33; XII, 4, 1070b26; *De generatione et corruptione*, II, 9 and 10.

There are, thus, four *and only four* kinds of cause: material, formal, efficient and final.⁷⁰ The material cause is *that out of which something is made*; the formal cause *that into which it is made*; the efficient cause *that by which it is made*; and the final cause *that for the sake of which it is made*. The causes of, for example, Michelangelo's *David* are its marble (the material cause); its shape (the formal cause); Michelangelo and the art of sculpting (the efficient cause); and the end for which Michelangelo created the *David*, say, esthetic pleasure (the final cause).

Aristotle believed the meaning of each of these four causes to be 'most obvious':

All the causes now mentioned fall under four senses which are the most obvious. For the letters are the cause of syllables, and the material is the cause of manufactured things, and fire and earth and all such things are the causes of bodies, and the parts are causes of the whole, and the hypotheses are causes of the conclusion, in the sense that they are that out of which these respectively are made; but of these some are cause as the *substratum* (e.g. the parts), others as the *essence* (the whole, the synthesis, and the form). The semen, the physician, the adviser, and in general the agent, are all *sources of change* or of rest. The remainder are causes as the *end* and the good of the other things [...]⁷¹

In this passage, Aristotle affirms that matter is a cause as 'that out of which something is made' *as substratum*. It is not simply *that from which* something comes to be (for, as this same passage states, this is also true of form) but also *that out of which* it is made. What does that mean? How is that significant? These are the questions we will be exploring as we examine, in the

⁷⁰ Although chance and spontaneity are said to be causes, they are only *incidental* and posterior to intelligence and nature (*Physics* II, 6, 198a5-10). They should not, thus, be counted among the causes of nature (198a14-15). St. Thomas's *De principiis naturae* (Leonine edition, vol. 43) explains each of the four causes distinguished by Aristotle.

⁷¹ *Metaphysics*, V, 2, 1013b15-25 (tr. by W. D. Ross).

remainder of this chapter, matter's causality in the metaphysical, physical and logical analyses of substance.

What is already clear, however, is that Aristotle recognized matter as a *cause*. This is, as we just saw, explicitly asserted by him. It is also, moreover, required by his own analysis. For, if the first principles of things are their primary causes and matter and form are the constitutional, correlative principles of sensible substances, matter and form (or potency and actuality) must also be the primary causes of such substances.⁷²

II) The Causality of Matter In the Metaphysical Analysis of Substance: Limitation of Act

According to Aristotle, substance is that which primarily is and is that to which all other categories of being are referred.⁷³ As not all substances are sensible, i.e. not all beings are corporeal, being is not analyzed in terms of matter and form but, rather, in terms of potency and act or, put differently, potentiality and actuality. Potency and act are, in this analysis of substance, the constitutional, correlative principles of all generable and corruptible substances.

Thus, in the metaphysical analysis of substance, at least as it pertains to sensible substances, matter is the principle of *potentiality* (it is that substance in potency) and form is the principle of *actuality* (it is what determines the substance to be in act): " the word substance has three meanings — form, matter, and the complex of both — and of these three what is called matter is

⁷² See, *Metaphysics*, XII, 5, in particular 1071a1-7.

⁷³ *Metaphysics*, IX, 1, 1045b28-29.

potentiality, and what is called form actuality.⁷⁴ Matter is, thus, the substance in potency, form the actuality of the substance:

[...] of the people who go in for defining, those who define a house as stones, bricks, and timbers are speaking of the potential house, for these are the matter; but those who propose 'a receptacle to shelter chattels and living beings', or something of the sort, speak of the actuality.⁷⁵

As the principle of potentiality in the metaphysical analysis of substance is matter, matter's causality in this analysis will be that of potency. We must, thus, determine what sort of causality is proper to potency. And it would seem that potency's role is to limit act.

For, the actuality (formal perfection) of any sensible substance must, necessarily, be limited: you will never meet Dog or The Man on the street. Actuality is, at least in the sensible realm, the actuality of some potency: I am not just any human being or The Human Being but these flesh and bones... my actuality as a human being is limited by my flesh and bones. Take as another example the pen you are (probably) holding as you read this. Its actuality is limited to the materials out of which it is made (plastic, metal, silver, etc.): it is a *silver pen*, a *plastic pen*, etc.

This sort of limitation is even more evident in examples of activity. Say a runner is running, i.e. her potency to run has been reduced to act. The activity of running is not itself limited to any particular distance or speed. It is, however, limited to the ability or abilities of the runner: she will only be able to run as far and as fast as her muscular and cardio-vascular abilities permit.

This limitation of act by potency points to an important fact: potentiality is in part responsible for finitude. For, that which has the potentiality of being also

⁷⁴ *De anima*, II, 2, 414a14-15. See also, *De anima*, II, 2, 412a10.

⁷⁵ *Metaphysics*, VIII, 2, 1043a14-17 (tr. by W. D. Ross).

has the potentiality of not-being, while the eternal is that which from its very nature cannot not be. As W. D. Ross explains:

In a sense, therefore, all the primordial entities in the universe are free from potentiality. God is in the fullest sense actual, since He is always what He is at any time, and has no element of unrealized potentiality. Form too is perfectly actual. No specific form ever begins or ceases to be; it only comes to be actualized in fresh individuals. Even matter, though from one point of view it is sheer potentiality, is free from the type of potentiality which cuts deepest, the potentiality of not-being; it is eternal. [...] all individual things in the world may be graded according to the extent to which they are infected with potentiality. The heavenly bodies are (apart from God and the intelligences) the least infected by it; they have no potentiality of coming into being or of passing away, of changing in size or in quality, but only that which is concerned with local movement. And even that is not a potentiality of moving or not-moving. By their nature they are necessarily ever in movement, and the only potentiality involved is that their movement may be from A to B or from B to C or from C to A. All sublunary things are subject to all four kinds of potentiality [...]⁷⁶

Generally speaking, then, the causality of potency is to limit act. As we shall see in the following section, this understanding of the causality of potency underlies the Stagirite's discussion of substances subject to movement. In that analysis, matter is not simply examined as a *principle* of potency but as *potency*, that is, as a real constituent of sensible substance. It is, thus, in that analysis that a more concrete and complete discussion of matter's causality should and can be found.

⁷⁶ W. D. Ross, *Aristotle*, (3rd ed., London: Methuen & Co., 1937), 177-178.

III) The Causality of Matter In the Physical Analysis of Substance: Substratum of Change

The study of substances subject to movement, or *physics*, must not simply describe these substances and their movement but explain them, that is, know their principles or causes. Although, as we saw earlier, the *possibility* of movement is established through the proper recognition of its three (metaphysical) principles, actuality, potentiality and privation, the *explanation* of different sorts of movement calls upon four causes: formal, efficient, material and final.

It was, thus, in order to explain movement that Aristotle elaborated his theory of the four causes (which we examined at the beginning of this chapter). Although there are many sorts of movement (alteration, locomotion, generation and corruption), each will be analyzed in terms of its formal, efficient, material and final cause. For instance, the commute from Montreal to Ottawa is a change of place that has as its formal cause being in Ottawa, its efficient cause whatever mode of transportation employed, its material cause the person who traveled and as its final cause the reason for the trip. Recalling an earlier example, the formal cause of Michelangelo's David is its shape, its material cause its marble, its efficient cause Michelangelo and the art of sculpting, and its final cause the reason for which it was made.

In every sort of movement there is a subject which acquires a certain determination it was able to acquire but initially lacked: the marble out of which Michelangelo sculpted his David at first lacked the shape in question but possessed the ability to acquire it. And, through Michelangelo's efforts, the ability (potency) of the marble to be the statue of David was actualized. As change is,

by definition, the passage from one contrary to another,⁷⁷ this requisite subject must be able to receive contrary determinations (not, of course, at one and the same time): being a statue of David and not being the statue of David, being hot and not being hot (being cold).

Without this requisite subject of change or *substrate*, a change could not be said to occur: "one can gather from surveying the various cases of becoming [...] that there must always be an underlying something, namely that which becomes".⁷⁸ Or, again:

Now in all cases other than substance it is plain that there must be some subject, namely, that which becomes. For we know that when a thing comes to be of such a quantity or quality or in such a relation, time or place, a subject is always presupposed, since substance alone is not predicated of another subject, but everything else of substance. But that substances too, and anything else that can be said 'to be' without qualification, come to be from some substratum, will appear on examination. For we find in every case something that underlies from which proceeds that which comes to be; for instance, animals and plants from seed.⁷⁹

It should be noted that some authors, like W. Charlton, have rejected the view that the substrate of change must always, according to Aristotle, *persist* through the change: "Aristotle's insistence that there is always an underlying thing is no evidence that he thought there is always something which remains."⁸⁰ This, however, is an untenable view. Without a persisting subject of

⁷⁷ See, for instance, *Physics*, I, 7, 190b-191a3-6 and *Metaphysics*, IV, 7, 1011b34.

⁷⁸ *Physics*, I, 8, 190a13-15.

⁷⁹ *Physics*, I, 7, 190a34-190b4 (tr. by R. P. Hardie and R. K. Gaye). See also: *Physics*, I, 9, 192a25-34 and *Metaphysics*, XII, 2, 1069b7-9. Regarding this issue, see: J. Owens, "The Aristotelian Argument for the Material Principle of Bodies," (in *Aristotle: The Collected Papers of Joseph Owens*, ed. by John R. Catan, Albany: State University of New York Press, 1981), p. 124; R. Sorabji, *Matter, Space and Motion: Theories in Antiquity and their Sequel*, (London: Duckworth, 1988), pp. 11-12.

⁸⁰ W. Charlton, *Aristotle's Physics. Books I and II*, (Oxford: Clarendon Press, 1970), pp. 131-132.

change nothing could be said to pass from potency to actuality, which is the very definition of change:

*The fulfillment of what exists potentially, in so far as it exists potentially, is motion — namely, of what is alterable qua alterable, alteration: of what can be increased and its opposite what can be decreased (there is no common name), increase and decrease: of what can come to be and can pass away, coming to be and passing away: of what can be carried along, locomotion.*⁸¹

Rather, without a persisting subject, all that could be said is that from one moment to another there is, for example, a clump of clay and then a vase, without any apparent or real connection (without any reason to believe the vase is made of that particular clump of clay). Although the subject of change evidently persists in cases of accidental change (changes in quality, quantity, place, etc.) — the clay persists in the vase, the man persists when he walks across the room — it is not so evident in the case of substantial change: what is the persisting subject of change in a coming-to-be or a passing-away? Whether evident or not, generation and corruption are movements⁸² and, like any other sorts of movement, require a persisting substratum. The reasons are the same: without one, a movement cannot be said to occur. How could animals and plants come to be *from* seed, as Aristotle himself claims, if the matter of the seed does not persist through the change? It is *that* seed (and not some other) that becomes *that* plant. Whatever the sort of movement in question (generation, corruption, increase, diminution, alteration, locomotion), every becoming requires a substrate or *hupokeimenon*⁸³ which persists. This is expressed by Aristotle in his definition of matter where matter is said to be an inherent foundation:

⁸¹ *Physics*, III, 1, 201a10-14 (tr. by R. P. Hardie and R. K. Gaye).

⁸² *Categories*, 14, 15a13-17.

⁸³ At the end of book I of *Physics* (9, 192a31-34), Aristotle simply refers to the 'underlying and persisting subject' by the term 'hyle' (matter) rather than by the term 'hupokeimenon'.

τούτο δ' ἐστὶν αὐτῆς ἡ φύσις, ὥστ' τοῦτο ἐστὶ πρὶν γένεσθαι—
λέγω γὰρ ὕλην τοῦ πρῶτον υποκείμενον ἕκαστῳ, ἐξ οὗ γίνεται
τὸ ἐνυπάρχοντος μὴ κατὰ συμβεβηκός — [...] ⁸⁴

However, that every movement requires a persisting substratum raises an important question: what is the ultimate substratum of change? That is, what is the substratum of change which does not itself become, does not itself require a substratum?

(a) Ultimate Substratum of Change

Complex beings like animals and humans are compounded out of organs and bones, organs out of tissues, and tissues and bones out of elements. This process cannot go on *ad infinitum*. At some point, there must be some sort of body which cannot be resolved into some simpler sort of body, i.e. there must exist some "simplest" sort of body or bodies.

The simplest sort of bodies are, according to Aristotle, the elements: earth, air, water and fire.⁸⁵ As such, they are that out of which all composite bodies are compounded.⁸⁶ Like other *bodies* (σώματων), the elements are subject to change and, by the same token, hylomorphically composed.⁸⁷

⁸⁴ *Physics*, I, 9, 192a31-33 (Loeb edition) — the English translation of this passage can be found in Chapter 1. See, also, *Metaphysics*, VIII, 2, 1042b9-11; *De generatione et corruptione*, I, 3, 318a1-10 and I, 4, 320a1-5. A discussion of this point can be found in Alan Code's "The Persistence of Aristotelian Matter," *Philosophical Studies* 29 (1976): 357-367.

⁸⁵ See, for instance, *De caelo*, III, 6, 305a14-33 (in *The Works of Aristotle Translated into English*, vol. II, tr. J. L. Stocks, Oxford: Clarendon Press, 1930). All references to *De caelo* will be from this translation. See also *De generatione et corruptione*, II, 1, 328a25 sqq.

⁸⁶ *De generatione et corruptione*, II, 8, 334b30-35.

⁸⁷ Once movement is admitted of the elements, their hylomorphic composition must necessarily be admitted. For, as we explained earlier, Aristotle accounts for movement by, precisely, the hylomorphic structure of the subject of movement. Any view of the elements which denies this

However, unlike other bodies, the elements possess a principle of movement in their own nature⁸⁸ and their matter is not compounded out of simpler bodies (otherwise, the elements would not be the simplest sort of bodies).

Furthermore, according to Aristotle, the elements are able to change into each other and it is their matter which is the substratum of those transformations:

We maintain that fire, air, water and earth are transformable one into another, and that each is potentially latent in the others, as is true of all other things that have a single common substratum underlying them into which they can in the last resort be resolved.⁸⁹

It is, thus, the substratum of elemental change which is the ultimate substratum of change. Furthermore, it is the *matter* of the elements which is the ultimate substratum. Speaking of elemental change, Aristotle says:

[...] is the *matter* of each [element] different? Or is it the same, since otherwise they would not come-to-be reciprocally out of one another, i.e. contraries out of contraries? For these things — Fire, Earth, Water, Air — are characterized by 'the contraries'. Perhaps the solution is that their *matter* is in one sense the same, but in another sense different. *For that which underlies them, whatever its nature may be qua underlying them, is the same: but its actual being is not the same.*⁹⁰

Thus, the most fundamental sort of matter is the matter underlying elemental change or, as it came to be called, *prime matter*. It should, however, be noted here that some authors, like Hugh R. King and William Charlton, disagree with this interpretation and offer an 'alternate' view of what is, according

composition is, then, erroneous. See, for instance, *De generatione et corruptione*, II, 9, 336a1-5. What the formal constituent of the elements is will be examined in the next section.

⁸⁸ See, for example, *De caelo*, I, 2, 268b27-29.

⁸⁹ *Meteorologica*, I, 3, 339a37-339b3 (tr. by H. D. P. Lee). See also, *De caelo*, III, 6, 305a14-34; I, 2, 268b26-29; *De generatione et corruptione*, II, 1, 329a2-8; VIII, 334b31-335a23.

⁹⁰ *De generatione et corruptione*, I, 3, 319b34-41 (tr. by C. J. F. Williams) (emphasis mine). See also: *ibid.*, I, 3, 319a29-319b4; II, 1, 329a24-33; I, 6, 322b12ff; II, 5, 332a11f; *Metaphysics*, VII, 3; *Physics*, IV, 2; *Meteorologica*, I, 3, 339a37-339b3.

to Aristotle, the ultimate substratum of change and, thus, the ultimate sort of matter: the elements.⁹¹ According to Charlton it is the elements themselves in entirety which underlie elemental change and, according to King, it is one of the elements' contraries (qualities).

The view that the substratum of elemental change is the element itself (the substratum of the change of an element of Fire into one of Air is, on this view, the element of Fire itself), however, rests on the controversial assumption that elemental change does not require a *persisting* substratum of change (Fire does not persist in the new element of Air). As we explained earlier, however, all change requires that the substratum persist.

King's view, aside from textual deficiencies, also rests on a mistake.⁹² For, according to him, the elements are not hylomorphically composed. They are 'pure' matter, characterized by two contraries (qualities). Yet, if this were the case, the elements would not be subject to movement, could not change at all. For, again, movement is explained precisely by the hylomorphic structure of the subject of the movement.⁹³

Although we will have more to say regarding elemental change and the structure of the elements in the next section, what is important to grasp at this point is that the elements *cannot* be the most fundamental matter: they are bodies and bodies are hylomorphically composed;⁹⁴ they are subject to

⁹¹ For King's view, see his "Aristotle Without Prima Materia," *Journal of the History of Ideas* XVII (1956): 370-389. For Charlton's, see the appendix of his translation *Aristotle's Physics. Books I and II*, Oxford: Clarendon Press, 1970.

⁹² H. M. Robinson offers a meticulous analysis of King's view, noting both textual as well as other deficiencies, in his "Prime Matter in Aristotle," *Phronesis* 19 (1974): 168-188.

⁹³ It should also be noted that King's analysis does not support his own position that the ultimate matter is the elements but, rather, the view that elemental qualities are the ultimate matter. This view, however, ontologizes elemental qualities at the expense of the unity of the elements. See, Robinson's article (cited in the above footnote) for a discussion of this point.

⁹⁴ Aristotle repeatedly says that the elements are bodies. For example: *Metaphysics*, VIII, 1, 1042a6-9; *Physics*, II, 1, 192b9-10; *De generatione et corruptione*, II, 2, 329b7-9; *De caelo*, I, 268b27-28; *Meteorologica*, I, 2, 339a15-16.

movement and that which is subject to movement is hylomorphically composed.⁹⁵ As so composed, it is their matter which is more fundamental, which acts as the substratum of their changes.⁹⁶

This ultimate matter or prime matter is, according to Aristotle, wholly devoid of determination:

By matter I mean that which in itself is neither a particular thing nor of a certain quantity nor assigned to any other of the categories by which being is determined [...] Therefore the ultimate substratum is of itself neither a particular thing nor of a particular quantity nor otherwise positively characterized; nor yet is it the negations of these, for negations also will belong to it only by accident.⁹⁷

As any substratum of change must lack the new determination but, also, be in potency to that new determination, so prime matter must lack the determinations of the four elements but, at the same time, be in potency to receiving them. However, because the elements are the simplest bodies (into which all other bodies can in the last resort be resolved), prime matter must also necessarily lack all determinations proper to bodies.

That prime matter is wholly undetermined does not, however, mean that it is not-being (privation). If this were so, Aristotle would himself be guilty of what he accused his predecessors: not making the distinction between not-being (privation) and potency.⁹⁸ Rather, as secondary matter is the principle of

⁹⁵ This point was mentioned earlier.

⁹⁶ The view to the contrary has been widely criticized. See, for instance, Robinson's "Prime Matter..." (cited in footnote 92); Friedrich Solmsen's "Aristotle and Prime Matter: A Reply to Hugh R. King," (*Journal of the History of Ideas* 19 (1958): 243-252); and C. J. F. Williams' translation of *De generatione et corruptione* (Oxford: Clarendon, 1982).

⁹⁷ *Metaphysics*, VII, 3, 1029a19-26 (tr. by W. D. Ross).

⁹⁸ This is a frequent and significant mistake in the secondary literature. For instance, S. Massobrio (*Aristotelian Matter as Understood by St. Thomas Aquinas and John Duns Scotus*, Montreal: McGill University Dissertation, 1991) takes as given that if "prime matter is purely potential [...] it follows that prime matter is not a positive principle" (p. 3) and I. Leclerc, in his *The Nature of Physical Existence*, (Lanham: University Press of America, 1986) laments "The problem is that if *hylé* be in itself wholly devoid of determinateness, how does it have a 'capacity to be'?" (p.

potency in accidental change, so prime matter is the principle of potency in substantial change. Secondary matter, by definition, bears some determinations and is, thus, limited to a certain range of potency (wood can become a table but not a computer). Prime matter, however, must be able to receive any determination for it is the ultimate substratum of all sensible substances.

That is why prime matter must be in potency to all determinations, i.e. be pure potency. The causality of prime matter is, thus, that of pure potency. It must not only be able to receive any sort of determination but *limit* that determination. This, as we explained earlier, is the role proper to potency in Aristotle's hylomorphism.

Because it must be able to receive and limit all determinations of sensible substances, prime matter is unobservable both in principle and in fact⁹⁹ and, more importantly, cannot be known directly:

Matter derives its knowability, just as it derives its determination and Being, from the form. The absolutely undetermined matter is known only by the process of analogous reasoning described in the *Physics*. The other type of matter is knowable as composite, on account of the form it already possesses.¹⁰⁰

As matter is known relatively to form and prime matter is formless in itself, prime matter cannot be known in the same way as other matters (elements, tissues, etc.). Rather, it is known by a process of analogous reasoning¹⁰¹ whereby, thinking of a substance, one 'removes (thinks away) every

12). But, not even substantial forms have 'capacity to be'. This is a fundamental misunderstanding. What is is the composite. Matter and form exist as co-principles of the structure of act and potency. See, for instance, *Physics*, II, 1, 193b4-5.

99 J. Owens, "Matter and Predication...", 91. See also, R. Sorabji, *Matter, Space and Motion. Theories in Antiquity and their Sequel* (London: Duckworth, 1988), p. 19.

100 J. Owens, *The Doctrine of Being in the Aristotelian Metaphysics: A Study in the Greek Background of Medieval Thought* (3rd ed., Toronto: PIMS, 1978), pp. 338-339.

101 See, for instance, *Physics*, I, 7, 191a7-12.

determination that substance possesses until, finally, nothing remains except a wholly undetermined subject which is able to be determined by those very forms:

When all else is stripped off evidently nothing but matter remains. For while the rest are affections, products, and potencies of bodies, length, breadth, and depth are quantities and not substances (for a quantity is not a substance), but the substance is rather that to which these belong primarily. But when length and breadth and depth are taken away we see nothing left unless there is something that is bounded by these [...]¹⁰²

Knowledge 'by an analogy' is, in fact, the explicit designation given by Aristotle to the grasp of the ultimate substratum of change:

The underlying nature is an object of scientific knowledge, by an analogy. For as the bronze is to the statue, the wood to the bed, or the matter and the formless before receiving form to any thing which has form, so is the underlying nature to substance, i.e. the 'this' or existent.¹⁰³

It is in this analogous way, then, that the ultimate substratum of change is indirectly known. This concords extremely well with Aristotle's claim that matter is unknowable in itself.¹⁰⁴ As Leclerc explains:

Another important implication of Aristotle's relative conception of *hyle* is that '*hyle* is unknowable in itself'. It is only possible to know what is definite, determinate and since *hyle* is *per se* lacking all determinateness (which comes entirely from form), *hyle* cannot be an object of knowledge — except in the way we have seen, namely the way or procedure of analogy.¹⁰⁵

Although prime matter is distinguishable in thought, it cannot exist apart, that is, in separation from form:

¹⁰² *Metaphysics* VII, 3, 1029a11-17 (tr. by W. D. Ross). Sorabji provides a simple explanation of this process in his *Matter, Space and Motion...*, p. 5.

¹⁰³ *Physics*, I, 7, 191a7-12 (tr. by R. P. Hardie and R. K. Gaye).

¹⁰⁴ See, for instance, *Metaphysics*, VII, 10, 1036a9.

¹⁰⁵ I. Leclerc, *The Nature of Physical Existence* (London: George Allen & Unwin / New York: Humanities Press, 1986), p. 118.

Prime matter, it is to be observed, never exists apart; the elements are the simplest physical things, and within them the distinction of matter and form can only be made by an abstraction of thought.¹⁰⁶

Matter never exists bare but always informed.¹⁰⁷

Thus, the ultimate substratum of change is the matter underlying the elements: prime matter. For, the elements are the simplest bodies, having their movement in their own nature, being hylomorphically composed of a matter which is not itself so composed and being that out of which composite bodies are compounded. Prime matter, further, can only be known by an analogy and that analogous reasoning uncovers prime matter as pure potentiality, being devoid of all determination but able to both receive and limit any determination, the latter being its proper causality. Although a real principle of being, pure potentiality (prime matter) does not possess being in itself but only exists as actualized by some form.

That prime matter is the ultimate substratum raises, however, an important issue: how is it the substratum of elemental change if, in fact, 'matter never exists bare but always informed' and prime matter is, as it were, bare? Aristotle's answer to this question is quite ingenuous but requires a more detailed discussion of the elements. We reserve, thus, our discussion of his answer to the following section devoted to a discussion of the elements, their composition, ontological status, movement and causality.

However, before embarking on that discussion, we would like to address the concern which appears to have motivated, at least in part, the attack on prime matter as the ultimate substratum of change. This concern, as one author explains, is that prime matter is not a positive principle:

¹⁰⁶ W. D. Ross, *Aristotle*, (5th ed., London: Methuen, 1949), p. 73.

¹⁰⁷ W. D. Ross, *Aristotle...*, p. 66.

[...] the common feeling shared by Charlton, King, Williams, and myself is that, whatever its other merits may be, the traditional notion of prime matter cannot fulfill the role of substratum for substantial change assigned to it [...] the problem seems to be this: intuitively, if we admit that [...] at the basic level (at the level, that is, at which water, for example, changes into air), prime matter is purely potential and has no actuality of its own, then it seems plausible to ask what the point would be of having something called prime matter at all, or alternatively, what the difference would be between such a notion of prime matter and non-being. One of Aristotle's most urgent reasons for introducing the notion of prime matter is the need he feels for a solution to the Eleatic problem. But to solve this problem he does not need a logical concept of prime matter to serve as the subject of predication. Instead he needs a real material substratum which allows him to give a coherent account of change able to invalidate the Eleatic objection.¹⁰⁸

The belief that prime matter cannot be a positive (real) principle rests, however, on some important misunderstandings. Firstly, prime matter is not a logical concept but a principle of substance. Second, if a 'real material substratum' is required (i.e. one that is *actual*), as the author believes, all change would, according to Aristotle, be accidental (which is clearly false). Thirdly, the belief that prime matter cannot be a positive (real) principle rests on a grave misunderstanding of Aristotle's notion of potency. Potency is not equivalent to non-being!¹⁰⁹ Prime matter is *not* pure privation. On these authors' view, there are only two principles of becoming (privation and being), instead of three — which is clearly false. By believing that only what is actual can be positive (real), these authors, in fact, do away with potency. For, if the potential has to be determinate in order to be positive, it is no longer potential but actual. Although prime matter is not a principle of determination (of actuality), it need not be such in order to be positive (real):

¹⁰⁸ S. Massobrio, *Aristotelian Matter...*, pp. 26-27.

¹⁰⁹ See, for example, *Physics*, I, 9, 192a2-12 and our discussion of this point in Chapter 1.

For Aristotle, 'actual' was a synonym for 'determinate'. What lacked actuality, or in technical language the potential, could therefore be positive. By establishing the concept of the potential as positive even though non-actual or indeterminate, Aristotle has been able to set up matter as a positive though entirely non-actual subject of predication.¹¹⁰

Thus, the worries concerning prime matter can be put to rest. Prime matter is a positive, immanent (ἐνυπάρχοντος) principle and, thus, can fulfill its role as the ultimate substratum of change. Which role, incidentally, requires precisely the ability to receive and limit any determination. Aristotle does not need 'a real material substratum' to explain substantial change. If he posited such, he would make all changes mere accidental changes, matter simply changing rather than the composite of matter and form coming to be.¹¹¹ Furthermore, it is important to remember that although the *notion* of prime matter is logical (as is any other *notion* of something), that does not mean that prime matter *is* a logical concept: my notion of human beings is logical but humans are not logical concepts, they are real. Thus, prime matter can be (and is) a real substratum of change, one which truly invalidates the Eleatic objection.

(b) The Elements

Aristotle does not provide a clear statement of what his doctrine regarding the elements is. This makes the task of determining what their causality is quite difficult. We shall take as our starting point what we have already noted concerning the elements: that there are four elements (Earth, Air, Water and

¹¹⁰ J. Owens, "Matter and Predication....," p. 92.

¹¹¹ Such a restriction of movement to accidental sorts of change is not only blatantly non-Aristotelian but fundamentally contradicts Aristotle's hylomorphic doctrine by its clear ontologization of matter.

Fire); that these are the 'simple bodies', in fact, the simplest sorts of body; that they have movement of their nature, e.g. to move upwards (Fire); that the elements can mutually change into one another, e.g., Earth can change into Water, Water into Earth; and that prime matter underlies them, just as it ultimately underlies all bodies (being, as it is, the proper correlate of substantial form).¹¹² What we then need to examine and elucidate upon, in order to properly determine the causality of the elements, is their ontological status, composition and mutual transformations.

Now, let us start by asking what the ontological status of the elements is. Are the elements substances? As we will recall, to be a primary substance both unity and separability are essential. These, however, are denied of the elements by Aristotle. Although previously cited, the text is important for the issue at hand and is, thus, worth repeating:

Evidently even of the things that are thought to be substances, most are only potencies —both the parts of animals (for none of them exists separately; and when they are separated, then too they exist, all of them, merely as matter) *and earth and fire and air*, for none of them is a unity, but as it were a mere heap, till they are worked up and some unity is made out of them.¹¹³

Aristotle does, however, on occasion refer to the elements as substances. For instance, in one passage from *De caelo* he states:

Now things that we call natural are either substances or functions and attributes of substances. *As substances I class the simple bodies —fire, earth, and the other terms in the series— and all things composed of them*; for example, the heaven as a whole and its parts, animals, again, and plants and their parts. By attributes and functions I mean the movements of these and of all other

¹¹² These points will, of course, be elaborated upon in what follows.

¹¹³ *Metaphysics*, VII, 16, 1040a5-10 (tr. by W. D. Ross) (emphasis mine).

things in which they have power in themselves to cause movement, and also their alterations and reciprocal transformations.¹¹⁴

The contradiction is, however, only apparent. For, substance is said in several senses, in the sense of matter, the sense of form and in the sense of that which is compounded of matter and form:

We are in the habit of recognizing, as one determinate kind of what is, substance, and that in several senses, (a) in the sense of matter or that which in itself is not 'a this', and (b) in the sense of form or essence, which is that precisely in virtue of which a thing is called 'a this', and thirdly (c) in the sense of that which is compounded of both (a) and (b).¹¹⁵

Although the elements are not substances in the primary sense of the term (as they lack the separability proper to primary substances), they could be substances in a derived sense, namely, as being *parts* of substances.¹¹⁶ What sort of ontological status do *parts* of substances enjoy?

As *parts* of (corporeal) substances, elements are said to be 'substances' in the same sense as matter is said to be 'substance', namely, as *that out of which* the (corporeal) substance is made. Hence, elements enjoy the same ontological status as matter. The ontological status of matter is, as we saw earlier, that of *potency*. We could, thus, refer to the elements as 'substances in the sense of potency' or 'potential substances'.¹¹⁷ Yet, it is perhaps preferable, given that the elements are not substances in the primary sense, not to refer to them as substances at all. As they enjoy the ontological status of matter and

¹¹⁴ *De caelo*, III, 1, 298a27-298b1 (tr. by J. L. Stocks) (emphasis mine).

¹¹⁵ See, for instance, *De anima*, II, 1, 412a7-10 (tr. by J. A. Smith).

¹¹⁶ According to R. Sokolowski in his "Matter, Elements and Substance in Aristotle," (in *Substances and Things: Aristotle's Doctrine of Physical Substance in Recent Essays*, ed. M. L. O'Hara, Washington: University Press of America, 1982), Aristotle is only writing according to common acceptance when he makes assertions regarding the substantiality of the elements (p. 95).

¹¹⁷ R. Sokolowski opts for this formula. See, "Matter, Elements...", p. 91.

matter is that out of which a substance is made, they could simply be referred to as parts of substances, just as bones and tissues are said to be parts of substances. For, just as animals are compounded out of bones and tissues, so bones and tissues are compounded out of elements. Whatever way of referring to the elements is adopted, it is important to realize that the elements are not substances in the primary sense of the term because they lack the requisite sort of unity. Only individuals, in the sensible realm, enjoy full ontological status in the Stagirite's system. Both substantial forms and matter depend upon the composite for their being.

The next question we must ask is how the elements are composed. As they are bodies, they must be hylomorphically composed. Are they hylomorphically composed of substantial form and prime matter or accidental forms and prime matter?

Aristotle never mentions a substantial form of Fire or of any of the other elements. When discussing the elements, he speaks of the qualities or contraries of elements: hot, cold, dry and moist.¹¹⁸ According to him, in each element two qualities are 'coupled' and, further, only four 'couplings' of elemental qualities are possible: hot+dry (Fire), hot+moist (Air), cold+dry (Earth), cold+moist (water).¹¹⁹

¹¹⁸ See, for instance, *De generatione et corruptione*, II, 1, 329a24-26. The sorts of contraries in question are those which correspond to touch (II, 2, 329b6-10).

¹¹⁹ *De generatione et corruptione*, II, 330a30-330b6.

According to Sokolowski, the dual qualities of the elements (what he calls 'dual powers') are extremely weak forms which make the elements 'almost nothing' ontologically:

The work or *logos* for which simple bodies are is simply the state in which such bodies are found, the condition of the powers that modify the underlying matter. This feeble work or *eidos* is all they are capable of in themselves; *it is so tenuous metaphysically* that when an element changes its state, its prior *eidos* does not leave anything behind to which it could be compared in its absence [...] However the very weakness of elemental forms gives them a certain endurance which higher forms do not have, for it enables them to remain what they are within higher substances [...] Thus the weakness of elemental forms is what allows simple bodies to be substance potentially and as foundation, since such bodies can remain what they are and still support the existence of full metaphysical essences. This is possible because *what they are is almost nothing* and not substance in the full sense.¹²⁰

Two precisions must, however, be brought to Sokolowski's interpretation. First, it is not quite true that the elements remain what they are within higher substances. According to Aristotle, elements do not remain in mixed bodies in actuality but only in potency.¹²¹ Second, forms do not admit of more or less. The notion of forms being more or less strong is quite foreign to Aristotle's hylomorphic theory. What allows the elements to 'support the existence of full metaphysical essences' is not the 'weakness' of their forms but, rather, that they are precisely meant to be *parts* of substances, putting their qualities or 'powers' at the disposal of the mixed body (tissue), which, in turn, does likewise for the animal.

In this way, the elements are parts of mixed bodies like tissues and bones and enjoy the ontological status of parts, which is that of potency. All parts or

¹²⁰ R. Sokolowski, "Matter, Elements..." (1982), pp. 102-103 (emphasis mine).

¹²¹ *De generatione et corruptione*, I, 10, 327b25-32.

potencies will, by definition, lack either or both the unity or/and separability of a primary substance.

If, as Sokolowski maintains, elements are composed of dual qualities and prime matter, an important difficulty arises: the elements, unlike any other hylomorphically composed body, are formally determined by *two* principles. This, however, hardly seems possible within Aristotle's hylomorphic theory. Another difficulty with Sokolowski's interpretation involves making hot, cold, dry and moist formal determinations rather than accidental determinations. Are not qualities accidents?

There seems to be two alternatives to Sokolowski's interpretation. A first alternative is to say that the elements share in the formal determination of the substance in which they are parts (e.g., the elements composing a human being are formally determined by the human soul) and that hot, cold, dry and moist are what accidentally distinguish them. The key to this interpretation is the premise that the elements cannot exist independently and can only be isolated in thought.¹²² As Aristotle maintains that the elements do not remain actually but only potentially in a substance, this interpretation would seem to explain why Aristotle would not mention substantial forms in relation to parts of a substance (having mentally isolated these parts from that of which they are parts). Yet, is it the case that the elements cannot ever exist independently? As that out of which all corporeal substances are made and that into which all corporeal substances are finally reduced, there seems to be room to argue that the elements can exist, at least for some time, independently.

¹²² It is important to remember, here, that elements are not mini fires, mini lakes, etc. A fire in your fireplace may be composed out of Fire elements but it is not Fire (the element) and Fire is not, to repeat, a fire in miniature.

A second alternative is to say that the elements are each formally determined by a substantial form (e.g., earth determined by the substantial form 'earth'), upon which determination certain accidental qualities follow (e.g., cold and dry). Although the substantial forms of the elements are corrupted when the elements become parts of a substance, their qualities remain. The fact that Aristotle speaks of the qualities of the elements as though they were the substantial differences of the elements can, further, be said to be due to the fact that the substantial differences of the elements are not known and, thus, these qualities are used in place of substantial differences.¹²³

Although this last interpretation seems to us to be the most adequate of the three mentioned, the issue is quite difficult and we do not suppose that Aristotle himself necessarily held this view. Leaving the composition of the elements aside, we must yet examine the role of elemental qualities before proceeding to discuss how the elements are that out of which more complex bodies are composed.

The two qualities of each element are so essential to the element that the loss of just one of them entails the element's transformation into another sort of element. For instance, if Fire (which is dry and hot) loses its ability to be hot *beyond a certain mean*, it will become Earth (which is dry and cold). Although there is a common matter underlying the elements and acting as their substratum, it is always qualified by at least one quality and, thus, never 'bare':

We must reckon as an 'originative source' and as 'primary' the matter which underlies, though it is inseparable from, the contrary qualities: for the 'hot' is not matter for the 'the cold' nor 'the cold' for 'the hot', but the substratum is matter for them both.¹²⁴

¹²³ This is, in fact, St. Thomas's interpretation. See, for instance, his *In De generatione et corruptione*, lectio 8 (Leonine edition, pp. 292-3).

¹²⁴ *De generatione et corruptione*, II, 1, 329a30-33 (tr. by C. J. F. Williams).

Although the elements are mutually transformable, they are also, however, able to be transformed into tissues and bones. How is this possible? According to Aristotle, the elements are able to become and be the matter of complex bodies like tissues and bones when their elemental qualities reach (and are maintained at) a certain mean or balance:

[...] hot and cold, unless they are equally balanced, are transformed into one another (and all the other contraries behave in a similar way). It is thus, then, that in the first place the 'elements' are transformed; and that [in the second place] out of the 'elements' there come-to-be flesh and bones and the like — the hot becoming cold and the cold becoming hot when they have been brought to the 'mean'. For at the 'mean' is neither hot nor cold. [...] it is *qua* reduced to a 'mean' condition that the dry and the moist, as well as the contraries we have used as examples, produce flesh and bone and the remaining compounds.¹²⁵

Hence, this 'mean' must be maintained in order that the compound remain what it is (a tissue, bone, etc.). Otherwise, the elements begin to transform into each other and, consequently, the compound is corrupted. There is, in this way, a certain fragility at the very foundation of sensible substances.

The elements are, thus, that out of which tissues and bones are compounded. They are not substances in the primary sense of the term but parts of complex bodies like tissues and bones (that out of which they are compounded). As they enjoy the ontological status of parts, i.e. that of matter, their causality is that of potency. Specifically, the causality of the elements is not simply to receive and limit elemental determinations but, also, to remain receptive to higher determinations, being both that out of which more complex bodies like tissues and bones are compounded and, ultimately, that out of which primary substances like humans are made.

¹²⁵ *De generatione et corruptione*, II, 7, 334b23-31 (tr. by C. J. F. Williams).

Although we will not discuss Aristotle's treatment of complex bodies or the organs these bodies compose, reserving a discussion of these for our chapters on Aquinas, it is our belief that the causality of matter becomes richer as the layers of potency are increased. The causality of organs (which are composed of tissues or bones) will be richer than that of the tissues (which are composed of the elements), that of the tissues greater than that of the elements. The apex will, of course, be the causality of the human body, with its incredible senses of touch and sight, not to mention the body's causality regarding human intellection.

In our discussion of Aristotle's physical analysis of substance we have nowhere mentioned one of the most often (if not sole) mentioned causality of matter: that of principle of individuation. It is not an oversight. As we shall argue in the following section, although the theory of 'individuation' by matter has a *physical* significance, it more properly belongs within the scope of Aristotle's logical analysis of substance.¹²⁶

IV) The Causality of Matter In the Logical Analysis of Substance: Principle of 'Individuation'

Primary substance is the cornerstone of Aristotelian logic. For, everything except primary substance is either predicable of a primary substance or present in a primary substance.¹²⁷ What is analyzed logically, then, are individuals (or present in one): 'Socrates is a man', 'His skin is pale', etc.

¹²⁶ We place the term individuation in single brackets because, as we will show in the following section, there is no problem of *individuation* in Aristotle but only one of *multiplication* of specifically identical forms.

¹²⁷ See, for instance, *Categories*, 5, 2a33-34.

Two general types of characteristics are predicated of a subject: substantial (what sort of thing the subject is) and accidental (how the subject is). As what is predicated is always a certain determination (to be a man, to be clever, to be sitting, etc.), substantial and accidental forms are considered as predicates in the logical analysis of substance and, consequently, that of which they are predicated (the subject of predication) is considered as 'matter': Socrates is the subject/'matter' of 'man', skin the subject/'matter' of 'pale'.

The role or causality of matter in this analysis of 'substance' is, thus, quite evident. Predicates are necessarily universal ('man', 'pale', etc.) and, consequently, predicable of many subjects (Socrates, Plato, Aristotle, etc. are all men), a principle is required which allows the universal characteristic to be predicable of multiple and diverse subjects: Socrates, Plato and Aristotle are neither 'man' as a group nor 'man' individually but, rather, particular men of which 'man' is predicated.

Caution must here be taken. The universality of such predicates is the result of *abstraction*. Without explaining abstraction in detail,¹²⁸ what is important to remember is that the result of abstraction are concepts (genus, species, etc.). Although these concepts are founded in reality, they *exist only* in the intellect: they are mental entities not real entities. Their ontological foundation (the substantial or accidental forms) do not exist separately in reality either. What exist are *individual* substances and, thus, the forms and matters of primary substances are equally individual: there are no *in re* universals. Thus, the subject or 'matter' of predication plays the role of a principle that *multiplies* the universal predicate.¹²⁹

¹²⁸ We shall have the opportunity to discuss abstraction in more detail in Chapter 8.

¹²⁹ Predications may be made of 'substance', as when we predicate of Socrates the universal 'man' as well as of 'matter', as when we predicate of some part of Socrates (like his skin, for instance) the universal 'white'. Given this, it is difficult to see why the advocates of the view that

This leads to two related reflections. First, there is no problem of *individuation* for Aristotle: substances *are* individual. The fact that there are substances in the world and that they are always and ever individual is taken to be evident by Aristotle and is used by him as a starting point of his scientific and philosophical investigations. There is, thus, no question here of having to *make* substances individual or of having to *account* for the individual nature of substances. Second, although there is no problem of individuation for Aristotle, there does seem to be another problem: that of the multiplication of specifically identical forms. What makes it possible to predicate 'man' of both Socrates and Plato? How is it possible for both Socrates and Plato to have the same specific nature (i.e., that of being a man) and, yet, be two distinct individuals?

Aristotle's answers this problem of multiplication in part with his theory of abstraction and in part by positing matter as a principle of multiplication. 'Man', abstracted from particulars as one and identical, can then be equally predicated of individuals like Socrates and Plato because these individuals exhibit the essential characteristics of the predicate in question and they are different and distinct material organizations, i.e. the matter of Socrates differs and is distinct from that of Plato.

The next question that follows from this is, then, how it is possible for both Socrates and Plato to exhibit the same essential characteristics of 'man'. It is in the answer to this question that matter as a principle of multiplication has not just a logical but a physical signification. The multiplication of a specifically identical nature requires that the nature in question not be exhausted by any individual. For, if in Socrates the nature of man was completely exhausted, either all other men would be identical with Socrates or we would have to say that they do not

matter is a real (as opposed to *logical*) principle of individuation do not also include substance as an equally *real* principle of individuation.

have the same nature as Socrates but are, in fact, specifically distinct. However, as we showed earlier, the causality proper to matter in Aristotle's hylomorphism is to limit form as potency limits actuality. It is because matter exercises this causality over form that, in the order of specific determination, substances are *finite*: because of the causality exercised by matter, the nature conferred by substantial form is, in every hylomorphically composed substance, always possessed in a determined way. As no hylomorphically composed substance exhausts its specific nature, the multiplication, in hylomorphically composed substances, of a same specific nature is possible.

Why, then, treat of matter as the principle of multiplication in a section devoted to Aristotle's logical analysis of substance instead of treating it in the previous section on his physical analysis of substance? Although matter as the principle of multiplication has, as we have just shown, a physical signification, it more properly belongs within Aristotle's logical analysis of substance because what is multiplied by matter is not an *in re* specifically identical nature but, rather, a specifically identical nature which is grasped as one and identical only through abstraction.

Hence, in the logical analysis of 'substance', 'matter' as subject is the principle of the multiplication of *abstracted* forms or, in other words, the principle of reference of numerically plural predications of specifically identical predicates. Although matter as the principle of multiplication has a physical signification, matter is not a *physical* principle of numerical plurality of specifically identical forms existing separately (*à la* Plato).

That there are passages in Aristotle's works which seem to support the view that matter is a *physical* principle of individuation cannot be denied. A classic is the following:

And when we have the whole, such and such a form in this flesh and in these bones, this is Callias or Socrates; and they are different in virtue of their matter (for that is different), but the same in form; for the form is indivisible.¹³⁰

What these sorts of passages mean, however, is not that matter particularizes a universal form. Rather, having abstracted the concept of 'man' and predicated it of Callias and Socrates, what logically remains is *these bones* and *this flesh*. What confusion may arise over when Aristotle is speaking of a concept rather than a real entity or substance is due to the fact that, according to the Stagirite, there is no special name for real entities or substances which would distinguish them from abstracted notions: "For 'circle' is used ambiguously, meaning both the circle, unqualified, and the individual circle, because there is no name peculiar to individuals."¹³¹

That ambiguity is, we believe, the source of the confusion surrounding matter as the principle of individuation. The multiplication and individuation of forms is not a physical problem:

Is there, then, a sphere apart from the individual spheres or a house apart from the bricks? [...] And the whole 'this', Callias or Socrates, is analogous to 'this brazen sphere' [a concrete thing], but man and animal to 'brazen sphere' in general [the concept of brazen sphere].¹³²

It is wrongheaded to ask how 'man' *becomes* a man (e.g., Socrates), as though 'man' had existence outside individual men and through some *process* took on determinations which rendered it *less general*. This is not Aristotle's view. What is generated is always, according to him, the composite of matter and form and this composite is individual. We may abstract universal definitions from

¹³⁰ *Metaphysics*, VII, 8, 1034a5-8 (tr. by W. D. Ross).

¹³¹ *Metaphysics*, VII, 10, 1035b1-2 (tr. by W. D. Ross).

¹³² *Metaphysics*, VII, 8, 1033b19-25 (tr. by W. D. Ross).

composites but these universals do not exist in things as universals: to repeat, there are no *in re* universals in Aristotle's system. Neither, however, do our (abstracted) universals exist in things as 'particularized universals' — as though physically stripping away matter from some substance would reveal an *in re* universal!

There is, for Aristotle, no problem of individuation in the metaphysical and physical analyses: substances *are* individual. The matter and form of two substances are the same *only* in their universal definition but in actual existence enjoy the individuality of the substance of which they are co-principles: "your matter and *form* and moving cause *being different from mine*, while in their universal definition they are the same".¹³³ It is only a logical consideration which allows us to say that all specifically identical substances have a 'same form'. Form has the individuality which is proper to substance for, as we have already noted, substances are individual, as are their correlative components.

Our interpretation is not generally held by scholars of Aristotle's philosophy. For instance, according to Sir David Ross, Aristotle maintained that matter is the principle of *individuation*. This, he notes, creates difficulties in accounting for the individuality of separate substances as well as in accounting for human individuality. Although Ross reflects that something like the interpretation I present seems to be required, he considers it improbable that Aristotle, in fact, held that view:

It is with a certain kind of flesh and bone that the form of man unites. But, further, if two portions of flesh and bone with which the form unites are qualitatively identical, they are no more capable of producing two distinguishable men than if they had been portions of prime matter. They must differ in character, i.e. form. Socrates and Callias, while agreeing in their specific form, must differ in the form of their matter. By following this line of thought we should

¹³³ *Metaphysics*, XII, 5, 1071a28-29 (tr. by W. D. Ross) (emphasis mine).

arrive at the notion of an essence of the individual which includes besides the specific form such further permanent characteristics as spring from differences in the matter of which different individuals are made. And, taking account of the correlation of form and end in Aristotle's system, we should hold that the end of each individual is not only to reach the perfection typical of the species, but to realize it in the particular way for which its individual form fits it. There is, however, little evidence that Aristotle thought of the problem so.¹³⁴

In defense of our interpretation, we can point out that Ross does not distinguish the issues of individuation and of multiplication and, also, cite two further texts which support our view. Let us examine each of these two texts in turn before arguing that a distinction between the issue of individuation and that of multiplication seems both required and appropriate.

In a passage from the *Metaphysics*, Aristotle states that "the substance of each thing is that which is peculiar to it, which does not belong to anything else".¹³⁵ This text is important because the word 'substance' is here used by Aristotle as a synonym for essential determination and, as we already know, essential determination is conferred by form. Because form confers essential determination, it can, as the principle of actuality, be said to be 'substance' in the derived sense of the term. Hence, in the cited text in question, Aristotle is affirming that form (substance in the derived sense of the term) is *individual* and does not belong to any other substance (in the proper sense of the term).

Another text which supports our interpretation is from Book II of Aristotle's *De anima*:

We are in the habit of recognizing, as one determinate kind of what is, substance, and that in several senses, (a) in the sense of matter or that which in itself is not 'a this', and (b) in the sense of form or essence, which is that precisely in virtue of which a thing is called 'a

¹³⁴ Sir David Ross, *Aristotle* (3rd ed., London: Methuen & Co., 1937), p. 170.

¹³⁵ *Metaphysics*, VII, 13, 1038b9-10 (tr. by W. D. Ross).

this', and thirdly (c) in the sense of that which is compounded of both (a) and (b).¹³⁶

The three senses of 'substance' distinguished by the Stagirite are: the two derived senses of the term, namely, as matter (that which is not itself a *tode ti* but that which is determined in a thing to be a *tode ti*) and as form (that which determines the thing to be a *tode ti*), and the primary sense of the term, which is the composite thing, the *tode ti* properly speaking.

Now, the passage is important because, in Aristotle's system, a *tode ti* is an *individual* substance. However, just as form can be said to be a 'substance' (in a derived sense of the term), it can also be said to be a '*tode ti*' (in a derived sense of the term). Hence, as *individuality* and the property of being a substance are considered equivalent in this passage (substances *are* individual) and form can be said to be a '*tode ti*' (in a derived sense), form is the principle of the ontological character of substance, namely its individuality because form is the principle of actuality of substance.

This interpretation seems, moreover, to make sense of Aristotle's position regarding separate substances. Separate substances are, according to the Stagirite, individual and, yet, their individuality cannot be due to matter because they are pure forms. The individual character of those substances must, thus, be attributed to their forms. On Ross's interpretation, the individuality of separate substances cannot be accounted for:

Aristotle finds the 'principle of individuation' in matter. Usually, at least, he represents the form of each *infima species* as being identical in every member of the species, so that it cannot serve to mark off one individual from another, and it is matter that is said to do so. On what, then, is the individuality of the pure forms based? It can only rest on a difference of *form*, and the schoolmen drew the logical conclusion when they treated God and the intelligences as

¹³⁶ *De anima*, II, 1, 412a7-10 (tr. by J. A. Smith).

sole members of separate *infimae species*. But this hardly meets the difficulty. Though a species may in fact have only one member, the nature of a species is to be capable of having more than one. How then is each of the intelligences distinguished from the thinkable though non-existent members of the same species? Neither by form nor by matter; yet how otherwise can it be?¹³⁷

The fact that Aristotle maintained that separate substances are *individual* (not in re species) but that there cannot be more than one separate substance in any given species lends further support to our claim that the issues of individuation and multiplication are distinct. Both hylomorphically composed substances and separate substances are, according to Aristotle, individual. While, however, there can be several hylomorphically composed substances within the same species, there can be only one separate substance of a given species. Without a distinction between the issue of individuation and that of multiplication, Aristotle's account is indeed problematic and confused. For, matter is supposed to be the principle of individuation/multiplication and, yet, it does not seem to be able to properly account for the individuality of hylomorphically composed substances and simply cannot account for the individuality of separate substances as these are pure forms. Moreover, if individuation and multiplication are not distinguished, it would simply be impossible for Aristotle to claim that separate substances are individual but their nature cannot be multiplied: if matter is the principle of both multiplication and individuation and separate substances are immaterial, separate substances could simply not be said to be individual at all.

By distinguishing the issues of individuation and multiplication, these difficulties are resolved. Individuality is an ontological characteristic of substances and, given that form actualizes the substance, form is, in Aristotle's

¹³⁷ Ross, *Aristotle...*, pp. 169-170 (emphasis his).

system, the principle of individuation. The individuality of both hylomorphic composites and pure forms can, thus, be accounted for. Multiplication within a species is, on the other hand, due to matter. That is why the specific nature of a separate substance cannot be present in more than one individual and why, conversely, the specific nature of a hylomorphically composed substance can be present in several individuals.

Although matter as the principle of multiplication has, as we showed earlier, a physical significance (in that a hylomorphically composed individual does not exhaust the perfection of its essence, allowing other individuals to manifest other ways of being that essence), it is important to remember that what is multiplied by matter is not an *in re* specifically identical nature but, rather, a specifically identical nature which is grasped as one and identical only through abstraction and, hence, that matter as the principle of multiplication properly belongs within Aristotle's logical analysis of substance rather than his physical analysis of substance.

V) The Causality of Matter: Summary & Conclusion

We have examined matter in each of Aristotle's three analyses of substance: metaphysical, physical and logical. In the logical analysis of 'substance', as we just saw, 'matter' is considered as a subject or substratum of predication and, as such, its causality is that of allowing for numerical plurality of specifically identical substances. Although as principle of multiplication matter does have a physical significance in that it limits the determination(s) conferred by form, it is properly examined within Aristotle's logical analysis of substance because what matter multiplies is not an *in re* specifically identical nature but a

specifically identical nature which is grasped as one and identical only through abstraction.

In the metaphysical analysis of substance, matter is advanced as the principle of potency of substance. As potency, its causality is that of limiting act. This causality is at the foundation of Aristotle's physical analysis of substance for, in that analysis, where matter is examined as the substratum of change, the ultimate substratum is pure potency (prime matter).

While this is true, the physical analysis of substance further discloses the causality of matter as being that which is able to receive and limit determinations while remaining receptive to higher determinations, allowing, in this way, for increasingly complex levels of organization. Although we did not pursue the examination of matter in this analysis beyond the elements, it is our belief that the more complex the body, the richer is the causality of matter. Thus, the study of the human body, the apex of organizational complexity, should more fully disclose the richness of matter's causality.

PART II

MATTER AND THE BODY ACCORDING TO THOMAS AQUINAS

Thomas Aquinas's debt to Aristotle is perhaps nowhere more evident than in the domain of natural philosophy. Ironically, it is in that very domain that Aquinas also distinguishes himself importantly from the Stagirite. For it is in psychology, a study proper to what the ancients called *physics*, that Aquinas firmly asserts the subsistence of the human soul, the incorruptibility of not only the human intellect but the entire human soul (that is, including the vegetative and sensitive powers which, however, cannot operate in separation from matter) and the individual character of intellection.

This modification or, as some would say, 'christianization' of Aristotelian doctrines is not, however, without repercussions. Certainly, one of the most evident of these is the resolution of the noetic problem encountered by Aristotle. Another repercussion is, we believe, a more profound understanding of the material dimension of human existence.

Our discussion is divided into six main sections. In the first, Chapter 3, we outline St. Thomas's adoption of Aristotle's hylomorphic theory as regards human beings, emphasizing certain points on which St. Thomas' analysis differs from the Stagirite. In Chapter 4, we outline each of the two complementary approaches to the study of man, distinguish the different senses of the term 'body' and set forth our methodology for the study of the human body from the 'viewpoint of body'. Chapter 5 discusses what is, according to Aquinas, the

principle of human individuation and examines his views on the elements. Chapters 6 through 8 then study the human body from the 'viewpoint of body' in accordance with the methodology outlined in Chapter 4, examining the causality of matter in each level of life: vegetative (Chapter 6), sensitive (Chapter 7) and intellective (Chapter 8). These analyses reveal not only that Aquinas's understanding develops still further the philosophical implications of hylomorphism and is less dependent on empirical observation than that of Aristotle but, also, that he ascribed a rich and important causality to matter which has been almost entirely neglected by Thomistic scholarship.

CHAPTER 3

AQUINAS' ANTHROPOLOGY

The aim of this chapter is to present St. Thomas's psychology/anthropology.¹³⁸ Unmistakably Aristotelian in origin and character, St. Thomas' theory of man is not, for that, a mere repetition of the Stagirite's views. Aquinas goes beyond Aristotle's psychology in two important ways: firstly, by introducing certain 'clarifications' which either remove certain doubts regarding Aristotle's doctrine or which make his anthropology more compatible or consonant with the demands of Christian theology and, secondly, by introducing original principles or doctrines, in particular, the distinction between *esse* and *essentia*.

A presentation of Aquinas' views, especially as they differ from those of the Stagirite, is thus required. Our discussion will be divided into three main sections. In the first, we will be concerned with St. Thomas' objective distinction between *esse* and *essentia*, as it is the basis of his explanation of the human soul's incorruptibility.¹³⁹ The second section will develop in more detail why the

¹³⁸ The modern term 'anthropology' is perhaps preferable to the term 'psychology', if only because the modern meaning of 'psychology' is so different than what the ancients and medievals understood by it. However, we use the two concepts interchangeably to broadly mean 'study of man'.

¹³⁹ In this chapter, we are solely concerned with the *incorruptibility* of the human soul, not its immortality. Although we shall have occasion to speak of the soul's immortality in Chapter 8, it is important to note here that *incorruptibility* and *immortality* are not synonymous terms. Whereas 'incorruptible' applies to entities which do not lose their act of being, 'immortality' applies to entities

human soul must, in fact, be incorruptible and what this does and does not imply within Aquinas' anthropology, addressing at some length the common misconception that the soul's subsistence implies or is equivalent to its substantiality and, more briefly, how the doctrine of the human soul's subsistence helps Aquinas' to overcome the noetic problem faced by Aristotle. The third section will, finally, outline St. Thomas' controversial advocacy of the unicity of the human soul, a doctrine which will have important implications in regards to the specificity of the human body as well as, more generally, the causality of matter.

To begin, let us recall that, according to Aristotle, humans are hylomorphically composed of soul and matter. Souls are substantial forms which not only determine matter in being and nature (just as all other substantial forms do) but, also, confer life. Neither the soul nor matter are substances in the primary sense: the ontological status of substance is reserved for the composite, viz., *this man, that woman*.

Now Aristotle had held that the soul is incorruptible (or, at least, that it has an incorruptible aspect — viz., the intellect). This, as we explained earlier, presented Aristotle with certain difficulties which have been referred to by some as 'the noetic problem'. St. Thomas, however, will unhesitatingly affirm the incorruptibility of the soul and will, as we shall see, explain its incorruptibility with the help of a distinction nowhere found in the Aristotelian corpus: the distinction between *esse* and *essentia*.

which not only do not lose their act of being but continue to exercise their proper operations. Although St. Thomas recognizes, on the basis of *philosophical* arguments, that the human soul is incorruptible, he does not accept that the separated soul can of itself exercise its proper operations. St. Thomas will, nevertheless, maintain that human soul is immortal but not on the basis of philosophical arguments but, rather, *theological* arguments (angelic influence, etc.).

1) The Distinction between *esse* and *essentia*

The distinction between *esse* and *essentia* is a distinction between the essence of a substance and its act of being.¹⁴⁰ In positing this distinction, St. Thomas clearly departed from the Philosopher's teaching. According to the Stagirite, the being of a thing is something given.¹⁴¹ It is not something distinct from substance, quality or quantity but, rather, is a simple predicate (in fact, the most universal of all predicates) which indicates the fact of *being-there* or *being-that-way* (being-short, being-white, etc.).¹⁴² Furthermore, of all the senses indicated by the categories, the primary sense of 'being' is, according to the Stagirite, none other than *essence*:

There are several senses in which a thing may be said to 'be' [...] for in one sense the 'being' meant is 'what a thing is' or a 'this', and in another sense it means a quality or quantity or one of the other things predicated as these are. While 'being' has all these senses, obviously that which 'is' primarily is the 'what', which indicates the substance of the thing. [...] And all other things are said to be because they are, some of them, quantities of that which *is* in this primary sense, others qualities of it, others affections of it, and others some other determination of it.¹⁴³

¹⁴⁰ The *esse/essentia* composition, unlike the prime matter/substantial form composition, is a metaphysical distinction, not a physical distinction. As we shall see, according to St. Thomas, hylomorphic composition applies only to a segment of finite beings (those subject to movement) but the *esse/essentia* composition applies to all finite beings, even those not subject to movement (as, for instance, angels).

¹⁴¹ Aristotle, *Metaphysics*, VII, 17, 1041b3-4.

¹⁴² Aristotle, *Metaphysics*, X, 2, 1053b20-21.

¹⁴³ Aristotle, *Metaphysics*, VII, 1, 1028a10-20 (tr. by W. D. Ross). The Greek text reads (Loeb edition): "Τὸ ὄν λέγεται πολλαχῶς, καθάπερ διειλόμεθα πρότερον ἐν τοῖς περὶ τοῦ ποσαχῶς· σημαίνει γὰρ τὸ μὲν τί ἐστὶ καὶ τὸδε τι, τὸ δὲ ποιὸν ἢ ροσόν ἢ τῶν ἄλλων ἕκαστον τῶν οὕτω κατηγορουμένων. τοσαυταχῶς δὲ λεγόμενου τοῦ ὄντος φανερόν ἐστι τούτων πρῶτον ὅν τὸ τί ἐστίν, ὅπερ σημαίνει τὴν οὐσίαν· ὅταν μὲν γὰρ εἰπωμεν ποιόν τι τὸδε, ἢ ἀγαθὸν λέγομεν ἢ κακόν, ἀλλ' οὐ τρίτην ἢ ἄνθρωπον· ὅταν δὲ τί ἐστίν, οὐ λευκὸν οὐδὲ θερμὸν οὐδὲ τρίτην, ἀλλὰ ἄνθρωπον ἢ θεόν. τὰ δ' ἄλλα λέγεται ὄντα τῷ οὕτως ὄντος τὰ μὲν ποσότητες εἶναι, τὰ δὲ ποιότητες, τὰ δὲ πάθη, τὰ δὲ ἄλλο τι τοιοῦτον." Although we cannot pursue the issue further within the scope of this thesis, it should be pointed out that Aristotle not only held being and essence to be equivalent but, also, essence and form. See, in this regard, B. C. Bazán's "Être: finitude et infini" in *De Ortu Grammaticae: Studies in medieval grammar and linguistic theory in memory of*

St. Thomas' distinction between *esse* and *essentia* is, however, more than merely original. According to Etienne Gilson, one of the most respected scholars of Aquinas' thought, it effects no less than a revolution with respect to the metaphysics of Aristotle.¹⁴⁴ Whereas Aristotle equated being with essence and reduced the significance of existence to that of a simple predicate which expresses the fact of being-there, St. Thomas links being to an act (*actus essendi*) which is, in composition with essence, a composing principle of the entity. Thus, although formulated within Aristotle's metaphysics of act and potency, Aquinas' conception of *esse* (as the *act* of being) is not reducible to Aristotle's conception of being.¹⁴⁵

That St. Thomas' '*esse*' is not a simple predicate which expresses a fact of existence, of being-there, but a constitutive co-principle of substance appears clearly in chapter four of his *De ente et essentia*, where what is at issue is whether intellectual substances (angels) are composed or simple.¹⁴⁶ Whereas Aristotle would have held, in the context of his metaphysics of form, that these substances are simple, Aquinas holds that they are composed of form and *esse*.¹⁴⁷ This composition, moreover, is held to be a composition of act and potency where *esse* is the principle of actuality and form, at least in angels (in

Jan Pinborg, *Studies in the History of the Language Sciences* vol. 43, ed. G. L. Bursill-Hall, S. Ebbesen and K. Koerner, (Amsterdam/Philadelphia: John Benjamins Publishing Co., 1990): 49-67, esp. 50-54.

¹⁴⁴ Etienne Gilson, *Being and Some Philosophers*, 2nd ed., (Toronto: PIMS, 1952), p. 174.

¹⁴⁵ Regarding the temptation to reduce Aquinas to Aristotle, see Gilson's *Being and Some Philosophers*, where he argues that such a reduction must systematically leave out texts which do not, in fact, support such an interpretation of St. Thomas (p. 158).

¹⁴⁶ The mention of the intellectual substances that are angels (here and in what follows) is not intended to support the existence of such beings. Rather, their mention serves simply to clarify certain aspects of St. Thomas' philosophy which are important to our discussion.

¹⁴⁷ *De ente et essentia*, cap. IV (Leonine edition, pp. 375-378). See also, *Summa contra Gentiles*, II, cap. 52 (Leonine edition, pp. 387-388); *Summa theologiae*, q. 50, art. 1, in corp. and art. 2, in corp.; and *Quaestiones de anima*, q. 6, art. 8, in corp.

whom essence is not composed of matter and form but is their form), the principle of potency.¹⁴⁸

In advancing *esse* as the act of the angelic form or essence, St. Thomas certainly insured the unity of that composite but, also, denied the Aristotelian principle according to which form is the last actuality of substance:

The distinctive character of a truly Aristotelian metaphysics of being — and one might feel tempted to call it its specific form — lies in the fact that it knows of no act superior to the form, not even existence. There is nothing above being; in being, there is nothing above the form, and this means that the form of a given being is an act of which there is no act.¹⁴⁹

Yet this is precisely what is denied by St. Thomas. For, according to him, it is *esse*, not form, which is the principle of being. Although essence expresses *what* a thing is, it is *esse* which is the principle *by which* a thing subsists.¹⁵⁰ Because *esse* is related to essence as act is to potency, form can no longer be considered the efficient cause of the *esse* which is its act:

But all that belongs to anything is either caused from principles of its nature, as for instance risibility in man, or accrues to it through some extrinsic principle, as for instance light in air from the influence of the sun. But it cannot be that existence itself should be caused by the form or quiddity of the thing, caused, I say, as by means of an efficient cause, because thus something would be the cause of itself and would bring its very self into existence, which is impossible. Therefore it follows that everything such that its existence is other than its nature has existence from another [*ab alio*].¹⁵¹

¹⁴⁸ Ibid.

¹⁴⁹ Gilson, *Being and Some Philosophers*, p. 47.

¹⁵⁰ *De ente et essentia*, cap. 4 (Leonine edition, p. 377).

¹⁵¹ *De ente et essentia*, cap. 4 (tr. by Armand Maurer). The Latin text reads (Leonine edition, p. 377, l. 27-37): "Omne autem quod conuenit alicui uel est causatum ex principiis nature sue, sicut risibile in homine; uel aduenit ab aliquo principio extrinseco, sicut lumen in aere ex influentia solis. Non autem potest esse quod ipsum esse sit causatum ab ipsa forma uel quidditate rei, dico sicut a causa efficiente, quia sic aliqua res esset sui ipsius causa et aliqua res se ipsam in esse produceret: quod est impossibile. Ergo oportet quod omnis talis res cuius esse est aliud quam natura sua habeat esse ab alio."

Clearly, then, St. Thomas' '*esse*' is not equivalent to, nor interchangeable with, 'being' as it is understood by Aristotle. *Esse* is a constitutive co-principle of substance, not merely a simple predicate which denotes existence as a fact. In composition with essence, it is the act *by which* the thing is, *by which* it subsists.

The distinction between *esse* and *essentia* is, according to Aquinas, an objective distinction between two metaphysical principles, *esse* standing to essence as act to potency. *Esse* and *essentia* are, in St. Thomas' view, the constitutive co-principles of substance, with the unity of their composition ensured by their act/potency relation.

Accounting for the finitude of creatures seems to have been the motivating concern behind St. Thomas' distinction between *esse* and *essentia*.¹⁵² Although all creatures are composed of *esse* and essence, this composition seems, moreover, to be especially important in the case of angels who, not being hylomorphically composed of matter and form, require a principle of potency other than matter to distinguish them from the pure actuality of God:

Therefore, if there be no matter, and given that the form itself subsists without matter, there nevertheless still remains the relation of the form to its very being, as of potentiality to act. [...] For *what is* is the form itself subsisting, and the being itself is that whereby the substance is; as the running is whereby the runner runs. But in God *being* and *what is* are not different [...] Hence God alone is pure act.¹⁵³

In God, *esse* and *essentia* are one and the same: God's act of being is his essence and his essence is his act of being. As God's essence *is to be*, his being

¹⁵² As the composition of *esse* and *essentia* does not address the problem of motion (as does the composition of matter and form) but, rather, that of finitude, it is a metaphysical distinction, not a physical one.

¹⁵³ *Summa theologiae*, I, q. 50, art. 2, ad 3 (tr. by Anton C. Pegis). The Latin text reads (Ottawa edition): "Subtracta ergo materia, et posito quod ipsa forma subsistat non in materia, adhuc remanet comparatio formae ad ipsum esse ut potentiae ad actum. [...] nam quod est est ipsa forma subsistens; ipsum autem esse est quo substantie est, sicut cursus est quo currens currit. Sed in Deo non est aliud esse et quo est [...]. Unde solus Deus est actus purus."

is absolutely necessary — it is neither received (from another) nor, hence, does it depend on any other being. Moreover, as his being is absolutely necessary, God cannot *not-be* and could never have *not-been*. His being or existence is, therefore, both absolutely necessary and infinite.¹⁵⁴

If the *esse* and *essentia* of angels were not distinct, they could not be said to be created by God. For, if such a composition did not hold, it would be of their essence (which is uncomposed) *to be* and, thus, it would be false to hold that they receive their being from God. But in angels *esse* and *essentia* are distinct and, thus, they must be created.

As, according to St. Thomas, the essence of angels is simple (they are forms alone), the being of angels will be incorruptible but finite.¹⁵⁵ It will be incorruptible because their essence is not hylomorphically composed and, thus, lacking the potentiality towards other forms, also lack the potentiality to *not-be*.¹⁵⁶ Their being will, nevertheless, be received because it is finite.

As all creatures are finite, their *esse* will be distinct from their essence. Although objectively distinct, *esse* and *essentia* are not and cannot exist apart. According to St. Thomas, *esse* and *essentia* are concreated co-principles. There is no essence without *esse* and no *esse* without essence:

Creation does not mean the production of a composite thing from pre-existing principles; but the composite is so said to be created that it is brought into being along with all its component principles.¹⁵⁷

¹⁵⁴ See, amongst others, *De spiritualibus creaturis*, art. 8, in corp.

¹⁵⁵ *Summa theologiae*, I, q. 45, art. 4, in corp.

¹⁵⁶ See, for instance, *De spiritualibus creaturis*, art. 8, in corp. It should be noted that the incorruptible being of certain creatures is not incompatible with their being created.

¹⁵⁷ *Summa theologiae*, I, q. 45, art. 4, ad 2 (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Dicendum quod creatio non dicit constitutionem rei compositae ex principiis praeexistentibus; sed compositum sic dicitur creari, quod simul cum omnibus suis principiis in esse producitur."

Therefore, just as accidents and forms and other non-subsisting things are to be said to co-exist rather than to exist, so they ought to be called *concreated* rather than *created* things. But properly speaking, it is subsisting beings which are created.¹⁵⁸

The finitude of creatures accounts for their contingency and for the objective distinction between *esse* and *essentia*. All *esse* and *essentia* are objectively distinct in all creatures, all creatures must both *begin to be* at some point and be limited in-being by their essence (which is not simply *to be* but *to be this or that sort of creature*). Yet, the manner in which *esse* is possessed differs for angels, humans and non-human material substances (like animals and plants). In angels, as we just saw, *esse* is possessed and limited by their essence which, moreover, is simple (i.e. a form alone). This is not, however, the case for material substances. For, the essence of any material substance is hylomorphically composed of matter and form. Moreover, the peculiar way in which *esse* is possessed in humans is what, in fact, accounts for the human soul's incorruptibility.

Let us first outline the manner in which *esse* is possessed by non-human material substances in order to better distinguish the manner in which it is possessed by human beings. Whereas angels are composed of form and *esse*, three principles constitute material substances: matter, form, and *esse*.¹⁵⁹ These three principles are ordered according to a double relation of act and potency: matter is in potency in relation to form (essential composition) and the

¹⁵⁸ *Summa theologiae*, I, q. 45, art. 4, in corp. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Sicut igitur accidentia et formae, et huiusmodi quae non subsistunt, magis sunt coexistentia quam entia; ita magis debent dici concreata quam creata. Proprie uero creata sunt subsistentia."

¹⁵⁹ *Quaestiones de anima*, q. 6, in corp.

essence, composed of matter and form, is, in turn, in potency in relation to the act of being (constitutive composition).¹⁶⁰ As St. Thomas, himself, puts it:

[...] in composite objects there are two kinds of act and two kinds of potency to consider. For first of all, matter is as potency which reference to form, and the form is its act. And secondly, if the nature is constituted of matter and form, the matter is as potency with reference to existence itself, insofar as it is able to receive this. Accordingly, when the foundation of matter is removed, if any form of a determinate nature remains which subsists of itself but not in matter, it will still be related to its own existence as potency is to act. But I do not say, as that potency which is separable from its act, but as a potency which is always accompanied by its act.¹⁶¹

Although it is by the form that material composites exist, it is the *composite* of matter and form, in non-human material substances, which is the subject of the act of being:

[...] since each thing operates insofar as it is a being, to operate belongs to each thing in the same way as to be belongs to it. The forms, therefore, which have no operation without being joined with their matter, do not themselves operate, but it is the composite that operates through the form. Whence indeed, forms of this kind do not themselves, properly speaking exist, but by means of them something exists.¹⁶²

¹⁶⁰ See Bazán's explanation of the double relation of act and potency in material creatures in his "La corporalité selon S. Thomas," *Revue Philosophique de Louvain* 81 (1981): 386-387.

¹⁶¹ *De spiritualibus creaturis*, art. 1, in corp. (tr. by Mary C. FitzPatrick & John J. Wellmuth). The Latin text (Keeler edition, p. 12, l. 12-21) reads: "[...] in rebus compositis est considerare duplicem actum et duplicem potentiam. Nam primo quidem, materia est ut potentia respectu formae, et forma est actus eius. Et iterum, natura constituta ex materia et forma, est ut potentia respectu ipsius esse, in quantum est susceptiva eius. Remoto igitur fundamento materiae, si remaneat aliqua forma determinatae naturae per se subsistens, non in materia adhuc comparabitur ad suum esse ut potentia ad actum; non dico autem, ut potentiam separabilem ab actu, sed quam semper suos actus comitetur."

¹⁶² *De unitate intellectus contra Averroistas*, cap. 1 (tr. by Beatrice H. Zedler). The Latin text (Leonine edition, p. 298, l. 627-634) reads: "[...] quia unumquodque operatur in quantum est ens; eo igitur modo unicuique competit operari quo sibi competit esse. Forme igitur que nullam operationem habent sine communicatione sue materie, ipse non operantur, sed compositum est quod operatur per formam; unde huiusmodi forme ipse quidem proprie loquendo non sunt, sed eis aliquid est."

As possessed by the composite of matter and form, *esse* is corrupted along with it.¹⁶³ Thus, the being of non-human material substances is both corruptible and finite: finite because their *esse* is received and limited (i.e. it is distinct from their essence), corruptible because their essence ishylomorphically composed and, thus, susceptible to corruption (i.e., non-human material substances have the potentiality to not-be).

The *esse* of human beings is, however, not possessed by the *composite* of soul and matter, as is that of other sorts of material substances, but by the soul alone. Leaving aside for the moment why the human soul (rather than the composite of soul and matter) *must* be the subject of *esse* (which shall be discussed in the next section), let us examine how this peculiar possession of *esse* by the human soul can yet account for the being of the human composite and, also, how it distinguishes humans from both non-human material substances and angels.

According to St. Thomas, humans do not possess two acts of being, one by the soul and the other by the body. Although the soul is the (sole) subject of *esse*, as the substantial form of its body, it confers its *esse* to the body, that is, makes the body not only to be *what it is* but, more fundamentally, *to be*:

[...] it is clear that that by which the body lives is its soul. Now to live is the 'to be' of living things. Therefore the soul is that by which a human body actually exists; but to confer being is a characteristic of a form. Therefore, a human soul is the form of its body.¹⁶⁴

¹⁶³ See, for instance, *De unitate intellectus contra Averroistas*, cap. 1 (Leonine edition, pp. 298-299, l. 654-680).

¹⁶⁴ *Quaestiones de anima*, q. 1, in corp. (tr. by James H. Robb). The Latin text (Leonine edition) reads: "Manifestum est enim id quo uiuit corpus animam esse. Viuere autem est esse uiuentium. Anima ergo est quo habet corpus humanum esse actu. Huiusmodi autem forma est." See also, *De unitate intellectus contra Averroistas*, cap. 1 (Leonine edition, p. 293, l. 191-212); *Summa contra Gentiles*, II, cap. 68 (Leonine edition, p. 440) and cap. 87 (Leonine edition, pp. 537-538). The text at *Summa theologiae*, I, q. 76, art. 1, ad 5 (Ottawa edition) is worth citing: "Dicendum quod anima illud esse in quo subsistit, communicat materiae corporali, ex qua et anima intellectiua fit unum; ita quod illud esse quod est totius compositi, est etiam ipsius animae. Quod

Thus, the body shares in the act of being possessed by the soul but does not, itself, possess that act.¹⁶⁵ Because *esse* is, in this way, shared with the body but properly possessed by the human soul, it is retained by the soul after the corruption of the body:

Although a soul and its body unite to achieve a single act of existence of a human being, still that act of existence accrues to the body from the soul, so that a human soul communicates to its body the soul's own existence by which it subsists [...]. Consequently, when its body is taken away, a soul continues to exist.¹⁶⁶

As is now apparent, it is the particular composition of *esse* and *essentia* in humans which accounts for the incorruptibility of their soul. As possessed by the soul and not by the body (but only conferred to the body by the soul), *esse* is retained by the soul when the body is corrupted. This is not the case for non-human material substances which, as we saw, lose their *esse* with the corruption of the composite of matter and soul (or matter and form) precisely because their act of being is possessed by their corruptible composite.

In this way, then, human souls have in common with angels the fact that their *esse* cannot be corrupted. Yet, human souls differ from angelic essences in an important way. For, unlike angelic forms, human souls do not possess, except in composition with their matter, a complete essence but are, rather, only a part of human nature.¹⁶⁷ Hence, while it is true that the *esse* possessed by the human soul cannot be corrupted, the human being *can* be corrupted: the human

non accidit in aliis formis, quae non sunt subsistentes. Et propter hoc anima humana remanet in suo esse, destructo corpore; non autem aliae formae."

¹⁶⁵ See, for example, *Quaestiones de anima*, q. 1, ad 18.

¹⁶⁶ *Quaestiones de anima*, q. 14, ad 11 (tr. by James H. Robb). The Latin text (Leonine edition): "licet anima et corpus conueniant ad unum esse hominis, tamen illud esse est corpori ab anima; ita quod anima humana esse suum, in quo subsistit, corpori communicat [...]. Et ideo, remoto corpore, adhuc remanet anima."

¹⁶⁷ *Quaestiones de anima*, q. 14, ad 21. See also, *ibid.*, q. 1, in corp.

being is a composite of soul/prime matter (not a soul alone) which is subject to movement and, hence, like all composites subject to movement, it is corruptible. So, the incorruptibility of the soul is not equivalent to the incorruptibility of human beings. Although we cannot engage the topic here, the fact that the human soul is the substantial form of its body and, yet, is the subject of *esse* will, as we shall see in Chapter 8, lead St. Thomas to posit, through theological arguments, the resurrection of the human body.

As we can now see, human beings have a quite peculiar status amongst creatures. Although they are finite like all other creatures, their *esse* being distinct from their essence, there is a sense in which they are incorruptible and a sense in which they are corruptible: the human soul, as being the subject of *esse*, is incorruptible but the human composite, being subject to movement and not being itself the possessor of the act of being, is corruptible.

Leaving aside what this peculiar composition of *esse* and *essentia* further implies for the soul, its matter and, more generally, the human being (the composite of soul and matter), let us take up where we left off concerning St. Thomas' affirmation of the soul's incorruptibility. Having seen how Aquinas' distinction between *esse* and *essentia* is at the basis of his explanation of the soul's incorruptibility, the soul being incorruptible due to its possession of *esse*, let us now examine *why* the human soul rather than the composite must, according to St. Thomas, be the subject of *esse*.

II) The Subsistence of the Human Soul

Aquinas offers several arguments to demonstrate the incorruptibility of the human soul.¹⁶⁸ One such argument rests on his general theory concerning the way in which forms progressively dominate the limitations of matter: the nobler the form, the more it rises above matter.¹⁶⁹ Another is that the creative causality of God makes possible that the human substantial form, while being essentially joined to matter like any other substantial form, is itself the subject of *esse*. Receiving its act of being directly from God rather than through the action of natural agents working on matter, the soul's being is not educed from the potency of matter and, thus, not dependent on its matter for its existence.¹⁷⁰ The foremost, however, is St. Thomas' argument that an analysis of human intellection reveals an operative independence of the soul from its body that can only be explained by a corresponding independence in the order of being.

According to St. Thomas, intelligence of universals by the human intellect requires that the human intellect be neither itself a body nor utilize a bodily organ in its operation:

For it is clear that by means of the intellect man can know all corporeal things. Now whatever knows certain things cannot have any of them in its own nature, because that which is in it naturally would impede the knowledge of anything else. [...] Now every body has its own determinate nature. Therefore it is impossible for the intellectual principle to be a body. It is also impossible for it to understand by means of a bodily organ, since the determinate nature of that organ would likewise impede knowledge of all bodies;

¹⁶⁸ For the sake of clarity of exposition and brevity, we shall examine only one of his arguments in greater detail. It should also be noted that we concerned in this section with St. Thomas' mature reflections, particularly as expressed in his *Quaestiones de anima*.

¹⁶⁹ *Summa theologiae*, I, q. 76, art. 1, in corp. See, also, *Quaestiones de anima*, q. 1, in corp.

¹⁷⁰ See, for instance, *Summa theologiae*, I, q. 90, art. 2, ad 2; q. 118, art. 2, in corp.; and q. 75, art. 6, ad 1. St. Thomas' assertion that the human soul's being is not educed from the potency of matter by natural agents will, clearly, pose certain difficulties for him as regards its explanation of the coming-to-be of humans (are not humans generated by human parents?). We shall have the opportunity to discuss this interesting 'dilemma' in a later chapter.

as when a certain determinate color is not only in the pupil of the eye, but also in a glass vase, the liquid in the vase seems to be of that same color.¹⁷¹

As the principle of intellectual operation, which Aquinas states is the soul of man,¹⁷² is neither a body nor utilizes a bodily organ, it has essentially an operation in which the body does not share. Moreover, only that which subsists *per se* can have an operation in itself:

[...] it is necessary that an intellective soul operate *per se*, inasmuch as it possesses an essential operation in which the body does not share. And because each being acts insofar as it is actual, it is necessary that an intellective soul possess an independent *per se* act of existing which is not dependent on its body. For forms which have an act of existing which depends on matter or on a subject do not possess *per se* operations.¹⁷³

For this reason, then, the soul must be a *subsistent* substantial form. To be *subsistent* means, moreover, to be the subject of *esse*.¹⁷⁴ This *esse*, although communicated to the body is, nevertheless, as we explained earlier, possessed by the human soul and, thus, is not corrupted with the corruption of

¹⁷¹ *Summa theologiae*, I, q. 75, art. 2, in corp. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Manifestum est enim quod homo per intellectum cognoscere potest naturas omnium corporum. Quod autem potest cognoscere aliqua, oportet ut nihil eorum habeat in sua natura; quia illud quod inesset ei naturaliter, impediret cognitionem aliorum [...] Omne autem corpus habet aliquam naturam determinatam. Impossibile est igitur quod principium intellectuale sit corpus. Et similiter impossibile est quod intelligat per organum corporeum, quia si esset, natura determinata illius organi corporei prohiberet cognitionem omnium corporum; sicut si aliquis determinatus color sit non solum in pupilla sed etiam in vase vitreo, liquor infusus eiusdem coloris videtur." See also, *Quaestiones de anima*, q. 1, in corp.

¹⁷² *Summa theologiae*, I, q. 75, art. 2, in corp. (Ottawa edition): "[...] quod est principium intellectualis operationis, quod dicimus animam hominis [...]"

¹⁷³ *Quaestiones de anima*, q. 1, in corp. (tr. by James H. Robb). The Latin text reads (Leonine edition): "Et sic oportet quod anima intellectiva per se agat, utpote propriam operationem habens absque corporis communione. Et quia unumquodque agit secundum quod est in actu, oportet quod anima intellectiva habeat esse per se absolutum, non dependens a corpore. Forme enim que habent esse dependens a materia vel subiecto non habent per se operationem." See also, *Summa theologiae*, I, q. 75, art. 2, in corp.

¹⁷⁴ See, for instance, *Quaestiones de anima*, q. 1, ad 1.

the body. Hence, the human soul, given that it is an intellectual principle, must be subsistent and, consequently, incorruptible.

Before proceeding to our discussion of St. Thomas' controversial advocacy of the unicity of the human soul, let us first address the common misconception that the subsistence of the soul is equivalent to its substantiality and, then, show how St. Thomas was able to overcome the 'noetic problem' encountered by Aristotle.

(a) Subsistence and Substantiality: A Clarification

Does St. Thomas' doctrine of the subsistence of the human soul imply that the human soul is a substance? If so, the strength and value of hylomorphism as a theory is lost. For, although the point of Aristotle's hylomorphic theory is to explain movement or change, it is also thoroughly non-dualistic: neither the form or soul nor its matter is itself, properly speaking, a substance. As we saw, it is *this* man, *this* dog, *that* tree which are, for Aristotle, substances in the primary sense. If either of the correlative co-principles of substance are said to be substances, the intimate unity of primary substances is destroyed and, moreover, a further composition must be posited within the already 'hylomorphically' composed entity: if man is 'hylomorphically' composed of soul and matter but his soul is itself a substance, his soul must also be said to be hylomorphically composed.¹⁷⁵ The unity of man, in this scenario, would thus be destroyed: man is not a primary substance but a substance (the soul)

¹⁷⁵ As, properly speaking, hylomorphic composition is of non-substantial (correlative) constitutive principles, the qualification *hylomorphically* is not properly applied to a composition of one or more substantial constituents and, thus, placed in single brackets to indicate its inappropriate use.

somehow attached to matter. This raises even further difficulties, for, what then could be said of matter? Is it, too, a substance? If so, the consequence is substantial dualism. If not, there are not many options to choose from for it could no longer be said to be a co-principle of substance as, in this scenario, it is merely joined to a substance (the soul), not a correlative principle of substance. If not itself a substance nor a correlative constitutive principle of substance, what could it be?

The consequences of holding that the soul or its matter is a substance (or that both the soul and matter are substances) are, as we can see from this brief outline, quite serious. It is, thus, with great care that St. Thomas' doctrine of the subsistence of the human soul must be examined and discussed. Is subsistence, in St. Thomas' scheme, equivalent to substantiality?

Although the secondary literature is confused on this point (and not without reason), St. Thomas clarifies his position in his *Quaestiones de anima*. According to that text, to be a substance in the proper sense of the term means to be both subsistent (i.e., capable of separate existence) and to possess a complete nature:

It must be said that an entity [hoc aliquid] in the proper sense of the term is an individual in the genus of substance. For the Philosopher says in the *Categories* that by first substances we unqualifiedly mean entity; however, second substances, although they seem to mean entity, really mean qualified entity. Now to be an individual in the genus of substance does not simply mean to be that which can subsist *per se* but also to be complete in a given species and genus of substance.¹⁷⁶

¹⁷⁶ *Quaestiones de anima*, q. 1, in corp. (tr. by James H. Robb). The Latin text (Leonine edition) reads: "Dicendum quod hoc aliquid proprie dicitur indiuiduum in genere substantie. Dicit enim Philosophus in Predicamentis quod prime substantie indubitanter hoc aliquid significant, secunde uero substantie, etsi uideantur hoc aliquid significare, magis tamen significant quale quid. Indiuiduum autem in genere substantie non solum habet quod per se possit subsistere, set quod sit aliquid completum in aliqua specie et genere substantie." See also, *In De anima*, II, lect. 1 (Leonine edition, p. 69, l. 84-95) and *Summa theologiae*, I, q. 90, art. 4, in corp. The text at

Now, although it is true that human souls are able to subsist *per se*, given that they are the subject of the act of being, substantiality also requires possessing a complete nature and human souls do not meet this criterion:

Although the soul is able to subsist *per se*, it does not possess a complete nature, but its body is joined to it to complete its nature.¹⁷⁷

On St. Thomas' view, the soul is only a 'part' of human nature. It is only the human being, soul and matter, which can, according to St. Thomas, meet both criteria of substantiality, that is, subsistence and a complete nature:

A soul and its body are not different as things of diverse genera or species, since neither belongs to a genus or a species, but only that which is composed of them.¹⁷⁸

Although the soul is able to exist apart from the matter it determines, this does not alter the fact that it is not complete in a given species and genus of substance and, thus, does not alter the fact that the soul is not, properly speaking, a substance. 'Subsistence', simply put, is not a synonym of or interchangeable with 'substance'.

It is, thus, with much dismay that we find scholars of St. Thomas' thought referring to the soul as a substance or stating both that the soul is and is not a

Summa theologiae, I, q. 76, art. 1, ad 5 (Ottawa edition) is simple and to the point: "Substantia autem est quid completum in suo esse et in sua specie".

¹⁷⁷ *Quaestiones de anima*, q. 1, ad 1 (tr. by James H. Robb). The Latin text (Leonine edition) reads: "[...] tum etiam quia etsi possit per se subsistere non tamen habet speciem completam, set corpus aduenit ei ad complementum speciei."

¹⁷⁸ *Quaestiones de anima*, q. 9, ad 18 (tr. by James H. Robb). The Latin text (Leonine edition) reads: "dicendum quod anima et corpus non sunt distantia sicut res diuersorum generum uel specierum, cum neuter eorum sit in genere uel specie, sed solum compositum ex eis." Two remarks are perhaps necessary here: first, that this man and that woman subsist (the other criterion of substantiality), i.e. exist individually, is considered evident by both Aristotle and Aquinas; and, second, St. Thomas' terminology is here a bit misleading: human beings are not, properly speaking, composites of soul and *body*, but soul and *matter*. The body is not in a different species than the soul precisely because it is *what it is* due to the soul. We shall, however, have the opportunity to discuss this a greater length in what follows.

recognized that the soul is not a substance, he also held (in a contradictory way) that the soul is a substance which is also, at the same time, the form of a body.¹⁷⁹ Contemporary scholars do not fare much better. For instance, Montague Brown believes quite simply that, according to Aquinas, the soul is a substance in its own right.¹⁸⁰ Yet, St. Thomas is quite clear: *substantia autem est quid completum in suo esse et in sua specie*¹⁸¹ and, although the human soul *possit per se subsistere, non tamen habet speciem completam*.¹⁸²

Moreover, the fact that the soul is not, according to St. Thomas, a substance is further supported by his refusal to ascribe to the soul the status of hypostasis or person:

Although the soul is incorruptible, it is nevertheless in no other genus than the body; for, since it is a part of a human nature, to be in a genus or in a species or to be a person or hypostasis is not characteristic of the soul, but of the composite.¹⁸³

As the status of hypostasis or person is reserved by St. Thomas for substantial individuals of a rational nature¹⁸⁴ and the soul is not a person, it is clear that the soul is not a substance.¹⁸⁵ It is, thus, self-contradictory to argue,

¹⁷⁹ E. Gilson, *History of Christian Philosophy in the Middle Ages*, (New York: 1954), p. 376 (emphasis mine): "The human soul is an intellectual *substance* indeed, but one which it is essential to be the form of a body..." Gilson's mistake was, we believe, to confound *conferring substantiality* (which is true of all forms of natural things) with *possessing substantiality* (which is proper to the composite alone).

¹⁸⁰ See, for instance, his "Aquinas on the Resurrection of the Body," *Thomist* 56 (1992): 165-207, esp. 166 ("the rational soul is an incorruptible substance") and 173 ("the soul is a substance in its own right").

¹⁸¹ *Summa theologiae*, I, q. 76, art. 1, ad 5 (Ottawa edition).

¹⁸² *Quaestiones de anima*, q. 1, ad 1 (Leonine edition) (emphasis mine).

¹⁸³ *De spiritualibus creaturis*, art. 2, ad 16 (tr. by Mary C. FitzPatrick & John J. Wellmuth). The Latin text (Keeler edition, p. 32, l. 23-26) reads: "Anima autem, licet sit incorruptibilis, non tamen est in alio genere quam corpus; quia, cum sit pars humanae naturae, non competit sibi esse in genere vel specie, vel esse personam aut hypostasim, sed composito".

¹⁸⁴ Aside from *De spiritualibus creaturis*, art. 2, ad 16, see *Summa theologiae*, I, q. 75, art. 4, ad 2 and *De potentia*, q. 6, art. 3, in corp.

¹⁸⁵ It is interesting to note how greatly Aquinas and Augustine differ on this point. Whereas Augustine had held that man is his soul (or, at best, that man is a soul *using* a body), Aquinas

as Montague Brown does, that St. Thomas denied that the soul is a person but believed the soul to be a substance.¹⁸⁶

Reserving for a later chapter a discussion of the human soul's peculiar ontological status (being, as it is, subsistent but not a substance), let us now briefly examine how St. Thomas overcomes, with the help of his doctrine of the soul's subsistence, Aristotle's difficulties as regards the intellect.

(b) The 'Noetic Problem' Resolved

In applying his hylomorphic analysis of substances to human beings in his *De anima*, Aristotle encountered a certain difficulty which, as is well known, he did not resolve. Like all other material substances having life, human beings are constituted by soul and matter. Neither soul nor matter is a substance in the primary sense as they are the constituents of an analysis relative to primary substance, in this case, the human being. Aristotle's denial of the human soul's substantiality, although necessary within the framework of his hylomorphic theory, posed the following difficulty: if the soul is the form of the body, then the intellect or *nous* also belongs to the domain of physics; but, *nous* is an immaterial faculty, not a material one... how, then, can the human capacity to know immaterial universals be explained in (or by) a hylomorphic analysis?

This problem, often referred to as the 'noetic problem', is explained by François Nuyens in the following manner:

teaches that man is the composite of his soul and his matter. This doctrine, as we shall see in Chapter 8, will make the resurrection of the body of tantamount importance in St. Thomas' eschatology.

¹⁸⁶ See his "St. Thomas and the Individuation of Persons," *American Catholic Philosophical Quarterly* LXV (Winter 1991): 29-44.

D'une part le Stagirite est convaincu de la nécessité d'avoir une définition de l'âme qui vaille pour toute espèce d'âmes: âme végétale, animale, humaine. Une telle définition peut comporter uniquement que l'âme soit la forme substantielle de l'être vivant. Aristote est convaincu que cette définition convient aussi à l'homme qui a toutes les fonctions vitales propres aux autres êtres vivants. [...] D'autre part, il n'est pas moins convaincu de l'existence, dans l'homme, d'une activité qui s'oppose à cette définition. La faculté intellectuelle, le 'nous', est un principe immatériel qui ne peut pas être rabaissé au rang de la forme substantielle d'un être matériel. D'un côté, donc, une nécessité de considérer l'âme humaine, elle aussi, comme une forme substantielle; de l'autre, la nécessité non moins impérieuse de faire exception en faveur du 'nous'.¹⁸⁷

So, while committed to the hylomorphic composition of human beings, Aristotle is no less committed to the fact that humans have an immaterial activity, even though that fact is difficult to explain within a strict hylomorphic analysis of man. Leaving this problem unresolved, Aristotle opened the door to several different interpretations, more or less compatible with hylomorphism. One, in particular, caused much debate in the Middle Ages: that of Averroes, which placed *nous* as a separate substance, outside the human being, rather than as a faculty of the human soul.¹⁸⁸

Granting that intellectual activity is immaterial, St. Thomas is nevertheless convinced that that activity is an activity of the soul, in fact, *each* human soul:

For when he [Aristotle] had defined the soul in general, he begins to distinguish its powers; and he says that "the powers of the soul are vegetative, sensitive, appetitive, locomotive, intellective." [*De anima*, II, 3, 414a30-31] And that the intellective [power] is the intellect is clear through what he adds later, when he explains the

¹⁸⁷ Nuyens, *L'Évolution de la psychologie...*, p. 213.

¹⁸⁸ Although a treatment of Averroes' interpretation of Aristotle would be interesting, we cannot do so here. We refer the reader to B. C. Bazán's study: "La noética de Averroes," *Philosophia* (Mendoza) 38 (1972): 19-42. We consulted an unpublished English version of this article entitled "Questio valde difficilis et ambigua: On Averroes' Averroism" made available to us by the author. For a treatment of the 'noetic problem' in Aristotle and Theophrastus, see B. C. Bazán's "La etapa aporética de la psicología peripatética," *Cuadernos de Filosofía* (Buenos Aires) XIII/19 (1973): 61-89.

division: "But for other beings, the intellective and intellect, as in men." [*De anima*, II, 3, 414b18-20] He therefore means that the intellect is a power of the soul, which is the act of the body.¹⁸⁹

As intellectual activity is immaterial (does not make use of a corporeal organ) and it is a faculty of the soul, it follows that the soul has an activity in which the body has no share. To this operative independence of the soul there must correspond an independence in the order of being, as we discussed earlier. This ontological independence does not necessarily imply that the soul is a substance, however, but only that the soul is the subject of the act of being, as we also explained earlier.

It is, thus, with the help of his doctrine of the subsistence of the human soul that St. Thomas was able to hold both that intellectual activity is immaterial and that the intellect is a faculty of the soul. Given that the soul is the subject of *esse*, it can have an operation or activity which does not depend on the body.¹⁹⁰

St. Thomas distinguishes from this *ordo demonstrationis* argument another argument from the fact of experience that each human being thinks (*hic homo singularis intelligit*). According to this *ordo inventionis* argument, the fact that each human being thinks requires that in each of us there be a principle of intellection which is joined to us as form, the only way any determination or

¹⁸⁹ *De unitate intellectus contra Averroistas*, cap. 1 (tr. by Beatrice H. Zedler). The Latin text (Leonine edition, p. 294, l. 222-231) reads: "Cum enim animam in communi diffinisset, incipit distinguere potentias eius; et dicit quod potentie anime sunt 'vegetativum, sensitivum, appetitivum, motivum secundum locum, intellectivum'. Et quod intellectivum sit intellectus, patet per id quod postea subdit, divisionem explanans 'Alteris autem intellectivum et intellectus, ut hominibus'. Vult ergo quod intellectus est potentia anime que est actus corporis." Note that that work is devoted entirely to the question of the human intellect, in particular, to a refutation of the Averroistic interpretation of the nature and activity of the intellect. Chapter 4 of that work, moreover, demonstrates that the intellect cannot be one for all men.

¹⁹⁰ Note here that this does not mean that the body has no role to play in the human acquisition of knowledge. We shall have, however, the opportunity to discuss its role in Chapter 8.

activity can be attributed to each of us.¹⁹¹ Now, such a form could not be wholly immersed in matter, for this would make of intellection a material rather than an immaterial activity. Hence, the principle of intellection in human beings must be independent of matter and, consequently, to this operative independence of the soul there must correspond an independence in the order of being.

III) The Unicity of the Human Soul

Besides the controversy over the nature of the human intellect, another controversy took place during Aquinas' lifetime over the question of whether there is more than one substantial form determining the human being. As Fernand Van Steenberghen has noted, the doctrine of a plurality of substantial forms in man is not Aristotelian in origin but inspired by neo-Augustinianism, promoted ardently by such medieval authors as, for instance, Richard of Mediavilla.¹⁹² In advocating that there was only one substantial form composing man, St. Thomas became a focal figure in the controversy. More importantly, however, in being more dialectical and polemical on the issue, St. Thomas was clearer than Aristotle on the proper correlate of soul.¹⁹³

¹⁹¹ See, for instance, *Summa theologiae*, I, q. 76, art. 1, in corp.

¹⁹² Fernand Van Steenberghen, *Introduction à l'étude de la philosophie médiévale*, (Louvain: Publications universitaires/Paris: Béatrice-Nauwelaerts, 1974), p. 509.

¹⁹³ Although, as we saw in Section I, it is true that for Aristotle the ultimate substratum of change is prime matter and that, hence, in generation and corruption it is clearly prime matter which is the correlate of substantial form, it is also true that Aristotle frequently uses the term *hupokeimenon* interchangeably with *hyle*, whether the *hupokeimenon* in question is that of an accidental change or of a substantial change (where, properly speaking, the substratum of change is not *matter* but *prime matter*). In this, Aristotle is not contradicting himself, for, 'matter' has many senses, including that of a wholly undetermined substratum, but, on the other hand, Aristotle is not being as clear as he could be regarding the proper correlate of substantial form.

The unity of the human being requires, according to St. Thomas, that there be no intermediate substantial forms between the human soul and its matter. For, if there were an intermediate substantial form, it would be that form, and not the human substantial form, which would confer existence upon matter and make the matter to be a body. As the human soul would be a form subsequent to a substantial determination, it could only be accidental to the substance already in existence:

[...] whatever comes to a thing after it is complete in its being, comes to it accidentally, since it is outside that thing's essence. Now every substantial form makes a being complete in the genus of substance, for it makes a being in act, and this particular thing. Therefore, whatever accrues to a thing after its first substantial form will accrue to it accidentally. Now, the nutritive soul is a substantial form, for *the living* is predicated substantially of man and animal. It will then follow that the sensitive soul accrues to man accidentally, and likewise the intellective soul.¹⁹⁴

Having an intermediate substantial form between the soul and its matter would seem to imply, then, that the human characteristic of some beings would only be an accident (like whiteness or boldness), or, if one insist that the soul is a substantial perfection, it would follow that the unity of the human being would be lost. For, the substantial union between soul and matter requires two things: first, that the soul confer substantial existence upon matter and be to the body that principle by which it is called a being; and, second, that the principle of existence be one for both component principles and that by which the composite substance

¹⁹⁴ *Summa contra Gentiles*, II, cap. 58 (tr. by James F. Anderson). The Latin text (Leonine edition, p. 409-410) reads: "Omne enim quod advenit alicui post esse completum, advenit ei accidentaliter: cum sit extra essentiam eius. Quaeliber autem forma substantialis facit ens completum in genere substantiae: facit enim ens actu et hoc aliquid. Quicquid igitur post primam formam substantialem advenit ei, accidentaliter adveniet. Cum igitur anima nutritiva sit forma substantialis, *vivum* enim substantialiter de homine praedicatur et de animali; sequetur quod anima sensitiva adveniat accidentaliter, et similiter intellectiva." See also: *Quaestiones de anima*, q. 9 and q. 11; *De spiritualibus creaturis*, art. 3, in corp.; and *Summa theologiae*, I, q. 76, art. 3, in corp.

exists as a unit.¹⁹⁵ And, if the soul were a subsequent form, it could not confer substantial existence upon matter, could not place it within a determinate species of substance, and could not be that by which the composite substance exists as a unit.¹⁹⁶ Hence, if one holds that there is a substantial form prior to the rational soul, then either the rational soul is an accidental form or the unity of the human being is lost.

According to St. Thomas, the unity of the human being can only be assured as a real unity through a unique formal principle.¹⁹⁷ Although it has been said that St. Thomas did not at first hold this view but, rather, held that a *forma corporeitas* (form of the body) as well as a rational soul composed human beings, there is, as far as we can tell, no textual support for this thesis.¹⁹⁸ However, whether or not St. Thomas progressively became aware that real unity requires a unique formal principle, he maintained in every principal text that there is only one substantial form in man, the rational soul, which informs matter immediately. In defending this position, St. Thomas departed from the views of his contemporaries who either held that two substantial forms, a *forma corporeitas* and a rational soul, compose man or that several substantial forms compose the *soul* of man.¹⁹⁹

¹⁹⁵ See, on this point, Anton C. Pegis's, *St. Thomas and the Problem of the Soul in the Thirteenth Century*, (Toronto: St. Michael's College, 1934), p. 168.

¹⁹⁶ See, for instance, *Quaestiones de anima*, q. 9, in corp. and q. 11, in corp.; *Summa theologiae*, I, q. 76, art. 3, in corp.; *De spiritualibus creaturis*, art. 3, in corp.; and *Summa contra Gentiles*, II, cap. 68 (Leonine edition, p. 440).

¹⁹⁷ See, in this regard, R. Zavalloni's discussion in his *Richard de Mediavilla et la controverse sur la pluralité des formes*, (Louvain: Editions de l'Institut supérieur de philosophie, 1951), 475.

¹⁹⁸ The thesis that St. Thomas's thought developed regarding the necessity that there be only one substantial form in man goes back to M.-D. Roland-Gosselin in his *Le "De ente et essentia" de S. Thomas d'Aquin* (ed. M.-D. Roland-Gosselin, Paris: Vrin, 1948). See, especially pp. 112-114.

¹⁹⁹ For the views of some of St Thomas's contemporaries such as, among others, Philip the Chancellor, Roland of Cremona, Albert the Great, Alexander of Hales, and Bonaventure, see Zavalloni's, *Richard de Mediavilla...*, 405-417. Regarding St. Thomas's predecessors on the issue of the plurality of forms, see also B. C. Bazán's "Pluralisme de formes ou dualisme de

An immediate and necessary implication of holding that there is only one substantial form in man is that the proper correlate of the human soul is prime matter. The body cannot be the proper correlate of the soul because if it was already determined as a body, it would mean, of course, that it is determined by a substantial form other than the soul to be what it is. The same is true of matter, which, if it was actual as this or that sort of matter, it would have been made actual by a substantial form. As there can be no intermediaries between the soul and its matter, the human soul must be joined to prime matter, the only sort of matter which is not already determined *to be* and to be *this or that sort of thing*.

[...] since a soul is a substantial form because it constitutes a human being in a determinate species of substance, there is no other substantial form intermediate between a soul and *prime matter*, but it is the soul itself which perfects a human being according to diverse levels of perfection, so that he is a body, and a living body, and a rational animal. [...] the soul, inasmuch as it is a form which bestows existence, has no intermediary between itself and *prime matter*.²⁰⁰

Although this teaching creates many difficulties for St. Thomas' explanation of the generation of human beings, as we shall see in Chapter 6, it rigorously ensures the unity of the human being.²⁰¹ There is only one substantial form composing man and man, hence, is one substance. Moreover, and in consequence, the human soul, given that it is the unique substantial form determining prime matter, is necessarily the only source of all the substantial

substances," *Revue philosophique de Louvain* 67 (1969): 30-73, which shows that pre-Thomistic theologians were above all dualists rather than pluralists.

²⁰⁰ *Quaestiones de anima*, q. 9, in corp. (tr. James H. Robb) (emphasis mine). The Latin text (Leonine edition) reads: "[...] cum anima sit forma substantialis quia constituit hominem in determinata specie substantie, non est aliqua alia forma substantialis media inter animam et materiam primam; set homo ab ipsa anima rationali perficitur secundum diversos gradus perfectionum, ut scilicet sit corpus, et animatum corpus, et animal rationale. [...] anima, secundum quod est forma dans esse, non habet aliquid aliud medium inter se et materiam primam."

²⁰¹ I have outlined some of the difficulties of St. Thomas' account in my "Human is Generated by Human and Created by God," *American Catholic Philosophical Quarterly* LXX (Summer 1996): 413-427.

determinations of the human composite: it determines prime matter to be 'a body, a living body and a rational animal'.

In denying that the proper correlate of the human soul is already organized matter and asserting that there cannot be more than one substantial form in each being, Aquinas ensured the unity of the human being and acknowledged that it is the human soul which confers corporeity. As he himself states in his commentary on *De anima*:

[...] what our premises compel us to say is that it is one and the same substantial form that makes man a particular thing or substance, and a bodily thing, and a living thing, and so on. [...] We must not think, therefore, of the soul and body as though the body had its own form making it a body, to which a soul is superadded, making it a living body; but rather that the body gets both its being and its life from the soul.²⁰²

This clear rejection of the thesis that the soul has its own substantial form to which the soul would be added — a 'Pinocchio' thesis — demonstrates that, for Aquinas, the body cannot be considered a body independently of the soul. This is an important point, one which we shall have to return to in the next chapter. But before doing so, it should perhaps be more emphasized. Consider, then, what St. Thomas himself states concerning human corporeity:

²⁰² In *De anima*, II, lect. 1 (tr. by Kenelm Foster & Silverster Humphries). The Latin text (Leonine edition, p. 71, l. 265-280) reads: "Oportet enim secundum premissa dicere quod una et eadem forma substantialis sit per quam hoc individuum est hoc aliquid siue substantia et per quam est corpus et animatum corpus et sic de aliis [...] Non est ergo sic intelligendum quod anima sit actus corporis et quod corpus sit eius materia et subiectum, quasi corpus sit constitutum per unam formam que faciat eum esse corpus, et superueniat ei anima faciens ipsum esse corpus uiuum, sed quia ab anima est et quod sit et quod corpus sit, et quod sit corpus uiuum." See also, *De spiritualibus creaturis*, art. 3, in corp. (Keeler edition, p. 40, l. 16-19): "per formam substantialem, quae est anima humana, habet hoc individuum non solum quod sit homo, sed quod sit animal, et quod sit vivum, et quod sit corpus, et substantia, et ens."

Corporeity, as the substantial form in man, cannot be other than the rational soul [...]²⁰³

[...] corporeity [...] is [...] in man the intellectual soul.²⁰⁴

²⁰³ *Summa contra Gentiles*, IV, cap. 81 (tr. by Charles J. O'Neil). The Latin text (Leonine edition, p. 253, l. 10-12) reads: "Oportet igitur, quod corporeitas, prout est forma substantialis in homine, non sit aliud quam anima rationalis".

²⁰⁴ *De spiritualibus creaturis*, art. 3, ad 14 (tr. by Mary C. FitzPatrick & John J. Wellmuth). The Latin text (Keeler edition, p. 49, l. 9-14) reads: "Corpus autem quod est in genere substantiae, habet formam substantialem quae dicitur corporeitas, quae non est tres dimensiones, sed quaecumque forma substantialis ex qua sequuntur in materia tres dimensiones, et haec forma in ignis est igneitas, in animali anima sensitiva, et in homine anima intellectiva".

CHAPTER 4

THE STUDY OF THE HUMAN BODY

If the human body has no existence outside the prime matter/human soul composition, as the last chapter has shown, it would seem inappropriate to speak of the 'body', particularly in opposition to the soul. Moreover, and for the same reason, it would seem just as inappropriate to try to determine the causality of human matter, and not just of prime matter, given that such matter is, according to St. Thomas, prime matter determined by the human substantial form.

The aim of this chapter is to show that, despite the rigorous unity of the human hylomorphic composite advocated by St. Thomas, the investigation of the causality of the matter of the human body we propose is neither futile nor does it involve an inherent contradiction within a Thomistic framework. The human body can legitimately be the object of study if the term 'body' is understood precisely (*cum praecisione*).²⁰⁵ Moreover, the 'viewpoint of body' elaborated by St. Thomas²⁰⁶ utilizes precise abstraction to examine the 'application' of the

²⁰⁵ The source of St. Thomas's doctrine of precise abstraction is in his *De ente et essentia*, II (Leonine edition, pp. 371-373). We shall discuss the doctrine in section II of this chapter.

²⁰⁶ St. Thomas distinguishes two 'viewpoints' to the study of man, namely, the 'viewpoint of soul' and the 'viewpoint of body'. The former will be discussed in section I of this chapter, the later will be discussed in section III of this chapter.

human soul to the body, providing a concrete account of human corporeity which elaborates significantly upon the important and rich causality of the human body.

Our demonstration will be divided into two main sections. In the first, we will briefly review and elaborate upon the findings of the last chapter, which seemed to remove the possibility of intelligibly discussing the human body in opposition to the soul and seemed to remove the possibility of finding a proper causality to matter beyond what may be ascribed to prime matter, under the heading 'The Viewpoint of the Soul'. This heading is appropriate because there is, according to St. Thomas, another approach to the study of the human being which, instead of emphasizing the role and causality of the soul, emphasizes that of matter: 'The Viewpoint of the Body'. Before examining this other 'viewpoint', we first look at the different senses of the term 'body', showing that through precise abstraction, the 'body' can be intelligibly distinguished from the 'soul' without contradicting or mitigating the rigorous unity of the human being. Then, under the heading 'The Viewpoint of Body', we elaborate upon the 'viewpoint of body' and distinguish it from the 'viewpoint of soul'. In a final section, we justify the use of the 'viewpoint of the body' approach in the examination of the causality of the human body within the hylomorphic composite which is the human being and discuss how our examination of the human body's causality should proceed.

1) The Viewpoint of The Soul

As we saw in the last chapter, St. Thomas analyzed the human being as a hylomorphically composed substance and rigorously affirmed the unity of that being, its unity neither mitigated through a positing of the substantiality of the

soul nor through the advocacy of intervening substantial forms between the human soul and its proper correlate, prime matter. St. Thomas carefully distinguishes the subsistence of the human soul from substantiality, which requires not only the ability to subsist be the possession of a complete nature, and insists, against much opposition, that the human soul is a substantial form immediately joined to prime matter (not matter), without any substantial or accidental form intervening between the human soul and prime matter. As a substantial form immediately joined to prime matter, the human soul is the source of all substantial determinations or (as they are often referred to) perfections, corporeity included.

An important consequence of this analysis of the human being is, as we also saw, that the human body has no existence outside of the human soul/prime matter composition. Although it is not true to say that man is his body alone, given that man has an activity in which the body does not share (intellection), it is equally false to say that man is his soul, for the soul does not possess a complete (human) nature. Moreover, the transcendence of the soul in respect to intellection is not equivalent to the transcendence, simpliciter, of the soul, for intellection is only one of several activities of the human soul, none of which are *separable*.²⁰⁷

As the human body is a composition of human soul and prime matter and, thus, *is matter* (i.e., determined prime matter), it is difficult to see what sort of *proper* causality may be ascribed to the human body (human matter) beyond what is proper to prime matter. For, the body is made to be what it is by the human soul, which determines *prima materia* in an unmediated way *to be, to be*

²⁰⁷ Aquinas fervently rejected the view that the intellect was separable or separate as that view implied, at least for him, that it is not the *human being* who thinks or knows, only the separate intellect. He addresses this issue at some length, as we have already mentioned, in his *De unitate intellectus contra Averroistas*.

a human body, to be a living human body, etc. Hence, whatever causality there is *seems*, beyond what is proper to pure potency, to belong to the human soul.²⁰⁸ Human matter (prime matter determined by the human soul) is what it is due to the soul because *materia est propter formam*.

Although the formula '*materia est propter formam*' is of averroistic origin, the principle itself can be found in the works of Aristotle.²⁰⁹ St. Thomas utilizes the principle '*materia est propter formam*' from the beginning of his career²¹⁰ and it became an important source of his reflection.²¹¹ What it signifies, simply, is that form is not for the sake of matter but, rather, matter is for the sake of form and, hence, the reason why matter is as it is (*talis*) must be taken from the form:

Since the form is not for the matter, but rather the matter for the form, we must gather from the form the reason why the matter is such as it is; and not conversely.²¹²

The adoption of this principle indicates a marked preference on the part of St. Thomas (as well as Averroes, for that matter) for a teleological interpretation of hylomorphism rather than a mechanistic, materialistic interpretation. Whereas in a materialistic interpretation of hylomorphism all causality belongs to matter, form being a result of the degree of organization of matter, a teleological interpretation of hylomorphism is based on the idea that form is, for Aristotle, not only a formal cause but, also, the final cause of the composite. On a teleological

²⁰⁸ However, as we shall show a little further on, the causality of the human body is not in fact limited to that which can be ascribed to prime matter, and this even from the 'viewpoint of soul'.

²⁰⁹ See Aristotle's *Physics*, II, 2, 194a15-b15 and II, 8, 199a30-34. The formula '*materia est propter formam*' can be found in Averroes's *In Phys.*, II, sct. 26 (ed. Venetiis, 1562, IV, p. 58 K-L).

²¹⁰ See, for instance *Super Sent.*, IV, d. 49, q. 1, art. 1, ad 6.

²¹¹ See, for instance, *Summa theologiae*, I, q. 76, art. 5, in corp.; *De spiritualibus creaturis*, art. 3, in corp.; *ibid.*, art. 6, in corp.; *De malo*, q. 5, art. 5, in corp.; *ibid.*, q. 16, art. 1, in corp.; *Quaestiones de anima*, q. 8, in corp.

²¹² *Summa theologiae*, I, q. 76, art. 5, in corp. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Dicendum quod cum forma non sit propter materiam, sed potius materia propter formam, ex forma oportet rationem accipere quare materia sit talis, et non e converso."

interpretation of hylomorphism, moreover, the formal cause is not an effect of the material cause and the formal/final cause of the composite is held to have priority over the material cause of the composite.²¹³

Given the priority of the formal/final cause over the material cause of the composite, what sort of causality can be ascribed to human materiality from the 'viewpoint of the soul'? As we pointed out earlier, this 'viewpoint' *seems* limited to ascribing to matter only whatever causality may be ascribed to prime matter, for the soul makes prime matter, in an unmediated way, to be a body, to be a living body, etc. However, even on the 'viewpoint of soul', the causality of man's material dimension is not, in fact, limited to that which is proper to prime matter.

The causality of matter extends beyond that proper to prime matter (limitation of act, numerical multiplication, etc.) because the fact that a reality is hylomorphically composed, that is, that it possesses a material aspect, also implies that it is affected by the *accidents* of matter: quantity, complexion, temporality, gender, influence of celestial bodies,²¹⁴ social life, corruptibility, etc.

Although it may not seem possible, given the *unmediated* nature of the soul's union with prime matter, for St. Thomas to maintain that these accidents enrich the causality which may be ascribed to matter, that is in fact not the case. It is important to realize that St. Thomas's doctrine of the immediate union of soul and prime matter excludes the possibility of intervening substantial forms between the soul and prime matter but does not exclude the possibility that accidental forms inhere in the composite. In fact, the generation of a human being, for instance, requires the inherence of accidental determinations at each

²¹³ Hence, as the 'viewpoint of soul' is based on the principle '*materia est propter formam*', it is a philosophical approach founded on the priority of the formal/final cause over the material cause of the composite.

²¹⁴ See, regarding this, Th. Litt's *Les corps celestes dans l'univers de saint Thomas*, (Louvain/Paris: 1963), 174 sqq.

successive level of determination of matter by the human soul: prime matter determined by the vegetative perfection of the soul and the accidents attendant to such a composite acts as 'matter' to the soul's further perfection of sensitivity and that sensitive composite along with the accidents attendant to it acts as 'matter' to the soul's further perfection of rationality.²¹⁵

In generation, the causality of matter is greatly enriched by accidental determinations. The causality of matter, even from the 'viewpoint of soul' is not, hence, limited to that which may be ascribed to prime matter but, rather, is quite important. The generation of a living being, in the last analysis, depends on the quality of the accidents of the reproductive cells (actives and passive powers), just as the corruption of a composite arises when there is a deterioration at the level of the accidents which make possible the union between the form and matter, for instance, if you lose too much weight (quantity), you perish. Inversely, if you can no longer sense because of material defects, you can no longer think either (even though your intellect remains intact).

Although the 'viewpoint of the soul' indicates that there is an immense terrain of material causality, it does not explore it at any length. To do so would require that the soul be examined with respect to its union with matter, in its 'application' to the body, rather than examined in itself (its nature, its role, its causality, its destiny, etc.). However, how can the human body be an object of study? If the human body has no existence outside the human soul/prime matter composition, how can it be distinguished from the soul in such a way that it may be intelligibly discussed in opposition to that which makes it to be a body? The key, here, would seem to be the term 'body'. What does the term 'body' mean? Are there different senses of the term 'body' and, if so, what are they?

²¹⁵ We cannot discuss St. Thomas's theory of generation in detail here but will, however, discuss it in Chapter 6.

II) The Different Senses of the Term 'Body'

According to St. Thomas, there are two different senses of the term 'body': it may be taken to refer to an integral part of the animal or may be taken to refer to a genus. The text at *De ente et essentia*, cap. 2, explaining the two senses of 'body' is worth citing at length:

[...] the difference between body when it means a part of animal and body when it means a genus [...] In the genus of substance we give the name 'body' to that which has a nature such that three dimensions can be counted in it; but these three determined dimensions themselves are a body in the genus of quantity. It does happen that something having one perfection may also possess a further perfection, as is evident in man, who has a sensitive nature and, besides this, an intellectual nature. So, too, over and above the perfection of having a form such that three dimensions can be designated in it, another perfection can be added, such as life, or something of the kind. The term 'body', therefore, can signify that which has such a form as allows the determination of three dimensions in it, prescinding from everything else, so that from that form no further perfection may follow. If anything else is added, it will be outside the meaning of body thus understood. In this way body will be an integral and material part of a living being, because the soul will be outside what is signified by the term 'body' and will be joined to this body in such a way that a living being is made up of these two, body and soul, as of two parts. The term 'body' can also be taken to mean a thing having a form such that three dimensions can be counted in it, no matter what that form may be, whether some further perfection can be derived from it or not. In this sense of the term, body is the genus of animal, because animal does not include anything that is not implicitly contained in body. The soul is not a form different from that which gives to the thing three determined dimensions. That is why, when we said that a body is that which has such a form as allows the determination of three dimensions in it, we understood this to mean any form whatsoever: animality, stoneness, or any other form. In this way the form of animal is implicitly contained in the form of body, inasmuch as body is its genus. And such also is the relation of animal to man. If 'animal' designated only a certain reality endowed with a perfection such that it could sense and be moved through an internal principle, prescinding from any other perfection, then any further perfection would be related to animal as a part and not as

implicitly contained in the notion of animal, and then animal would not be a genus. But it is a genus when it signifies a thing whose form can be the source of sensation and movement, no matter what that form may be, whether it be only a sensitive soul or a soul that is both sensitive and rational.²¹⁶

Although the first sense is of particular importance to us, let us explain each sense of the term 'body'. With respect to the first sense of the term 'body', as an integral part of an animal,²¹⁷ Aquinas notes that something which has one perfection may also have a further perfection. For instance, any animal has the perfection of life but, also, a sensitive nature or, in the case of man, both a sensitive nature and an intellectual nature are possessed. The possibility of

²¹⁶ *De ente et essentia*, cap. 2 (tr. by Armand Maurer). The Latin text (Leonine edition, pp. 371-372, l. 106-163) reads: "[...] differt corpus secundum quod ponitur pars animalis, et secundum quod ponitur genus [...] Corpus enim secundum quod est in genere substantie dicitur ex eo quod habet talem naturam ut in eo possint designari tres dimensiones; ipse enim tres dimensiones designate sunt corpus quod est in genere quantitatis. Contingit autem in rebus ut quod habet unam perfectionem, ad ulteriorem etiam perfectionem pertingat; sicut patet in homine, qui et naturam sensitivam habet, et ulterius intellectivam. Similiter etiam et super hanc perfectionem que est habere talem formam ut in ea possint tres dimensiones designari, potest alia perfectio adungi, ut vita uel aliquid huiusmodi. Potest ergo hoc nomen corpus significare rem quandam que habet talem formam ex qua sequitur in ipsa designabilitas trium dimensionum, cum precisione: ut scilicet ex illa forma nulla ulterior perfectio sequatur, sed si quid aliud superadditur, sit preter significationem corporis sic dicti. Et hoc modo corpus erit integralis et materialis pars animalis: quia sic anima erit preter id quod significatum est nomine corporis, et erit superueniens ipsi corpori, ita quod ex ipsis duobus, scilicet anima et corpore, sicut ex partibus constituetur animal. Potest etiam hoc nomen corpus hoc modo accipi ut significet rem quandam que habet talem formam ex qua tres dimensiones in ea possunt designari, quecumque forma sit illa, siue ex ea possit provenire aliqua ulterior perfectio, siue non; et hoc modo corpus erit genus animalis, quia in animali nichil erit accipere quod non implicite in corpore contineatur. Non enim anima est alia forma ab illa per quam in re illa poterant designari tres dimensiones; et ideo cum dicebatur quod 'corpus est quod habet talem formam ex qua possunt designari tres dimensiones in eo', intelligebatur quecumque forma esset: siue anima, siue lapideitas, siue quecumque alia. Et sic forma animalis implicite in forma corporis continetur, prout corpus est genus eius. Et talis est etiam habitudo animalis ad hominem. Si enim animal nominaret tantum rem quandam que habet talem perfectionem ut possit sentire et moveri per principium in ipso existens, cum precisione alterius perfectionis, tunc quecumque alia perfectio ulterior superueniret haberet se ad animal per modum compartis, et non sicut implicite contenta in ratione animalis: et sic animal non esset genus. Sed est genus secundum quod significat rem quandam ex cuius forma potest provenire sensus et motus, quecumque sit illa forma: siue sit anima sensibilis tantum, siue sensibilis et rationalis simul." Our comprehension of the distinction was aided by Joseph Owens' "Soul as Agent in Aquinas," *New Scholasticism* 48 (1974) and K. White's "Two Studies...", pp. 7-12.

²¹⁷ Terms will be understood as *parts*, according to Aquinas, when they have been understood *precisively*, e.g. St. Thomas says of the nature of a species: "[...] if the nature of the species is signified with precision from designated matter [...] then it will have the role of a part" (*De ente et essentia*, cap. 2).

distinguishing, in this way, among different perfections of the same thing is, according to St. Thomas, what allows for the mental operation he calls *praecisio*. This mental operation is, as J. Owens explains, the type of abstraction "in which the abstracted notion rigorously excludes from itself all the rest of the thing from which it was abstracted".²¹⁸ The term 'body' taken as an integral part of the animal can, hence, *precisively* signify (i.e., *cum praecisione*) that which, for instance, has such a form that the three dimensions can be designated in it, excluding from its meaning any other perfection which might belong to the thing, for example, the further perfection of life.

However, precise abstraction would seem to be able to include and exclude any number of the hierarchy of perfections which a thing possesses.²¹⁹ And, thus, the term 'body' can also precisely signify, for instance, that which has such a form that the thing is living, excluding from its meaning further perfections which may belong to it, for instance, a sensitive nature. Hence, the term 'body' can precisely signify a thing at any level of material determination or perfection, excluding from its meaning any non-material perfections or any material perfections further to what makes the thing have three dimensions (and, hence, entitled to be called some sort of 'body' in the first place).

Understood through the mental operation of precise abstraction, 'body' is an integral and material part of an animal, exclusive of the animal's soul and, hence, the animal will be considered as constituted from soul and body *as though* from two distinct parts. If 'body' is precisely defined to exclude all perfections of the animal further to that of life, the animal will be considered *as though* constituted by a living body and a specific sort of soul (vegetative,

²¹⁸ Joseph Owens, "Soul as Agent...", p. 49.

²¹⁹ See, for instance, Owens, "Soul as Agent...", p. 52: "Precise abstraction allows this mental separation to be made at any of the stages in the Porphyrian tree."

sensitive or intellective). If, on the other hand, 'body' is precisely defined to exclude all perfections of the animal further to that of sensitivity, the animal will be considered *as though* constituted by a sensitive body and a specific sort of soul, even if its soul does not confer any perfections beyond that of sensitivity. It is clear, then, that the opposition between soul and body in precise abstraction is only apparent and not, in fact, ontological: what real opposition could there be between a sensitive body, which can only be considered sensitive because of a sensitive form, and a sensitive form?

Now, other terms may also be understood *cum precisione*. For instance, 'animal' may be precisely understood to describe that which has such a perfection as to be capable of sensation and movement, excluding from its meaning any further perfection it may have, which would then be *considered* as related to 'animal' as a co-part. Man, for instance, can be regarded as a composition of an 'animal' part and a 'rational' part, even though these 'parts' are not the real constitutive co-principles of humans and both perfections (sensitivity and rationality) are, in fact, conferred by one and the same soul.

What about the other sense of the term 'body'? Taken as a genus, the term 'body' signifies what has such a form that the thing is corporeal, whatever that form may be and whether or not that form confers further perfections. The 'body' so understood is not a part of the animal but its genus and, hence, soul and body are not opposed as co-parts of the animal but, rather, soul is included in the body (considered as an undetermined and substantial whole) as its actualizing principle. As Kevin White explains:

Understood without the operation of precise abstraction, however, the term 'body' signifies not a part, but a genus, that is, what has such a form that three dimensions can be determined in it, whatever that form may be, and whether or not any further perfections follow from this it. In this sense, 'body' is the genus of

animal, for there is nothing in the notion 'animal' which is not implicitly contained in the notion 'body'. Furthermore, 'body' so understood is not exclusive of soul, since a soul is one of the many forms by means of which three dimensions can be determined in a thing. Here, then, soul and body are not opposed as component parts, but soul is included as a part, and as the actualizing principle, of the body, considered as an undetermined and substantial whole.²²⁰

Other terms may also be considered generically. For instance, 'animal' taken as a genus, signifies what has a form such that sensation and movement are possible, whatever that form is, be it simply a sensitive soul (as is the case for dogs and horses, for instance) or one which is both sensitive and rational (as is the case for human beings). In the case of human beings, 'animal', generically understood, "is the genus of man, implicitly containing the difference 'rational' rather than excluding it."²²¹

It is interesting to note that one of the manifestations of the distinction of the two senses of the term 'body' is that 'body', understood precisely, cannot be predicated of the subject because no part of a whole can be predicated of the whole, whereas 'body', understood as a 'genus', can be predicated of the subject because a genus is an undetermined whole. As St. Thomas himself explains with reference to the terms 'man' (understood to mean 'the essence of man as a genus', i.e. understood as a 'genus') and 'humanity' (understood to mean "the essence of man as a part", i.e. understood precisely):

It is clear, then, that the essence of man is signified by the two terms 'man' and 'humanity', but in different ways, as we have said. The term 'man' expresses it as a whole, because it does not prescind from the designation of matter but contains it implicitly and indistinctly, as we said the genus contains the difference. That is

²²⁰ White, "Two Studies...", pp. 7-8. See also: *De ente et essentia*, cap. 2 (Leonine edition, pp. 371-372).

²²¹ White, "Two Studies...", p. 9. See also: *De ente et essentia*, cap. 2 (Leonine edition, pp. 372-373).

why the term 'man' can be predicated of individuals. But the term 'humanity' signifies the essence of man as a part, because its meaning includes only what belongs to man as man, prescinding from all designation of matter. As a result it cannot be predicated of individual men.²²²

Having clarified the different senses of the term 'body', we can now begin to make sense of St. Thomas' frequent references to the union between the rational soul and its *body* rather than to the union of the human soul and its proper correlate, *prime matter*.²²³ As St. Thomas is opposing soul and body as though they were components parts, he is certainly using the term 'body' precisely. As precise abstraction can include or exclude any number of perfections further to that of corporeity (having three dimensions), it is legitimate to ask which perfections St. Thomas includes and excludes when he opposes the body from the human soul. Is the body considered precisely as that which has three dimensions, excluding all further perfections of life, sensitivity and rationality? Is it considered, instead, as that which has three dimensions and life but not sensitivity and rationality? Or, again, is it considered such that only rationality is excluded?

It would seem that in opposing the human soul and its body as components parts St. Thomas associates man's specific difference of rationality with the soul. This certainly seems legitimate, given that intellection is an immaterial operation and, thus, cannot be associated with the body. This

²²² *De ente et essentia*, cap. 2 (tr. by Armand Maurer). The Latin text (Leonine edition, p. 373, l. 292-304) reads: "Sic igitur patet quod essentiam hominis significat hoc nomen homo et hoc nomen humanitas, sed diuersimode, ut dictum est: quia hoc nomen homo significat eam ut totum, in quantum scilicet non precipit designationem materie sed implicate continet eam et indistincte, sicut dictum est quod genus continet differentiam; et ideo predicatur hoc nomen homo de indiuiduis. Sed hoc nomen humanitas significat eam ut partem, quia non continet in significatione sua nisi id quod est hominis in quantum est homo, et precipit omnem designationem; unde de indiuiduis hominis non predicatur."

²²³ The passages in which St. Thomas speaks of soul and body in human nature seem to tacitly rely upon a precise sense of the term 'body'. This is also the conclusion of Kevin White. See his "Two Studies...", pp. 10-11.

association, however, leaves all other perfections of human nature on the side of the body and, hence, the 'body' seems to be none other than man's 'animal' nature, precisely understood to the exclusion of the further perfection of rationality. St. Thomas, thus, does not mean by 'body' something which merely has dimensions but that which has dimensions, life and sensitivity. According to Kevin White, although precise abstraction in the case of human nature may exclude everything but man's corporeity (the perfection of having three dimensions) or, at a higher level, include everything but man's rationality, "it is certainly at this higher level that St. Thomas regularly speaks, with precision, of the human 'body', which thus signifies human nature to the exclusion of its rationality."²²⁴ And, hence,

In calling man the 'rational animal', St. Thomas suggests that we are non-precisely using the term 'animal' to refer to the genus which, in man, is determined by the difference 'rational'. In saying that man is composed of soul and body, on the other hand, we are using the term 'body' precisely, since we thus suggest that soul and body are two distinct things which make up the third thing 'man'.²²⁵

What is important to remember, however, is that the opposition between the soul and the body so understood (i.e. understood precisely) is not ontological. Although *considered* as co-parts of human nature, neither the soul nor the body is a substance or 'distinct thing'. Neither, too, is the human soul *only* rational nor the body sensitive without that perfection being conferred by the soul. Why, then, oppose them in this way?

Although this way of speaking about the human being as a union of soul and body has the disadvantage of obscuring St. Thomas' doctrine of the unity of

²²⁴ White, "Two Studies...", p. 10.

²²⁵ White, "Two Studies...", 9.

the human being, it has an intelligible meaning in St. Thomas' works which is not in conflict with his view of human nature as an immediate union between a single substantial form and prime matter, for, soul and body are only *considered* as co-parts of human nature. It is, further, what allowed Aquinas to speak in continuity with the long tradition of Christian asceticism²²⁶ and, more importantly for our own inquiry, what provided him with a framework for the question of the kind(s) of causality the body to which the human soul is united exerts. To pose this sort of question seems, moreover, quite appropriate, if not also quite necessary, for an author who does not consider man to be just a soul but, rather, a hylomorphic composite (i.e. a corporeal being).

Having shown that through precise abstraction the body may be distinguished from the soul and that this distinction does not conflict with St. Thomas' own doctrine of the unity of the human being (which denies the existence of the human body outside of the human soul/prime matter composition), we can now address the questions of whether St. Thomas elaborated a 'viewpoint' which instead of being based on a generic understanding of 'body', as is the 'viewpoint of soul', is based on a precise understanding of 'body' and, if so, what that 'viewpoint' is, how it differs from the 'viewpoint of soul', how it is related to the 'viewpoint of soul' and whether that 'viewpoint' is able to explore the rich and important causality of the human body.

²²⁶ See, on this point, White's "Two Studies...", p. 11.

III) The Viewpoint of Body

St. Thomas does distinguish two sorts of viewpoints or approaches to the study of man. According to him, the theologian²²⁷ considers man from the point of view of the soul and not from the point of view of the body, *except* with respect to the relationship that the body has to the soul:

Now the theologian considers the nature of man in relation to the soul, but not in relation to the body, except in so far as the body has relation to the soul.²²⁸

The two approaches distinguished by St. Thomas are, thus, one which considers the soul in itself (the 'viewpoint of soul') and one, the 'viewpoint of the body', which considers the soul in its union with its body (i.e., its matter). Both 'viewpoints' are deemed necessary by Aquinas and, hence, after discussing the soul in itself in question 75 of the *Summa theologiae*, for instance, St. Thomas then considers the soul with respect to its union with the body in question 76.²²⁹

The significance of this distinction of viewpoints and, moreover, the reason why the formula *materia est propter formam* (and its implications) is proper to a 'viewpoint of the soul' approach, is that while discussions of the soul in itself emphasize the causality of the soul in respect to prime matter, showing how the soul confers all substantial perfections to prime matter (which is the very

²²⁷ It should be noted here that the theologian will consider the human being from this 'viewpoint' (the 'viewpoint of soul') not because this 'viewpoint' is itself theological in character and, hence, restricted to use by theologians (as we pointed out earlier, the 'viewpoint of soul' is a philosophical approach based on the priority of the formal/final cause over the material cause), but because it discloses the most fully the nature, role and causality of that which the theologian is most interested in: the human soul.

²²⁸ *Summa theologiae*, I, q. 75, intro. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Naturam autem hominis considerare pertinet ad theologum ex parte animae, non autem ex parte corporis, nisi secundum habitudinem quam habet corpus ad animam."

²²⁹ *Summa theologiae*, I, q. 75, intro. (Ottawa edition): "Circa primum duplex occurrit consideratio: quarum prima est de ipsa anima secundum se; secunda, de unione eius ad corpus." St. Thomas respects this division of topics for consideration wherever he treats of man.

meaning of the principle *materia est propter formam*), considerations of the soul with respect to its union with the body emphasize the causality of matter, discussing such issues as the specific character of the human body, for instance, in terms of the physiology of human sensation.²³⁰

Why are both 'viewpoints' necessary? Is it because each 'viewpoint' emphasizes the causality of only one of the two correlative constitutive principles of the human being and, thus, are complementary? What is it about the 'viewpoint of the body' which distinguishes it from the 'viewpoint of the soul' and allows it to emphasize the causality of matter instead of that of the soul?

In his commentary of Aristotle's *De sensu*, Aquinas makes the relation between the 'viewpoint of the soul' and the 'viewpoint of the body' approach to the study of human nature quite clear. There he argues that since all the powers of the soul, with the exception of the intellect, are acts of certain parts of the body, there must, after the 'abstract' consideration of the soul in the *De anima*, be a subsequent consideration of these corporeal powers with respect to their 'application' to the body:

Nam *primo* quidem consideravit de anima secundum se quasi in quadam abstractione; secundo uero considerationem facit de hiis, que sunt anime secundum quandam concretionem siue applicationem ad corpus [...].²³¹

As St. Thomas states further on, this consideration of corporeal powers with respect to their 'application' to the body is from the point of view of the body itself (*ex parte corporis*) so that the bodily dispositions required for the operations

²³⁰ See, for instance, *Summa theologiae*, I, q. 75 and q. 76.

²³¹ In *Aristotelis libros De sensu et sensato et De memoria et reminiscencia commentarium* (Leonine edition), Prohemium (Leonine edition, p. 4, l. 39-44). Hereafter we will refer to the St. Thomas' commentary on the *De sensu et sensato* as a single work, even though it is published in conjunction with his commentary of Aristotle's *De memoria et reminiscencia*. Note also that the Latin is cited directly in text because there is no English or French translation of the *In De sensu et sensato* currently available.

common to the soul and the body might be known (*ut sciatur qualis dispositio corporum ad huiusmodi operationes uel passiones requiritur*).²³² Thus, the 'viewpoint of the soul' and the 'viewpoint of the body' are two complementary approaches to the study of man: the first provides an 'abstract' consideration of the soul in itself and the second provides a more 'concrete' consideration of the soul in its relation to the body.

Now, the 'viewpoint of the body' requires that 'body' be understood precisely (*cum praecisione*). For, to make the human body the *object* of study, it must be *considered* as an entity separate from the soul. Otherwise, we could not be said to study the body but, rather, the human being (soul and prime matter). It is, moreover, only a precise definition of 'body' which allows us to consider the body in this way, for, 'body', considered generically, is an undetermined and substantial whole which *includes* the soul as its actualizing principle.

Now, several precise definitions of 'body' are possible, as was briefly indicated in the last section. The body can be considered as that which has a sensitive perfection but not that of rationality, can be considered as that which has a vegetative perfection but not any other further perfection (*viz.*, sensitivity and rationality), or the body can be considered as that which has three dimensions but not any other further perfection.

In the first possible precise definition of 'body', the soul is considered as though it only conferred a rational perfection and is opposed to a body considered sensitive apart from the soul. The second possible precise definition of 'body' we listed, on the other hand, considers the soul as though it conferred both a rational and a sensitive perfection but no lower perfections to

²³² *In De sensu*, Prohemium (Leonine edition, p. 7, l. 168-169).

these and is opposed to a body considered vegetative (living and capable of nutrition and growth) apart from the soul. Lastly, the third possible precise definition of 'body' considers the soul as though it conferred all perfections except that of having three dimensions and is opposed to a body which possesses three dimensions apart from the soul.

That the human body can be precisely defined in these three ways has important implications for the manner in which the body should be studied. We shall examine these in the last section of this chapter. However, what is important to note here is that the 'viewpoint of body' requires a precise definition of 'body' because it is an approach which treats of the body *as if* it were a separate entity from the soul. The 'viewpoint of the soul', on the other hand, does not depend upon a precise but a generic definition of 'body', for, the 'viewpoint of soul' considers the body has having no existence outside the prime matter/human soul composition and, hence, on this 'viewpoint', 'body' must be considered as an undetermined and substantial whole which *includes* the soul as its actualizing principle (i.e., 'body' must be defined generically).

Other than depending on different senses of the term 'body', how does the study of the body from the 'viewpoint of body' significantly differ from that from the 'viewpoint of soul'? While the 'viewpoint of soul' considers the powers of the soul in themselves, the 'viewpoint of the body' discusses the powers of the soul as they are 'applied' to the body, that is, considers the physiology of those acts. In *De sensu et sensato*, for instance, sensation (the act of the sense-power) is discussed in physiological terms. The same will be true of other texts where the corporeal powers of the soul are discussed and in which a 'viewpoint of body' approach is taken, as we shall see in the following chapters.

These physiological analyses, moreover, are precisely where we should look for St. Thomas' answer to the question we have posed, that is, 'what

causality does St. Thomas ascribe to the human body?'. The reasons should, by now, be quite apparent. An 'abstract' consideration of the soul in itself will have very little to say about the causality of the body or matter, except regarding the causality of prime matter as the correlative co-principle of the human being. Although the causality of pure potency is not nothing (and the human body is not limited to the causality which may be ascribed to prime matter, even on a 'viewpoint of soul' approach), it yet *seems* negligible in comparison with the causality of the human soul, which confers all substantial perfections: corporeity, life, sensitivity and rationality. Considerations of human nature from the 'viewpoint of the body', however, are specifically concerned with bodily dispositions and, thus, elaborate much more fully upon the causality of matter.

Hence, in the following chapters, we will examine the causality of the human body from the 'viewpoint of the body'. To do so from the 'viewpoint of the body' is, as we have just shown, both legitimate and appropriate. Moreover, as each 'viewpoint' is considered complementary by St. Thomas, our examination of the human being from the 'viewpoint of the body' will contribute to a fuller understanding of what, according to St. Thomas, it means to be human.

In fact, most scholarly presentations of St. Thomas' views on the human being have tended to overlook his relatively few texts on the human body, concentrating more or exclusively upon those which discuss the human soul.²³³ The human body is, however, a fixed and important aspect of St. Thomas' anthropology, a fact testified to by his discussion of the specificity of the human body in all his major texts on the human soul, by his texts devoted to the physiology of the soul's corporeal powers and also by his general anthropology,

²³³ One notable exception is the doctoral dissertation of Sister M. Evangeline Anderson entitled *The Human Body in the Philosophy of St. Thomas Aquinas* (Washington: Catholic University of America: 1953). This work, however, examines the human body from the 'viewpoint of soul' alone.

which squarely rejects dualism and, consequently, emphasizes the importance of human corporeality. Thus, in addressing a neglected aspect of St. Thomas' anthropology, our inquiry into the causality of the human body will not only contribute to be a better understanding of matter and the body in Aquinas's thought but, more generally, to a more balanced and complete understanding of his anthropology.

Although we have determined that we will examine the causality of the human body from the 'viewpoint of the body', it yet remains to clarify how we shall proceed.

IV) Methodology for the Study of the Human Body

Adopting a 'viewpoint of body' approach to the study of the human body, particularly its causality, requires a three-pronged approach. For, the 'viewpoint of body' is based on a precise understanding of the term 'body' and this term may, as we discussed in the last section, be precisely understood in three ways: (1) the body may be considered as having three dimensions and opposed to a soul which confers all higher perfections except that of three dimensions; (2) the body may be considered as being living and opposed to a soul which confers all higher perfections to the vegetative perfection; and (3) the body may be considered as being sensitive and opposed to a soul which confers all higher perfections to the sensitive perfection. Now, as the human body can be considered, through precise abstraction, in each of these three ways, our examination should look at the causality of the human body at each of these levels of consideration.

To do so, we shall examine the causality of the human body (1) in generation and vegetative life; (2) in sensitive life; and (3) in intellectual life. In the first study (Chapter 6), the body will be considered as being determined by three dimensions, but not by any further perfection, in order to see what sort of causality the body, so considered, exerts in generation and nutrition. In the second study (Chapter 7), the body will be considered as being living, but not as possessing any further perfection, in order to determine the causality of the body, so considered, in sensing and other sensitive activities. In the third study (Chapter 8), the body will be considered as being sensitive, but not as possessing any further perfection, in order to see the causality of the body, so considered, in man's intellectual activities.

These three studies, however, leave out two issues which we raised in our section on Aristotle: is human materiality responsible for human individuation or human multiplication and what sort of causality may be ascribed to the elements? We shall, hence, discuss these two issues in the next chapter (Chapter 5) before proceeding with the study of the human body's causality at each level of life (vegetative, sensitive and intellectual).

CHAPTER 5

MATTER, INDIVIDUATION AND THE ELEMENTS

In this chapter, we will discuss St. Thomas's position on two issues: whether matter is the principle of human individuation and what sort of causality may be ascribed to the four elements. As neither of these two issues will be treated in our analysis of the causality of matter at each level of life but we raised these same issues in our section on Aristotle, treating of them here will provide a good transition from our discussion of the causality of matter in the Stagirite's system to our discussion of the causality ascribed to matter by St. Thomas.

1) Human Individuation

Scholars are certainly not unanimously agreed on the issue of what, according to St. Thomas, individuates human beings. The resolution of the issue appears to be hindered in two ways: first and, perhaps, foremost, St. Thomas did not devote a special treatise to individuation nor, specifically, to human individuation among his uncontested writings²³⁴ and, second, it seems textually

²³⁴ One treatise, doubtfully authentic, pertains directly to the question: "De principio individuationis" in *Opuscula philosophica* (ed. R.M. Spiazzi), pp. 149-151.

possible to advance either of the three ontological constituents of human beings (prime matter, substantial form and *esse*) as the principle of human individuation.

In fact, each of these ontological constituents has been advanced as the principle of human individuation by different scholars of St. Thomas's thought.²³⁵ This diversity of opinion, moreover, has led some authors to advance that St. Thomas's position on human individuation developed or changed over the course of his works,²³⁶ though not everyone agrees.²³⁷

As a chronological analysis of St. Thomas's texts would require more time and space than we can devote to this one issue within the limitations of this dissertation, what we propose to do is, in a first section, examine the view that, according to St. Thomas, *materia signata* is the principle of individuation, clarify what 'principle of individuation' signifies when said of *materia signata* (namely, 'that by which a substance is *unum de numero*'), indicate some of the problems which arise when *materia signata* is held to be the principle of human individuation but the sense in which it is a 'principle of individuation' is not properly clarified and discuss how holding that *materia signata* is the principle by which material substances are *unum de numero* depends on an analysis which considers matter and form as *concepts* rather than as they really are in human beings.

²³⁵ Prime matter has been advanced as the first principle of individuation by, for instance, J. Bobik in his article "The Individual Body," in *Readings in the Philosophy of Nature* (ed. by H. J. Koren, Maryland: Newman Press, 1964), 327-340; substantial form as the true basis for individuality has been advanced, for example, by Montague Brown in his article "St. Thomas Aquinas and the Individuation of Persons," *American Catholic Philosophical Quarterly* LXV (Winter 1991): 29-44; and *esse* as cause of human individuality has been advanced, for instance, by David Winiewicz in his article "A Note on 'Alteritas' and Numerical Diversity in St. Thomas Aquinas," *Dialogue* (Canada) 16 (1977): 693-707.

²³⁶ See, for example, M.-D. Roland-Gosselin's *Le 'De Ente et Essentia' de S. Thomas D'Aquin* (Paris: Vrin, 1948), chapter XI, especially p. 113.

²³⁷ This is the view, for instance, of Joseph Owens. See his "Thomas Aquinas: Dimensive Quantity as Individuating Principle," *Medieval Studies* 50 (1988): 279-310, esp. 303.

Then, in a second section, we will present another sense of 'principle of individuation' distinguished by St. Thomas (namely, 'that by which a substance is *unum numero*'), examine how it is *esse*, not *materia signata*, which causes human beings to be *unum numero* and discuss how holding that *esse* is the principle of human individuation in the sense of being that by which human beings are *unum numero* depends on an analysis which considers matter and form as they really are in human beings. We will, then, argue on the basis of St. Thomas's own distinction between being *unum numero* and being *unum de numero* that *esse* answers the problem of individuation, *materia signata* the problem of multiplication within a species.

Before proceeding, we should indicate some points which should be borne in mind throughout our discussion of human individuation. First, we do not deny that St. Thomas's position on human individuation may have developed over the course of his works — we simply do not address the issue of evolution of thought because it cannot be properly examined within the limitations of time and space of this dissertation.

Second, we do not deny that St. Thomas explicitly states that *materia signata* is the principle of individuation. What we wish to do, however, is clarify the sense 'principle of individuation' has when St. Thomas says that *materia signata* is the principle of individuation to show how *materia signata* is the principle by which humans are *unum de numero* (i.e., the principle of numerical multiplicity within a species) but not, however, the principle by which humans are *unum numero* (i.e., not the principle of ontological unity and distinctness).

Lastly, it is certainly not our intention to belittle, in any way, the studies which advance *materia signata* as the principle of human individuation. *Materia signata* must, in fact, be said to be the principle of human individuation when, by

'principle of individuation' we mean 'that which causes numerical multiplicity within a same specific perfection'.

(a) *Materia signata* as Principle of Human 'Individuation'

St. Thomas undeniably identifies *materia signata* as the principle of individuation.²³⁸ What we must ask, however, is what *kind* of individuation is caused by *materia signata*? Is *materia signata* the cause of a substance's being *numerically distinct* from other specifically identical substances and/or the cause of a substance's being *ontologically distinct* from other substances?

These two 'kinds' of individuation, namely numerical diversity within a species (being *unum de numero*) and ontological distinctness (being *unum numero*) are, in fact, distinguished by St. Thomas. According to him, to be *unum numero* is to be individual and singular according to one's being and to be *unum de numero*, on the other hand, is to be an individual in a series of specifically identical substances, that is, to possess a specific nature which can be participated in by many but, by virtue of one's matter (which cannot be participated in by many), be an individual distinct from other specifically identical individuals.²³⁹

Now, the kind of individuation caused by *materia signata* is, according to St. Thomas, numerical diversity within a species. Arguing, for instance, in his commentary on Boethius's *De trinitate*, that the dimensions in matter must be

²³⁸ See, amongst others, *In De trinitate*, q. 4, art. 2, ad 4; *Summa theologiae*, III, q. 77, art. 2, in corp.; and *In Metaphysicam*, 5, lect. 8 (Marietti edition, p. 236, sct. 876).

²³⁹ See, on this distinction, *De unitate intellectus contra Averroistas*, cap. 5 (Leonine edition, pp. 310-311, l. 15-95). It is interesting to see here that St. Thomas criticizes Averroists because they think that "non est unum numero nisi quod est unum de numero". Against that he proposes the principle: "non enim numerus est causa unius sed e converso".

understood as undefined rather than as defined if matter is to individuate form, St. Thomas states:

[...] by virtue of these undefined dimensions [dimensions considered in the nature of dimension only] matter becomes this designated matter, and in that way it individuates the form; and thus numerical diversity in the same species is caused by matter.²⁴⁰

Moreover, St. Thomas only says that *materia signata* is the cause of a substance's being numerically distinct from other specifically identical substances (i.e., that *materia signata* is the cause of a substance's being *unum de numero*), not that it is the cause of a substance's being ontologically one and distinct (i.e., *unum numero*). As we shall see in next section, this sort of number is not and cannot, according to St. Thomas, be caused by matter.

Before examining how *materia signata* causes numerical diversity within a species, it is important to point out that St. Thomas's distinction between being *unum numero* and being *unum de numero* is, for the most part neglected in discussions of individuation. For this reason, it is frequently difficult to determine what a scholar means by 'individuation' when he/she says that *materia signata* is the principle of individuation: does he/she mean that *materia signata* is the principle of numerical diversity within a species but not the principle of ontological distinctness or is he/she advancing that *materia signata* is both the cause of numerical diversity within a species and the cause of ontological distinctness?

Moreover, in some cases, *materia signata* is quite explicitly held to be the cause of both a substance's being *unum de numero* and of its being *unum numero*. For example, Joseph Bobik, an outspoken defender of the thesis that

²⁴⁰ *In De trinitate*, q. 4, art. 2, in corp. (tr. by Armand Maurer) (emphasis mine). The Latin text (Leonine edition, p. 143, l. 19-21) reads: "[...] ex his dimensionibus interminatis materia efficitur haec materia signata, et sic individuat formam, et sic ex materia causatur diversitas secundum numerum in eadem specie."

materia signata is the principle of individuation, offers the following description of the problem to which *materia signata* is the answer:

Le problème est posé ici par le fait qu'il existe de multiples individus spécifiquement identiques. Pourquoi Azor et Médor sont-ils distincts, alors que ce sont tous deux des chiens? Pourquoi vous et moi, qui sommes également hommes, sommes-nous distincts l'un de l'autre? Pourquoi toute substance corporelle est-elle distincte de toute autre, qu'elle appartienne ou non à la même espèce que cette autre? [...] Quels principes intrinsèques à cet individu rendent intelligible le fait qu'il est un individu, séparé dans son être de tout ce qui n'est pas lui, chacun de ces autres êtres étant d'ailleurs à son tour un individu?²⁴¹

With this said, let us proceed to explain how *materia signata* is the principle of individuation in the sense St. Thomas says it is such and in that sense only (i.e., as being the cause of numerical diversity within a species).

St. Thomas's teaching is that *materia signata* causes numerical multiplicity within a species by restricting the specific perfection received to *its* mutually excluding and diversely situated parts:

Only if three-dimensional quantity renders prime matter spread out in virtue of its (dimensive quantity's) mutually excluding (i.e., diversely situated) contiguous, designable or divisible parts, can prime matter receive a plurality of specifically identical substantial forms, a diverse form in each of its mutually excluding or diversely situated parts. Without dimensive quantity, prime matter remains ever indivisible, and a plurality of material individuals of a same specific nature remains ever impossible.²⁴²

Now, to consider the question of how numerical diversity within a same species is possible (i.e., to consider the question to which *materia signata* is the answer) involves certain presuppositions. One such presupposition is that the form received by matter is initially *general* or *universal*. For, if the form received

²⁴¹ Bobik, "La Doctrine de saint Thomas...", pp. 5-6 (emphasis mine). A similar, though not as telling, description can also be found in his "The Individual Body," p. 328.

²⁴² This summary of St. Thomas's position is given by Bobik in his "The Individual Body," p. 332.

by matter were not considered to be initially 'general' or 'universal', there would be no need to argue that the matter in which it is received must have interminate dimensions, whose role is precisely to limit the form as to place, size, and so forth. This presupposition (that the form received by matter is initially 'general' or 'universal') is, moreover, sometimes explicitly recognized by scholars who maintain that *materia signata* is the principle of 'individuation'.²⁴³ For example, according to Jorge J. E. Gracia, the problem of human individuation is the problem of "how or through what *process* the universal 'man' becomes a man or this man."²⁴⁴

Another important presupposition follows from the one just outlined. If the form received by matter is 'general' or 'universal' just of itself and that it is *materia signata* which particularizes that 'general' or 'universal' form, it follows that the form received by matter pre-exists its union with matter. For, even though *materia signata* restricts the specific perfection received to itself, it is one and the same form which is received by different matters: the form received by my matter, your matter and the matter of each person who has ever been was the form of 'man'. This, however, implies not only that the forms of species subsist outside of particulars but, also, that the 'common' human soul received by matter necessarily pre-exists its union(s) with matter(s), at least temporally speaking.

Now, although a form received by matter can be *considered* as 'general' or 'universal', can be *considered* to pre-exist its union with matter and must be so considered in order to address the issue of what causes numerical multiplicity within a species, it is important to remember that, according to St. Thomas,

²⁴³ As it is not always clear whether these scholars properly distinguish the cause of a substance's being *unum de numero* from the cause of a substance's being *unum numero* when they speak of individuation, the term 'individuation' has been placed in single brackets.

²⁴⁴ Jorge J. E. Gracia, *Introduction to the Problem of Individuation in the Early Middle Ages*, (Washington: Catholic University of America Press, 1988), pp. 18-20.

forms received by matter are never 'universal' or 'general' *in reality* nor do they ever pre-exist their union with matter.

For, universals like 'man' do not have, according to St. Thomas, extramental reality in things, only mental reality: there are, on his view, no *in re* universals. According to St. Thomas, universals do not even need to exist outside of particulars as their exemplars.²⁴⁵ And, in fact, St. Thomas explicitly states that, in the case of human beings, the form received by matter is *particular* (not 'common' or 'universal'). In his *Summa contra Gentiles*, for instance, St. Thomas states that God creates new souls every day and each of these is created *specially* for each person who comes-to-be:

[...] in the Book of Genesis (2:2) it is said at the same time that 'God ended His work,' and that 'He rested from all His work which He had done.' Hence, just as the consummation or perfection of creatures is considered in terms of species, not individuals, so God's resting must be understood to refer to cessation from forming new species, but not new individuals, of which others specifically alike have existed before. Thus, since all human souls are of one species, and likewise all men, it is not inconsistent with God's rest if He creates new souls every day.²⁴⁶

[...] souls were not in existence before bodies. With this truth the Catholic faith expressly agrees. For it is said in a Psalm (32:15): 'He who hath made the hearts of every one of them'; namely, because God created a soul specially for each one, and neither created them all together, nor united one to different bodies. ²⁴⁷

²⁴⁵ *Summa theologiae*, I, q. 44, art. 3, ad 3.

²⁴⁶ *Summa contra Gentiles*, II, cap. 84 (tr. by James F. Anderson). The Latin text (Leonine edition, p. 531) reads: "Simul enim dicitur, Gen. 1, quod *Deus consummavit opera sua*, et quod *requievit ab omni opere quod patrarat*. Sicut ergo consummatio sive perfectio creaturarum secundum species consideratur et non secundum individua, ita quies Dei est intelligenda secundum cessationem a novis speciebus condendis: non autem a novis individuis, quorum similia secundum speciem praecesserunt. Et sic, cum omnes animae humanae sint unius speciei sicut et omnes homines, non repugnat praedictae quieti si Deus quotidie novas animas creat."

²⁴⁷ *Summa contra Gentiles*, II, cap. 83 (tr. by James F. Anderson). The Latin text (Leonine edition, p. 524) reads: "[...] nec animae fuerunt ante corpora. Huic autem veritati Catholicae fidei sententia concordat. Dicitur enim in Psalmo: *Qui finxit singillatim corda eorum*: quia scilicet unicuique seorsum Deus animam fecit, non autem simul omnes creavit, neque unam diversis corporibus adiunxit."

Furthermore, St. Thomas adamantly denies that the human soul in any way pre-exists its union with matter, arguing that maintaining such a view has several, completely unacceptable consequences: for instance, if the human soul pre-existed its union with matter, it would follow that the union of the soul and the body is unnatural²⁴⁸ and that the union of the soul and the body would be accidental rather than essential.²⁴⁹ It is of fundamental importance, on St. Thomas view, that humans souls not be held to be created before (not be held to pre-exist) the bodies to which they are united:

The soul [...] was not created before the body to which it is united.²⁵⁰

It would [...] be inconsistent with the order of nature were the soul created apart from the body before being united to it.²⁵¹

[...] it would not have been consistent with the order of divine wisdom to ennoble human bodies by uniting pre-existing souls to them [...].²⁵²

To examine the question of what causes numerical multiplicity with a species requires that the form received by matter be *considered* to be 'general' or 'universal' just of itself, even though forms are never that way in reality. Now, to conceive of form in this way is proper to, what Joseph Owens calls, the 'viewpoint of notion', which considers the problem of 'individuation' in the notion

²⁴⁸ See, for example, *Summa contra Gentiles*, II, cap. 83 (Leonine edition, p. 521).

²⁴⁹ See, for example, *Summa contra Gentiles*, II, cap. 83 (Leonine edition, p. 521).

²⁵⁰ *Summa contra Gentiles*, II, cap. 83 ["That the Human Soul Begins to Exist When the Body Does"/ "Quod anima humana incipiat cum corpore"] (tr. by James F. Anderson). The Latin text (Leonine edition, p. 521) reads: "Non igitur creata fuit ante corpus cui unitur."

²⁵¹ *Summa contra Gentiles*, II, cap. 83 (tr. by James F. Anderson). The Latin text (Leonine edition, p. 521) reads: "Non [...] competit naturae ordini quod anima fuerit prius creata a corpore exuta, quam corpori unita."

²⁵² *Summa contra Gentiles*, II, cap. 83 (tr. by James F. Anderson). The Latin text (Leonine edition, p. 522) reads: "Non [...] fuisset conveniens ordini divinae sapientiae, ad nobilitandum humana corpora, animas praeexistentes eis unire [...]"

(*ratio*) it presents.²⁵³ In their notion (*ratio*), matter, form and being are 'common' just of themselves and, for this reason, something must be said to particularize 'being', 'form' and 'matter':

From the viewpoint of notion [...] the role of dimensive quantity in the individuation of material things is basic. From that viewpoint, none of the other factors originates the individuation. Matter, common just of itself, requires quantity for individual distinction. Form, because specifically common, has to be received into particularized matter if it is to be individuated. Existence, because most common of all, needs a limiting essence if it is to be distinguished from existence elsewhere.²⁵⁴

However, although the viewpoint of notion *considers* the soul as something universal and *considers* matter as stripped of every form, it is important to remember, as Owens himself tells us, that matter can never be that way in reality²⁵⁵ and nor can a human soul ever be other than individual:

[...] in actuality, in being, the form is a *this*. As something universal, the form has its existence only in the mind. In reality, it is received in matter only insofar as it is this individual form, e.g. the soul of Peter or the soul of Paul.²⁵⁶

Now, if forms, matter and being are only 'common' or 'universal' in our concept of them but not in things, in actuality, but asking the question "what causes numerical multiplicity within a species" requires that form, matter and being be conceived as 'common' or 'universal', it seems to follow the problem of numerical multiplicity within a species is a logical problem.

To say that the problem of numerical multiplicity within a species is a logical problem rather than an ontological problem or a physical problem does

²⁵³ See his "Thomas Aquinas: Dimensive Quantity as Individuating Principle," *Medieval Studies* 50 (1988): 279-309.

²⁵⁴ Owens, "Thomas Aquinas: Dimensive Quantity....," p. 295.

²⁵⁵ *Ibid.*, p. 284.

²⁵⁶ *Ibid.*, p. 293 (*italics his; emphasis mine*).

not mean, however, that *materia signata* does not truly answer the problem of numerical multiplicity within a species. For, as Owens clearly shows in the passage we quoted above, only *materia signata* can account for numerical multiplicity within a species.

Nor does saying that the problem of numerical multiplicity within a species is a logical problem mean that this problem has only a logical signification. As we argued in Chapter 2, there is a physical signification to matter (more precisely, here, *materia signata*) being the cause of numerical multiplicity within a species: the multiplication of a specifically identical nature requires that the nature in question not be exhausted by any individual and it is *materia signata* which limits the specific perfection conferred by the substantial form.

Having distinguished two senses in which a principle can be said to individuate a substance (as being the cause of a substance's being *unum de numero* and as being the cause of a substance's being *unum numero*), outlined the sense in which *materia signata* is a principle of individuation (as being the cause of a substance's being *unum de numero* within a species) and shown how the tenet that *materia signata* is the principle of 'individuation' depends on an analysis from the 'viewpoint of notion', we must now examine what is, according to St. Thomas, the cause of a substance's being *unum numero* (ontologically one and distinct).

(b) *Esse* and Human 'Individuation'

As we noted in the previous section, to be *unum numero* is, according to St. Thomas, to be ontologically one and distinct. Now, the cause of this sort of distinctness or 'individuation' is not caused by *materia signata* but by *esse*. Why

this sort of 'individuation' can only be caused by *esse* and not by either *materia signata* or substantial form is not, however, immediately evident. As a careful consideration of St. Thomas's position on the 'individuation' of separate substances can greatly facilitate the task of showing this, that is where our analysis will begin.

According to St. Thomas, separate substances are both immaterial and individual. As *materia signata* is the principle of numerical multiplicity within a species and separate substances are immaterial forms, separate substances can neither be numerically multiplied within their species (and St. Thomas clearly denies that separate substances are numerically multiplied within their species²⁵⁷), nor can their principle of 'individuation' be *materia signata*. If, however, *materia signata* is not the cause of their 'individuation', what is and what sort of 'individuation' do separate substances possess?

Although *materia signata* is the cause of a substance's being *unum de numero* within a species, this is not the only sort of individuation or 'number' a substance can possess. Arguing that separate substances are individual and singular without, yet, being composed of matter, St. Thomas states:

[...] it is not true to say that every number is caused by matter [...] Nor is it true to say that a separate substance is not singular and something individual [...] For matter is not the principle of individuation in material things except in so far as matter cannot be participated in by many because it is the first subject not existing in another. [...] Separate substances, therefore, are individuals and singular. But they are not individuated by matter, but by the very fact that it is not their nature to be in another, and consequently they are not participated in by many.²⁵⁸

²⁵⁷ See, for instance, *Summa theologiae*, I, q. 50, art. 4, in corp. and *Summa contra Gentiles*, II, cap. 93 (which is entirely devoted to the issue of separate substances being each a unique individual of a species).

²⁵⁸ *De unitate intellectus contra Averroistas*, cap. 5 (tr. by Beatrice H. Zedler). The Latin text (Leonine edition, p. 310, l. 50-74): "[...] Nec iterum hoc uerum est, quod omnis numerus causetur ex materia [...] Nec etiam hoc uerum est, quod substantia separata non sit singularis et indiuiduum aliquid [...] Non enim materia est principium indiuiduationis in rebus materialibus, nisi

The sort of individuation possessed by separated substances is not, according to St. Thomas, that of being *unum de numero* but that of being *unum numero*:

It should not be said that any separate substance is one only in species or genus, because this is not to be one simply. It remains, therefore, that any separate substance is one in number (*unum numero*). But something is not said to be one in number (*unum numero*) because it is one of a number (*unum de numero*); for number is not the cause of a thing being one but conversely, because in being numbered, a thing is not divided; for one is that which is not divided.²⁵⁹

What causes a separate substance to be *unum numero* and what does it mean to be *unum numero*? To be *unum numero* is to be ontologically one and distinct and separate substances are *unum numero* on Aristotle's view, as St. Thomas points out, because they *are* (they have being) and, whatever *is* cannot but be individual:

For Aristotle says in Book IV of the *Metaphysics*: "The substance of each thing is one but not accidentally" and that "one is nothing else except being." A separate substance, therefore, if it is being, is one according to its substance, especially since Aristotle says in Book VIII of the *Metaphysics* that those things which do not have matter, do not have a cause (outside themselves) for their being one and for their being.²⁶⁰

in quantum materia non est participabilis a pluralibus, cum sit primum subiectum non existens in alio [...] Individue ergo sunt substantie separate et singulares; non autem indiuiduantur ex materia, sed ex hoc ipso quod non sunt nate in alio esse, et per consequens nec participari a multis".

²⁵⁹ *De unitate intellectus contra Averroistas*, cap. 5 (tr. by Beatrice H. Zedler) (Latin in parentheses not present in the translation). The Latin text (Leonine edition, p. 310, l. 40-49) reads: "Nec est dicendum quod aliqua substantia separata sit unum tantum specie uel genere, quia hoc non est esse simpliciter unum: relinquuntur quod quilibet substantia separata sit unum numero. Nec dicitur aliquid unum numero quia sit unum de numero — non enim numerus est causa unius sed e conuerso —, sed quia in numerando non diuiditur; unum enim est id quod non diuiditur". It is important to note that St. Thomas here explicitly rejects the view that separate substances are not individuals (ontologically one and distinct) but only one in species or genus. For him, a separate substance is a unique individual of a certain specific perfection, not simply a subsistent 'species'.

²⁶⁰ *De unitate intellectus contra Averroistas*, cap. 5 (tr. by Beatrice H. Zedler). The Latin text (Leonine edition, p. 310, l. 31-38) reads: "Dicit enim Aristoteles in IV Metaphisice quod 'cuiusque substantia unum est non secundum accidens', et quod 'nichil est aliud unum preter ens'. Substantia ergo separata si est ens, secundum suam substantiam est una; precipue cum

Although this would seem to imply that separate substances are individuated by their forms (i.e., of themselves, for, separate substances are forms), St. Thomas and Aristotle differ on an important point concerning separate substances which has important implications regarding the principle of their individuation.

For Aristotle, an immaterial substance does not have a cause of individuation outside of itself because it is a simple substance, a form unrelated to matter, and form is, in his system, the highest/last actuality of substance. As form is that which makes the substance to be (and to be *this or that sort of thing*) and whatever is must, necessarily, be individual, it is the form of the immaterial substance which individuates that substance and, hence, immaterial substances are individuated of themselves.

As B. Carlos Bazán has aptly noted, this means that for Aristotle the question of 'being' is equivalent to that of 'essence' and that of 'essence' equivalent to that of 'form':

L'équivalence entre 'être', 'essence' et 'forme' est ainsi achevée. Dans l'unité intelligible de la forme et de la définition qui expriment ce que les choses 'sont' s'épuise la recherche, car dans cette essence on a trouvé la détermination immuable, objet propre de la pensée (*Met. K, 6, 1063 a 10-15*). Penser est toujours penser un être déterminé: on ne sort de l'imprécision du simple prédicat 'être' que lorsqu'on se situe au plan de l'essence et de la forme qui lui confèrent un sens *défini*.²⁶¹

For St. Thomas, however, the question of 'being' is not equivalent to that of 'essence'. According to him, *esse* is an act (namely, the act of being), in fact, "the first among all acts".²⁶² Whereas, for the Stagirite, form is the highest/last

Aristoteles dicat in VIII Metaphisice quod ea que non habent materiam, non habent causam ut sint unum et ens".

²⁶¹ Bazán, "Être...", pp. 53-54.

²⁶² See, for instance, *Summa theologiae*, I, q. 76, art. 6, in corp.

principle of actuality of substance and 'being' is a mere predicate which indicates the fact of 'being there',²⁶³ in St. Thomas's system *esse* is the highest/last principle of actuality of substance²⁶⁴ and the act of being (*esse*) is a constitutive co-principle of substances.

Now, separate substances are, according to St. Thomas, composed of *esse* and form.²⁶⁵ This composition is, according to him, one of act and potency where *esse* is the principle of actuality and the form of the immaterial substance the principle of potency.²⁶⁶ Moreover, it is *esse*, not form, which makes the immaterial substance *to be*. For, although essence expresses *what* a thing is, it is *esse* which is, according to St. Thomas, the principle *by which* a thing subsists.²⁶⁷

As *esse* is related to essence, to the form of the separate substance, as act is to potency, the form of a separate substance cannot be considered to be (as it can be in Aristotle's metaphysics of form) the efficient cause of its own being:

But all that belongs to anything is either caused from principles of its nature, as for instance risibility in man, or accrues to it through some extrinsic principle, as for instance light in air from the influence of the sun. But it cannot be that existence itself should be

²⁶³ Aristotle, *Metaphysics*, 1053b16-21. For Aristotle, the being which is attributed (in the existential sense) to substances does not signify anything outside of the categories. See, on this, *Metaphysics*, Z (VII), 1, 1028b2-4.

²⁶⁴ This tenet that *esse* has primacy in the order of being is fundamental in St. Thomas's system and has been given, as Etienne Gilson has aptly noted (*Being and Some Philosophers...*, p. 175), various formulations by St. Thomas in his works, including "*To be* is the act of the subsisting forms: *Ipsum esse est actus formae subsistentis*" (*Quaestiones de anima*, art. 6, in corp.); "*To be* is the actuality of all acts, and that is why it is the perfection of all perfections: *esse est actualitas omnium actuum, et propter hoc est perfectio omnium perfectionum*" (*Quaestiones de anima*, q. 7, art. 2, ad 9); "*To be* is the actuality of all things, and even of forms themselves: *ipsum esse est actualitas omnium rerum et etiam formarum*" (*Summa theologiae*, I, q. 4, art. 2, ad 3).

²⁶⁵ *De ente et essentia*, cap. IV (Leonine edition, pp. 375-378). See also: *Summa contra Gentiles*, II, cap. 52 (Leonine edition, pp. 387-388); *Summa theologiae*, q. 50, art. 1, in corp. & art. 2, in corp.; *Quaestiones de anima*, q. 6, in corp.

²⁶⁶ Ibid.

²⁶⁷ Ibid.

caused by the form or quiddity of the thing, caused, I say, as by means of an efficient cause, because thus something would be the cause of itself and would bring its very self into existence, which is impossible. Therefore it follows that everything such that its existence is other than its nature has existence from another (*ab alio*).²⁶⁸

As, on St. Thomas's view, it is *esse*, not form, which causes the separate substance *to be* and separate substances, if they *are*, are individuated, it must be the case that separate substances are individuated by their act of being.

Moreover, that it is *esse* which causes separate substances to be *unum numero* can be further supported by a consideration of the following Thomistic principle: "we must gather from the act the reason why the potency is such as it is".²⁶⁹

If, the form of a separate substance is, in relation to *esse*, a principle of potency and 'we must gather from the act the reason why the potency is such as it is', we must gather from *esse* the reason why the form of the separate substance is such as it is. If the form of the separate substance is individual, the cause of its individuation must, then, be its *esse*.

When St. Thomas says, therefore, that separate *substances* are individuated of themselves, he must not be understood to claim that *the form* of a separate substance is individuated of itself. Rather, although it is true to say that, as a composition of *esse* and form, the separate *substance* is individuated of itself, the individuation of the *form* of a separate substance is caused by its *esse*.

²⁶⁸ *De ente et essentia*, cap. IV (tr. by Armand Maurer). The Latin text (Leonine edition, p. 377, l. 27-37): "Omne autem quod convenit alicui vel est causatum ex principiis nature sue, sicut risibile in homine; vel advenit ab aliquo principio extrinseco, sicut lumen in aere ex influentia solis. Non autem potest esse quod ipsum esse sit causatum ab ipsa forma vel quidditate rei, dico sicut a causa efficiente, quia sic aliqua res esset sui ipsius causa et aliqua res se ipsam in esse produceret: quod est impossibile. Ergo oportet quod omnis talis res cuius esse est aliud quam natura sua habeat esse ab alio."

²⁶⁹ See, for instance, *Summa theologiae*, I, q. 76, art. 5, in corp. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "ex forma oportet rationem accipere quare materia sit talis". This, of course, is an expression of the '*materia est propter formam*' doctrine which we discussed in Chapter 4.

Having explained the individuation of separate substances and, in so doing, elicited some of the important principles involved in the question of what causes a substance to be *unum numero*, we can now turn our attention to what causes human beings to be *unum numero*.

It must first be said that in examining what causes human beings to be *unum numero* that we do not deny that it is *materia signata* which causes human beings to be *unum de numero* within a species. For, as we explained in the last section, *materia signata* is clearly the principle of numerical multiplicity in a species and, further, there seems no reason to make exception to that tenet in the case of human beings: human beings are, after all, composed of matter.

Now, because human beings, unlike separate substances, are composed of matter, the question of whether *materia signata* is both the principle of numerical multiplicity within a species and the principal of ontological distinctness can be posed. To address this question, it is helpful to examine what causes non-human material substances to be *unum numero* and how human beings differ from other material substances.

Whereas separate substances are composed of form and *esse*, three principles constitute material substances (human beings included): matter, form and *esse*.²⁷⁰ These three principles are ordered, in non-human material substances, according to a double relation of act and potency. Matter is in potency in relation to form (essential composition) and the essence, composed of matter and form, is, in turn, in potency in relation to the act of being (constitutive composition).²⁷¹ As St. Thomas, himself, puts it:

²⁷⁰ *Quaestiones de anima*, q. 6, in corp.

²⁷¹ B. C. Bazán, "La corporalité selon S. Thomas," *Revue Philosophique de Louvain* 81 (1981): 369-409, see esp. 386-387.

Hence in composite objects there are two kinds of act and two kinds of potency to consider. For first of all, matter is as potency with reference to form, and the form is its act. And secondly, if the nature is constituted of matter and form, the nature is as potency with reference to existence itself, insofar as it is able to receive this. Accordingly, when the foundation of matter is removed, if any form of a determinate nature remains which subsists of itself but not in matter, it will still be related to its own existence as potency is to act. But I do not say, as that potency which is separable from its act, but as a potency which is always accompanied by its act.²⁷²

Although it is by the form that non-human material composites exist, it is the *composite* of matter and form which is the subject of the act of being in those sorts of material substances:

[...] since each thing operates insofar as it is a being, to operate belongs to each thing in the same way as to be belongs to it. The forms, therefore, which have no operation without being joined with their matter, do not themselves operate, but it is the composite that operates through the form. Whence indeed, forms of this kind do not themselves, properly speaking exist, but by means of them something exists.²⁷³

What is, then, the subject of the act of being in these sorts of substances is not their form alone but the composite of matter and form. This has, amongst others, the following two implications: as *esse* is possessed by the composite

²⁷² *De spiritualibus creaturis*, art. 1, in corp. (tr. by Mary C. Fitzpatrick and John J. Wellmuth). The Latin text (Keeler edition, p. 12, l. 12-21): "Unde in rebus compositis est considerare duplicem actum et duplicem potentiam. Nam primo quidem, materia est ut potentia respectu formae, et forma est actus eius. Et iterum, natura constituta ex materia et forma, est ut potentia respectu ipsius esse, in quantum est susceptiva eius. Remoto igitur fundamento materiae, si remaneat aliqua forma determinatae naturae per se subsistens, non in materia adhuc comparabitur ad suum esse ut potentia ad actum; non dico autem, ut potentiam separabilem ab actu, sed quam semper suus actus comitetur."

²⁷³ *De unitate intellectus contra averroistas*, cap. 1 (tr. by Beatrice H. Zedler). The Latin text (Leonine edition, p. 298, l. 627-634) reads: "quia unumquodque operatur in quantum est ens; eo igitur modo unicuique competit operari quo sibi competit esse. Forme igitur que nullam operationem habent sine communicatione sue materie, ipse non operantur, sed compositum est quod operatur per formam; unde huiusmodi forme ipse quidem proprie loquendo non sunt, sed eis aliquid est".

essence, it is corrupted with the corruption of the composite²⁷⁴ and as the specific nature conferred by the form is related to matter and matter cannot exhaust that specific nature but always participates in it in a limited way, there can be a multiplicity of individuals of that specific nature (i.e., matter is the principle of numerical multiplicity within a species in non-human material substances).

Now, the act of being of each non-human material composite is, according to St. Thomas, educed from the potency of matter.²⁷⁵ As educed from the potency of matter, the *esse* of a non-human material composite depends on matter and, consequently, is corrupted with the corruption of the composite and, further, although *esse* is the principle by which non-human material substances are, that act is itself dependent on matter and, consequently, non-human material substances seem to owe their ontological distinctness to matter.

Now, a much clearer answer to what causes humans to be *unum numero* can be given. For, according to St. Thomas, our act of being is not educed from the potency of matter²⁷⁶ and, as we have already explained, it is the human soul which is the subject of the act of being, not the composite of soul and matter. In this respect, human souls are like the forms of separate substances, though, unlike these, human souls are essentially related to matter. What do the

²⁷⁴ See, for instance, *De unitate intellectus contra auerroistas*, cap. 1 (Leonine edition, pp. 299-301).

²⁷⁵ See, for instance, *De potentia*, q. 3, art. 9, in corp.

²⁷⁶ See, for instance, *Quaestiones de anima*, q. 2, ad 12 (Leonine edition): "anima humana, licet sit forma unita corpori, tamen excedit proportionem totius materie corporalis. Et ideo non potest educi in actum de potentia materie per aliquem motum uel mutationem, sicut alie forme que sunt materie immerse."

similarities and dissimilarities between human beings and, on the one hand, separate substances and, on the other hand, non-human material substances imply regarding what causes humans to be *unum de numero* and what causes us to be *unum numero*?

As composed of matter, human beings must be said to be numerically distinct due to dimensionally quantified matter just as other material substances are. As our act of being is not, however, educed from the potency of matter like that of non-human material substances and it is our soul which is the subject of our act of being, our *esse* cannot be corrupted with the corruption of the composite of matter soul²⁷⁷ and, further, must be said to be the cause of our ontological distinctness. For, human beings are because of that act, that act is not dependent on any other principle and the human soul, like the form of a separate substance, is a principle of potency in respect to its *esse*. This conclusion is not only supported by the principles already elicited during our discussion of the cause of the ontological distinctness of separate substances but also by the principle '*unumquodque secundum idem habet esse et indiuiduationem*'.²⁷⁸

Now, just as an analysis of the cause of a substance's being *unum de numero* depends on a certain 'viewpoint' on the problem of 'individuation' (namely, the 'viewpoint of notion'), an analysis of the cause of a substance's being *unum numero* also depends on a certain 'viewpoint', namely, the 'viewpoint of being'. This 'viewpoint' is described by Owens in the following way:

²⁷⁷ See, for instance, *Quaestiones de anima*, q. 14, ad 11.

²⁷⁸ *Quaestiones de anima*, q. 1, ad 2 (Leonine edition). Although this text could be interpreted to mean that *esse* is the cause of a substance's being not only *unum numero* but also of its being *unum de numero*, such an interpretation would not seem warranted, given St. Thomas's insistence that matter (more precisely, *materia signata*) is the cause of a substance's being *unum de numero*.

[...] from the viewpoint of being, the sequence runs in opposite direction [from that of the viewpoint of notion]. Existence is the basic actuality of the material thing. Its bestowal outside subsistent existence (God) takes place in a formally limiting essence, the potentiality limiting the actuality. [...] Further, the actuality that gives formal determination to a material thing, namely, its substantial form, has by its nature the requirement to actuate [...] matter if it is to exist in reality. Still further, determinate quantities and all the other accidents are in matter in accord with the 'exigency' of the form, and accordingly follow upon matter and form as effect upon cause. The result is that in the order of being, existence is basic. Form comes next, then matter, then the accident of quantity.²⁷⁹

Whereas the 'viewpoint of notion' approaches the problem of 'individuation' through an analysis of the *concepts* of matter, form and *esse*, the 'viewpoint of being' approaches the problem of 'individuation' through an analysis of matter, form and *esse* as they *actually are* in things.²⁸⁰ What are the presuppositions underlying the 'viewpoint of being' which lead to the conclusion that *esse* causes human beings to be *unum numero*?

One such presupposition is that ontological distinctness and numerical multiplicity within a species can be distinguished as different forms of individuation. As we have seen, that presupposition is textually founded in St. Thomas's own distinction between being *unum numero* and being *unum de numero* and can explain why separate substances are individual without, yet, being composed of matter.

It is important to note here that although Owens distinguishes the 'viewpoint of notion' and the 'viewpoint of being' approaches to the problem of 'individuation', he does not distinguish the two senses in which a substance can be individual (i.e., as being *unum numero* and/or as being *unum de numero*). For him, 'individuation' means, first and foremost, 'numerical diversity within the

²⁷⁹ Owens, "Thomas Aquinas: Dimensive Quantity...", p. 295.

²⁸⁰ See, on this, Owens's "Thomas Aquinas: Dimensive Quantity...", pp. 284-285; p. 290; p. 293; p. 309.

same species'. And, thus, the presuppositions we are here outlining are not those involved in the 'viewpoint of being' as such but those underlying the conclusion that *esse* is the cause of a substance's being *unum numero*.

Another important presupposition underlying the conclusion that *esse* is the cause of our being *unum numero* is that being *unum numero* is an ontological *perfection* and, as such, requires an act as its cause. Now this presupposition is certainly not without textual support, for, according to St. Thomas, to be an *individuum* is the proper characteristic of primary substances: "the individual in itself is undivided, but is distinct from others";²⁸¹ "the individual — i.e., distinct and incommunicable substance".²⁸²

Lastly, the Thomistic principle according to which act has priority over potency is fundamental to the conclusion that *esse* is the principle by which humans are *unum numero*. For, although the human soul is an act in relation to matter and could, for that reason, be held to be the principle by which we are *unum numero*, we have argued that it is *esse* which must be said to be the cause of our ontological distinctness because act has priority over potency and the human soul is a principle of potency in relation to *esse*.

Before proceeding to the second part of this chapter (which deals with the causality of the elements), we may do well to indicate that at least two other scholars, David Winiewicz and Etienne Gilson, have maintained that *esse* is the cause of our uniqueness:

St. Thomas continually emphasizes the fact that each individual existent is so-named from the incommunicable act-of-existing

²⁸¹ *Summa theologiae*, I, q. 29, art. 4, in corp. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Individuum autem est quod est in se indistinctum, ab aliis vero distinctum."

²⁸² *Summa theologiae*, I, q. 29, art. 4, ad 3 (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "[...] substantiae individuae, idest distinctae vel incommunicabiles". Although we cannot discuss the point here, it is yet interesting to note that for platonists and neoplatonists, 'individuation' is not a perfection but something negative ('universality' being, on their view, a perfection).

which it peculiarly possesses. [...] This primal ground of uniqueness, *esse*, is an act which discloses and manifests a determinate and intelligible actuality which is wholly unique in each instance.²⁸³

Saints, philosophers, scientists, artists, craftsmen — no two men are the same, because even the humblest among them ultimately is his own 'to be'.²⁸⁴

Finally, lest any misunderstandings arise, it should be noted that we are not arguing that the root of the ontological distinctness of human beings is God's creative causality. Although God's creative act is at the basis of our being, His creative act is an extrinsic cause of our being. That which individuates us must, however, be one of our constituents, must be intrinsic to us and *esse*, though dependent on God's creative causality, is an intrinsic constituent of each human being.

II) The Elements

As we noted in our section on Aristotle, there are many debates in Aristotelian scholarship surrounding the nature, composition and movement (change) ascribed to the elements in Aristotle's treatises: is there a persistent substratum of elemental change?; are the elements substances and if so what kind of substance?; are they composed of form and prime matter, qualities and prime matter, or not composed by prime matter at all but just of two qualities?; etc.

²⁸³ David Winiewicz, "A Note on 'Alteritas' and Numerical Diversity in St. Thomas Aquinas," *Dialogue* (Canada) 16 (1977): 697-698.

²⁸⁴ Gilson, *op. cit.*, p. 186.

To our knowledge, however, very little has been said about St. Thomas's position regarding the four elements. Whatever the reason for this, we must here at least briefly outline his theory of the four elements. Doing so will provide a smoother transition from our discussion of the causality of matter in Aristotelian hylomorphism, where we did raise the issue of the causality of the four elements, to our discussion of the causality ascribed by St. Thomas to matter at each level of life (vegetative, sensitive and intellectual), where the causality of the elements is assumed and not directly discussed.

In order to determine what sort of causality St. Thomas ascribed to the four elements, we shall examine what ontological status he believed the elements to possess, what sort of composition he held them to have, how the elements change into one another and how they are the matter of more complex bodies like tissues and bones.

(a) Ontological Status, Composition and Movement

Earth, air, water and fire are not primary substances but *parts* of primary (material) substances. They are not, however, parts of primary substances in the same way as bones and fingers, for instance, are parts of a man. According to St. Thomas, the elements are *essential* rather than *accidental* parts of primary substances:

[...] there are some parts upon which the nature of the whole depends, namely, when the being of a particular whole consists in the composition of particular parts. It is in this way that a syllable is related to letters and a mixed body to the elements. Parts of this sort, which are necessary for understanding the whole because they enter into its definition, are called parts of the species and of the form. There are some parts, however, that are accidental to the

whole as such. The semicircle, for instance, is related to the circle in this way, for it is accidental to a circle that it be divided into two or more equal or unequal parts. But it is not accidental to a triangle that three lines are designated in it, for because of this a triangle is a triangle. Similarly, it is an essential characteristic of man that there be found in him a rational soul and a body composed of the four elements. So man cannot be understood without these parts and they must be included in his definition; so they are parts of his species and form. But finger, foot, and hand, and other parts of this kind are outside the definition of man; and thus the essential nature of man does not depend on them and he can be understood without them. For whether or not he has feet, as long as he is constituted of a rational soul and a body composed of the elements in the proper mixture required by this sort of form, he will be a man.²⁸⁵

St. Thomas does not seem to have even considered ascribing the ontological status of primary substance to any of the four elements, taking as evident that primary substances like men are composed of organs, organs composed of mixed bodies, and mixed bodies composed of elements. This hierarchy of composition, moreover, is not considered by St. Thomas as 'layerings' of substances (where man would be said to be composed of a hierarchically ordered plurality of substances) but as a hierarchy of potency, where matter acquires the potency towards increasingly higher determinations:

Thus, prime matter is in potency, first of all, to the form of an element. When it is existing under the form of an element it is in potency to the form of a mixed body; that is why the elements are

²⁸⁵ *In De Trinitate*, q. 5, art. 3, in corp. (tr. by Armand Maurer). The Latin text (Leonine edition, pp. 148-149, l. 204-229) reads: "Sunt enim quedam partes ex quibus ratio totius dependet, quando scilicet hoc est esse tali toti quod ex talibus partibus componi, sicut se habet sillaba ad litteras, et mixtum ad elementa; et tales partes dicuntur partes speciei et forme, sine quibus totum intelligi non potest, cum ponantur in eius diffinitione. Quedam uero partes sunt que accidunt toti in quantum huiusmodi, sicut semicirculus se habet ad circulum; accidit enim circulo quod sumantur per diuisionem due eius partes equales uel inequales, uel etiam plures, non autem accidit triangulo quod in eo designentur tres linee, quia ex hoc triangulus est triangulus. Similiter etiam per se competit homini quod inueniatur in eo anima rationalis et corpus compositum ex quatuor elementis, unde sine his partibus homo intelligi non potest, set hoc oportet poni in diffinitione eius, unde sunt partes speciei et forme; set digitus, pes, et manus, et alie huiusmodi partes sunt post intellectum hominis, unde ex eis ratio essentialis hominis non dependet, et ideo sine his intelligi potest: siue enim habeat pedes siue non, dummodo ponatur coniunctum ex anima rationali et corpore mixto ex elementis propria mixtione quam requirit talis forma, erit homo".

matter for the mixed body. Considered under the form of a mixed body, it is in potency to a vegetative soul, for this sort of soul is the act of a body. [In a like way], the vegetative soul is in potency to a sensitive soul, and a sensitive one to an intellective one.²⁸⁶

What is important to note here is that with every new substantial determination acquired by matter, the previous substantial determination does not remain in actuality. According to St. Thomas, it is only in this way that a succession of substantial forms can actualize the full potentiality of matter:

[...] prime matter tends toward its perfection by actually acquiring a form to which it was previously in potency, even though it then ceases to have the other form which it actually possessed before, for this is the way that matter may receive in succession all the forms to which it is potential, so that its entire potentiality may be successively reduced to act, which could not be done all at once.²⁸⁷

As we shall see in the next chapter, St. Thomas's embryological analysis follows this hierarchy of act and theory of succession of substantial forms. That analysis, moreover, clearly rejects that the human being is a plurality of substances, setting forth that human generation is a succession of generations and corruptions where the embryo is never determined by more than one substantial form at any given time but increasingly acquires the potency towards its proper form, the human soul. That substantial determinations prior to that of

²⁸⁶ *Summa contra Gentiles*, IIIa, cap. 22 (tr. by Vernon J. Bourke) (Bourke's translation of 'itemque' as 'in turn' leaves the manner in which a certain kind of soul is in potency to a higher kind of soul unclear. We have, for this reason, inserted in square brackets a preferable translation of 'itemque', namely 'in a like way'). The Latin text (Leonine edition, p. 53, l. 9-17) reads: "Nam materia prima est in potentia primo ad formam elementi. Sub forma vero elementi existens est in potentia ad formam mixti: propter quod elementa sunt materia mixti. Sub forma autem mixti considerata, est in potentia ad animam vegetabilem: nam talis corporis anima actus est. Itemque anima vegetabilis est in potentia ad sensitivam; sensitiva vero ad intellectivam."

²⁸⁷ *Summa contra Gentiles*, IIIa, cap. 22 (tr. by Vernon J. Bourke). The Latin text (Leonine edition, p. 52, 16-22) reads: "[...] materia prima in suam perfectionem tendit per hoc quod acquirit in actu formam quam prius habebat in potentia, licet et aliam habere desinat quam prius actu habebat: sic enim successive materia omnes formas suscipit ad quas est in potentia, ut tota eius potentia reducat in actum successive, quod simul fieri non poterat."

the human soul not actually remain in the embryo is, as we shall also see, a very important aspect of St. Thomas's embryological analysis for, according to him, there cannot be any intermediaries between the human soul and prime matter.

As the elements are that out of which ultimately all material substances are made, they cannot be primary substances. They can only enjoy the ontological status of *parts* of substances. They are, however, different from other parts of primary substances like fingers and toes because earth, air, water and fire are, according to St. Thomas, the cause of generation and corruption and alteration in all other bodies.²⁸⁸

Before discussing the causality of the elements, however, we should first examine the manner in which they are said to be composed. We saw, in our section on Aristotle, that there is some debate amongst scholars over how the elements are composed. Noting that Aristotle could be interpreted as claiming that the qualities of the elements are their substantial differences, St. Thomas examines and rejects this view as wholly impossible.²⁸⁹

One argument offered by St. Thomas against the view that the substantial forms of the elements are their qualities is that hot, cold, dry and moist cannot be the substantial forms of the elements because they would then be in one thing an accident (for instance, a leaf is accidentally dry) and in another a substantial form (i.e., in the elements) but this is, of course, impossible:

[...] it is necessary to consider how it may be said here that earth and fire differ with these differences, namely, in terms of cold and hot. For this must be understood of substantial differences — otherwise they would not pertain to generation and corruption, but rather to alteration. Now the principles of substantial differences, which are constitutive of species, must be substantial forms, which are specific. According to this, therefore, it follows that heat and cold are the substantial forms of fire and earth. This is wholly

²⁸⁸ See, for instance, *In De generatione et corruptione*, prohemium (Leonine edition, p. 262).

²⁸⁹ *In De generatione et corruptione*, I, lectio 8 (Leonine edition, p. 293).

impossible. This is so, first of all, because it is not possible that the same thing be in one thing an accident and in another a substantial form, unless one speak equivocally. But hot and cold are accidents in other bodies, to which they are referred univocally the same as to the elements, from the admixture of which such are qualities are found in them [i.e., in the other, composite, bodies]. Therefore it is not possible that hot and cold in the elements be substantial forms.²⁹⁰

According to St. Thomas, when the Stagirite speaks as though the qualities of the elements are their substantial differences, he must be understood as doing so only because their substantial differences are not known.²⁹¹ The accidental differences of the elements (hot, cold, dry, moist) are, thus, used in place of substantial differences but these qualities are, however, the proper effects of the (unknown) substantial forms of the elements:

One should say [...] that, as is had in *Metaphysics* VIII, substantial differences, when unknown, are manifested by accidental differences — consequently we frequently use accidental differences in place of substantial. And it is in this way that the Philosopher here says hot and cold to be the differences of fire and earth. For hot and cold, since they are proper passions of these bodies, are the proper effects of the substantial forms of the same.²⁹²

²⁹⁰ In *De generatione et corruptione*, I, lectio 8, (tr. by R. F. Larcher and Pierre H. Conway). The Latin text (Leonine edition, p. 293) reads: "[...] oportet considerare quomodo hic dicatur quod terra et ignis differant his differentiis, scilicet frigido et calido. Oportet enim hoc intelligi de differentiis substantialibus: alioquin non pertinerent ad generationem et corruptionem, sed magis ad alterationem. Principia autem differentiarum substantialium, quae sunt constitutivae specierum, oportet esse formas substantiales, quae sunt specificae. Secundum hoc ergo sequitur quod calor et frigus sint formae substantiales ignis et terrae. Quod est omnino impossibile. Primo quidem quia non est possibile quod idem in uno sit accidens et in alio forma substantialis, nisi aequivoce diceretur: calidum autem et frigidum in aliis corporibus sunt accidentia, de quibus tamen univoce dicuntur cum elementis, ex quorum commixtione in eis huiusmodi qualitates inveniuntur. Non ergo potest esse quod calidum et frigidum in elementis sint formae substantiales."

²⁹¹ It is interesting to note that the substantial differences of angels or of animals are also not known. Practically speaking, the only substantial difference known is that of human beings. All other substances are distinguished by accidental differences. This fact, however, does not preclude those substances from being considered as real substances.

²⁹² In *De generatione et corruptione*, I, lectio 8 (tr. by R. F. Larcher and Pierre H. Conway). The Latin text (Leonine edition, p. 293) reads: "Dicendum est ergo quod, sicut habetur ex VIII *Metaphys.*, differentiae substantiales, quia sunt ignotae, per differentias accidentales manifestantur: et ideo multoties utimur differentiis accidentalibus loco substantialium. Et hoc modo Philosophus hic dicit calidum et frigidum esse differentias ignis et terrae. Calidum enim et

Elements are, thus, each determined by a substantial form and each of these forms have two proper effects: the substantial form of fire, for instance, causes the composite to be hot and dry and the substantial form of water, on the other hand, causes the composite to be cold and moist. Each element is, moreover, a composite of substantial form and prime matter: "prime matter is in potency, first of all, to the form of an element".²⁹³

Although the elements are composites of substantial form and prime matter, they are not for that reason primary substances. They are substances only in the sense of being *parts* of substances. Their *ordo* is, in fact, precisely to be that out of which primary substances (in the material order) are made. The elements are, according to St. Thomas, for the sake of mixed bodies.²⁹⁴

Before discussing how elements are the matter of mixed bodies, let us first briefly examine how St. Thomas conceived elemental movement. Two different aspects of elemental movement are distinguished by Aquinas. Movements in the elements themselves and elemental change. Regarding the first, St. Thomas denies that the elements are self-moving:

[...] certain movements are called natural, not that they be from an intrinsic principle, but because they are from a higher moving principle — thus the movements that are caused in the elements by the impress of heavenly bodies are said to be natural [...]²⁹⁵

frigidum, cum sint propriae passionis horum corporum, sunt proprii effectus formarum substantialium eorundem [...]."

²⁹³ *Summa contra Gentiles*, IIIa, cap. 22 (tr. Vernon J. Bourke). The Latin text (Leonine edition, p. 53, l. 10-11) reads: "materia prima est in potentia primo ad formam elementi".

²⁹⁴ *Summa contra Gentiles*, IIIa, cap. 22 (Leonine edition, p. 53). This, of course, follows St. Thomas's central tenet 'materia est propter formam'.

²⁹⁵ *Summa theologiae*, supplement, q. 65, art. 1, ad 4 (tr. by the English Dominicans). The Latin text (Ottawa edition) reads: "Et quia etiam in rebus naturalibus dicuntur aliqui motus naturales, non quia sint ex principio intrinseco, sed quia sunt a principio superiori movente, sicut motus qui sunt in elementis ex impressione corporum caelestium, naturales dicuntur [...]"

Regarding elemental change, St. Thomas follows Aristotle, maintaining that the elements reciprocally change and that these sorts of changes are not alterations but generations and corruptions.²⁹⁶ Without repeating the theory here, it is yet interesting to note the clarification St. Thomas brings to one aspect of the theory: why are the reciprocal changes of the elements generations and corruptions if one quality of the element is always in the subject of change and in the generated element (e.g., a water element changes into an air element, the quality of transparency seems to remain virtually throughout the change, being both present in the subject of change and in the element generated)? If the quality is held to remain throughout the change then, as St. Thomas explains, we would have to say that the reciprocal changes of the elements are alterations rather than generations and corruptions:

[...] in those bodies that are reciprocally changed one from the other, sometimes there remains some one and the same passion in the generated and in the corrupted thing, as when from air is produced water — for both are 'diaphanous,' i.e., transparent [...]; yet this does not mean that the other thing, in which the change takes place, namely the air or the water, is a passion of that which remains, namely, the diaphanous or the cold. If what we now say were not so, it would follow that when water comes to be from air, it would be alteration; for we always see that when that which is changed is a passion of what remains, we have alteration, but when that which is changed is not a passion of what remains, it is generation.²⁹⁷

²⁹⁶ See, for instance, *In De generatione et corruptione*, I, lect. 5-8.

²⁹⁷ *In De generatione et corruptione*, I, lect. 10 (tr. by R. F. Larcher and Pierre H. Conway). The Latin text (Leonine edition, p. 300) reads: "Sed ipse hoc excludit, dicens quod in his corporibus quae adinvicem transmutantur, quandoque manet aliqua passio eadem in generato et corrupto, sicut quando ex aere fit aqua; ambo enim sunt *diaphana*, idest transparentia [...]: non tamen oportet quod huius permanentis, scilicet diaphani vel frigidi, alterum in quod fit transmutatio, scilicet aer vel aqua, sit passio. Si autem non esset verum quod nunc dicimus, sequeretur quod quando ex aere fit aqua, esset alteratio: semper enim videmus quod, quando id quod transmutatur est passio permanentis, est alteratio; tunc autem generatio, quando id quod transmutatur non est passio permanentis."

However, elemental changes must be generations and corruptions because, according to St. Thomas, elements are determined by substantial forms and hence when, for example, water is changed into air, it must necessarily be the case that a substantial form is lost and another acquired (when water changes into air, the substantial form of water is lost and the substantial form of air is acquired).²⁹⁸ What must, then, be said in order to resolve the apparent difficulty is that the quality which seems to persist throughout the change does not, in fact, do so:

It should be answered, therefore, that the same numerical passion does not remain, but that what existed previously is corrupted *per accidens* with the corruption of the subject, when the form which was the principle of that accident departed, and that a similar accident comes, following on the newly-arriving form. And because, with respect to this accident, there was no conflict between agent and patient, the change was easier.²⁹⁹

Having briefly described St. Thomas's position regarding the ontological status, composition and movements of the elements, we must now turn our attention to the question of how the elements are the matter of complex bodies like tissues and bones. Do they remain in complex bodies and, if so, how? What sort of causality do the elements exercise in complex bodies? What do the elements, the *propria materia* of forms of complex bodies contribute to the complex body which of itself prime matter, which is yet the proper correlate of the forms of complex bodies, cannot contribute?

²⁹⁸ See, for instance, *In De generatione et corruptione*, I, lect. 5 (tr. by R. F. Larcher and Pierre H. Conway) (Leonine edition, p. 283).

²⁹⁹ *In De generatione et corruptione*, I, lect. 10 (tr. by R. F. Larcher and Pierre H. Conway). The Latin text (Leonine edition, p. 300) reads: "Dicendum ergo quod non manet idem numero: sed id quod prius erat, corrumpitur per accidens corruptione subiecti, recedente forma quae erat principium talis accidentis; et advenit simile accidens, consequens formam de novo advenientem. Et quia secundum hoc accidens non erat aliqua repugnantia in agendo et patiando facilius fuit transmutatio."

(b) The Matter of Complex Bodies

According to St. Thomas, elements are the matter of mixed bodies³⁰⁰ and, as the human body has various parts (organs) which are made up of mixed bodies (like tissues and bones), human bodies are, like all other corporeal bodies (except, of course, the elements themselves) formed of the four elements.³⁰¹ It is not only fitting that our bodies are made of the four elements³⁰² but, also, absolutely necessary:

[...] since man's proper matter is a mixed body, having a certain temperament and endowed with organs, it is absolutely necessary that a man have in himself each of the elements and humors and principal organs.³⁰³

Although from a metaphysical point of view the formal and material causes of human beings are, respectively, rational soul and prime matter, from a physical standpoint, it is rational soul and the elements (earth, air, water and fire) which are, respectively, the formal and material causes of man.³⁰⁴ Although prime matter is a real constitutive principle of corporeal substances, physically speaking, it does not of itself exist (prime matter is without any actuality of its own). Even under the forms of the elements (and, ultimately, under every form of a material composite), prime matter does not exist *qua* prime matter but what

³⁰⁰ See, for instance, *Summa contra Gentiles*, IIIa, cap. 22 (Leonine edition, pp. 52-54) and IV, cap. 35 (Leonine edition, pp. 125-127).

³⁰¹ See, for instance, *Summa theologiae*, I, q. 91, art. 1, ad. 3.

³⁰² See, for instance, *Summa theologiae*, I, q. 91, art. 1, ad 1.

³⁰³ *Summa contra Gentiles*, II, cap. 30 (tr. by James F. Anderson). The Latin text (Leonine edition, p. 339) reads: "Quia [...] materia propria hominis est corpus commixtum et complexionatum et organizatum, necessarium est absolute hominem quodlibet elementorum et humorum et organorum principalium in se habere."

³⁰⁴ See, for instance, *In Metaphysicam*, XII, lect. 4 (Marietti edition, sct. 2481). Although one might expect the metaphysical rather than physical point of view of the causes of man in this work, physics and metaphysics are not always distinctly treated by Aristotle as, in his philosophy, there is an equivalence between being and substance. See, on this point, B. C. Bazán's "Être....," 53-54.

exists is this or that composite (for example, an element, which is prime matter determined by a certain elemental form, neither the elemental form nor the prime matter existing *qua* elemental form or *qua* prime matter).

To say that the elements are the material cause of human beings rather than, for instance, the physical, organic body having sensitive life (which is the proximate matter of the rational soul) implies that the elements are somehow present *qua* elements in complex bodies like tissues and bones as well as in the organs which are composed of such complex bodies. If the elements were not somehow present *qua* elements, we could not say that complex bodies are made up elements *existing in it*. However, if the elements are said to be *actually* present *qua* elements in the complex body, then the complex body will not be real but apparent, consisting of a juxtaposition of particles which are too small for the senses to distinguish.³⁰⁵ How, then, are the elements present in complex bodies?

Rejecting the view that the elements remain in compounds in a half-existent state (being averaged out in the compound in such a way that they are more or less elements) as impossible, St. Thomas sets forth that the elements remain in complex bodies, not actually but, *virtually*.³⁰⁶ What this means is that, although the elements are not substantially present in complex bodies (which would make complex bodies only apparent, not real), their qualities (hot, cold, etc.) are preserved in the complex body in the following way:

[...] the behavioral properties of elements do oppose one another and can exist more or less. From such opposed properties existing more or less we can construct an intermediate property that retains a taste of what each extreme is like: gray, for example, intermediate[s] between black and white, and tepid, intermediate[s]

³⁰⁵ This problem is raised by St. Thomas himself in, for example, his *De mixtione elementorum* (Leonine edition, pp. 155-157).

³⁰⁶ *Ibid.* See also, *Summa theologiae*, I, q. 76, art. 4, ad. 4.

between hot and cold. So, then, when the extreme properties of elements have been damped down, there remains an intermediate property characteristic of the compound, differing in each compound because of different proportions of the component elements. It is this intermediate property that specially conditions the matter to the form of the compound in question [...]. Just as any intermediate retains part of the nature of the two extremes, so the characteristic quality of the compound retains something of the qualities of its elements. But the qualitative property of an element is not its substance [...] So the powers of the elemental substances are preserved in the compound substance in this way. The substances of the elements then are present in the compound, but virtually — through their powers — not actually. And that is what Aristotle says: *Thus they neither persist actually* (the elements, namely, in the compound) *as body and white do, nor are they destroyed (either one of them or both); for their power is preserved.*³⁰⁷

The forms of the elements, hence, do not actually remain in the complex body but, rather, remain potentially through their proper qualities (proper accidents) which are preserved in the complex body, though in a modified way:

[...] one must not say that the forms of the elements are wholly corrupted, but rather that they continue to exist virtually in the compound, as Aristotle teaches. They remain in the compound, that is, to the extent that their proper accidents somehow continue

³⁰⁷ *De mixtione elementorum*, (in *Aquinas: Selected Philosophical Writings*, selected and tr. by Timothy McDermott, Oxford: Oxford University Press, 1993), pp. 120-121. The Latin text (Leonine edition, pp. 156-157, l. 123-153) reads: "qualitates actiue et passiue elementorum contrarie sunt ad inuicem, et magis et minus recipiunt. Ex contrariis autem qualitatibus que recipiunt magis et minus, constitui potest media qualitas que sapiat utriusque extremi naturam, sicut pallidum inter album et nigrum, et tepidum inter calidum et frigidum. Sic igitur remissis excellentiis qualitarum elementarium, constituitur ex hiis quedam qualitas media que est propria qualitas corporis mixti, differens tamen in diuersis secundum diuersam mixtionis proportionem; et hec quidem qualitas est propria dispositio ad formam corporis mixti, sicut qualitas simplex ad formam corporis simplicis. Sicut igitur extrema inueniuntur in medio quod participat naturam utriusque, sic qualitates simplicium corporum inueniuntur in propria qualitate corporis mixti. Qualitas autem simplicis corporis est quidem aliud a forma substantiali ipsius, agit tamen in uirtute forme substantialis; alioquin calor calefaceret tantum, non autem per eius actionem forma substantialis educeretur in actum, cum nichil agat ultra suam speciem. Sic igitur uirtutes formarum substantialium simplicium corporum in corporibus mixtis saluantur. Sunt igitur forme elementorum in corporibus mixtis, non quidem actu sed uirtute. Et hoc est quod Aristoteles dicit in I De generatione: 'Non manent igitur — elementa scilicet in mixto — actu ut corpus et album, nec corrumpuntur nec alterum nec ambo: saluatur enim uirtus eorum'." Note that McDermott's translation does not respect St. Thomas's technical vocabulary (accidents, qualities, etc.) but was used here because it is the only available translation (in either French or English) of this text.

to exist therein, and the power of the elements is retained in these proper accidents.³⁰⁸

[...] we must say, in accordance with the Philosopher, that the forms of the elements remain in the mixed body, not actually, but virtually. For the proper qualities of the elements remain, though modified; and in these qualities is the power of the elementary forms. This quality of the mixture is the proper disposition for the substantial form of the mixed body; for instance, the form of a stone, or of any sort of soul.³⁰⁹

Complex bodies are, thus, 'blendings' rather than 'juxtapositions' of elements, as in them the elements are not actually present but only virtually present through their qualities. The substantial form of a complex body is the only substantial form present in a complex body and, thus, a complex body is, properly speaking, a hylomorphic composition of prime matter and a substantial form of a complex body (for instance, the substantial form of stone), though the accidental qualities of the elements remain in a modified way in the complex body, namely, through the mean quality of the mixed body.

The elements are also, however, said to be the material cause of such alterations as growth and diminution in all complex bodies. According to St. Thomas, changes as to size consist either in the addition of magnitude (growth) or the lessening of magnitude (diminution).³¹⁰ Although growth is an act of the vegetative soul,³¹¹ the elements are the material cause of growth being that

³⁰⁸ *Quaestiones de anima*, q. 9, ad 10 (tr. by James H. Robb). The Latin text (Leonine edition) reads: "Nec iterum dicendum est quod totaliter corrumpantur, sed quod maneant uirtute, ut Aristoteles dicit; et hoc est in quantum manent accidentia propria elementorum secundum aliquem modum, in quibus manet uirtus elementorum."

³⁰⁹ *Summa theologiae*, I, q. 76, art. 4, ad 4 (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Et ideo dicendum est, secundum Philosophum in I *De Gener.*, quod formae elementorum manent in mixto non actu, sed uirtute. Manent enim qualitates propriae elementorum licet remissae, in quibus est uirtus formarum elementarium. Et huiusmodi qualitas mixtionis est propria dispositio ad formam substantialem corporis mixti, puta formam lapidis, vel animae cuiuscumque."

³¹⁰ See, for instance, *In De generatione et corruptione*, I, lect. 13 (Leonine edition, pp. 307-309) and lect. 14 (Leonine edition, pp. 311-313).

³¹¹ See, for instance, *In De generatione et corruptione*, I, lect. 16 (Leonine edition, pp. 318-19).

which are added to the complex body through nutrition.³¹² Diminution, on the other hand, is not an act of the vegetative soul but occurs when the virtue of the species becomes weakened and, consequently, cannot convert as much food as is necessary to maintain the quantity of its body. The elements are said to be the cause of diminution because the presence of their contrarities in the matter is what eventually weakens the virtue of the species and, hence, what causes the loss of quantity.³¹³

Having briefly examined how the elements are the matter of complex bodies and why they are said to be the material cause of generation, corruption and alteration, an important question yet remains: what do the elements (the *propria materia* of complex bodies like tissues and bones) contribute to the complex body which prime matter (the proper correlate of all substantial forms of matter) cannot, of itself, contribute?

Put differently, what we are asking is "what makes the elements rather than prime matter the '*propria materia*' of such complex bodies like stones, tissues and bones?" One possible answer is that prime matter *under the forms of the elements* gains the ability to receive the higher determination of a form of a complex body and without such determinations could not be the subject of a form of a complex body. This answer, however, requires certain precisions, for the forms of the elements do not remain in the complex body actually but, rather, virtually. In what sense, then, can they be said to prepare matter for the reception of higher determinations?

The forms of the elements determine prime matter and prepare it for the reception of higher determinations in the sense that under the forms of the

³¹² See, for instance, *In De generatione et corruptione*, I, lect. 15 (Leonine edition, p. 316). We shall have more to say regarding growth and nutrition in Chapter 6.

³¹³ See, for instance, *In De generatione et corruptione*, I, lect. 17 (Leonine edition, p. 321).

elements, prime matter is the subject of certain accidental determinations: hot, dry, etc. These accidental determinations of matter are what make the matter proper to the reception of the form of a complex body and are what remain, though in a modified way, in the complex body.

Hence, what makes the elements the *propria materia* of forms of complex bodies are the accidental characteristics of matter which are consequent upon the determination of prime matter by the forms of the elements, which proper accidents allow the forms of the elements themselves to virtually remain in the mixed body. It is, thus, these accidental characteristics of matter which prime matter, of itself, cannot contribute to the complex body but which the elements can and do contribute.

CHAPTER 6

THE CAUSALITY OF MATTER: GENERATION AND VEGETATIVE LIFE

In this chapter, we will examine St. Thomas's theory of human generation, which outlines in a general way the causality of matter at each level of life (vegetative, sensitive and intellective) acquired by the human embryo during its development, and then examine in more detail the causality of matter at the first level of life, the vegetative level, looking at quantity and nutrition as well as the necessary qualities of the human body. The causality of matter at the sensitive and intellective levels of life will then be examined in, respectively, Chapter 7 and Chapter 8.

I) Human Generation

St. Thomas provides two analyses of human generation: an ontological (*in facto esse*) analysis and an embryological (*in fieri*) analysis. While it is his embryological analysis which shall retain most of our attention in this section, a brief review of his ontological account would yet be in order, if only to indicate the

inadequacy of the analysis in respect to disclosing the causality of matter in human generation.³¹⁴

(a) The Ontological Analysis of the Human Being *in facto esse*

In St. Thomas's analysis of the human being *in facto esse*, to ask the question 'how does a human being come to be?' is to ask 'how is the human soul united to its correlate, prime matter?'. Central to this issue in St. Thomas's works is a concern to safeguard the unity of the human being. St. Thomas formulates two important theories which enable him to account for the union of the human soul with prime matter while respecting that being's fundamental unity: the theory of the unicity of the substantial form and the theory of the hierarchy of substantial perfections.

St. Thomas's controversial theory of the unicity of the substantial form sets forth that the human soul informs prime matter without mediation and that it confers all substantial perfections to prime matter.³¹⁵ To inform prime matter without mediation means that the substantial determination of matter granted by the rational soul is not subsequent to any other *substantial* determination already enjoyed by prime matter.

The unmediated (or immediate) union of the rational soul with prime matter is, in St. Thomas's view, essential if the unity of the human being is to be

³¹⁴ A fuller treatment of St. Thomas's analysis of the human being *in facto esse* can be found in my "Human is Generated by Human and Created by God," *American Catholic Philosophical Quarterly* LXX (Summer 1996): 413-427.

³¹⁵ In defending his thesis of the unicity of the substantial form, St. Thomas departed from the views of his contemporaries who either held that two substantial forms, a *forma corporeitas* and a rational soul, compose man or that several substantial forms compose the soul of man. On the views of St. Thomas's contemporaries, see R. Zavalloni's *Richard de Mediavilla et la controverse sur la pluralité des formes* (Louvain: Éditions de l'Institut supérieur de philosophie, 1951).

assured. For, if there were any substantial form determining prime matter prior to the human soul, it would be that form, and not the human soul, which would confer existence upon matter and make the matter to be this or that sort of substance. Furthermore, as the human soul would be a form subsequent to a substantial perfection, it could then only be accidental to the substance already in existence:

[...] the principle of a thing's unity is the same as that of its being; for *one* is consequent upon *being*. Therefore, since each and every thing has being from its form, it will also have unity from its form. Consequently, if several souls, as so many distinct forms, are ascribed to man, he will not be one being, but several. [...] Also, the impossibility noted above will again arise, namely, that from the intellective soul and the body there results a thing that is one not unqualifiedly speaking but only accidentally. For whatever comes to a thing after it is complete in its being, comes to it accidentally, since it is outside that thing's essence. Now, every substantial form makes a being complete in the genus of substance, for it makes a being in act, and this particular thing. Therefore, whatever accrues to a thing after its first substantial form will accrue to it accidentally. Now, the nutritive soul is a substantial form, for *the living* is predicated substantially of man and animal. It will then follow that the sensitive soul accrues to man accidentally and likewise the intellective soul. Thus, neither *animal* nor *man* will signify one thing unqualifiedly speaking, nor will they denote a genus or a species in the category of *substance*.³¹⁶

³¹⁶ *Summa contra Gentiles*, II, cap. 58 (tr. by James F. Anderson). The Latin text (Leonine edition, pp. 409-410) reads: "Ab eodem aliquid habet esse et unitatem: *unum* enim consequitur ad ens. Cum igitur a forma unaquaeque res habeat esse, a forma etiam habebit unitatem. Si igitur ponantur in homine plures animae sicut diversae formae, homo non erit unum ens, sed plura. [...] Item. Adhuc redibit praedictum inconueniens, ut scilicet ex anima intellectiva et corpore non fiat unum simpliciter, sed secundum accidens tantum. Omne enim quod advenit alicui post esse completum, advenit ei accidentaliter: cum sit extra essentiam eius. Quaelibet autem forma substantialis facit ens completum in genere substantiae: facit enim ens actu et hoc aliquid. Quicquid igitur post primam formam substantialem advenit ei, accidentaliter advenit. Cum igitur anima nutritiva sit forma substantialis, *vivum* enim substantialiter de homine praedicatur et de animali; sequetur quod anima sensitiva adveniat accidentaliter, et similiter intellectiva. Et sic neque *animal* neque *homo* significant unum simpliciter, neque aliquod genus aut speciem in praedicamento *substantiae*." See also: *Quaestiones de anima*, q. 9, in corp. and q. 11, in corp.; *De spiritualibus creaturis*, art. 3, in corp.; *Summa theologiae*, I, q. 76, art. 3, in corp.

Holding that there is an intermediate *substantial form* between the human soul and prime matter implies one of two things: that the perfection of being a man is accidental or, if one yet insist that the human soul is a substantial perfection, that human beings are not unqualifiedly one but, in fact, composed of two (or more — depending on how many substantial forms are said to be possessed) substances. For, the substantial union between the human soul and prime matter requires two things: 1) that the soul confer substantial existence upon prime matter and be to the body that principle by which it is called a being; 2) the principle of existence must be one for both component principles, and must be that by which the composite substance exists as a unit.³¹⁷ Now, if the soul were a subsequent form, it could not confer substantial existence upon prime matter, could not place the matter it informs within a determinate species of substance and could not be that by which the hylomorphically composed substance exists as a unit.³¹⁸

Thus, according to St. Thomas, the unity of the human being can only be assured as a real unity through a unique formal principle.³¹⁹ Although it has been suggested, by some authors,³²⁰ that St. Thomas *may* have at first held that a *forma corporeitas* as well as a rational soul compose human beings, there does not appear to be any textual support for this thesis.³²¹

³¹⁷ See, regarding this, Anton C. Pegis's *St. Thomas and the Problem of the Soul in the Thirteenth Century* (Toronto: St Michael's College, 1934), p. 168.

³¹⁸ See, for instance, *Quaestiones de anima*, q. 9, in corp. and q. 11, in corp.; *Summa theologiae*, I, q. 76, art. 3, in corp.; *De spiritualibus creaturis*, art. 3, in corp.

³¹⁹ Zavalloni, *Richard de Mediavilla...*, p. 475.

³²⁰ See, for instance, Frederick Copleston's *A History of Philosophy* (New York: Image Books, 1962), vol. 2, part II, p. 94.

³²¹ One early text which is used to support the claim that St. Thomas may have at first accepted the existence of a *forma corporeitatis* as the first substantial form in a material substance is the following: "Sed prima forma quae recipitur in materia, est corporeitas, a qua numquam denudatur, ut dicit *Comment. [...]*" (*Scriptum super libros Sententiarum Magistri Petri Lombardi*, ed. by P. Mandonnet and M. F. Moos, I, d. 8, q. 5, art. 2, l. 228-229). Such passages can, however, be interpreted as meaning that corporeity is the first perfection conferred by a substantial form of a

As the human soul is the unique substantial form in human beings, it must also be the unique source all substantial perfections (vegetative, sensitive and intellective). To explain how the human soul can confer not only its proper perfection, intellection, but all other substantial perfections as well, St. Thomas set forth a theory of the hierarchy of forms.

This theory, drawn from Aristotle, compares substantial forms to the species of figures.³²² According to this theory, the species and forms of things differ from one another as the perfect and the less perfect and, just as a pentagon *contains* and *exceeds* a tetragon, the rational soul, according to St. Thomas, contains and exceeds the sensitive and nutritive/vegetative souls:

[...] just as a surface which is of a pentagonal shape is not tetragonal by one shape, and pentagonal by another — since a tetragonal shape would be superfluous, as being contained in the pentagonal — so neither is Socrates a man by one soul, and an animal by another; but by one and the same soul he is both animal and man.³²³

The point of this theory of the hierarchy of forms is that a more perfect form confers not only its specific perfection but, also, all lower perfections (for example, a sensitive soul will confer its specific sensitive perfection as well as the nutritive/vegetative perfection).³²⁴ This is explained by St. Thomas, in question nine of his *Quaestiones de anima*, in the following way:

material composite and should, in fact, be interpreted in this way given that St. Thomas does express his theory of the unicity of the substantial form even in his *Scriptum* (see, for instance, II, d. 12, q. 1, art. 4, in corp.).

³²² See, for instance, Aristotle's *De anima*, II, 3, 414b28.

³²³ *Summa Theologiae*, I, q. 76, art. 3, in corp. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Sicut [...] superficies quae habet figuram est tetragona, et per aliam pentagona; quia superflueret figura tetragona, ex quo in pentagona continetur; ita nec per aliam animam Socrates est homo, et per aliam animal, sed per unam et eandem." See also: *Summa theologiae*, art. 4, in corp.; *ibid.*, art. 4, ad 3; *ibid.*, art. 6, ad 1; *ibid.*, art. 5, in corp.; *De spiritualibus creaturis*, art. 3, in corp.; *Quaestiones de anima*, q. 11, ad 18.

³²⁴ See, on the bearing of this theory, B. C. Bazán's "La corporalité selon S. Thomas," *Revue philosophique de Louvain* 81 (1983): 369-409, esp. 393.

[...] the diversity of natural forms, through which matter is constituted in diverse species, must be understood to mean that one form bestows another perfection in addition to that conferred by another form; for instance, one form constitutes matter in corporeal existence only [...] But another and more perfect form constitutes matter in corporeal existence and confers vital existence in addition; and yet another form confers both vital existence on matter while giving it sensory existence as well; and so it is with other forms.³²⁵

As the human, rational soul is superior to both vegetative and sensitive souls, it will confer not only its specific perfection (rationality) but, also, both the vegetative and sensitive perfections. And hence, as St. Thomas himself states, "it is the [rational] soul itself which perfects a human being according to diverse levels of perfection".³²⁶

How does the rational soul confer all these substantial perfections? Are they conferred all at once or successively? According to St. Thomas, they cannot be conferred all at once because prime matter is, of itself, only in potency to substantial corporeal existence (the lowest grade of perfection) and requires certain dispositions in order to be in potency towards further perfections.³²⁷ The human soul must, then, somehow confer its vegetative, sensitive and intellective perfections successively.

This, however, raises two important questions: how does the human soul successively confer its vegetative, sensitive and intellective perfections and, if

³²⁵ *Quaestiones de anima*, q. 9, in corp. (tr. by James H. Robb). The Latin text (Leonine edition, l. 176-190) reads: "[...] oportet intelligere diuersitatem formarum naturalium, secundum quas materia constituitur in diuersis speciebus, ex hoc quod una addit perfectionem super aliam. Vt puta quod una forma constituit in esse corporali tantum (hunc enim oportet esse infimum gradum formarum materialium, eo quod materia non est in potentia nisi ad formas corporales; que enim incorporea sunt, immaterialia sunt, ut in precedentibus ostensum est); alia autem perfectior forma constituit materiam in esse corporali et ulterius dat ei esse uitale; et ulterius alia forma dat ei esse corporale et esse uitale et super hoc addit esse sensitium; et sic est in aliis."

³²⁶ *Quaestiones de anima*, q. 9, in corp. (tr. by James H. Robb). The Latin text (Leonine edition, l. 234-235) reads: "[...] homo ab ipsa anima rationali perficitur secundum diuersos gradus perfectionum [...]"

³²⁷ See, for instance, *Summa theologiae*, I, q. 76, art. 6, ad 2.

dispositions are required by matter for the reception of higher perfections, how can St. Thomas still claim that the human soul informs prime matter immediately?

According to St. Thomas, once prime matter is perfected in substantial corporeal existence, it can then be regarded as subject to accidents. These *accidents* make it a matter proper for the reception of a higher perfection — they are *dispositions* toward the reception of higher perfections:

Dimensions of quantity are accidents consequent upon the corporeity which belongs to the whole matter. Hence, once matter is understood as corporeal and measurable, it can be understood as distinct in its various parts, and as receptive of different forms according to further degrees of perfection.³²⁸

Dimensions of quantity follow upon the determination of prime matter by a form which confers substantial corporeal existence. Once these accidents are present in the matter, a higher perfection may be received (for instance, the perfection of life).³²⁹ Other accidents will follow upon the reception of that higher perfection (if such a perfection is, in fact, received) and an even higher perfection may be then be received (for instance, the sensitive perfection), and so on.

These accidents consequent upon the reception of a certain perfection are required dispositions for the reception of higher perfections because, according to St. Thomas, "what is specifically proper to a higher form is not received by matter except through the mediation of that which is specifically

³²⁸ *Summa theologiae*, I, q. 76, art. 6, ad 2 (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Dicendum quod dimensiones quantitativae sunt accidentia consequentia corporeitatem, quae toti materiae convenit. Unde materia iam intellecta sub corporeitate et dimensionibus, potest intelligi ut distincta in diversas partes, ut sic accipiat diversas formas secundum ultiores perfectionis gradus." See also: *Quaestiones de anima*, q. 9, in corp.

³²⁹ This accords with St. Thomas's position regarding the reception of a form of a complex body by elements which, as we saw in the last chapter, maintains that certain accidents (hot, dry, etc.) make the elements proper to the reception of a form of a complex body.

proper to a lower form".³³⁰ Although necessary, these dispositions are not, according to St. Thomas, intermediaries between form and matter but, rather, intermediaries between matter inasmuch as it is already determined by a form which grants it the perfection of a lower order and the same form inasmuch as it confers the ultimate perfection:

It must therefore be understood that even a more perfect form, to the extent that it constitutes matter in the perfection of a lower level of being, has to be considered, in composition with its matter, as material with respect to a higher perfection. And to carry the analysis further, this first composition, which is one of matter and form inasmuch as it is already constituted in corporeal existence, is matter with respect to the higher perfection, life. [...] And so one and the same form, insofar as it constitutes matter in the actuality of a lower level of perfection, is in a sense intermediate between matter and itself, insofar as it constitutes matter in the actuality of a higher level of perfection.³³¹

Dispositions of this kind mediate, not between prime matter and the human soul (which would contradict St. Thomas's doctrine of the immediate union of the human soul with prime matter), but between a lower level of perfection granted by the human soul and a higher level of perfection granted by the same soul, i.e., mediate between two perfections of *one and the same* substantial form.

³³⁰ *Quaestiones de anima*, q. 9, ad 9 (tr. by James H. Robb). The Latin text (Leonine edition, l. 446-448) reads: "[...] quia id quod est proprium forme non recipit nisi mediante eo quod est proprium inferioris forme [...]".

³³¹ *Quaestiones de anima*, q. 9, in corp. (tr. by James H. Robb) (emphasis mine). The Latin text (Leonine edition) reads: "Oportet igitur intelligere quod forma perfectior, secundum quod constituit materiam in perfectione inferioris gradus, simul cum materia composita intelligatur ut materiale respectu ulterioris perfectionis, et sic ulterius procedendo: utpote materia prima, secundum quod iam constituta est in esse corporeo, est materia respectu ulterioris perfectionis que est uita. [...] Et sic quodammodo una et eadem forma, secundum quod constituit materiam in actu inferioris gradus, est media inter materiam et se ipsam, secundum quod constituit eam in actu superioris gradus." See also, on this point, *Quaestiones de anima*, q. 9, ad 5 and *Summa theologiae*, I, q. 76, art. 6, in corp.

Hence, it is *not* the case that there is a substantial form for each level of perfection found in human beings. On St. Thomas's view, it is one and the same form, insofar as it constitutes matter in the actuality of a lower level of perfection, which mediates between matter and itself, insofar as it constitutes matter in the actuality of a higher level of perfection.³³² Although accidental dispositions are required for the reception of any perfection other than that of substantial corporeal existence, they are not direct intermediaries between form and prime matter.³³³

Let us briefly summarize St. Thomas's *in facto esse* account of human generation from the foregoing considerations. The human soul is united to prime matter immediately. The first perfection conferred by the human soul is that of corporeity and, once certain accidents proper to that perfection inhere in the matter — making the matter proper to the reception of the vegetative perfection, that perfection is conferred by one and the same human soul. Once the required dispositions for the reception of the sensitive perfection inhere in the matter, that perfection is then conferred, again, by the same soul and, once the required dispositions for the reception of the intellective perfection inhere in matter, the soul confers that perfection (which is its ultimate perfection).

Thus, on this account of human generation, it is the soul which is united to prime matter, the soul which confers upon matter the initial perfection of corporeity and one and the same soul which confers its own higher perfections (the vegetative, sensitive and intellective perfections).³³⁴

³³² *Quaestiones de anima*, q. 9, ad 5. See also citations in previous footnote.

³³³ We shall have more to say regarding accidental dispositions in the next section.

³³⁴ For some of the objections which have been raised against St. Thomas's *in facto esse* account and possible replies to those objections, see my "Human is Generated...", pp. 419-420.

(b) The Embryological Analysis of the Human Being *in fieri*

The strength of St. Thomas's ontological analysis of the human being *in facto esse*, as we just saw, resides in positing that the human substantial form is immediately united to prime matter, as this safeguard's the unity of that being. In his embryological analysis of the human being *in fieri*, however, St. Thomas claims that the rational soul cannot be present at the beginning of embryological development.

In order to present at the beginning of embryological development, the rational soul would either have to be educed from the potency of matter by one of the human parents or be infused by God at the moment of conception. The first alternative is impossible, for, as we saw earlier, the subsistence of the rational soul requires that it be directly created by God (because it has an operation which transcends matter and, thus, its being cannot be educed from matter³³⁵) and, hence, according to St. Thomas, "to hold that the intellectual soul is caused by the begetter is nothing else than to hold the soul to be non-subsistent".³³⁶

Although the second alternative, that the human soul is created by God and infused by Him at the moment of conception, would safeguard the subsistence of the rational soul, it also cannot be admitted. For, according to St. Thomas, this would imply either (a) that the embryo has the perfection of the rational soul actually or (b) that the rational soul is wholly present but in potency

³³⁵ See, for instance, *Quaestiones de anima*, q. 2, ad 12.

³³⁶ *Summa theologiae*, I, q. 118, art. 2, in corp. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Ponere ergo animam intellectivam a generante causari, nihil est aliud quam ponere eam non subsistentem [...]" See also, *ibid.*, q. 90, art. 2, in corp.; *Summa contra Gentiles*, II, cap. 86 (Leonine edition, pp. 534-535), cap. 87 (Leonine edition, pp. 537-538) and cap. 89 (Leonine edition, pp. 540-543).

in the embryo, gradually being brought into act with the formation of organs.³³⁷ The first alternative is, however, contrary to fact (there being no sign of the rational soul's activity at the beginning of embryological development)³³⁸ and the second cannot be admitted, for, according to St. Thomas, if a substantial form is said to be brought into act continuously or by degrees, there would be movement in the genus of substance just as there is in the genus of quality. However, this is impossible for because, first of all, *generatio fit instanti* and, secondly, *forma substantialis non suscipit magis et minus*.³³⁹

Hence, because the human soul is a subsistent substantial form and cannot be brought into act gradually, it cannot be transmitted by human generators and cannot be present at the beginning of embryological development. What, then, is present at the beginning of embryological development?

According to St. Thomas, as humans generate through coition like other animals, what is present at the onset of conception is the foetal matter provided by the female (which is informed by a nutritive/vegetative soul) and the active force in the semen of the male:

In perfect animals, generated by coition, the active force is in the semen of the male [...] but the foetal matter is provided by the female. In this matter the vegetative soul exists from the very beginning [...] This matter [...] is transmuted by the power which is in the semen of the male, until it is actually informed by the sensitive soul."³⁴⁰

³³⁷ *Summa theologiae*, I, q. 118, art. 2, in corp. &, particularly, the replies to the objections.

³³⁸ See, for instance, *De potentia*, q. 3, art. 9, ad 9.

³³⁹ See, for instance, *De potentia*, q. 3, art. 9, ad 9.

³⁴⁰ *Summa theologiae*, I, q. 118, art. 1, ad 4 (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Dicendum quod in animalibus perfectis, quae generantur ex coitu, virtus activa est in semine maris [...]; materia autem foetus est illud quod ministratur a femina. In qua quidem materia statim a principio est anima vegetabilis [...] Huiusmodi [...] materia transmutatur a virtute quae est in semine maris, quousque perducatur in actum animae sensitivae [...]".

If the embryo has first of all a vegetative soul and then a sensitive soul, how can St. Thomas still claim that only one substantial form, the rational soul, perfects a human being according to diverse levels of perfection? When and how does the rational soul inform the embryo? Are there, now, three substantial forms (vegetative, sensitive, rational), three substances composing human beings?

St. Thomas sets out, what may be called, a theory of the 'succession of substantial forms' in order to answer to these difficulties:

We must [...] say that since the generation of one thing is the corruption of another, it follows of necessity both in men and in other animals that when a more perfect form supervenes the previous form is corrupted; yet so that the supervening form contains the perfection of the previous form, and something in addition. It is in this way that through many generations and corruptions we arrive at the ultimate substantial form, both in man and other animals. [...] We conclude therefore that the intellectual soul is created by God at the end of human generation, and that this soul is at the same time sensitive and nutritive, for the pre-existing forms have been corrupted.³⁴¹

The foetal matter provided by the female is not prime matter but matter informed by the vegetative soul. When the semen of the male is introduced into this foetal matter, it transmutes it until it is actually informed by the sensitive soul, corrupting the vegetative soul initially possessed by the matter in the process. Hence the semen, although not itself informed by the sensitive soul,³⁴² when

³⁴¹ *Summa theologiae*, I, q. 118, art. 2, ad 2 (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Et ideo dicendum est quod cum generatio unius semper sit corruptio alterius, necesse est dicere quod tam in homine quam in animalibus aliis, quando perfectior forma advenit fit corruptio prioris; ita tamen quod sequens forma habet quidquid habebat prima, et adhuc amplius. Et sic per multas generationes et corruptiones pervenitur ad ultimam formam substantialem, tam in homine quam in aliis animalibus. [...] Sic igitur dicendum est quod anima intellectiva creatur a Deo in fine generationis humanae, quae simul est et sensitiva et nutritiva, corruptis formis praeeistentibus." See also: *De spiritualibus creaturis*, art. 3, ad 13; *Quaestiones de anima*, q. 11, ad 1.

³⁴² See, for instance, *Summa theologiae*, I, q. 118, art. 2, ad 2. Although this passage does not explicitly state that the form of semen confers a nutritive perfection to foetal matter, this would certainly seem to be the case.

introduced into appropriate matter (human semen can only transmute human foetal matter) causes the acquisition of the sensitive soul.³⁴³ Thus, the embryo is said to have first of all the form of semen³⁴⁴ through which the sensitive soul is acquired.

Although the vegetative form possessed by the foetal matter is corrupted in the process of acquiring a sensitive soul, its perfection is not lost because, as we saw earlier, the sensitive form which the embryo acquires is a more perfect form (the sensitive soul) and, as a more perfect form, that form confers both its specific sensitive perfection and all lower perfections (including the vegetative perfection).

St. Thomas explains, in a like manner, the embryo's acquisition of the rational soul. Once the sensitive operational capability of the embryo is completely developed, God creates the rational soul and unites it with the embryo. With the acquisition of this form, the sensitive form is corrupted but its perfection is not lost, for, the rational soul confers that perfection and all lower perfections in addition to conferring rationality.

Although the human soul is not present at conception, once it is acquired by the embryo, it is the unique principle of all the embryo's substantial perfections, making the embryo to be, to be a body, to be a living body, to be a sensitive body, to be a rational creature.³⁴⁵ The reason why the human soul cannot be present from the moment of conception is that, as we saw, the matter it is united to must be appropriate (have all the required accidental dispositions),

³⁴³ Although the doctrine sounds materialistic, it is important to remember that, according to St. Thomas, the vegetative and sensitive souls are *educed* from the potency of matter *by an active principle*.

³⁴⁴ *Quaestiones de anima*, q. 11, ad 1.

³⁴⁵ See *Quaestiones de anima*, q. 9, in corp.; *ibid.*, q. 11, in corp.; *ibid.*, q. 11, ad 1; *ibid.*, q. 11, ad 18; *Summa Theologiae*, I, q. 76, art. 4, ad 1; *ibid.*, I, q. 76, art. 3, in corp.

that is, must be such that the rational soul may confer its proper perfection in act (and not simply be possessed by the embryo in potency).

Although there would appear to be a lack of correspondence between St. Thomas's *in facto esse* account and this *in fieri* account of human generation regarding when the human soul makes the embryo to be a human being with all the perfections proper to a human being, the requirement that the matter which is to receive a certain perfection be appropriate for that perfection is, as we have seen, present in both accounts.³⁴⁶

(c) The Causality of Matter in Human Generation

According to St. Thomas, matter is the cause of natural generation, in the sense of being that out of which all corporeal substances are constituted.³⁴⁷ As we just noted, to this general sort of causality (material causality as opposed to formal, efficient or final causality), material accidents are additionally said by St. Thomas to cause the acquisition of certain substantial perfections by disposing matter appropriately for the reception of those perfections.³⁴⁸

According to St. Thomas, even the rational soul cannot be received in matter unless the matter is apt to receive this perfection, i.e. unless it possesses appropriate accidental characteristics (which are caused by nature³⁴⁹) and, in

³⁴⁶ I discuss the lack of correspondence between both accounts of human generation in my "Human is Generated...", esp. 426-427.

³⁴⁷ See previous chapter, section II.

³⁴⁸ The same point is made, as we saw in the last chapter, in St. Thomas's analysis of the coming-to-be of complex bodies from the elements.

³⁴⁹ See, on this, *De potentia*, q. 3, art. 4, ad 7.

this sense, matter is a cause of the union of the rational soul with matter.³⁵⁰ In disposing matter in such a way as to cause the union of the rational soul with matter, the accidental characteristics due to matter play a role in the coming-to-be of a human being which is both necessary and complementary to the role assumed by God (creation of the rational soul): human is generated by human and created by God.

For the acquisition of each successive substantial perfection other than the initial perfection of corporeity (namely, the vegetative, sensitive and intellectual perfections), the embryo will require certain accidental dispositions of matter, for instance, dimensions of quantity,³⁵¹ specific organs, gender, etc. These accidental dispositions are, according to St. Thomas, of two general kinds:

Now matter, understood as constituted in substantial existence according to the perfection of a lower level of being, can consequently be regarded as subject to accidents. For a substance, as constituted in that lower level of perfection, must have *proper accidents* which necessarily inhere in it. For example,

³⁵⁰ *De potentia*, q. 3, art. 4, ad 7 (Marietti edition, p. 47): "forma potest considerari dupliciter: uno modo secundum quod est in potentia; et sic a Deo materia concreat, nulla disponentis naturae actione interveniente. Alio modo secundum quod est in actu; et sic non creatur, sed de potentia materiae educitur per agens naturale; unde non oportet quod natura aliquid agat dispositive ad hoc quod aliquid creetur. Quia tamen aliqua forma naturalis est quae per creationem in esse producit, scilicet anima rationalis, cuius materiam natura disponit; ideo sciendum est, quod cum creationis opus materiam tollat, dupliciter aliquid creari dicitur. Nam quaedam creantur nulla materia praesupposita, nec ex qua nec in qua, sicut Angeli et corpora caelestia; et ad horum creationem natura nihil operari potest dispositive. Quaedam vero creantur, etsi non praesupposita materia ex qua sint, praesupposita tamen materia in qua sint, ut animae humanae. Ex parte ergo illa qua habent materiam in qua, natura potest dispositive operari; non tamen quod ad ipsam substantiam creati, naturae actio se extendat."

³⁵¹ According to St. Thomas, corporeal existence is always accompanied by quantity, which makes the corporeal substance divisible. See, for instance, *In Phys.* III, lect. 5 (Marietti edition, p. 158, sct. 322: "quantitas proprie consequitur materiam"); *Summa contra Gentiles*, I, cap. 99 (Leonine edition, p. 65b: "Omnis quantitas in quadam multiplicatione partium consistit"); *In Metaph.*, V, lect. 15 (Marietti edition, p. 266, sct. 977: "quantum dicitur quod est divisibile in ea quae insunt"). Divisibility, it should be noted, is a necessary condition of the possibility of developing organs. On this point, see for instance, *Quaestiones de anima*, q. 8, ad 14 (Leonine edition, p. 73, l. 459-463: "quamvis anima sit simplex [...] requirit corpus organicum quod sit dissimilium partium").

because matter is constituted in corporeal existence through forms, the immediate consequence is that it has dimensions; by reason of these dimensions it is understood to be matter divisible into diverse parts, that so, through its diverse parts, it might be capable of acquiring diverse forms. Furthermore, from the fact that matter is now understood as constituted in some kind of substantial existence, one can consider matter as capable of acquiring accidents which in turn makes it a matter proper for the reception of a yet higher perfection. Now dispositions of this kind are understood as prior to the form, inasmuch as the form is induced into matter by an agent; although there are some accidents so proper to the form that they cannot be produced in matter except by the form itself.³⁵²

Proper accidents are caused by the substantial form when it is conjoined to matter and they inhere in their subject essentially ("Every accident is not accidentally in its subject; for some are proper accidents [...]"³⁵³), as, for example, risibility in human beings and heat in fire.³⁵⁴ The other general kind of accidents are, according to St. Thomas, caused by the principles of the individual and they inhere in their subject either inseparably or separably:

Some accidents are caused by the principles of the species and are called proper accidents, as 'risible' for human beings. Other accidents are caused by the principles of an individual, and these

³⁵² *Quaestiones de anima*, q. 9, in corp. (emphasis mine) (tr. by James H. Robb). The Latin text (Leonine edition) reads: "Materia autem, prout intelligitur constituta in esse substantiali secundum perfectionem inferioris gradus, per consequens intelligi potest ut accidentibus subiecta, nam substantia, secundum illum inferiorem gradum perfectionis, necesse est quod habeat quedam accidentia propria, que necesse est ei inesse. Sicut ex hoc quod materia constituitur in esse corporeo per formam, statim consequitur ut sint in ea dimensiones per quas intelligitur materia diuisibilis per diuersas partes, ut sic secundum diuersas sui partes possit esse susceptiua diuersarum formarum. Et ulterius, ex quo materia intelligitur constituta in esse quodam substantiali, intelligi potest ut susceptiua accidentium quibus disponitur ad ulteriorem perfectionem, secundum quam materia fit propria ad altiore perfectionem suscipiendam. Huiusmodi autem dispositiones preintelliguntur forme ut inducte ab agente in materiam, licet sint quedam accidentia ita propria forme quod non nisi ex ipsa forma causentur in materia."

³⁵³ *Summa theologiae*, I-II, q. 18, art. 3, ad 2 (tr. by the English Dominicans). The Latin text (Ottawa edition) reads: "non omnia accidentia per accidens se habent ad suam substantiam sed quaedam sunt per se accidentia [...]"

³⁵⁴ Regarding proper accidents, see for example: *Summa theologiae*, I, q. 29, art. 1, ad 3; *ibid.*, q. 76, art. 6, ad 1; *ibid.*, q. 77, art. 1, ad 5; *ibid.*, q. 77, art. 6, ad 3; *ibid.*, I-II, q. 18, art. 3, ad 2; *De ente et essentia*, cap. 6 (Leonine edition, pp. 379-381); *De spiritualibus creaturis*, art. 3, ad 18; *ibid.*, art. 11, in corp.; *Summa contra Gentiles*, IIIa, cap. 69 (Leonine edition, pp. 199-202); *Quaestiones de anima*, q. 9, ad 5; *ibid.*, q. 12, ad 7.

are of two kinds. For either they have a cause that permanently resides in the subject, and these are inseparable accidents, for example, 'masculine,' 'feminine' and other accidents of this kind; or they have a cause which does not reside permanently in the subject, and these are separable accidents, for example, sitting and walking. [...]³⁵⁵

According to St. Thomas, although both proper accidents (e.g., dimensions of quantity) and inseparable accidents (e.g., gender) are required for the reception of a higher perfection (for instance, for the embryo's reception of the human substantial form), each has a different role to play. The role of inseparable accidents is to dispose matter for the reception of this or that sort of soul and, hence, intermediate between the soul and prime matter.³⁵⁶ Lower perfections are said to be dispositions towards a higher perfection granted by one and the same soul and, for this reason, proper accidents (like the faculties of the soul) do not intermediate between the soul and prime matter but only between levels of perfection granted by the same substantial form, i.e. between the soul and itself.³⁵⁷

Thus, the causality of proper accidents and inseparable accidents differ and, also, are ascribed in different senses to matter. In the case of proper accidents, which are consequent upon the soul's determination of matter, both the soul and matter are said to be causes, the soul being that *by which* the

³⁵⁵ *Quaestiones de anima*, q. 12, ad 7 (tr. by James H. Robb). The Latin text (Leonine edition) reads: "[...] quedam enim causantur ex principiis speciei et dicuntur propria, sicut risibile homini; quedam causantur ex principiis individui, et hoc dupliciter: quia uel habent causam permanentem in subiecto, et hec sunt accidentia inseparabilia, sicut masculinum et femininum et alia huiusmodi; quedam uero habent causam non semper permanentem in subiecto, et hec sunt accidentia separabilia, ut sedere et ambulare." See also, regarding separable and inseparable accidents: *De spiritualibus creaturis*, art. 11, in corp; *De ente et essentia*, cap. 6 (Leonine edition, pp. 379-381); *In De generatione et corruptione*, I, lect. 14 (Leonine edition, pp. 311-313). St. Thomas also discusses separable and inseparable accidents in his commentary on Boethius's *De Trinitate*, as Prof. Maurer points out in the introduction of *Faith, Reason, and Theology: Questions I-IV of the Commentary on Boethius' De Trinitate*, (tr. by Armand Maurer, Toronto: PIMS, 1986), p. xxix.

³⁵⁶ See, for instance, *Quaestiones de anima*, q. 9, in corp.

³⁵⁷ See, for instance, *Quaestiones de anima*, q. 9, ad 5.

accidents inhere and matter being that *in which* and *according to which* proper accidents inhere. For, all determinations are received according to the mode of the recipient: *quicquid recipitur, per modum recipientis recipitur*.³⁵⁸ In the case of inseparable accidents (as well as separable accidents), which are caused by the principals of the individual (i.e., the composite), matter is not only that *in which* and *according to which* these sorts of accidents inhere but, also, that *by which* they inhere. For, the composite, which is their cause, is considered as *matter* in respect to the perfection to be received: "this first composition, which is one of matter and form inasmuch as it is already constituted in corporeal existence, is matter with respect to the higher perfection".³⁵⁹

The causality of the material dimension of human beings is, thus, quite significant. Beyond the obvious fact that we could not have dimensions of quantity, organs, etc. without being material and the equally obvious fact that, by being material, we are also subject to corruption (which point we shall discuss in the last section of this chapter), matter is also a cause of such inseparable accidents as gender, temperature (we require a body of a certain temperature), complexion (we require a body of a certain complexion), etc.³⁶⁰

That the causality of matter is not merely negative (the cause of disease and corruption) should already be evident from these considerations. We could not be the sort of creatures that we are (physical, living, sensitive, etc.) without being material. Moreover, through inseparable and, to a lesser extent, separable

³⁵⁸ St. Thomas assigns two sources to this principle. In his *De veritate* (q. 24, art. 8, arg. 6), he attributes it to the *Liber de causis*, paragr. 9 [paragr. 10 in St. Thomas's editions]; paragr. 19 [20]; paragr. 23 [24]. In his *Super Sent.* (II, d. 17, q. 2, art. 1, arg. 3), he attributes the principle to the [Pseudo-] Dionysius (*De divinis nominibus*, IV, 1) as well as to the *Liber de causis*.

³⁵⁹ *Quaestiones de anima*, q. 9, in corp. (tr. by James H. Robb). The Latin text (Leonine edition) reads: "utpote materia prima, secundum quod iam constituta est in esse corporeo, est materia respectu ulterioris perfectionis".

³⁶⁰ We shall discuss the required complexion of the human body in the last section of this chapter.

accidents (like hair color and skin color), matter contributes significantly to who we are as individuals: for instance, being male or female, being black, brown, red or white of skin, being more or less mentally agile (which, as we shall see in the last section of this chapter, depends on the body's degree of complexion), etc.

Matter also, however, conditions the acts of the soul. For, all determinations are, as we have already noted, received according to the mode of the recipient. Now, the acts of the soul differ at each level of perfection but as we are, in this chapter, concerned only with the causality of matter at the vegetative level of perfection, we shall restrict our attention to the acts of the soul at that level of perfection. The soul has three acts at the vegetative level of perfection: generation (procreation), nutrition and growth. Having already discussed the causality of matter in human generation, let us now turn our attention to growth and nutrition.

II) Growth and Nutrition

Growth and nutrition are, according to St. Thomas, acts of the vegetative soul.³⁶¹ The material cause of these two acts of the vegetative soul is, however, the elements. The elements are the material cause of nutrition in that ingested food is converted and digested through heat (which is a proper quality of fire) and the material cause of growth in being that which is added to the substance through nutrition:

An inanimate natural thing acquires simultaneously its specific nature and its appropriate quantity; this cannot happen in living

³⁶¹ See, for instance, *In De generatione et corruptione*, lect. 16 (Leonine edition, pp. 318-19). This does not mean that growth and nutrition are not, also, acts of sensitive and intellective souls. For, we must remember that, according to St. Thomas, higher souls (like sensitive and intellective souls) confer all lower perfections in addition to their proper perfection.

things, for at the beginning of their process of generation they must be small in size because they are begotten from semen, and consequently they must have, in addition to the generative power, an augmentative power which brings them to their proper size. This growth must come about because something is changed into the substance that is to be enlarged and is thus added to its bulk. Now this change takes place because of heat, which both converts the food that the body takes in from outside and also digest that already inside it.³⁶²

Although this material causality of the elements is clearly necessary, it may seem as though it has no effect upon the augmentative and nutritive acts of the vegetative soul themselves. This is not, however, the case. According to St. Thomas, over time the causality of the elements in growth and nutrition weaken the augmentative and nutritive acts of the soul.³⁶³ The causality of the elements in growth and nutrition is, thus, not simply complimentary to the vegetative acts of the soul, but has an impact on those acts themselves.

Before turning our attention to the causality of matter at the sensitive and intellective levels of perfection, we must first examine the implications of what we explained so far regarding the nature of the human soul and the causality of matter for what St. Thomas will say about the *sort of body* required by the human soul.

³⁶² *Quaestiones de anima*, q. 13, ad 15. The Latin text (Leonine edition) reads: "[...] res naturalis inanimata simul recipit speciem et debitam quantitatem; quod non est possibile in rebus uiuentibus, quas oportet in principio generationis esse modice quantitatis, quia generantur ex semine. Et ideo oportet quod preter uim generatiuam in eis sit uis augmentatiua, que perducatur ad debitam quantitatem. Hoc autem fieri oportet per hoc quod aliquid conuertitur in substantiam augmentandi, et sic additur ei. Hec autem conuersio fit per calorem, qui et conuertit id quod extrinsecus apponitur, et resoluit etiam id quod inest." See, also, *In De generatione et corruptione*, lect. 15 (Leonine edition, p. 316).

³⁶³ See, for instance, *In De generatione et corruptione*, lect. 17 (Leonine edition, p. 321).

III) The Qualities of the Human Body

What kind of body should the human soul be united to? What sort of qualities should the human body possess? Is the specific character of the human body due to the soul, to matter or to both the soul and matter?

Although St. Thomas's reflections regarding the kind of body the human soul should be united to developed between the time he wrote his commentary on the *Sentences* of Peter Lombard and when he wrote his *Quaestiones de anima*, his main conclusion remains the same throughout his works: the human soul must be united to a body of 'balanced complexion'.³⁶⁴ For this reason as well as limitations of time and space, we shall restrict our attention to his mature position as it can be found question 8 of his *Quaestiones de anima*.

Question 8 of *Quaestiones de anima* asks whether the rational soul ought to be united to a body such as the human body (*utrum anima rationalis tali corpori debuerit uniri quale est corpus humanum*). This question is significant to our examination of the causality of matter and the human body, for, at least one of the issues addressed in this question is why our souls are united to a material body rather than a completely spiritual body (objection 8). Would we not be better off if our souls were not united to a material body?

According to St. Thomas, it would not be fitting for the human soul to be united to a completely spiritual body because, as the lowest sort of form in the genus of intelligible forms, it must acquire intelligible species through the senses. To acquire intelligible species in this way cannot, however, be accomplished

³⁶⁴ In his commentary on the *Sentences* of Peter Lombard, St. Thomas argues that the human soul must be united to a 'well-complexioned' body (*corpori bene complexionato*) such as is the human body because it must be united to a body which most closely resembles the body of the heavens (*simillimum caelo*). In his *Quaestiones de anima*, on the other hand, St. Thomas still argues that the human soul is united to a body of 'balanced mixture' (*aequalis complexionis*) but denies that it is united to such a body because of any resemblance it (the human body) may have to the body of the heavens. See, regarding this point, Kevin White's "Two Studies....," pp. 1-2; St. Thomas's *In II Sententiarum*, d. 1, q. 2, art. 5; and *Quaestiones de anima*, q. 8, in corp.

without bodily organs. Hence, it is necessary that a human soul be united to a corporeal body.³⁶⁵

Not just any sort of corporeal body will, however, do. Because of the manifold powers of our souls, our bodies must possess a diversity of parts and of qualities.³⁶⁶ They must also be of such a kind that they are particularly suitable for acquiring sensible species and, thus, must be arranged in the best possible way for the operation of sensing.³⁶⁷

Thus, all the organs of our bodies must be organized so that we might sense most effectively. That our organs are so organized is indicated by various facts, for example, the size of our brain, our erect position, etc.

[...] because a well ordered brain is necessary for the effective condition of the internal sense powers, for example, the imagination, the memory and the cogitative power, a human being was made in such a way that in proportion to his size he has a brain that is larger than that of any other animal. Also, in order that a human being's operation be more free, a human being has his head placed at the top of his body; for a human being is the only animal that stands erect, whereas other animals move along in a bent-over position. In order to possess and maintain this erect position, the heart must possess a great deal of heat by which many spirits may be generated, so that through the greater abundance of these spirits produced by heat, the body might be maintained in an upright position [...]³⁶⁸

³⁶⁵ *Quaestiones de anima*, q. 8, in corp. See also, *ibid.*, q. 8, ad 1.

³⁶⁶ *Quaestiones de anima*, q. 8, ad 14. See also, *ibid.*, q. 9, in corp. and q. 2, ad 19.

³⁶⁷ *Quaestiones de anima*, q. 8, in corp.

³⁶⁸ *Quaestiones de anima*, q. 8, in corp. (tr. by James H. Robb). The Latin text (Leonine edition) reads: "Vnde, quia ad bonam habitudinem potentiarum sensitiuarum interiorum, puta ymaginationis et memorie et cogitatie uirtutis, necessaria est bona dispositio cerebri, factus est homo habens maius cerebrum inter omnia animalia, secundum proportionem sue quantitatis. Et ut liberor sit eius operatio, habet caput sursum positum, quia solus homo est animal rectum, alia uero animalia curua incedunt. Et ad hanc rectitudinem habendam et conseruandam necessaria fuit habundantia caloris in corde, per quam multi spiritus generarentur, ut per caloris habundantiam et spirituum corpus possit in directum sustineri."

However, as our bodies must be of such a kind that they are particularly suitable for acquiring sensible species, they must not only be arranged in the best possible way for the operation of sensing but must, also, be an extremely suitable organ for the sense of touch, for, the sense of touch is the foundation of all the other senses.³⁶⁹

Now to be an extremely suitable organ for the sense of touch requires, according to St. Thomas, that the body to which the human soul is united be an equal blending of the four elements brought to the highest possible median state:

[...] the sense of touch is capable of knowing those elements of which an animal body must be composed, namely, the hot and the cold, the moist and the dry. Hence it is impossible that the organ of the sense of touch should be totally deprived of any one of these four elements that are its sensible object; but it must rather be constituted as a kind of mean among them all, for thus it is in potency to contraries. Consequently the body to which the rational soul is united, since it must be extremely suitable for the sense of touch, must be brought to the highest possible degree of this median state through an equal blending of the four simple elements.³⁷⁰

As an equal blending of the four simple elements brought to the highest possible median state, human bodies are, according to St. Thomas, the pinnacle of perfection in nature:

And from this constitution of the human body we see that the entire operation of inferior powers terminates in a human being as in the perfection of nature. For we observe that that operation of nature advances gradually from simple elements, by combining them, until

³⁶⁹ *Quaestiones de anima*, q. 8, in corp. See also, *ibid.*, q. 8, ad 12. We shall discuss the sense of touch in greater detail in the next chapter.

³⁷⁰ *Quaestiones de anima*, q. 8, in corp. (tr. James H. Robb). The Latin text (Leonine edition) reads: "[...] tactus est cognoscituius eorum ex quibus necesse est componi corpus animalis, scilicet caloris et frigoris, humidi et sicci. Vnde impossibile est quod organum tactus omnino sit reductum ad medium: sic enim est in potentia ad contraria. Corpus igitur cui anima rationalis unitur, cum debeat esse conuenientissimum ad sensum tactus, oportet quod sit maxime reductum ad medium per equalitatem complexionis."

it achieves the most perfect mode in which things may be combined, the mode found in the human body.³⁷¹

As our bodies must be an 'equal blending of the four elements brought to the highest possible median state', they must, in St. Thomas's own words, be 'of a very balanced disposition' (*temperatissime complexionis*).³⁷² Thus, in order to be the sort of creature that the human being is, i.e. one which acquires intelligible species from things through the senses, the soul must be united to a body which is so ordered that we might sense most effectively and this requires that our bodies be of a 'balanced complexion'.

The 'balanced complexion'³⁷³ of the human body requires that all four elements be virtually present but not, however, in equal proportions. According to St. Thomas, the human body must have, not actually but virtually, a greater measure of the two heavier elements, i.e., those of earth and water, for otherwise a median state of elemental qualities could not be achieved:

[The soul] must be united to a body which is a balanced combination of elements, so that the soul might acquire intelligible species through the senses. For this reason it was necessary that the body to which a soul is united contain a greater measure of the heavier elements, namely, earth and water. For since fire is more powerful in its action than the heavier elements, if there were not a greater measure of the lower elements, the four elements could not be combined and especially not brought to a median state, since fire would burn up the other elements. Hence, in Book II of his *De*

³⁷¹ *Quaestiones de anima*, q. 8, in corp. (tr. by James H. Robb). The Latin text (Leonine edition) reads: "In quo apparet quod tota operatio nature inferioris terminatur ad hominem sicut ad perfectissimum. Videmus enim operationem nature procedere gradatim a simplicibus elementis, commiscendo ea quousque perueniatur ad perfectissimum commixtionis modum, qui est in corpore humano."

³⁷² *Quaestiones de anima*, q. 8, in corp. (Leonine edition): "Hanc igitur oportet esse dispositionem in communi corporis cui anima rationalis unitur, ut scilicet sit temperatissime complexionis."

³⁷³ See *Quaestiones de anima*, q. 8, in corp; q. 8, ad 2; q. 8, ad 12. For more on the sort of body to which the rational soul is fittingly united, see "Corpus tale: A Study of the Development in St. Thomas' Account of the Specific Character of the Human Body" in K. White's *Two Studies...*, pp. 15-78.

Generatione, the Philosopher states that in compound bodies there is a greater measure of earth and water.³⁷⁴

Should the balanced complexion of the human body be lost, for instance, by becoming too hot or too dry, it would be corrupted. That is why the elements, which are yet present only virtually in the body, are said to be the material cause of our corruption. According to St. Thomas, that our bodies are corruptible, that they become tired, and that they have other defects of this kind are the necessary consequences of the kind of matter the body is.³⁷⁵ How is that possible if *materia est propter formam*?

St. Thomas distinguishes between two sorts of dispositions of matter: dispositions belonging to the matter itself on account of which matter of a particular kind is chosen for a particular form (*dispositiones in ipsa materia propter quas talis materia eligitur ad hanc formam*) and dispositions which are consequences of what necessarily belongs to matter and are not the result of the agent's choice (*dispositiones que consequuntur ex necessitate materie, et non ex electione agentis*).³⁷⁶

To explain this distinction, St. Thomas gives the following example of the dispositions which make iron suitable for the form of a saw and those which are consequences of the kind of matter iron is:

[...] in order to make a saw, an artisan selects the hardness in iron in order that the saw be suitable for cutting; but that the sharpness of the iron can be blunted and that it can become rusty are the necessary consequences of the kind of matter iron is. For the artisan would prefer to choose a kind of matter which did not have such disadvantages if he could find it; but since he cannot find it, the artisan does not refuse to use the matter which he has at his

³⁷⁴ See, for instance, *Quaestiones de anima*, q. 8, ad 1.

³⁷⁵ See, for instance, *Quaestiones de anima*, q. 8, in corp.

³⁷⁶ See, on this, *Quaestiones de anima*, q. 8, in corp. (Leonine edition, I. 277-281).

disposal to produce the saw because this matter has defects inherent in it.³⁷⁷

What this distinction teaches is that while particular forms (e.g., the form of a saw) require particular kinds of matter (e.g., iron), not all the dispositions of the sort of matter required by a certain form are for the sake of that form but, rather, are consequences of the sort of matter in question (e.g., becoming rusty and blunted are consequences of the sort of matter iron is).

Now, this is true of the human body. While the human soul requires a body which is a balanced combination of the four elements brought to the highest possible median state and while the human body is for the sake of the soul and not vice versa, the human body also has dispositions which are not for the sake of the soul but are simply consequences of the sort of matter the human body is (i.e., a body composed of contraries):

The same thing is true of the human body [that is true of the iron chosen by the artisan to make a saw]; the fact that it is compounded from the elements and its organs so arranged that it is a very suitable instrument for the operations of the sense powers results from the decision of the Maker to fashion a human being from this kind of matter. But that the body is corruptible, that it grows weary, and that it has other defects of this kind are the necessary consequences of the kind of matter the body is. For it is necessary that any body which is composed of these sorts of contraries be subject to these sorts of defects.³⁷⁸

³⁷⁷ *Quaestiones de anima*, q. 8, in corp. (tr. by James H. Robb). The Latin text (Leonine edition) reads: "Sicut ad faciendum serram artifex eligit duritiem in ferro, ut serra sit utilis ad secandum; set quod acies serrae hebetari possit et fieri rubiginosa, hoc accidit ex necessitate materie. Magis enim artifex eligeret materiam ad quam hoc non consequeretur, si posset inueniri; set quia inueniri non potest, propter huiusmodi defectus consequentes non pretermittit ex materia conuenienti facere opus."

³⁷⁸ *Quaestiones de anima*, q. 8, in corp. (tr. by James H. Robb). The Latin text (Leonine edition) reads: "Sic igitur et in corpore humano contingit: quod enim taliter sit commixtum et secundum partes dispositum, ut sit conuenientissimum ad operationes sensitivas, est electum in hac materia a factore hominis; set quod hoc corpus sit corruptibile, fatigabile et huiusmodi defectus habeat, consequitur ex necessitate materie. Necesse est enim corpus sic commixtum ex contrariis, talibus subiaccere defectibus."

Now, despite the fact that there are many necessary consequences of the sort of matter the human body is which we would much rather do without (disease, fatigue, and so forth), the sort of matter the human body is (a balanced complexion of the four elements) is both *required* and *beneficial*. It is required, as we just saw, so that we might acquire sensible species and it is beneficial, for, without it human beings could not accomplish their proper operation, which is to understand.³⁷⁹

St. Thomas also notes in Question 8 of *Quaestiones de anima* a few other benefits caused by the matter of our bodies, including: differing levels of mental endowment based on the level of delicacy in our sense of touch; the effective condition of our internal sense powers (afforded by a well-ordered brain); and freer movement than other animals (because of our erect position).

Having now examined the causality of matter in generation, nutrition & growth and in the necessary *complexio* of the human body, we must now turn our attention to the causality of matter at the sensitive level of life.

³⁷⁹ See, for instance, *Quaestiones de anima*, q. 8, in corp. To the objection that a separated soul can understand (without needing its body to do so), we respond that a separated soul is not a human being (as we shall see in Chapter 8, the separated soul is not a *person* and is *praeter naturam* in the separated state) and, thus, it is quite accurate and appropriate to say (as we do) that a human being requires a body such as the human body in order to acquire knowledge.

CHAPTER 7

THE CAUSALITY OF MATTER: SENSITIVE LIFE

In this chapter, we will examine the causality of matter at the level of sensitive life and our discussion will be divided into five main sections. In the first, we will discuss the sensitive faculty of the soul, the diversity of its acts and the operative dependence of sensitive acts on organs. The following four sections will, then, examine the causality of matter in respect to each of the sensitive acts of the soul: (ii) in external sensation, through an analysis of touch, which is the basis of all the other external senses and whose organ is flesh; (iii) in movement, where the causality of 'animal spirits' produced in the heart is instrumental; (iv) in the operation of the internal senses, first as regards the internal senses (imagination, memory, common sense and natural judgment) in general and, second, as regards our power of memory in particular; and, finally, in (v) the causality of matter in human appetites and emotions will be examined.

I) Organ and Faculty

In our discussion of the causality of matter, we divided our discussion according to the three levels of perfection of life, namely, the nutritive, sensitive and intellective perfections. As we saw earlier, the human soul confers each of these levels of perfection and they are called the powers (*vis*) or faculties (*potentia*) of the human soul.³⁸⁰ The powers of the soul are, according to St. Thomas, distinguished by their actions and these, in turn, are distinguished by their objects.³⁸¹

Although there are three 'degrees' of action (*quantum ad id quod agitur*), namely, nutritive, sensitive and intellective, there are five genera of faculties (*secundum obiecta*): nutritive, sensitive, intellective, appetitive and motive. The three 'degrees' (*tres gradus*) of action³⁸² determine the three kinds of soul (nutritive soul, sensitive soul, intellective soul), the five genera of faculties distinguish the five 'powers' of the human soul (the nutritive, sensitive, appetitive, motive and intellective 'powers').³⁸³

Now, as we just mentioned, the powers of the soul are distinguished by their actions and these, in turn, are distinguished by their objects. This is, according to St. Thomas, because acts derive their specific nature from their objects. Hence, the acts of each level of power of the human soul (namely, nutritive, sensitive and intellective) are diversified according to their objects. For instance, the acts of the nutritive faculty of the soul, which are ordered towards the production and conservation of the individual, are diversified according to

³⁸⁰ See, for instance, *Quaestiones de anima*, q. 3, in corp. where St. Thomas uses the terms 'uis' and 'potentia' interchangeably.

³⁸¹ See, for example, *Quaestiones de anima*, q. 13, in corp.

³⁸² See, for instance, *Quaestiones de anima*, q. 13, in corp. The Latin text (Leonine edition) reads: "in actionibus anime tres gradus".

³⁸³ See, regarding this, *Summa theologiae*, I, q. 78, art. 1, in corp.

their specific objects: production of an individual in its being (the generative act); assuring that the individual achieve its proper size (the augmentative act); and assuring the conservation of the individual in its being (the nutritive act).³⁸⁴

Now, the acts of the sensitive faculty of man, which are ordered towards sense knowledge, are likewise distinguished by their objects: to receive sensible species from sensible things (the 5 external senses); to discriminate among sensible qualities (common sense); to retain the sensible species received (imagination); to apprehend intentions that the other senses do not perceive, for instance, the harmful and the useful (natural judgment: *cogitativa*);³⁸⁵ to recall things previously apprehended by the senses and retained in the interior senses (memory); to tend towards sensible things (appetitive power); and to seek that which is tended towards/desired (motive power).³⁸⁶

Now all the acts of the sensitive degree of the human soul (as, also, those of the nutritive degree of the human soul) require, for their operation, an organ: we cannot move without a heart (which, according to St. Thomas, is the primary instrument through which other parts of the body are moved³⁸⁷), cannot see without eyes, etc. For each of these acts of the human soul are acts of matter and, thus, are operationally dependent on matter, more specifically, on this or that organ: our sense of sight, for instance, is operationally dependent on our eyes and our sense of hearing is operationally dependent on our ears.³⁸⁸

³⁸⁴ See, for instance, *Quaestiones de anima*, q. 13, in corp.

³⁸⁵ 'Natural judgment' is called *estimativa* in animals but *cogitativa* in human beings. *Estimativa* and *cogitativa* differ in that *estimativa* is instinctual (a sheep instinctively flees a wolf as being harmful) but *cogitativa* is the result of investigation and deliberation. See, for instance, *Quaestiones de anima*, q. 13, in corp.

³⁸⁶ See, regarding the powers of the sensitive faculty, *Quaestiones de anima*, q. 13, in corp.

³⁸⁷ See, for example, *Quaestiones de anima*, q. 9, ad 13.

³⁸⁸ See, for instance, *Quaestiones de anima*, q. 2, ad 3.

Now the sensitive degree of the human soul has different sensitive faculties (external and internal senses, appetive and motive) and these, as we have already noted, are diversified according to their objects. Now, generically speaking, the object of the external sense powers is to receive sensible species from sensible things.³⁸⁹ However, each external sense power has its own specific object: color is the object of sight; sound of hearing; etc.

According to St. Thomas, each external sense receives sensible species from its proper object without matter, i.e. each external sense undergoes what St. Thomas calls 'spiritual immutation'.³⁹⁰ However, some external senses also undergo another kind of immutation: 'material immutation'.³⁹¹

This is true of the sense of touch, which is not only spiritually immuted but, also, materially immuted by contact with its object (for example, the flame of a candle in contact with a finger will heat/burn the finger):

[...] there are some sensible things whose species, although immaterially received in a sense power, nevertheless produce also a material immutation in the animals which do the sensing. Now of this sort are the qualities which are the principles of transmutations even in material things, such as the hot, the cold, the dry and other qualities of this sort. Therefore, because sensible things of this sort cause immutations in us by acting simply as material agents, and because a material immutation takes place through contact, it is necessary that sensible things of this sort be sensed by touching. Because of this the sensitive power which apprehends such sensibles is called touch.³⁹²

³⁸⁹ Which is why all the senses powers are passive rather than active powers. See for instance, regarding this point, *Quaestiones de anima*, q. 4, ad 5.

³⁹⁰ All external senses undergo spiritual immutation insofar as they all receive the forms of their objects without their matter but in the matter proper to the organ of sense. See, for instance, *In De anima*, II, lect. 24 (Leonine edition, pp. 168-169); *ibid.*, II, lect. 26 (Leonine edition, p. 179); and *Quaestiones de anima*, q. 13, in corp. (Leonine edition, l. 221-227).

³⁹¹ On the two types of 'immutation', see for instance, *Quaestiones de anima*, q. 13, in corp.; *ibid.*, q. 13, ad 19; and *Summa theologiae*, I, q. 78, art. 3, in corp.

³⁹² *Quaestiones de anima*, q. 13, in corp. (tr. by James H. Robb). The Latin text (Leonine edition) reads: "Sunt [...] quedam sensibilia quorum species, licet immaterialiter in sensu recipiantur, tamen etiam materialem immutationem faciunt in animalibus sentientibus. Huiusmodi autem sunt principia transmutationum etiam in rebus materialibus, sicut calidum, frigidum,

Taste, hearing and smell are also immuted both spiritually and materially. However, they do not undergo material immutation in the same way as the sense of touch does, for, whereas something hot causes what touches it to be hot, a flavorful thing does not cause the tongue to be flavorful, a melodic tune does not cause the ear to be melodic, etc. According to St. Thomas, taste, hearing and smell are materially immuted by an 'accessory' material immutation connected to the perception of their objects. The accessory material immutated may be in both the sensible object and the one sensing (which is the case for taste) or only in the sensible object (which is the case for hearing and smell³⁹³):

There are, however, certain sensible things that do not themselves cause a material immutation in us, although the immutation which they do produce has a material immutation connected with it; and this occurs in two ways. First, the accessory material immutation is located both in the sensible thing and in the one who senses; this is true of the sense of taste. For although flavor does not change the sense organ by making it flavorful, still this change does not take place without some transmutation both of the flavorful thing and also of the organ of taste, and moisture is the principal cause of these changes. Secondly, the conjoined material transmutation takes place only in the thing sensed. Now a transmutation of this kind takes place either through a dispersion and change in the sensible thing as in the sense of smell; or only through a change in place, as in hearing. Hence the auditory and olfactory senses operate through an extrinsic medium and not by contact with their objects, because these senses produce no material immutation in the one who senses, even though they involve a material mutation in the sensible thing. Taste, however, operates only through contact with its object because it demands a material immutation on the part of the one sensing.³⁹⁴

humidum et siccum, et alia huiusmodi. Quia igitur huiusmodi sensibilia immutant nos etiam materialiter agendo, materialis autem immutatio fit per contactum, necesse est quod huiusmodi sensibilia contingendo sentiantur: propter quod potentia sensitiva comprehendens ea uocatur tactus."

³⁹³ As the citation which follows notes, what distinguishes the sense of hearing from that of smell is that, in the case of hearing, the accessory material immutation in the object sensed involves only a change of place whereas, in the case of smell, the accessory material immutation involves a dispersion and qualitative change (but not a change of place).

³⁹⁴ *Quaestiones de anima*, q. 13, in corp. (tr. by James H. Robb). The Latin text (Leonine edition) reads: "Sunt autem quedam sensibilia quae ipsa quidem non materialiter immutant, set

Although, as we have already mentioned, all external senses are spiritually immuted, sight alone of the five external senses is *only* immuted spiritually: it does not undergo a material immutation nor does the perception of its object involve an accessory material immutation. Now, sight does operate through an extrinsic medium (namely, air) and its organ is changed by its object but, according to St. Thomas, in sight neither the medium nor the organ is materially affected. For, in the act of seeing a colored object, neither the organ of sight nor the medium of sight (air) becomes colored but, rather, the form of color is received in the organ of sight in an immaterial mode of being.³⁹⁵ For this reason, sight is said to be loftier, more universal and more spiritual than any of the other senses.³⁹⁶

Now, the external sense power is not the only sensitive power which is divided into different powers. According to St. Thomas, there is a two-fold division of the appetitive power³⁹⁷ and they are diversified according to the nature of the sensory apprehension: whether it is itself appetible (concupiscible

tamen eorum immutatio habet materialem immutationem annexam; quod contingit dupliciter. Vno modo sic quod materialis immutatio annexa sit tam ex parte sensibilis quam ex parte sentientis; et hoc pertinet ad gustum: licet enim sapor non immutet organum sensus faciendo ipsum saporosum, tamen hec immutatio non est sine aliquali transmutatione, tam saporosi quam ipsius organi gustus, et precipue secundum humectationem. Alio modo sic quod transmutatio materialis annexa sit solum ex parte sensibilis: huiusmodi autem transmutatio uel est secundum resolutionem et alterationem quamdam sensibilis, sicut accidit in sensu odoratus; uel solum secundum loci mutationem, sicut accidit in auditu. Vnde auditus et odoratus, quia sunt sine materiali immutatione sentientis, licet assit materialis immutatio ex parte sensibilis, non tangendo, set per medium extrinsecum sentiunt. Gustus autem solum in tangendo, quia requiritur immutatio materialis ex parte sentientis." The extrinsic medium of sight is the diaphane (which can be air or water). See, on this point, *In De anima*, II, lect. 14 (Leonine edition, p. 125).

³⁹⁵ See, for instance, *Quaestiones de anima*, q. 13, in corp.; *In Metaphysicam*, I, bk. I, lect. 1 (Marietti edition, sct. 6); and *Summa theologiae*, I, q. 78, art. 3, in corp.

³⁹⁶ See, for instance, *Quaestiones de anima*, q. 13, in corp.; *In Metaphysicam*, I, bk. I, lect. 1 (Marietti edition, sct. 6 and 7); *In De anima*, II, lect. 19, sct. 484 (Leonine edition, p. 149, l. 85-114); and *Summa theologiae*, I, q. 78, art. 3, in corp. Regarding the different pleasures afforded by sight and touch, see for instance: *Summa theologiae*, I-II, q. 31, art. 6, in corp.

³⁹⁷ It is interesting to note that, according to St. Thomas, some powers are found in two different degrees of perfection, as is the case with the 'appetitive power', which is found in both the sensitive degree of perfection of the human being (*concupiscibilis & irascibilis*) and the intellective degree of perfection of the human being (the will). However, given limitations of topic and space, we shall not have the opportunity to discuss the will in this work.

power) or whether it is appetible only as means to enjoying pleasurable objects (irascible power):

There are [...] two divisions of the appetitive power which follows upon a sensory apprehension. For something is appetible either because it is pleasing to and appropriate to one of the senses, and the concupiscible power is concerned with this; or something is appetible because through it one possesses the power to enjoy things that please the senses. This pleasurable experience sometimes occurs in conjunction with an experience that is painful to the senses, as when an animal gains the power to enjoy the pleasurable object proper to one of its senses only by fighting and warding off whatever would hinder this enjoyment; and the irascible power is concerned with this.³⁹⁸

Having delineated the faculties of the sensitive soul and discussed the operative dependence of the soul's sensitive acts on organs, we must now turn to a discussion of each of the various powers of the sensitive level of perfection in human beings, beginning with the external sense powers.

Now there are, as we just noted, five external sense powers, namely, touch, sight, hearing, smell and taste. We shall not, however, examine each of these powers but concentrate our attention on the sense of touch and, this, for two reasons: because of limitations of time and space and, more importantly, because the sense of touch is, according to St. Thomas, the basis of all the other external senses³⁹⁹ and, hence, the conclusions we reach regarding the causality of matter in touch will hold for the other external senses, at least in a general way.

³⁹⁸ *Quaestiones de anima*, q. 13, in corp. (tr. by James H. Robb). The Latin text (Leonine edition) reads: "[...] autem uis appetitiua, que consequitur apprehensionem sensus, necesse est quod in duo diuidatur. Quia aliquid est appetibile uel ea ratione quod est delectabile et conueniens sensui et ad hoc est uis concupiscibilis; uel ea ratione quod per hoc habetur potestas fruendi delectabilibus secundum sensum, quod quandoque contingit cum aliquo tristabili secundum sensum: sicut animal pugnado adipiscitur quamdam potestatem fruendi proprio delectabili, repellendo impediencia et ad hoc ordinatur uis irascibilis."

³⁹⁹ This point will be discussed at greater length in what follows.

II) The Primacy of Touch and the Role of the Flesh

According to St. Thomas, the sense of touch is the foundation of all the other senses.⁴⁰⁰ In fact, there simply cannot be sensation where there is not the sense of touch, for, all the other senses depend on the sense of touch.⁴⁰¹ The primacy of the sense of touch is indicated by the fact that the organ of each particular sense, be it sight or some other sense, not only senses the contraries which are proper to it (for instance, colors in the case of sight or sounds in the case of hearing) but, also, those which are proper to the sense of touch (e.g., cold):

[...] we see among the senses that the sense of touch is a sort of foundation for the other senses and that in the organ of each sense there is found not only the distinctive characteristic of the sense whose proper organ it is, but also the characteristics of touch. Thus the eye not only senses white and black as the organ of sight, but also as the organ of touch senses heat and cold and is destroyed by an excess in them.⁴⁰²

The reason why the *organs* (eyes, ears, nose and tongue) of each of the other senses (sight, hearing, smell and taste) possess the characteristics of touch besides their distinctive characteristics is that they are made of flesh and flesh is, according to St. Thomas, the medium of touch.⁴⁰³

⁴⁰⁰ See, for instance, *Summa theologiae*, I, q. 76, art. 5, in corp.; *ibid.*, q. 78, art. 3, ad 3; *ibid.*, q. 91, art. 1, ad 3 and art. 3, ad 1; *De veritate*, III, q. 22, art. 5, in corp. (Leonine edition, I. 164-166); *De malo*, q. 5, art. 5, in corp. (Leonine edition, I. 212-213); *In De anima*, II, lect. 4 (Leonine edition, p. 84, I. 87-88); *ibid.*, II, lect. 22 (Leonine ed., p. 159); *Quaestiones de anima*, q. 8, in corp. (Leonine edition, p. 67).

⁴⁰¹ See, for instance, *Summa contra Gentiles*, IIIb, cap. 104 (Leonine edition, p. 326).

⁴⁰² *De veritate*, III, q. 22, art. 5, in corp. (tr. by Robert W. Schmidt). The Latin text (Leonine edition, p. 623-624, I. 164-173) reads: "Et similiter etiam videmus in sensibus quod cum sensus tactus sit quasi fundamentum aliorum sensuum, in organo uniuscuiusque sensus non solum invenitur proprietas illius sensus cuius est proprium organum, sed etiam proprietas tactus; sicut oculus non solum sentit album et nigrum in quantum est organum visus set etiam sentit calidum et frigidum et corrumpitur ab eorum excellentiis secundum quod est organum tactus."

⁴⁰³ See, for instance, *In De anima*, II, lect. 22 (Leonine edition, p. 162, I. 183-186).

Now, flesh is not merely our skin but is found over the whole of our bodies.⁴⁰⁴ According to St. Thomas, it is not precisely a sense-organ but, rather, a medium of sensation.⁴⁰⁵ As such, flesh is the human body considered as perfected by the sensitive perfection and, thus, is not something opposed to the human soul. For, it must be remembered that, as we have noted several times, the human soul is that which makes the sensitive body to be the sensitive body that it is and, further, that the soul requires precisely this sort of body, a body which is a medium of sensation (and a most excellent medium of sensation) in order to understand.⁴⁰⁶

Because the body must be a most excellent medium of sensation and the sense of touch is the foundation of all the other senses, the human body must, as we noted earlier, be an extremely suitable organ for the sense of touch. Now, the sense of touch perceives the contrary qualities of the elements (e.g., hot & cold, wet & dry, etc.).⁴⁰⁷ To do so, it must not actually but *potentially* possess that which it perceives: it must not be hot and dry or cold and wet or some other combination of the contrary qualities but, rather, must be a *mean* between the contrary qualities of the elements.⁴⁰⁸

⁴⁰⁴ See, for instance, *In De anima*, II, lect. 4 (Leonine edition, p. 84, l. 87-88) and, also, *ibid.*, II, lect. 22 (Leonine edition, p. 161, l. 150-154), where the question asked is whether the flesh is the instrument or the medium of the sense of touch and St. Thomas determines that it is only the medium (the instrument is the nerves): "Vnde, licet ad tactum carnis que est homini connaturalis statim tangibile sentiatur, non sequitur quod caro sit organum tactus, set est quoddam medium connaturale".

⁴⁰⁵ See, for instance, *In De anima*, II, lect. 23 (Leonine edition, p. 166, l. 211-217).

⁴⁰⁶ We discussed this point in section III of the last chapter. Of course, there is a sense in which our flesh *can* be opposed to our reason, namely, in cases where our *desire* for a certain *pleasure* associated with our senses conflicts with one or more of our *rationaly or morally motivated desires*: e.g., when we desire a second piece of chocolate cake but also desire to restrict our intake of desserts in an effort to lose weight or when we desire sexual intercourse but also desire to respect our vow of chastity. We shall, however, have more to say regarding conflicts of desire in section VI of this chapter.

⁴⁰⁷ See, for example, *Summa theologiae*, I, q. 90, art. 3, in corp. and q. 76, art. 5, in corp.

⁴⁰⁸ See, for example, *De Malo*, q. 5, art. 5, in corp. (Leonine edition, p. 141, l. 214: "medium inter contraria"); *De occultis operationibus naturae*, l. 200-207 (Leonine edition, p. 185); *In De*

As the sense of touch is the foundation of all the other senses and the perception of the elemental contraries requires that that which perceives them be in potency to them, each of the other senses (sight, hearing, smell and taste) will also need to be *in potency* to the contrary qualities of which they have perception. There is, however, two ways in which a sense can be in potency to contrary elemental qualities. The first way in which a sense is said to be in potency to the contraries of which it has perception is by being a medium between those contraries, which, as we just noted, is the case for the sense of touch. The second way in which a sense is said to be in potency to the contraries of which it has perception is by being entirely void of the whole 'genus' of the contraries of which it has perception, which, for example, is the case for the sense of sight. As St. Thomas himself explains:

[...] the organ of any particular sense must not have actually the contraries of which that sense has the perception, but only potentially. This can take place either in such a way that it is entirely without the whole *genus* of such contraries, — thus, for instance, the pupil of the eye is without color, so as to be in potentiality to all colors (this is not possible in the organ of touch, since it is composed of the elements whose qualities are perceived by touch); or so that the organ is a mean between two contraries, as must needs be the case with touch, for the mean is in potentiality to the extremes.⁴⁰⁹

The sort of body which is an excellent organ for the sense of touch is, as we noted in the last chapter, one in which all the elements are present (present in the sense that their qualities are in potency in the body) in certain

anima, II, lect. 23 (Leonine edition, p. 167, l. 253-266); *ibid.*, III, lect. 12 (Leonine edition, p. 259, l. 31-52); and *Quaestiones de anima*, q. 8, in corp.

⁴⁰⁹ *Summa theologiae*, q. 91, art. 1, ad 3 (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Oportet enim organum cuiuslibet sensus non habere in actu contraria quorum sensus est perceptivus, sed in potentia tantum. Vel ita quod omnino careat toto genere contrariorum, sicut pupilla caret colore, ut sit in potentia ad omnes colores; quod in organo tactus non erat possibile, cum sit compositum ex elementis, quorum qualitates percipit tactus. Vel ita quod organum sit medium inter contraria, ut necesse est in tactu accidere: medium enim est in potentia ad extrema."

proportions⁴¹⁰ and one which is reduced to the most equable complexion. The more equable the complexion of the human body, the more sensitive will the person's sense of touch be and the more mentally well-endowed will the person be.⁴¹¹ Although we shall have the opportunity to discuss desires in the last section of this chapter, it should at least be noted here that desires depend on the sense of touch. For, perceptions of pain and pleasure arise from touch, everything touched is either pleasant or unpleasant and whatever can feel pleasure and pain can desire the pleasant.⁴¹²

The *complexio* of the human body which is required for a keen sense of touch such as that of human beings has, however, other consequences, some positive and some negative: on account of our equable *complexio*, we excel all other animals in the interior sensitive powers,⁴¹³ but we fall short of other animals in some of the exterior senses (for instance, in the sense of smell, sight and hearing) and in swiftness of movement:

The sense of touch, which is the foundation of the other senses, is more perfect in man than in any other animal; and for this reason man must have the most equable temperament of all animals. Moreover, man also excels all other animals in the interior sensitive powers [...]. But by a kind of necessity, man falls short of the other animals in some of the exterior senses; and thus of all animals he has the weakest sense of smell. For of all the animals man needs the largest brain as compared to the body; and this both for his greater freedom of action in the interior powers required for the intellectual operations [...]; and in order that the low temperature of the brain may modify the heat of the heart, which has to be considerable in man for him to be able to stand up erect. So it

⁴¹⁰ See references from last chapter for this teaching and, also, *Summa theologiae*, I, q. 90, art. 3, in corp.

⁴¹¹ See, on this point, Aristotle's *De anima*, II, 421a25-26 and St. Thomas's commentary on that passage (*In De anima*, II, lect. 19 (Leonine edition, p. 149, v. 80-81)); *Quaestiones de anima*, q. 8, in corp.; *Summa contra Gentiles*, II, cap. 73 (Leonine edition, p. 461) & cap. 90 (Leonine edition, p. 552); and *Summa theologiae*, I, q. 76, art. 5, in corp.

⁴¹² See, for instance, *In De anima*, II, lect. 5 (Leonine edition, p. 89, l. 160-175).

⁴¹³ We shall discuss the interior sense powers in section IV of this chapter.

happens that the size of the brain, by reason of its humidity, is an impediment to the smell, which requires dryness. In the same way, we may suggest a reason why some animals have a keener sight, and a more acute hearing than man, namely, because of a hindrance to his senses arising necessarily from the perfect equability of his temperament. The same reason suffices to explain why some animals are more rapid in movement than man, since this excellence of speed is inconsistent with the equability of the human temperament.⁴¹⁴

Having examined the primacy of touch, the medium of touch (flesh) and the required disposition (*complexio*) of the human body for the sense of touch, we must now clarify what sort of causality is exercised by matter in sensation (extending our conclusions to sensation in general from our analysis of the sense of touch, which is the foundation of all the other senses, and from our analysis of sense organs).

The sense organs, which are considered as matter in respect to the sensitive acts of the human soul,⁴¹⁵ are a necessary condition of sensation, i.e. that upon which the sensitive acts of the human soul operationally depend: we

⁴¹⁴ *Summa theologiae*, q. 91, art. 3, ad 1 (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Dicendum quod tactus, qui est fundamentum aliorum sensuum, est perfectior in homine quam in aliquo alio animali; et propter hoc oportuit quod homo haberet temperatissimam complexionem inter omnia animalia. Praecedit etiam homo omnia animalia. Praecedit etiam homo omnia alia animalia quantum ad vires sensitivas interiores [...]. — Ex quadam autem necessitate contingit quod quantum ad aliquos exteriores sensus homo ab aliis animalibus deficiat. Sicut homo, inter omnia animalia, habet pessimum olfactum. Necessarium enim fuit quod homo, inter omnia animalia, respectu sui corporis haberet maximum cerebrum; tum ut liberius in eo perficerentur operationes interiorum virium sensitivarum, quae sunt necessariae ad intellectus operationem [...]; tum etiam ut frigiditas cerebri temperaret calorem cordis, quem necesse est in homine abundare, ad hoc quod homo sit rectae staturae. Magnitudo autem cerebri propter eius humiditatem est impedimentum olfactus, qui requirit siccitatem. — Et similiter potest assignari ratio quare quaedam animalia sunt acutioris visus et subtilioris auditus quam homo, propter impedimentum horum sensuum quod necesse est consequi in homine ex perfecta complexionis aequalitate. Et eadem etiam ratio est assignada de hoc quod quaedam animalia sunt homine velociora, cui excellentiae velocitatis repugnat aequalitas humanae complexionis."

⁴¹⁵ That organs are considered as matter in respect to the sensitive acts of the soul follows from the general principles we have already established but it is interesting to note that St. Thomas applies the formula 'materia est propter formam' to their relation, saying, "the powers are not for the organs, but the organs for the powers" ("Non enim potentiae sunt propter organa, sed organa propter potentias") in, for instance, *Summa theologiae*, I, q. 78, art. 3, in corp. (tr. by Anton C. Pegis; Latin from Ottawa edition).

cannot see without eyes, cannot hear without ears, etc. Sense organs are, thus, essential for sense knowledge and, given that intellectual knowledge is derived from sense knowledge, they are also essential for human intellectual knowledge, which point is clearly supported by St. Thomas's analysis of the sort of body which we required in order to acquire intellectual knowledge.⁴¹⁶

Aside from being essential for sensation, sense organs also exercise an accidental causality upon the sense powers of the soul. For, since the sense acts of the soul are operatively dependent on their respective organs, the sense powers are accidentally hindered in their operation when their respective organs are damaged:

[...] if a power of the soul is weakened for that reason [debility of the body], this occurs only by accident, namely, in so far as that power has need of a bodily organ. Thus, the power of sight is debilitated through the weakening of its organ — accidentally, however. The following considerations will make this point clear. If some weakness were attached to the power through itself, it would never be restored as a result of the organ's being restored; yet it is a fact of observation that, however much the power of sight may seem to be weakened, if the organ is restored, then the power is restored. That is why Aristotle says, in *De anima* I, "that if an old man were to recover the eye of a youth, he would see just as well as the youth does".⁴¹⁷

Matter also exercises an important causality in the immutation of sense organs, at least those that are materially immuted either by the sensible objects

⁴¹⁶ Intellectual knowledge will be discussed in the following chapter.

⁴¹⁷ *Summa contra Gentiles*, II, cap. 79 (tr. by James F. Anderson). The Latin text (Leonine edition, pp. 498-499) reads: "Si autem aliqua virtus animae debilitetur debilitato corpore, hoc non est nisi per accidens, inquantum scilicet virtus animae indiget organo corporali: sicut visus debilitatur debilitato organo, per accidens tamen. Quod ex hoc patet. Si enim ipsi virtuti per se accideret aliqua debilitas, nunquam restauraretur organo reparato: videmus autem quod, quantumcumque vis visiva dideatur debilitata, si organum reparatur, quod vis visiva restauratur; unde dicit Aristoteles, in I *de Anima*, quod, si senex accipiat oculum iuvenis videret utique sicut iuvenis." See also, on this point, *De veritate*, III, q. 26, art. 3, in corp. (Leonine edition, p. 755); *ibid.*, III, q. 26, art. 9, ad 7 (Leonine edition, p. 781); and *Summa contra Gentiles*, II, cap. 79 (Leonine edition, p. 498).

themselves or by attendant (material) accidents. For example, the heat of a sensible object (which is due to a relative preponderance of elements of fire) causes the medium of touch to become warm or hot when the object is touched; and, without the moisture of saliva (which is due to a relative preponderance of elements of water in saliva), we could not perceive flavors.

III) The Causality of the Human Heart

St. Thomas identifies three important functions of the heart: one has to do with vital operations (growth, nutrition and generation), another has to do with movement (locomotion) and the third function he identifies regards the maintenance of man's erect position. Let us look at each of these in turn.

(a) Vital Operations

Although we examined the causality of matter in vital operations (nutrition, growth and generation) in the previous chapter, given that that chapter was concerned with the causality of matter at the vegetative level of life, we left out of consideration any role matter perfected by the sensitive level of the human soul may have in those operations. As, however, we are considering the causality of matter at the sensitive level of life in this chapter, we may now do so.

According to St. Thomas, the heart is the principle of man's vital operations.⁴¹⁸ For, although the vital powers of a plant or an imperfect animal

⁴¹⁸ See, for instance, *Super Iob*, cap. 18 (Leonine edition, l. 166-167): "[...] vitalium operationum, quarum principium est cor".

(for instance, a shellfish) does not require an intermediary through which its soul may cause nutrition, growth and generation (procreation), a human soul does require, according to St. Thomas, such an intermediary and that intermediary is the heart.⁴¹⁹ How is the human heart the intermediary between the vital acts of the human soul and the members of the human body which perform vital operations?

The heart is the intermediary between the human soul's vital acts and the body's members which perform vital operations in that it is *through the heart* that the soul *causes* the body's other members to perform their vital operations.⁴²⁰ Each vital operation (nutrition, growth and generation) of human beings requires natural heat.⁴²¹ Nutrition and growth, as we noted in the last chapter, both depend upon the breakdown of ingested food by natural heat. Moreover, semen, which is fundamental to human generation (procreation), also depends on digestion, for it is a residue of food.⁴²² Now the heart is, according to St. Thomas, the principle and distributor of natural heat and, hence, it is as the principle and distributor of natural heat that the heart is said to be a cause of vital operations.⁴²³

This 'natural heat' which breaks down nutrients and produces human semen through its action (amongst other functions, as we shall note in a moment) is in the human heart: the source of natural heat is the heart.⁴²⁴

⁴¹⁹ See, for instance, *Quaestiones de anima*, q. 9, in corp.

⁴²⁰ See, for instance, *Quaestiones de anima*, q. 9, in corp.

⁴²¹ See, for example, *Quaestiones de anima*, q. 13, ad 15.

⁴²² See, for instance, *In De anima*, II, lect. 9 (Leonine edition, p. 104, l. 114-121 and p. 106, l. 264-276).

⁴²³ See, for instance, *De motu cordis*, (Leonine edition, p. 129, l. 174-175): "Motus autem cordis principium quidem est omnium motuum que sunt in animali". See also B. C. Bazán's edition of *Quaestiones de anima*, q. 8, note for text lines 270-271.

⁴²⁴ See, for instance, *In De anima*, II, lect. 18 (Leonine edition, p. 145, l. 111-120).

Natural heat, further, is distributed in the bloodstream to the other parts of the body through the expansion and contraction of the heart.⁴²⁵

According to St. Thomas, this motion of the heart is natural, in the same way as the upward motion of heat is natural and the movement of blood to its proper and determinate places is natural. Although the heart's motion (namely, expansion and contraction) is natural, it receives the cooperation of 'spirits' dissolved by the blood:

[...] just as fire, through its natural form, has a natural movement by which it tends upward, so also that part of an animated body in which is found the first movement which does not result from knowledge possesses this movement naturally through its soul. For just as fire naturally moves upwards, so also blood naturally moves toward its proper and determinate places. And in a similar fashion a heart moves by its own proper motion, although the dissolution of spirits brought about by the blood cooperates in this movement, for by means of this dissolution the heart expands and contracts, as Aristotle states in the text where he treats of inhalation and exhalation.⁴²⁶

The 'spirits' spoken of in the foregoing passage seem to be 'capsules' of hot air which, when dissolved (i.e. the capsules), release their hot air and, thus, make the heart expand (much like a lung expands when air is taken in). Three types of 'spirits' may be distinguished, namely, natural, vital and animal⁴²⁷ and

⁴²⁵ The notion comes from Aristotle's *De partibus animalium*, III, 665b30-666a3.

⁴²⁶ *Quaestiones de anima*, q. 9, ad 6 (tr. by James H. Robb). The Latin text (Leonine edition) reads: "Secundum hoc ergo dicendum quod sicut ignis per formam suam naturalem habet naturalem motum quo tendit sursum, ita aliqua pars corporis animati, in qua primo inuenitur motus qui non est per apprehensionem, habet hunc motum naturaliter per animam. Sicut enim ignis naturaliter mouetur sursum, ita sanguis naturaliter mouetur ad loca propria et determinata. Et similiter cor naturaliter mouetur motu sibi proprio, licet ad hoc etiam cooperetur resolutio spirituum facta ex sanguine, quibus cor dilatatur et constringitur, ut Aristoteles dicit ubi agit de respiratione et expiratione."

⁴²⁷ As B. C. Bazán notes in his edition of *Quaestiones de anima* (question 8, note to line 271), the doctrine of the 'spiritus' or 'pneuma' can be traced by to Aristotle (*De generatione animalium*, I, 20, 728a10 and 728b25; *ibid.*, II, 3, 736b35; *De motu animalium*, cap. 10, 703a19-22) and their classification into the three categories of 'spiritus naturalis', 'spiritus vitalis' and 'spiritus animalis' is owed to Galen (see his *De usu partium*, VIII, 13 and his *De Hippocratis et Platonis decretis*, VII, 3).

their distinction would seem to either rest upon their various functions or, perhaps, on a difference among types of hot air (heat). However, St. Thomas does not seem to explain at any great length what 'spirits' are in any of his works. We shall, nevertheless, need to discuss one type of 'spirits', namely 'animal spirits', in somewhat more detail when we examine the causality of matter in locomotion.

Before doing so, we should point out one last thing. Human beings require an abundance of natural heat⁴²⁸ and, as we have just seen, the source of that heat is the heart. As its source, the heart must necessarily be quite hot, so much so that the parts of the body which are located close to it would, if not somehow cooled, be corrupted through being exposed to a level of heat which exceeds that which they require. The parts of the body which are located close to the heart must, then, be somehow cooled.

Without going into the subject in any detail, according to St. Thomas (who follows Aristotle on this point), this cooling of the parts of the body which is effected through respiration, inhalation cooling those parts and expiration expelling the now warmed up air which was inhaled.⁴²⁹ Furthermore, according to both St. Thomas and Aristotle, the brain moderates the heat of the heart.⁴³⁰

⁴²⁸ We shall examine this point in what follows.

⁴²⁹ See for instance, *In De anima*, II, lect. 18 (Leonine edition, pp. 144-145, l. 92-129). Although the point is made by Aristotle in various texts, it is elaborated upon in his treatise *De respiratione*.

⁴³⁰ See, for instance, Aristotle's *De partibus animalium*, 652a25 and St. Thomas's *Summa theologiae*, I, q. 91, art. 3, ad 1.

(b) Movement

What is the organ of our movement (movement from place to place of both our bodies as a whole and, also, its individual parts)? According to St. Thomas, although we are able to move almost every part of our body (arms, legs, torso, head and so forth), the *primary* organ of human movement, i.e. that *by which* all the other moveable parts of our body is moved, is the heart:

The heart is the primary instrument through which a soul moves the other parts of its body, and consequently a soul as mover is united to other parts of its body through the mediation of the heart; although a soul as form is united essentially and directly to each part of its body.⁴³¹

The motive power of human beings is, thus, principally in the heart.⁴³² Our motive power is not, for that, *only* in the heart. For, the heart neither initiates (commands) movement, this being appropriate to sense and appetite, nor is it that which obeys the command to move, this being appropriate to the moveable parts of the body:

Although sense and appetite are principles of movement in perfect animals, yet sense and appetite, as such, are not sufficient to cause movement, unless another power be added to them; for immovable animals have sense and appetite, and yet they have not the power of motion. Now this motive power is not only in the appetite and sense as commanding the movement, but also in the parts of the body, to make them obey the appetite of the soul which moves them.⁴³³

⁴³¹ *Quaestiones de anima*, q. 9, ad 13 (tr. by James H. Robb). The Latin text (Leonine edition) reads: "[...] cor est primum instrumentum per quod anima mouet ceteras corporis partes; et ideo eo mediante anima unitur reliquis partibus ut motor; licet ut forma uniatur unicuique parti corporis per se et immediate."

⁴³² See, for instance, *In De anima*, II, lect. 18 (Leonine edition, p. 145, l. 114-129).

⁴³³ *Summa theologiae*, q. 78, art. 1, ad 4 (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "[...] quamvis sensus et appetitus sint principia moventia in animalibus perfectis, non tamen sensus et appetitus, inquantum huiusmodi, sufficiunt ad movendum, nisi superadderetur eis aliqua virtus, nam in immobilibus animalibus est sensus et appetitus, non tamen habent vim

Although the heart is not a cause of movement in the sense of being that which commands movement nor in the sense of being that which obeys the command to move, it is, nevertheless, a cause of movement,⁴³⁴ as being the intermediary, the instrument, by which sense and appetite command the moveable parts of the body to move.

According to St. Thomas, the heart intermediates between, on the one hand, sense and appetite and, on the other hand, the other members of the body which are commanded to move by means of 'spirits'.⁴³⁵ Although these 'spirits', given their role, would seem to be more than just 'encapsulated hot air' (how can 'spirits', so understood, cause movement in other members of the body?), we must examine St. Thomas's description of how bodily movements are caused before jumping to any conclusions.

St. Thomas sets forth, in his commentary on Aristotle's *De anima*, that the primary organic motive-principle is the heart and that, through its dilation and contraction, the heart gives rise to movements of impulsion and retraction.⁴³⁶ Now, all animal movements consist of impulsions and retractions.⁴³⁷ As not only walking, sitting and the like but, also, fear, anger and the like are animal movements,⁴³⁸ an analysis of any of these movements will disclose what the general role of 'spirits' is in movement.

The most detailed description of movement given by St. Thomas is for the movement of anger. When, he says, the soul thinks that anything is worthy of

motivam. Haec autem vis motiva non solum est in appetitu et sensu ut imperante motum; sed etiam est in ipsis partibus corporis, ut sint habilia ad obediendum appetitui animae moventis."

⁴³⁴ See, for instance, *In De anima*, II, lect. 18 (Leonine edition, p. 145, l. 114-129).

⁴³⁵ See, for instance, *Summa contra Gentiles*, II, cap. 71 (Leonine edition, p. 454) and *De spiritualibus creaturis*, art. 3, in corp. (Keeler edition, p. 40, l. 2: "per spiritum movet corpus").

⁴³⁶ See *In De anima*, III, lect. 9 (Leonine edition, p. 247, l. 186-252).

⁴³⁷ See, for instance, *In De anima*, III, lect. 9 (Leonine edition, p. 247, l. 232-233).

⁴³⁸ See, for instance, *In De anima*, I, lect. 10 (Leonine edition, p. 48, l. 83-104).

anger, the animal organ called the heart is disturbed and the blood gets heated around it.⁴³⁹ Although the soul in itself does not move, it moves in the movement of the heart (just as it must be said that in walking the soul moves in the movement of the body but not in itself) and the blood heated by the heart is dispelled towards the extremities of the body (which can explain why, when one is angry, the temperature of the body rises and why, often, one's face becomes red).⁴⁴⁰

From this description and from the principles already pointed out regarding the heart and the 'spirits', the role of the heart as well as that of 'spirits' in movement becomes quite apparent: the 'spirits' heat the blood around the heart and cause, through their dissolution in the heart, the heart's expansions and contractions and the heart, through its pumping action (its expansions and contractions), dispels blood towards the extremities of the body.

A similar description of other movements could be made. For instance, walking could be described as a pumping of the heart which dispels blood to the muscles of the legs, which muscles expand and contract through the dissolution of 'spirits' in them. However, St. Thomas does not himself describe local movements of this sort.⁴⁴¹

Having, as best we could, explained movement, the causality of the heart as primary instrument of movement and, also, the causality of 'spirits' in movement, we will now turn our attention to the role of the heart (and, again, 'spirits') in maintaining the upright position of our bodies.

⁴³⁹ See, for instance, *In De anima*, I, lect. 10 (Leonine edition, pp. 48-49) and I, lect. 2 (Leonine edition, p. 11, l. 170-173).

⁴⁴⁰ See above references and, also, *In De anima*, I, lect. 10 (Leonine edition, p. 50, l. 174-189).

⁴⁴¹ St. Thomas does, however, point to Aristotle's *De causa motu animalium* for a description of movement which takes into account that movement is an activity common to both the body and the soul (*In De anima*, III (Leonine edition, p. 247, l. 186-206)).

(c) Man's Erect Position

According to St. Thomas, we owe our upright bodily position and the maintenance of that position to the abundance of heat possessed by the human heart:

In order to possess and to maintain this erect position, the heart must possess a great deal of heat by which many spirits may be generated, so that through the greater abundance of [heat and of] these spirits produced by heat, the body might be maintained in an upright position [...]⁴⁴²

Now, the abundance of heat possessed by the heart makes us stand upright because, according to both Aristotle and St. Thomas, the natural movement of elements of fire, whose primary quality is the hot, is to rise upwards.⁴⁴³ Thus, depending on the amount of heat possessed by the heart, the person will stand more or less upright.

Having now examined the causality of the heart (and, to the extent possible, of 'spirits') in vital operations, in movement and in man's upright position, we will now turn our attention to the causality which may be ascribed to the human brain.

⁴⁴² *Quaestiones de anima*, q. 8, in corp. (tr. by James H. Robb) (The text in square brackets is omitted in Robb's translation but present in St. Thomas's text). The Latin text (Leonine edition) reads: "Et ad hanc rectitudinem habendam et consequendam necessaria fuit habundantia caloris in corde, per quam multi spiritus generarentur, ut per caloris habundantiam et spirituum corpus possit in directum sustineri" (emphasis mine). See also, *Summa theologiae*, I, q. 93, art. 3, ad 1; and Aristotle's *De partibus animalium*, 653a25 sqq.

⁴⁴³ See, for instance, Aristotle, *De caelo*, 269a25-30; 310b15-16; 311b33; and St. Thomas, *In De caelo*, III, lect. 7 (Leonine edition, pp. 250-253).

IV) The Interior Sensitive Powers

According to St. Thomas, human beings have four interior sensitive powers: common sense, phantasy or imagination, the cogitative power and the memorative power (which includes both memory and reminiscence). The common sense is the common root and principle of the exterior senses⁴⁴⁴ and its function is to receive sensible forms; the power of phantasy or imagination is, as it were, a storehouse of forms received through the senses; the cogitative power, which by some sort of comparison discovers intentions which are not received through the external senses; and the memorative power is that by which humans can both remember something past (memory) and, also, syllogistically search for a recollection of the past (reminiscence).⁴⁴⁵

Our discussion of the interior sense powers from the 'viewpoint' of the body will be divided into two sections. In the first, we will examine what is, according to St. Thomas, the organ of the interior sensitive powers and what the required physiology of that organ is for the proper operation of man's interior sensitive powers. In the second section, we will look at, in particular, the memorative power of human beings, examining the physiological conditions it requires beyond those already required by the interior sensitive powers in general.

⁴⁴⁴ See, for example, *Summa theologiae*, I, q. 78, art. 4, ad 1.

⁴⁴⁵ See, for example, *Summa theologiae*, I, q. 78, art. 4, in corp. Simon Kemp devotes a chapter (Chapter 4, pp. 45-63) of his *Cognitive Psychology in the Middle Ages* (Connecticut: Greenwood Press, 1996) to the inner senses, examining, in particular, their physiology.

(a) The Inner Senses and the Physiology of the Brain

The organ of the soul's interior sensitive acts is, according to St. Thomas, the brain.⁴⁴⁶ For the effective condition of the internal sense powers, man's brain must be well-ordered.⁴⁴⁷ What constitutes a 'well-ordered' brain?

A 'well-ordered' brain could mean one which has the proper number and placement of ventricles (liquid filled chambers). According to one scholar, the existence of three ventricles in the brain which 'house' the inner sense powers does not seem to have been questioned in the Middle Ages.⁴⁴⁸ Although St. Thomas would seem to have been aware of the theory (mentioning, for instance, that physicians declare that imagination is seated in the middle cell of the head),⁴⁴⁹ he nowhere develops it himself. Hence, it is difficult to judge whether he fully ascribed to this theory of the brain's physiology and, consequently, difficult to judge whether a brain in which the sensitive powers were properly located and ordered was what he considered a 'well-ordered' brain.

Another possible interpretation of what St. Thomas means by a 'well-ordered' brain is one which possesses the proper variation of elemental qualities necessary for the different inner sense acts, for example, a preponderance of dry elements in those parts of the brain in which imagination and memory are seated (for, these are powers of retention and that which is moist does not retain well) and a preponderance of moist elements in that part of the brain in which

⁴⁴⁶ See, for instance, *Summa theologiae*, I, q. 71, art. 3, ad 3; *ibid.*, q. 91, art. 3, ad 1; *De veritate*, II, q. 18, art. 8, in corp. (Leonine edition, p. 558); and *ibid.*, II, q. 18, art. 8, ad 5 (Leonine edition, p. 559); and *Quaestiones de anima*, q. 8, in corp.

⁴⁴⁷ See, for instance, *Quaestiones de anima*, q. 8, in corp.

⁴⁴⁸ See Simon Kemp, *Cognitive Psychology...*, p. 51.

⁴⁴⁹ See, for example, *Summa contra Gentiles*, II, cap. 60 (Leonine edition, p. 420). Although the text says that physicians declare the passive intellect to be seated in the middle cell of the head (*in media cellula capitis*), the passive intellect is, according to St. Thomas, none other than the imagination: see, for instance, *Summa theologiae*, I, q. 79, art. 2, ad 2; *De spiritualibus creaturis*, art. 9, in corp.; *In De anima*, III (Leonine edition, p. 223, l. 235-242).

common sense is seated (for this is a power which receives and that which is dry does not receive well).⁴⁵⁰

Whatever the precise meaning of 'well-ordered', it is clear that, according to St. Thomas, the brain is the organ of the inner sensitive powers and that it requires a certain physiology. Although the details of that physiology are lacking in the texts of St. Thomas, three physiological aspects of the human brain are explicitly mentioned by him: it is the most moist part of the body, possesses a low temperature and is larger, in proportion to our size, than that of any other animal.⁴⁵¹

The soul's inner sensitive acts operationally depend on the brain and, hence, when the brain's physiology is disturbed, for instance, when the brain is too moist⁴⁵² or the brain is injured,⁴⁵³ the inner sense powers are hindered. Yet, a more positive causality can be ascribed to the organ of the inner sensitive acts of the soul as well, for, according to St. Thomas, one man will differ from another in genius and other points pertaining to intelligence according to the brain's disposition.⁴⁵⁴

⁴⁵⁰ Regarding the point that that which is moist receives better and that which is dry retains better, see, for instance, *Summa theologiae*, I, q. 78, art. 4, in corp.

⁴⁵¹ Regarding the low temperature of the brain, see *Summa theologiae*, I, q. 91, art. 3, ad 1. On the brain being the most moist part of the body, see *Summa theologiae*, I, q. 115, art. 5, ad 1; and *De veritate*, II, q. 18, art. 8, ad 5 (Leonine edition, p. 559). Regarding the fact that the human brain is proportionally larger in humans, see for example, *Quaestiones de anima*, q. 8, in corp.

⁴⁵² See, for instance, *De veritate*, II, q. 18, art. 8, in corp (Leonine edition, p. 558).

⁴⁵³ See, for instance, *De spiritualibus creaturis*, art. 2, ad 7.

⁴⁵⁴ See, for instance, *Summa contra Gentiles*, II, cap. 60 (Leonine edition, p. 420).

(b) The Memorative Power

As we mentioned earlier, man has both the ability to remember and to recollect. What are memory and recollection and how do these two abilities differ? Are memory and recollection powers of the sensitive soul? What particular material dispositions are required for memory and recollection?

According to St. Thomas, memory is a habit, i.e., a certain habitual preservation of a phantasm insofar as the phantasm is an image of something previously sensed.⁴⁵⁵ A memory which is remembered arises 'spontaneously' in the mind, that is, arises in the mind without having been searched for.⁴⁵⁶

Recollection, on the other hand, is not a habit but, rather, involves 'syllogistically' searching for a certain memory (for instance, to recollect where you went for dinner last week, you 'work' your way back through your memories until the sought memory is recalled: you were called by so-and-so, they mentioned two restaurants, you said you preferred going out for French food rather than seafood, etc.).⁴⁵⁷ Although many animals besides man have the power of remembering, no other animal except man has the power of *recollection*, the power to recall something which has 'slipped' from his memory.⁴⁵⁸

Now, the memorative power is, according to St. Thomas, in the sensitive part of the soul.⁴⁵⁹ It can, however, be said to be *accidentally* in the intellective

⁴⁵⁵ See, for instance, *In De sensu II (De memoria)*, lect. 3 (Leonine edition, p. 116, l. 271-281); see also, *ibid.*, lect. 1 (Leonine edition, p. 106, l. 178-190) and *Summa theologiae*, I, q. 79, art. 6, in corp.

⁴⁵⁶ See, on this point, the references given in the following footnote.

⁴⁵⁷ See, for instance, *In De sensu II (De memoria)*, lect. 8 (Leonine edition, p. 131, l. 17-34); *ibid.*, lect. 5 (Leonine edition, p. 121, l. 48-63); and *Summa theologiae*, I, q. 78, art. 4, in corp.

⁴⁵⁸ See, for instance, *In De sensu II (De memoria)*, lect. 8 (Leonine edition, p. 130, l. 1-17) and *Summa theologiae*, q. 78, art. 4, in corp.

⁴⁵⁹ See, for instance, *Summa contra Gentiles*, II, cap. 74 (Leonine edition, p. 470); *Summa theologiae*, I, q. 78, art. 4, in corp; *ibid.*, I, q. 79, art. 6, in corp; *ibid.*, q. 79, art. 6, ad 1; *De veritate*,

part of the soul insofar as what is remembered is something previously understood but, as intelligible objects are not remembered without a phantasm, the memorative power cannot be said to be in the intellective part of the soul *essentially*, only *accidentally*.⁴⁶⁰ For, the perception of time is only in the sensitive memory and although there is, on St. Thomas's view, intellective memory, it cannot involve perception of time.⁴⁶¹ However, we shall have more to say regarding intellective memory in the next chapter.

According to St. Thomas, memory is consequent upon imagination,⁴⁶² which is a movement caused by the senses in their act of sensing,⁴⁶³ and phantasms are preserved in memory through frequent meditations on those things which were sensed.⁴⁶⁴ Without explaining in detail how we acquire memories, let us now examine the causality of the organ of man's memorative power.

As we noted earlier, the memorative power, given that it is one of the inner sensitive powers of man, has as its organ the brain.⁴⁶⁵ Although we have already mentioned that the human brain must be moist (but not too moist) in order for that the inner sensitive powers (including the memorative power) function properly, other material dispositions also seem to have been deemed

II, q. 10, art. 2, in corp. (Leonine edition, p. 300, l. 102-103: "memoria proprie loquendo non est in parte intellectiva sed sensitiva tantum"); and *In De sensu II (De memoria)*, lect. 2 (Leonine edition, p. 109, l. 154-156).

⁴⁶⁰ See, regarding this point, *In De sensu II (De memoria)*, lect. 2 (Leonine edition, p. 109, l. 154-156).

⁴⁶¹ See, for instance, *Summa theologiae*, I, q. 79, art. 6, in corp.; *ibid.*, q. 79, art. 7, in corp.; *De veritate*, II, q. 10, art. 3, in corp.

⁴⁶² See, for instance, *Summa contra Gentiles*, II, cap. 60 (Leonine edition, p. 420).

⁴⁶³ See, for instance, *In De anima*, II, lect. 30 (Leonine edition, p. 199, l. 116): "fantasia est motus sensu facto in actu". See also Aristotle's *De anima*, 429a1.

⁴⁶⁴ See, regarding this point, *In De sensu II (De memoria)*, lect. 3 (Leonine edition, p. 116, l. 258-270).

⁴⁶⁵ See previous references regarding the organ of the inner sensitive powers and, also, *Summa theologiae*, I, art. 79, art. 6, ad 1 and *De veritate*, q. 18, art. 8, ad 5 (Leonine edition, p. 559).

necessary for the proper functioning of the memorative power of man. These particular dispositions may be gleaned from what St. Thomas notes as *impediments* to memory, namely, having upper members which are larger than one's lower members, growth, decline, being too swift in movement, being too slow in movement and over-dryness, over-moistness and over-coldness of the organ of the inner sensitive powers.⁴⁶⁶

From these impediments to memory, it would appear that the full and proper operation of man's memorative power not only requires a certain *complexio* of elemental qualities in the organ of the memorative power but, also, that the body's members be disposed in a balanced way and that a certain equilibrium of bodily movement be maintained (not be too swift in movement or too slow and not be in growth or decline).

Aside from having a causality in respect to the retention of phantasms and the exercise of our memorative power, the material disposition of our brain also causes, according to St. Thomas, our power of understanding to be better or less good:

Diversity of composition causes the power of understanding to be better or less good because of the powers from which the intellect does its abstracting, and these are all powers that make use of bodily organs, such as imagination, memory and the like.⁴⁶⁷

When one considers the fact that, according to St. Thomas memory causes experience and experience, in turn, causes knowledge,⁴⁶⁸ the causality

⁴⁶⁶ See *In De sensu II (De memoria)*, lect. 8 (Leonine edition, p. 132, l. 129-142) and lect. 3 (Leonine edition, p. 113, l. 45-79).

⁴⁶⁷ *Quaestiones de anima*, q. 5, ad 5 (tr. by James H. Robb). The Latin text (Leonine edition) reads: "diuersitas complexionis causat facultatem intelligendi uel meliorem uel minus bonam, ratione potentiarum a quibus abstrahit intellectus, que sunt potentie utentes organis corporalibus, sicut ymaginatio et memoria et huiusmodi."

⁴⁶⁸ See, regarding this point, *In Post. Anal. II*, lect. 5 (Leonine edition, p. 245, l. 170-177) and *In Metaphysicam*, I, lect. 6 (Marietti edition, p. 167, sct. 599).

of matter in the exercise of our memorative power cannot be considered as having a merely negative impact on our lives. Having such organs as a brain, a heart and so forth is necessary for sensitive operations as such and the causality of these organs's dispositions *contribute* to the operation of man's sensitive powers not only in negative ways (making some persons forgetful and/or less intelligent than others) but, also, in positive ways (making some persons mindful and/or more intelligent than others). Nor can the causality of matter in respect to our memorative power (and, for that matter, in respect to all our inner sensitive powers) be considered as being of little significance, for, without it, we could not exercise our proper operation (understanding).

V) Appetites and Emotions

Although the power of appetite is found in human beings at both the sensitive level (sensitive appetite) and the intellective level (volition), as this chapter is concerned with the causality of matter at the level of sensitive life, we shall restrict our discussion to sensitive appetite.⁴⁶⁹

The sensitive appetite is, as we noted earlier, a natural inclination towards objects of the senses and is twofold: either something is desirable because it is pleasing to and appropriate to one of the senses (concupiscible power) or it is desirable as a means by which things pleasing to the senses may be enjoyed or may continue to be enjoyed (irascible power):

⁴⁶⁹ Although Aquinas's theory of human volition is discussed by many scholars of his thought, the following secondary sources seem to suggest themselves as a good starting point for those interested in the topic: E. Gilson, *Le Thomisme*, (5th ed., Paris: Vrin, 1948), ch. 8; R. P. Sertillanges, *La philosophie de saint Thomas d'Aquin*, (Paris: Aubier, 1940), vol. 2, p. 175ff.; and F. Copleston, *A History of Philosophy*, (New York: Image Books, 1962), vol. 2, part. II, ch. 37, sct. 2 & sct. 4.

[...] something is appetible either because it is pleasing to and appropriate to one of the senses, and the concupiscible power is concerned with this; or something is appetible because through it one possesses the power to enjoy things that please the senses. This pleasurable experience sometimes occurs in conjunction with an experience that is painful to the senses, as when an animal gains the power to enjoy the pleasurable object proper to one of its sense[s] only by fighting and warding off whatever would hinder this enjoyment; and the irascible power is concerned with this.⁴⁷⁰

Now, according to St. Thomas, sensitive appetite depends on external sensation, particularly on the sense of touch. For, as we just saw, an object of sense will be desired insofar as it gives pleasure or is a means by which pleasurable objects may be gained or continued to be enjoyed; and pleasure and pain come from external sensations, especially from the sense of touch:

All animals have at least one sense, touch; but where there is any sensation there is pleasure and pain, joy and sorrow. Now while joy and sorrow seem to spring from inward apprehension, pain and pleasure come from external sensations, especially from touch. But joy and sorrow necessarily imply some sweet or disagreeable object, i.e. something pleasant or painful. For everything touched is either congenial to the one touching, and then it gives pleasure; or uncongenial, and then it gives pain. But whatever can feel pleasure and pain can desire the pleasant. Since then all animals, without exception, have a sense of touch, all can desire.⁴⁷¹

⁴⁷⁰ *Quaestiones de anima*, q. 13, in corp. (tr. by James H. Robb). The Latin text (Leonine edition) reads: "Quia aliquid est appetibile uel ea ratione quod est delectabile et conueniens sensui et ad hoc est uis concupiscibilis; uel ea ratione quod per hoc habetur potestas fruendi delectabilibus secundum sensum, quod quandoque contingit cum aliquo tristabili secundum sensum: sicut cum animal pugnando adipiscitur quamdam potestatem fruendi proprio delectabili, repellendo impediencia et ad hoc ordinatur uis irascibilis."

⁴⁷¹ *In De anima*, II, lect. 5 (tr. by Kenelm Foster and Silverster Humphries). The Latin text (Leonine edition, p. 89, l. 160-175) reads: "Quarum prima est quod omnia animalia habent ad minus unum sensum; quibus autem inest sensus, inest leticia et tristitia, id est delectatio et dolor (leticia enim et tristitia magis uidentur sequi apprehensionem interiorem, set delectatio et dolor consequuntur apprehensionem sensus et precipue sensus tactus), et si est leticia et tristitia, necesse est quod sit aliquid dulce et triste, id est delectabile et dolorosum (oportet enim omne quod sentitur secundum tactum esse uel conueniens, et sic est delectabile, uel nociuum, et sic est dolorosum; quibuscunque autem est aliquid delectabile et triste, hiis inest et concupiscencia, que est appetitus delectabilis; ergo de primo ad ultimum omnibus animalibus quibus inest sensus tactus, inest appetitus".

As sensitive appetite depends on the external senses, particularly on the sense of touch, it follows that matter has a causality in sensitive appetite, for, the sensitive powers depend on matter for their operation and, as is manifest in the case of touch, pleasure (and pain) at the sensitive level is (are) caused by the material qualities of sense objects. For example, touching another person's hand will be pleasing (at the sensitive level) because it is warm, soft, etc. and these qualities are due to the particular composition of elemental qualities in the skin of the hand touched.

Furthermore, the material disposition of a sense organ also has a role to play in sensitive appetite. For, one and the same sense object can be at one time perceived as painful and at another time perceived as pleasure, depending on the disposition of the sense organ: touching ice, for instance, may be perceived as painful if your hand is itself cold but may be perceived as pleasurable if your hand is itself hot.

However, a sense organ has only a certain range of possible disposition (e.g., flesh cannot be boiling hot or else it would be corrupted) and, hence, if the qualities perceived by the sense organ exceed the range of disposition possible to it, they will cause pain independently of the *particular* disposition of the sense organ which perceives them: e.g., touching a boiling kettle will cause pain whether or not the hand touching it is cold or warm. In these cases, matter exercises a causality in sensitive appetite not at the level of the particular disposition of the sense organ in question but at the level of the general disposition (the *complexio*) required by that sense organ.

Although we will not discuss appetite at the intellective level, it is yet interesting to note that, according to St. Thomas, conflicts between sensitive desires and intellective desires are due to matter. For, our desire for the

pleasures of the senses (which are caused by matter in the way just explained) are often opposed to intellectual desires:

The struggle which goes on in a human being among contrary desires results too from the exigencies of nature [*ex necessitate materie*]. Thus, if a human being was to have senses, it was necessary that he then sense objects which cause delight and that a desire for these delightful objects arise in him, and such a desire [is] very often opposed to reason.⁴⁷²

Although this is certainly a negative aspect to matter's causality in human appetite, it is important to remember that matter's causality in appetite is essential (without appetite we would not seek out those things which are necessary to live, e.g., food, shelter, etc.) and that, in other respects, it can positively contribute to human existence. For example, the desire for sex can be said to positively contribute to human existence in that sexual intercourse can give rise to children (which, in turn enrich our lives by making us parents and all that being a parent involves) and can enrich the relationship of those who engage in that activity (contributing, for instance, to the loving intimacy of the married couple).

Let us now, however, turn our attention to emotions. What are emotions? Do emotions belong to the sensitive level of perfection in the human being, the intellectual level of perfection in the human being, or to both? What role, if any, does matter play in emotions?

According to St. Thomas, emotions like anger, sorrow and fear are a kind of passion (*passio*). St. Thomas distinguishes three kinds of passion: passion in

⁴⁷² *Quaestiones de anima*, q. 8, ad 7 (tr. by James H. Robb) (The 'is' in square brackets indicates a typographical error in Robb's text, namely, 'if' instead of 'is'. Robb's translation of 'ex necessitate materie' as 'from the exigencies of nature' is inaccurate and, thus, we inserted St. Thomas's own expression, in square brackets, into the text.). The Latin text (Leonine edition) reads: "pugna que est in homine ex contrariis concupiscentiis etiam ex necessitate materie provenit. Necesse enim fuit, si homo haberet sensum, quod sentiret delectabilia et quod eum consequeretur concupiscentia delectabilium, que plerumque repugnat rationi."

the general sense, passion in the strict or proper sense and passion in the transferred sense. In the general sense, *passio* is used whenever any quality is received, even if the subject loses nothing in the process (e.g., when we say that air 'suffers' illumination); in the proper sense, *passio* is used whenever a subject acquires one quality by losing its contrary (e.g., when we say that a sick animal 'suffers' healing); in the transferred sense, *passio* is used whenever something is kept from what belongs to it (e.g., when we say that something heavy 'suffers' when prevented from moving downward).⁴⁷³

Now, emotions like anger, sorrow and fear are passions in the strict sense of the term, for, they involve the acquisition of one quality by the loss of its contrary: for example, a man becomes angry by losing his calm or, conversely, a man becomes calm by losing his anger.

Two kinds of *passio* in the strict sense are, however, distinguished by St. Thomas: *passio corporalis* and *passio animalis*. In a bodily passion (*passio corporalis*), there is first an alteration in the body of the subject which is then immediately apprehended by the soul inasmuch as it is the form of the body (for example, when a man is slapped on the face, the sensation of pain is immediately apprehended by the soul inasmuch as it is the form of the body). An animal passion (*passio animalis*), on the other hand, is aroused by the apprehension and appetite of the soul and ends in the body, that is, has a bodily transformation consequent upon it.⁴⁷⁴ As the examples given by St. Thomas indicate, emotions like anger, fear and the like are, on his view, of this sort:

[...] This is called a *passio animalis*. An example is seen in anger and fear and the like: for passions of this kind are aroused by the

⁴⁷³ See, for instance, *Summa theologiae*, I, q. 79, art. 2, in corp.; *ibid.*, q. 97, art. 2, in corp.; *De veritate*, III, q. 26, art. 1, in corp. (Leonine edition, pp. 747-748); *ibid.*, q. 26, art. 3, in corp. (Leonine edition, pp. 755-756). Marcel Sarot discusses the different senses of 'passio' in his "God, Emotion, and Corporeality," *Thomist* 59 (January 1994): 61-92, esp. 65-73.

⁴⁷⁴ See, for instance, *De veritate*, III, q. 26, art. 2, in corp. (Leonine edition, p. 752, l. 95-107).

apprehension and appetite of the soul, and a bodily transformation follows upon them.⁴⁷⁵

Although emotions are aroused by the apprehension and appetite of the soul, they belong only *per accidens* to the soul, for, these sorts of passions cannot, according to St. Thomas, be experienced by the soul except in the sense that the whole person, the matter-soul composite, undergoes it.⁴⁷⁶ Furthermore, because emotions (*passiones animalis*) alter the body, they belong, not to the intellective but, to the sensitive level of perfection:

[since by a *passio animalis*] the body is altered because of an operation of the soul, this kind of passion has to be in a power which is joined to a bodily organ and whose business it is to alter the body. As a consequence, such a passion is not in the intellective part, which is not the actuality of any bodily organ. Nor again is it in the power of sensitive apprehension, because from sense apprehension no movement in the body follows except through the mediation of the appetitive power, which is the immediate mover. According to its manner of operating, then, a bodily organ (e.g., the heart) from which motion takes its beginning is at once given a disposition suitable for carrying out that to which the sensitive appetite inclines. In anger the heart accordingly heats up, and in fear it in a way cools off and tightens up. Thus [*passio animalis*] is properly found only in the sensitive appetite.⁴⁷⁷

⁴⁷⁵ *De veritate*, III, q. 26, art. 2, in corp. (tr. by Marcel Sarot in his "God, Emotions..., 68) (We have, however, modified Sarot's translation following St. Thomas's terminology, using 'passio animalis' where Sarot uses 'passion of the soul'). The Latin text (Leonine edition, p. 752, l. 97-101) reads: "[...] et haec dicitur passio animalis; sicut patet in ira et timore, et aliis huiusmodi: nam huiusmodi per apprehensionem et appetitum animae peraguntur, ad quae sequitur corporis transmutatio."

⁴⁷⁶ *Summa theologiae*, I-II, q. 22, art. 1, in corp. (Ottawa edition): "Passio autem cum abiectioe non est nisi secundum transmutationem corporalem, unde passio proprie dicta non potest competere animae nisi per accidens, inquantum scilicet compositum patitur." Sarot makes this point in his "God, Emotions..., p. 68.

⁴⁷⁷ *De veritate*, III, q. 26, art. 3, in corp. (tr. by Marcel Sarot in his "God, Emotions..., p. 72) (We have, again, adapted Sarot's translation which renders 'passio animalis' as 'passion of the soul'). The Latin text (Leonine edition, p. 756, l. 204-221) reads: "passio vero animalis, cum per eam ex operatione animae transmutetur corpus, in illa potentia esse debet quae organo corporali adiungitur, et cuius est corpus transmutare. Et ideo huiusmodi passio non est in parte intellectiva, quae non est alicuius organi corporalis actus; nec iterum est in apprehensiva sensitiva, quia ex apprehensione sensus non sequitur motus in corpore nisi mediante appetitiva, quae est immediatum movens. Unde secundum modum operationis eius statim disponitur organum corporale, scilicet cor, unde est principium motus, tali dispositione quae competat ad exequendum hoc in quod appetitus sensibilis inclinatur. Unde in ira fervet, et in timore quodammodo frigescit et

Thus, emotions are properly found only in the sensitive appetite, depend on bodily organs and involve bodily changes. Yet, is there not a sense in which emotions are ascribed to the intellective appetite, i.e. the will, as when we say that someone angry *wills* revenge? According to St. Thomas, although terms like 'anger', 'fear', 'love' and so forth *can* denote acts of the intellective appetite (acts of the will), for instance; the repose of the will in an object of spiritual affection can be called 'love', acts of the will are not, properly speaking, passions. Love, joy and so forth are, according to St. Thomas, found in the will according to their species but not as passions.⁴⁷⁸ As, however, emotions (*passiones animalis*) are, properly speaking, passions, they properly belong to the sensitive appetite only.

With this said, let us return to our discussion of emotions, properly speaking. St. Thomas enumerates eleven basic emotions: love (*amor*); desire (*desiderium*); joy (*gaudium*); hate (*odium*); aversion (*fuga*); sadness (*tristitia*); fear (*timor*); courage (*audacia*); anger (*ira*); despair (*desperatio*); and hope (*spes*).⁴⁷⁹ Other emotions (e.g., rage, envy, pity and so forth) are accounted for by reference to a greater or lesser intensity of one of the basic emotions, for

constringitur. Et sic in appetitiva sensitiva sola, animalis passio proprie invenitur." See also, *Summa theologiae*, I, q. 20, art. 1, ad 1; *ibid.*, q. 75, art. 3, in corp.; *ibid.*, I-II, q. 22, art. 3, in corp.; and Sarot's "God, Emotions....," pp. 72-73.

⁴⁷⁸ See, for instance, *Summa contra Gentiles*, I, q. 90 (Leonine edition, p. 243); *De veritate*, III, q. 25, art. 3, in corp. (Leonine edition, p. 735). This point is also discussed, and in a bit more detail, by Sarot in his "God, Emotions....," pp. 75-76.

⁴⁷⁹ See, on this, Sarot's "God, Emotions....," p. 74, especially footnotes 41 and 42 which give references to Aquinas's texts.

example, rage is intense anger.⁴⁸⁰ And, of these, love is primary, i.e. that from which all other emotions spring.⁴⁸¹

As organs are required for emotivity and emotions are accompanied by bodily changes, matter must be said to have a causality in emotion both at the level of instrument (organs being the instrument by which apprehension and appetite move us to anger, to joy, etc.) and at the level of the bodily changes which accompany that movement (the heating up of the heart in anger, the cooling off and constriction of the heart in fear, etc.).

Having already examined the causality of matter, at least generally, at the level of bodily changes (in particular with respect to the heart), we shall not repeat here how that causality is significant or examine in detail how the heart is heated up in anger, cooled off in fear, and so forth. The point that we would like to emphasize here, however, is that holding, as St. Thomas does, that emotivity requires organs, that emotions involve bodily changes and that it is the person, the soul-matter composite which is emotive (and not just the soul) necessarily implies that we could not be emotive without being material, without being corporeal. This view, however, clearly ascribes a positive value to corporeality and an important causality to matter, for, an existence devoid of such *passiones animalis* as love, joy, and so forth, which are precisely made possible by corporeality (by matter), would certainly be greatly impoverished and less meaningful. Insofar, then, as human emotivity is considered to significantly and

⁴⁸⁰ See, for instance, *De veritate*, III, q. 26, art. 4, in corp. (Leonine edition, p. 761, l. 179-191).

⁴⁸¹ See, for instance, *Summa theologiae*, I, q. 20, art. 1, in corp.

- **positively contribute to human existence, so must the causality of matter be considered to do so.**

CHAPTER 8

THE CAUSALITY OF MATTER: INTELLECTIVE LIFE

The intellectual perfection is the highest perfection conferred by the human soul. It is, moreover, man's proper perfection, distinguishing him from all other material creatures as the only material creature capable of acquiring intellectual knowledge. We have already seen that, according to St. Thomas, it is the nature of the human soul to acquire intelligible species from things outside itself through the mediation of senses powers and that, to do so, the soul requires to be united to a body such as the human body.⁴⁸² What now remains to be examined is the sort of causality matter exercises at the level of man's intellectual perfection itself.

In the first section, we will look at the causality in matter with respect to the intellect and, also, with respect to the will, which are the two acts belonging to the intellectual level of perfection of man. Showing, first, that the human soul, precisely as capable of intellectual knowledge, objectively depends on matter to acquire knowledge and to exercise its acquired knowledge, we will then show that our will also objectively depends on matter to act.

⁴⁸² This point was discussed in Chapter 6, sct. III.

As St. Thomas's position on these matters has important implications for what may be said regarding the separated state of the human soul, the second section will discuss the state of the separated soul with respect to knowledge and willing. Although discussion of the state of the separated soul involves philosophical as well as theological doctrines, we will broach the topic carefully and only in order to show that what St. Thomas says about the state of the separated soul with respect to knowledge and willing is consistent with the assumptions of his anthropology and of his theory of knowledge.

As a capstone to our discussion of the causality of matter, in the last section of this chapter we will examine St. Thomas's teaching regarding the resurrection of the human body. Now, although the resurrected body is a theological theme, St. Thomas's teaching regarding the resurrected body is consistent with his philosophical principles and, given that matter exercises a rich and important causality on St. Thomas's philosophical principles, discussing his teaching regarding the resurrection of the human body can reveal just how significant the causality of matter is in his system.

I) Objective Dependence

What is the proper object of human knowledge? According to St. Thomas, the object of knowledge is proportionate to the power of knowledge (*obiectum cognoscibile proportionatur virtuti cognoscitivae*).⁴⁸³ Three kinds of cognitive powers may, however, be distinguished: that which is the act of a corporeal organ (namely, sense), that which is neither the act of a corporeal organ nor in

⁴⁸³ See, for instance, *Summa theologiae*, I, q. 85, art. 1, in corp.

any way connected to matter (namely, angelic intellect) and that which is not the act of a corporeal organ but is a power of a soul which is the substantial form of matter (namely, human intellect).⁴⁸⁴

Now, the proper object of knowledge of sense, because it is the act of a corporeal organ, is material particulars:

[...] one cognitive power, namely, the sense, is the act of a corporeal organ. And therefore the object of every sensitive power is a form as existing in corporeal matter; and since such matter is the principle of individuation, therefore every power of the sensitive part can have knowledge only of particulars.⁴⁸⁵

The proper object of angelic intellect, on the other hand, because it is not the act of a corporeal organ nor in any way connected to matter, is immaterial essences:

There is another grade of cognitive power which is neither the act of a corporeal organ, nor in any way connected with corporeal matter. Such is the angelic intellect, the object of whose cognitive power is therefore a form existing apart from matter; for though angels know material things, yet they do not know them save in something immaterial, namely, either in themselves or in God.⁴⁸⁶

If, like angelic intellects (and unlike sense powers), human intellects are not the act of a corporeal organ but, like sense powers (and unlike angelic intellects) human intellects are a power of a soul which is by nature the

⁴⁸⁴ Ibid.

⁴⁸⁵ *Summa theologiae*, I, q. 85, art. 1, in corp. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Quaedam [...] cognoscitiva virtus est actus organi corporalis, scilicet sensus. Et ideo obiectum cuiuslibet sensitivae potentiae est forma prout in materia corporali existit. Et quia huiusmodi materia est individuationis principium, ideo omnis potentia sensitivae partis est cognoscitiva particularium tantum."

⁴⁸⁶ *Summa theologiae*, I, q. 85, art. 1, in corp. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Quaedam autem virtus cognoscitiva est quae neque est actus organi corporalis, neque est aliquo modo corporali materiae coniuncta, sicut intellectus angelicus. Et ideo huius virtutis cognoscitivae obiectum est forma sine materia subsistens; etsi enim materialia cognoscant, non tamen nisi in immaterialibus ea intuentur, vel in seipsis, vel in Deo."

substantial form of matter, it must be the case that the proper object of human intellection is the essence of material things:

[...] the human intellect [...] is not the act of an organ, and yet is a power of the soul, which is the form of the body, as is clear from what we have said above. And therefore it is proper to it know a form existing individually in corporeal matter, but not as existing in this individual matter. But to know what is in individual matter, yet not as existing in such matter, is to abstract the form from individual matter which is represented by the phantasms. Therefore we must needs say that our intellect understands material things by abstracting from phantasms; and that through material things thus considered we acquire some knowledge of immaterial things [...]"⁴⁸⁷

The essence of material things is the proper object of human intellection precisely because our intellect is a power of a substantial form of matter but not, at the same time, the act of a corporeal organ. As its proper object is the essence of material things, our intellect "must acquire intelligible species from things outside itself through the mediation of sense powers".⁴⁸⁸

This, however, poses the following difficulty: how does our intellect acquire *intelligible* species through the mediation of sense powers (which are acts of *corporeal* organs and have, as we have just noted, material *particulars* as their proper object)?

⁴⁸⁷ *Summa theologiae*, I, q. 85, art. 1, in corp. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Intellectus autem humanus [...] est actus alicuius organi, sed tamen est quaedam virtus animae, quae est forma corporis, ut ex supra dictis patet. Et ideo proprium eius est cognoscere formam in materia quidem corporali individualiter existentem, non tamen prout est in tali materia. Cognoscere vero id quod est in materia individuali, non prout est in tali materia, est abstrahere formam a materia individuali, quam repraesentant phantasmata. Et ideo necesse est dicere quod intellectus noster intelligit materialia abstrahendo a phantasmatibus, et per materialis sic considerata in immaterialium aliqualem cognitionem devenimus [...]" This point (that the proper object of human knowledge is the essence of material things) is one among many relevant to St. Thomas's theory of human knowledge discussed by Karl Rahner in his *Spirit in the World* (New York: Herder & Herder, 1967). On the point in question, see pp. 31-38 of his text.

⁴⁸⁸ *Quaestiones de anima*, q. 8, in corp. (tr. by James H. Robb). The Latin text (Leonine edition, p. 67, l. 194-195) reads: "species intelligibiles a rebus exterioribus accipiat mediantibus potentiis sensitiuis".

Through sensation we can apprehend only particular men, particular trees, particular apples and so forth. Human intellectual cognition, however, is of the *essence* of material things, i.e. of 'man', 'tree', 'apple' and so forth. Now although intellectual concepts are particular as accidents of a subject (my concept of 'dog' is not your concept of 'dog'), they are universal in their intentional capability of representation:⁴⁸⁹ they are the mean (*obiectum quo*) through which we grasp the 'essence' (*obiectum quod*).⁴⁹⁰ Phantasms, however, are not universal in their intentional capability of representation: they represent this or that particular object. This is true even of 'composite' phantasms (phantasms which do not represent any one actual material thing distinctly): these sorts of phantasms represent a particular imagined object.⁴⁹¹

How, then, do human beings acquire intelligible species? Without explaining the process in detail, according to St. Thomas, our agent intellect *abstracts* the essence of material things from the phantasms in the imagination (the passive intellect) and our possible intellect (*intellectus possibilis*) receives the intelligible species abstracted by the agent intellect. As E. Gilson explains:

⁴⁸⁹ On the 'intention of universality', see for instance, *Summa theologiae*, I, q. 85, art. 4, in corp. & ad 1 & ad 4.

⁴⁹⁰ See, for instance, *Super Sent. II*, d. 17, q. 2, art. 1, ad 3: "species intellecta potest dupliciter considerari: aut secundum esse quod habet in intellectu, et sic habet esse singulare; aut secundum quod est similitudo talis rei intellectae, prout ducit in cognitionem ejus, et ex hac parte habet universalitatem: quia non est similitudo hujus rei secundum quod haec res est, sed secundum naturam in qua cum aliis suae speciei convenit. Nec oportet omne singulare esse intelligibile tantum in potentia, sicut patet in substantiis separatis, sed in illis quae individuantur per materiam, sicut sunt corporalia: sed istae species individuantur per individuationem intellectus; unde non perdunt esse intelligibile in actu [...]"; *De veritate*, q. 10, art. 4, in corp. (Leonine edition, p. 306, l. 57-70): "omnis cognitio est secundum aliquam formam quae est in cognoscente principium cognitionis. Forma autem huiusmodi dupliciter potest considerari: uno modo secundum esse quod habet in cognoscente, alio modo secundum respectum quem habet ad rem cuius est similitudo. Secundum quidem primum respectum facit cognoscentem actu cognoscere, sed secundum respectum secundum determinat cognitionem ad aliquod cognoscibile determinatum; et ideo modus cognoscendi rem aliquam est secundum condicionem cognoscentis in quo forma recipitur secundum modum eius." See, also on this point, B. C. Bazán's "Le dialogue philosophique entre Siger de Brabant et Thomas d'Aquin," *Revue philosophique de Louvain* 72 (1974): 53-155, esp. pp. 118-124.

⁴⁹¹ On 'composite' phantasms, see Copleston's, *A History of Philosophy*, vol. 2, part II (New York: Image Books, 1962), p. 109.

L'âme a l'intelligibilité en acte, mais il lui manque la détermination; les phantasmes ont la détermination en acte, mais il leur manque l'intelligibilité; elle va donc leur conférer l'intelligibilité, par où elle sera intellect agent, et en recevoir la détermination, par où elle sera intellect possible. Pour que l'opération soit réalisable, une seule condition est requise [...]: il faut que l'action de l'intellect agent, qui rend les phantasmes intelligibles, précède la réception de cet intelligible dans l'intellect possible: *actio intellectus agentis in phantasmatis praecedat receptionem intellectus possibilis*.⁴⁹²

What is important in this explanation of how we come to know the essence of material things is that our (agent) intellect is such that it must abstract intelligible species from phantasms. Our (possible) intellect, let us recall, does not possess innate intelligible species but is a *tabula rasa* which must receive intelligible species.⁴⁹³ Moreover, although our intellect (possible and agent) is not the act of any corporeal organ, it yet *depends* on the body, more precisely, on phantasms:

There are, however, operations of the soul which are not exercised through the medium of the body, though the body ministers, as it were, to their production. The intellect, for example, makes use of the phantasms derived from the bodily senses, and thus far is dependent on the body, although capable of existing apart from it.⁴⁹⁴

⁴⁹² Gilson, *Le Thomisme...*, p. 309. It should be noted that some scholars, for instance Copleston (see his *A History...*, vol. 2, part II, pp. 109-111), confuse *intellectus passivus* (imagination, a sensitive faculty) and *intellectus possibilis* (an intellective faculty, receptive by nature). For St. Thomas's teaching regarding *intellectus passivus*, see for instance *In De anima*, III, lect. 4 (Leonine edition, v. 235-242): "[...] passivus uero intellectus corruptibilis est, id est pars anime que est subiecta predictis passionibus est corruptibilis: pertinet enim ad partem sensitivam (tamen hec pars anime dicitur intellectus, sicut et dicitur rationalis in quantum aliquantulum participat rationem obediendo rationi et sequendo motum eius [...])".

⁴⁹³ See, for instance, *Quaestiones de anima*, q. 8, in corp. (Leonine edition): "[...] non habet anima humana intelligibiles species sibi naturaliter inditas quibus in operationem propriam exire possit — que est intelligere —, sicut habent superiores substantie intelligibiles; set est in potentia ad eas, cum sit sicut tabula in qua nichil est scriptum, ut dicitur in III De anima."

⁴⁹⁴ *Summa theologiae*, q. 70, art. 3, in corp. (tr. by Anton C. Pegis) (emphasis mine). The Latin text (Ottawa edition) reads: "Est autem aliqua operatio animae, quae non exercetur corpore mediante, sed tamen ex corpore aliquod adminiculum tali operationi exhibetur; sicut per corpus exhibentur animae humanae phantasmata, quibus indiget ad intelligendum."

The dependence of our (agent and possible) intellect on the body is not *subjective* (for, as the cited text just indicated, it is capable of existing apart from the body) but *objective*, for, the objects (namely, the essences of material things) of our intellect are in the phantasms in our inner senses, which phantasms cannot exist apart from the organs of the body:

To understand is the essential operation of a soul if one takes into account the principle from which the operation proceeds. For understanding does not take place in a soul by means of a corporeal organ as sight does through the medium of the eye. The body nevertheless shares in the operation of understanding from the side of the object, for phantasms, which are the objects of the intellect, cannot exist apart from the organs of the body.⁴⁹⁵

Now this objective dependence of the (agent and possible) intellect on matter (i.e., the body considered in precise abstraction from the intellectual perfection of the human soul) implies both the external senses (without which we would not have phantasms) and the inner sense powers (in which phantasms are produced or retained). However, it mainly implies the imagination (the passive intellect), in which phantasms are produced and memory, which is the 'storehouse' of phantasms.⁴⁹⁶

Having already discussed the causality of the human brain (which is the organ of both imagination and memory) in the previous chapter, we shall not repeat, here, our findings. However, it is important to point out that we are not claiming that the causality exercised by the human brain in intellection is either efficient, formal or final. That sort of claim cannot be textually supported and

⁴⁹⁵ *Quaestiones de anima*, q. 1, ad 11 (tr. by James H. Robb). The Latin text (Leonine edition) reads: "intelligere est propria operatio anime si consideret principium a quo egreditur operatio. Non enim egreditur ab anima mediante organo corporali, sicut visio mediante oculo. Communicat tamen in ea corpus ex parte obiecti, nam fantasmata, que sunt obiecta intellectus, sine corporeis organis esse non possunt."

⁴⁹⁶ For the role of memory, see *In An. Post. II*, lect. 20 (Leonine edition, pp. 244-245) where St. Thomas analyzes Aristotle's thesis that 'ex sensu fit memoria', 'ex memoria fit experimentum' and 'ex experimento fit universale'.

clearly contradicts St. Thomas's teaching. Rather, what is clear from the texts is that the human brain (in particular, imagination and memory) exercises a *material causality* in human intellection, as the organ of internal senses providing the data (namely, the phantasms) from which the agent intellect abstracts the intelligible forms, which abstracted forms are then received by the possible intellect.

It is also important to point out that our intellect requires a *conversio ad phantasmata* not only for the acquisition of new knowledge but, also, for the exercise of acquired science.⁴⁹⁷ For, according to St. Thomas,

In the state of the present life, in which the soul is united to a corruptible body, it is impossible for our intellect to understand anything actually, except by turning to phantasms. [...] First of all because the intellect, being a power that does not make use of a corporeal organ, would in no way be hindered in its act through the lesion of a corporeal organ, if there were not required for its act the act of some power that does make use of a corporeal organ. Now sense, imagination and the other powers belong to the sensitive part make use of a corporeal organ. Therefore it is clear that for the intellect to understand actually, not only when it acquires new knowledge, but also when it uses knowledge already acquired, there is need for the act of the imagination and of the other powers. For when the act of the imagination is hindered by a lesion of the corporeal organ, for instance, in a case of frenzy, or when the act of the memory is hindered, as in the case of lethargy, we see that a man is hindered from understanding actually even those things of which he had a previous knowledge.⁴⁹⁸

⁴⁹⁷ For a more detailed explanation of this point, see Gilson's *Le Thomisme...*, pp. 310-312.

⁴⁹⁸ *Summa theologiae*, I, q. 84, art. 7, in corp. (tr. by Anton C. Pegis) (emphasis mine). The Latin text (Ottawa edition) reads: "impossible est intellectum secundum praesentis vitae statum, quo passibili corpori coniungitur, aliquid intelligere in actu, nisi convertendo se ad phantasmata. [...] Primo quidem quia, cum intellectus sit vis quaedam non utens corporali organi, nullo modo impediretur in suo actu per laesionem alicuius corporalis organi, si non requireretur ad eius actum actus alicuius potentiae utentis organo corporali. Utuntur autem organo corporali sensus et imaginatio et aliae vires pertinentes ad partem sensitivam. Unde manifestum est quod ad hoc quod intellectus actu intelligat, non solum accipiendo scientiam de novo, sed etiam utendo scientia iam acquisita, requiritur actus imaginationis et ceterarum virtutum. Videmus enim quod impedito actu virtutis imaginativae per laesionem organi, ut in phreneticis, et similiter impedito actu memorativae virtutis, ut in lethargicis, impeditur homo ab intelligendo in actu etiam ea quorum scientiam praeaccepit." Karl Rahner's *Spirit in the World* (New York: Herder & Herder,

Another point of great importance is (intellectual) knowledge of singulars.⁴⁹⁹ Now, this sort of knowledge is not, according to St. Thomas, reached through abstraction (for, what is abstracted from phantasms are universals) but, rather, reached *per reflexionem* on the phantasms.⁵⁰⁰ That we cannot know singulars directly is, according to St. Thomas, a consequence of the fact that our knowledge is *abstractive* (from matter) and without matter we intellectually grasp only universals:

Our intellect cannot know the singular in material things directly and primarily. The reason for this is that the principle of singularity in material things is individual matter; whereas our intellect, as we have said above, understands by abstracting the intelligible species from such matter. Now what is abstracted from individual matter is universal. Hence our intellect knows directly only universals. But indirectly, however, and as it were by a kind of reflection, it can know the singular, because, as we have said above, even after abstracting the intelligible species, the intellect, in order to understand actually, needs to turn to the phantasms in which it understands the species, as is said in *De Anima* iii. Therefore it understands the universal directly through the intelligible species, and indirectly the singular represented by the phantasm. And thus it forms the proposition, *Socrates is a man*.⁵⁰¹

1968) is a detailed (and, frankly, beautiful) study of *Summa theologiae*, I, q. 84, art. 7. We recommend, in particular, Chapter 4 ("Conversion to the Phantasm").

⁴⁹⁹ The causality of matter is also evident and important with regards to the object and limits of metaphysics. As, however, we are here concerned only with the causality of the matter which is the human body, we will not broach this topic but refer the reader to *Summa theologiae*, I, q. 88 and *loci paralleli* as well as to Part III ("The Possibility of Metaphysics on the Basis of the Imagination") of Karl Rahner's *Spirit in the World*.

⁵⁰⁰ See, for instance, *Summa theologiae*, I, q. 86, art. 1, in corp.

⁵⁰¹ *Summa theologiae*, I, q. 86, art. 1, corp. (tr. by Anton C. Pegis). The Latin text (Leonine edition) reads: "singulare in rebus materialibus intellectus noster directe et primo cognoscere non potest. Cuius ratio est, quia principium singularitatis in rebus materialibus est materia individualis; intellectus autem noster, sicut supra dictum est, intelligit abstrahendo speciem intelligibilem ab huiusmodi materia. Quod autem a materia individuali abstrahitur, est universale. Unde intellectus noster directe non est cognoscitivus nisi universalium. Indirecte autem et quasi per quandam reflexionem, potest cognoscere singulare, quia, sicut supra dictum est, etiam postquam species intelligibiles abtraxerit, non potest secundum eas actu intelligere nisi convertendo se ad phantasmata, in quibus species intelligibiles intelligit, ut dicitur in III *De An.* Sic igitur ipsum universale per speciem intelligibilem directe intelligit; indirecte autem singularia, quorum sunt phantasmata. Et hoc modo format hanc propositionem: Socrates est homo."

Our intellect, hence, understands the universal directly through the intelligible species abstracted from matter and understands indirectly the singular represented by the phantasm. Furthermore, it should be noted that the intelligible species (the *obiectum quo*) is, like singulars, known *per reflexionem* and that, according to St. Thomas, although the universal is known directly, what is primarily understood is the thing of which the species is the likeness:

[...] that by which the sight sees is the likeness of the visible thing; and the likeness of the thing understood, that is, the intelligible species, is the form by which the intellect understands. But since the intellect reflects upon itself, by such reflection it understands both its own act of understanding, and the species by which it understands. Thus the intelligible species is secondarily that which is understood; but that which is primarily understood is the thing of which the species is the likeness.⁵⁰²

Let us now turn our attention to the will, which is also an act belonging to the intellective level of perfection of human beings. Now, St. Thomas's teaching regarding the will is quite involved and it is not our place, here, to provide a detailed exegesis of it. However, as here, too, the causality of matter can be seen, we would be remiss not to say something about it.

According to St. Thomas, the intellectual appetite — that is, the will — has as its object the good:

Willing is a rational appetite, and there is no appetite except for a good, because appetite is nothing other than a certain bent towards a thing that is wanted, a thing which is matching and complementary. What a thing is, as a being and as a substance, is a definite good. So that every bent towards a thing is towards

⁵⁰² *Summa theologiae*, I, q. 85, art. 3, in corp. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "[...] similitudo rei visibilis est secundum quam visus videt; et similitudo rei intellectae, quae est species intelligibilis, est forma secundum quam intellectus intelligit. — Sed quia intellectus supra seipsum reflectitur, secundum eandem reflexionem intelligit et suum intelligere, et speciem qua intelligit. Et sic species intellecta secundario est id quod intelligitur. Sed id quod intelligitur primo, est res cuius species intelligibilis est similitudo."

something good. Which is why Aristotle says that the good is that which all desire.⁵⁰³

Now, just as our intellect of necessity adheres to first principles, our will of necessity adheres to the good as its end, which is happiness.⁵⁰⁴ This sort of necessity (necessity of the end) is not repugnant to the will but is *natural*, that is, according to the inclination of nature.⁵⁰⁵ Man's freedom, as Gilson has aptly pointed out, results from the distance, always present in this life, between our will and its object:

[...] l'homme est un être doué de volonté, propriété inséparable d'un agent raisonnable et libre. On sait aussi d'où provient cette liberté. Elle résulte de l'écart qui se rencontre toujours, ici-bas, entre notre volonté et son objet. Solidaire d'un entendement capable de l'être universel, la volonté tend vers le bien universel; en fait, elle se trouve toujours placée en présence de biens particuliers. Ces biens particuliers, incapables de remplir son désir, ne constituent donc pas à son égard des fins nécessitantes, d'où il résulte qu'elle demeure à leur égard entièrement libre.⁵⁰⁶

Hence, although our will is naturally inclined towards the good, it does not of necessity desire whatever it desires, i.e. it is free to elect the means to achieve the end to which it is determined:

The will can tend to nothing except under the aspect of good. But because good is of many kinds, for this reason the will is not of necessity determined to one.⁵⁰⁷

⁵⁰³ *Summa theologiae*, I-II, q. 8, art. 1, in corp. (tr. by Thomas Gilby). The Latin text (Ottawa edition) reads: "voluntas est appetitus quidam rationalis. Omnis autem appetitus non est nisi boni. Cuius ratio est quia appetitus nihil aliud est quam quaedam inclinatio appetentis in aliquid. Nihil autem inclinatur nisi in aliquid simile et conveniens. Cum igitur omnis res, in quantum est ens et substantia, sit quoddam bonum, necesse est ut omnis inclinatio sit in bonum. Et inde est quod Philosophus dicit in I Eth., quod 'bonum est quod omnia appetunt'."

⁵⁰⁴ See, for instance, *Summa theologiae*, I, q. 82, art. 2, in corp.

⁵⁰⁵ Ibid.

⁵⁰⁶ Gilson, *Le Thomisme...*, p. 351. See, also, *Summa theologiae*, I-II, q. 10, art. 2, in corp.

⁵⁰⁷ *Summa theologiae*, I, q. 82, art. 2, ad 1 (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "voluntas in nihil potest tendere nisi sub ratione boni. Sed quia bonum est multiplex, propter hoc non ex necessitate determinatur ad unum."

Election (choice) of this (apparent) good over another (apparent) good or (apparent) evil is not, however, the domain of will alone: it requires deliberation. Deliberation, which concludes in a judgment of practical reason, is accomplished by the intellect alone, "sans que la volonté intervienne pour autre chose que pour le mettre en mouvement et, en quelque sorte, le déclencher."⁵⁰⁸ As, however, practical reason is exercised in contingent and particular matters (and it is here, then, that matter has a causality), it generally offers more than one judgment, i.e. represents one act as good in this or that respect and another as good in this or that respect. These different acts proposed by practical reason as possible means towards the end to which we tend are the basis of our will's choice, choice being an act of will:

It is clear that reason comes before will and directs its activity, in that the will tends towards its object in the setting of reason, which presents to it the object of desire. Accordingly, then, that will-act which turns towards an object proposed to it as being good, that is, as being reasonably subordinate to the end, is 'materially' one of will, but 'formally' one of reason. To appetite belongs the texture of the act, to knowledge its shape. In this sense choice is substantially an act of will, not of reason, wrought in a certain going out of the soul to a good which is preferred, clearly an act of appetitive power.⁵⁰⁹

What this means is that, after the consideration of practical reason, the will elects one of the means proposed to it as being good (i.e., subordinate to its

⁵⁰⁸ Gilson, *Le Thomisme...*, p. 353.

⁵⁰⁹ *Summa theologiae*, I-II, q. 13, art. 1, in corp. (tr. by Thomas Gilby). The Latin text (Ottawa edition) reads: "Manifestum est autem quod ratio quodammodo voluntatem praecedat, et ordinat actum eius: in quantum scilicet voluntas in suum obiectum tendit secundum ordinem rationis, eo quod vis apprehensiva appetitivae suum obiectum repraesentat. Sic igitur ille actus quo voluntas tendit in aliquid quod proponitur ut bonum, ex eo quod per rationem est ordinatum ad finem, materialiter quidem est voluntatis, formaliter autem rationis. In huiusmodi autem substantia actus materialiter se habet ad ordinem qui imponitur a superiori potentia. Et ideo electio substantialiter non est actus rationis, sed voluntatis; perficitur enim electio in motu quodam animae ad bonum quod eligitur. Unde manifeste actus est appetitivae potentiae." Gilson gives a much more detailed analysis of election and the respective roles of practical reason and will than we can offer here. See his *Le Thomisme...*, esp. pp. 351-356.

end). Our choices, thus, rest in one respect on the will's end (the good) and, in another respect, on the sensible data deliberated upon by practical reason. As the deliberation of practical reason is essential to willing and that deliberation requires sensible data, our will must be said to, like our intellect, *objectively depend* on the body (in particular, on the external and internal senses which provide the sensible data for the deliberation of our practical reason).

Now, this objective dependence of the will on the body has significant ramifications, for, man's particular decisions as to what should be pursued and what should be avoided in order to attain happiness is based on the judgment(s) of practical reason, and practical reason deliberates upon sensible data, but the good as such (which is the object of the will) is not available to the senses (for, the good as such is, according to St. Thomas, God).

Although this seems to put the causality of matter in a very negative light (in that the will's objective dependence on sensible data seems to make willing God difficult because God is not a sensible object), there is a certain beauty to the human situation which we would, on a purely personal note, like to point out. Without the task of discovering that true happiness can only be found in God, we would will God, love God, by necessity rather than freely. Now, despite the difficulties involved in discovering that true happiness can only be found in God, freely willing our proper end (God), freely loving God seems, at least to me, to be much more meaningful and beautiful than loving Him by necessity.⁵¹⁰

Now, to hold that the intellect and the will are objectively dependent on matter (i.e., the body considered in precise abstraction from the intellectual perfection of the soul) to act has important implications with regards to what can

⁵¹⁰ If the parable of the prodigal son is any indication, God would also seem to more greatly appreciate being loved freely to being loved out of necessity. But, a discussion of this point takes us well beyond the parameters of this thesis.

consistently be said about intellection and willing in the separated state of the human soul. Although a discussion of the state of the human soul in separation from its matter involves both philosophical as well as theological elements, we shall restrict our attention to showing that what St. Thomas says regarding intellection and willing in the separated state is consistent with his philosophical principles. That St. Thomas is consistent with his philosophical principles on these matters is significant, for, it indicates that the causality he ascribes to the human body is considered by him to be an important and essential aspect of the human being, of what it means to be *human*.

II) Knowing and Willing in the Separated State

As we have already shown in Chapter 3, the human soul is a subsistent substantial form and, as such, incorruptible. Although the human soul is not corrupted with the corruption of the body (of which it was the substantial form) and, thus, can exist in a separated state, in such a state the human soul is, according to St. Thomas, outside its nature (*praeter naturam*). For, as we have also already discussed, it is the very nature of the soul to be a substantial form of matter.

Now, in a state of separation, the soul cannot exercise any of the operations which are proper to the composite of soul and matter, namely, all the nutritive and sensitive operations.⁵¹¹ However, although the nutritive and sensitive powers are destroyed with the corruption of the body, they remain in

⁵¹¹ See, for example, *Quaestiones de anima*, q. 19, in corp.

the soul as in a principle, that is, only remain in the separated soul as in their root:

[...] it is clear that no operation of the sensitive part can belong to the soul alone as that which is operating, but rather belongs to the composite through the soul, as that which is not performs the action of heating through heat. Therefore it is the composite which sees and hears and in general senses, but through the soul; hence, too, it is the composite which has the power to see and to hear and to sense, but through the soul. Therefore it is clear that the powers of the sensitive part of a soul are in the composite as in a subject, but come from the soul as from a principle. Consequently when its body is destroyed, the sensitive powers of the soul are destroyed, but they remain in the soul as in a principle [...] that is, that the sensitive powers remain in a separated soul only as in their root.⁵¹²

What this means, in lay terms, is that the separated soul cannot see, hear, eat, and so forth but yet remains what it is, namely, the principle of all the nutritive and sensitive powers (and, of course, the principle of the intellectual powers as well).⁵¹³ However, as our (active/agent) intellect is not the act of an organ as are sensitive and nutritive powers, it cannot be corrupted with the corruption of the body and, thus, does not remain in the separated soul *only* as in its root but actually.

Yet, as we have just seen in the previous section, our intellect is objectively dependent on the body to act (requiring, at least while the soul is

⁵¹² *Quaestiones de anima*, q. 19, in corp. (tr. by James H. Robb). The Latin text (Leonine edition) reads: "Manifestum est [...] quod nulla operatio partis sensitivae potest esse anime tantum ut operantis; set est compositi per animam, sicut calefactio est calidi per calorem. Compositum igitur est videns et audiens et omnino sentiens, set per animam; unde et compositum est potens videre et audire et sentire, set per animam. Manifestum est quod potentie partis sensitivae sunt in composito sicut in subiecto, set sunt ab anima sicut a principio. Destructo igitur corpore, destruuntur potentie sensitivae, set remanent in anima sicut in principio [...] quod potentie sensitivae manent in anima separate solum sicut in radice."

⁵¹³ This introduces the following interesting dilemma: if vital operations are proper to the nutritive faculty of the soul but these remain in the separated soul only as in their root, can the separated soul be said to be *alive*, to actually have life? The question is difficult and we shall not investigate it here.

united to the body, the *conversio ad phantasmata*) , at least while the soul is united to the body. How, then, does the separated soul know and what can it know in the separated state? Does it know more and know more perfectly in separation from matter? If so, the causality of matter would certainly seem to be negatively perceived by St. Thomas and it would, then, seem quite legitimate to call into question his claim that the union of the soul with the body is both fitting and beneficial.

However, St. Thomas was clearly aware that if he maintained that the soul knows more perfectly in separation from its body than when it is united with the body, he could not maintain that the union of the soul with the body is both fitting and beneficial:

The difficulty in solving this question ["whether the separated soul can understand anything"] arises from the fact that the soul united to the body can understand only by turning to the phantasms, as experience shows. Did this not proceed from the soul's very nature, but accidentally, through its being bound up with the body, as the Platonists said, the difficulty would vanish; for in that case, when the burden of body was once removed, the soul would at once return to its own nature, and would understand intelligible things simply, without turning to phantasms, as is exemplified in the case of other separate substances. In that case, however, the union of soul and body would not be for the soul's good, for evidently it would understand worse in the body than out of it; but the union would be for the good of the body, which would be absurd, since matter exists for the sake of the form, and not the form for the sake of the body.⁵¹⁴

⁵¹⁴ *Summa theologiae*, I, q. 89, art. 1, in corp. (tr. by Anton C. Pegis) (emphasis mine). The Latin text (Ottawa edition) reads: "ista quaestio ["Utrum anima separata aliquid intelligere possit"] difficultatem habet ex hoc quod anima, quandiu est corpori coniuncta, non potest aliquid intelligere non convertendo se ad phantasmata, ut per experimentum patet. Si autem hoc non est ex natura animae, sed per accidens hoc convenit ei ex eo quod corpori alligatur, sicut Platonici posuerunt, de facili quaestio solvi posset. Nam remoto impedimento corporis, rediret anima ad suam naturam, ut intelligeret intelligibilia simpliciter, non convertendo se ad phantasmata, sicut est de aliis subsantiis separatis. Sed secundum hoc non esset anima corpori unita propter melius animae, si peius intelligeret corpori unita quam separata; sed hoc esset solum propter melius corporis, quod est irrationabile, cum materia sit propter formam, et non e converso."

If it is proper to the human soul to know by turning to phantasms and, yet, in separation from the body the soul has no phantasms to turn to, can the separated soul know at all and, if so, how?

According to St. Thomas, the soul in separation from the body has a different mode of being than when united to the body and, as nothing acts except insofar as it is actual, the mode of action of the soul will differ when it is separated from the body, namely, its mode of understanding will not be by turning to phantasms but by turning to pure intelligibles.⁵¹⁵ As, however, it is not natural for the soul to understand without turning to phantasms,⁵¹⁶ the knowledge of the separated soul as regards natural things will be general and confused:

[...] the separated soul, like the angels, understands by means of species received from the influence of the divine light. Nevertheless, as the soul by nature is inferior to an angel, to whom this kind of knowledge is natural, the soul apart from the body does not receive perfect knowledge through such species, but only a general and confused kind of knowledge.⁵¹⁷

In separation from the body, the soul will also be impeded as regards knowledge of singulars:

[...] the angels, by reason of their perfect intellect, know through the species not only the specific natures of things, but also the singulars contained in those species; whereas separated souls know by these species only those singulars to which they are

⁵¹⁵ See, for instance, *Summa theologiae*, I, q. 89, art. 1, in corp.

⁵¹⁶ See, for instance, *Summa theologiae*, I, q. 89, art. 1, in corp. (Ottawa edition): "Unde modus intelligendi per conversionem ad phantasmata est animae naturalis, sicut et corpori uniri; sed esse separatam a corpore est praeter rationem suae naturae, et similiter intelligere sine conversione ad phantasmata est ei praeter naturam."

⁵¹⁷ *Summa theologiae*, I, q. 89, art. 3, in corp. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "anima separata intelligit per species separatas quas recipit ex influentia divini luminis, sicut et angeli; sed tamen quia natura animae est infra naturam angeli, cui iste modus cognoscendi est naturalis; anima separata per huiusmodi species non accipit perfectam rerum cognitionem, sed quasi in communi et confusam." See also, *Quaestiones de anima*, q. 18, in corp. and *loci parallela*.

determined by former knowledge in this life, or by some affection, or by natural relation, or by the divine plan; because whatever is received into anything is determined according to the mode of the recipient.⁵¹⁸

Regarding the soul's will in the separated state, St. Thomas argues that while the will is mutable so long as the soul is united to the body, it will be immutable once the soul has been separated from the body.⁵¹⁹ This gives to willing in this life a great significance, for, "the body was given to the soul by nature with this in view: that the soul existing within the body be perfected, be, as it were, moved toward its perfection"⁵²⁰ and, should we fail to will the good in this life, our soul will have a will which is unchangeably evil.⁵²¹

As we can see, what St. Thomas teaches regarding the separated state of the soul, in particular as regards knowing and willing, is consistent with the assumptions of his anthropology and his theory of knowledge. Because it is the very nature of the human soul to be united to the body, it is outside its nature (*praeter naturam*) when separated from the body; because it is our nature to know by turning to phantasms, the different mode of knowledge afforded the human soul in the separated state is insufficient to provide us with as perfect a knowledge as can the *conversio ad phantasmata*, which is our proper mode of understanding; and, in the separated state (where the object of our will, sensible

⁵¹⁸ *Summa theologiae*, I, q. 89, art. 4, in corp. (tr. by Anton C. Pegis). The Latin text (Ottawa edition) reads: "Unde angeli propter efficaciam sui intellectus per huiusmodi species non solum naturas rerum in speciali cognoscere possunt, sed etiam singularia sub speciebus contenta. Animae vero separatae non possunt cognoscere per huiusmodi species nisi solum singularia illa ad quae quodammodo determinantur vel per praecedentem cognitionem, vel per aliquam affectionem, vel per naturalem habitudinem, vel per divinam ordinationem: quia omne quod recipitur in aliquo, recipitur in eo per modum recipientis." See also, *Quaestiones de anima*, q. 20, in corp. and *loci paralleli*.

⁵¹⁹ See, for instance, *Summa contra Gentiles*, IV, cap. 95 (Leonine edition, pp. 291-292).

⁵²⁰ *Summa contra Gentiles*, IV, cap. 95 (tr. by Charles J. O'Neil). The Latin text (Leonine edition, p. 292) reads: "[...] corpus deserviat animae ad proprias operationes, ad hoc ei naturaliter datum est ut in ipso existens perficiatur, quasi ad perfectionem mota."

⁵²¹ See, for instance, *Summa contra Gentiles*, IV, cap. 93 (Leonine edition, p. 290).

data, is no longer available), we no longer make particular decisions as to what should be pursued or avoided to attain happiness.

This consistency indicates to what extent St. Thomas took seriously the causality of matter and, also, to what extent he believed that the causality of matter is both essential and contributive to human existence.

III) The Body and Ultimate End: The Resurrected Body

Although the resurrection of the body is a theological topic, St. Thomas's teaching regarding the resurrected body is consistent with his philosophical principles and, as it reveals that being corporeal is not merely valuable and important for this life but fundamental to human beatitude, discussing St. Thomas's teaching regarding the resurrected body would seem an appropriate capstone to our examination of the causality of human materiality.

As we have seen, the human soul is, according to St. Thomas, a *subsistent* substantial form of matter and, consequently, incorruptible. However, being incorruptible and, yet, by nature a substantial form of matter means that in separation from its matter, the soul is outside its nature (*praeter naturam*), cannot perform any of its sensitive and nutritive functions and even its mode of understanding in the separated state is not natural to it. Now, philosophically speaking, this does not make sense, for, *natura nihil facit frustra* and, in the separated state, the soul is precisely *praeter naturam*.

Moreover, as we have also discussed, human beings naturally desire happiness (beatitude) and this desire cannot be in vain. Now, beatitude is the

perfect good which leaves all desire at rest.⁵²² However, the human soul in separation from its matter is not completely at rest, for, although the desire of the soul is completely at rest insofar as the object of desire is concerned (*ex parte appetibilis*), it is not completely satisfied with itself as subject of desire (*ex parte appetentis*) because it does not possess the supreme Good in all the ways possible for a complete human being:

The desire of the separated soul is entirely at rest, as regards the thing desired; since, to wit, it has that which suffices its appetite. But it is not wholly at rest, as regards the desirer, since it does not possess that good in every way that it would wish to possess it.⁵²³ And therefore, as long as it enjoys God, without the fellowship of the body, its appetite is at rest in that which it has, in such a way, that it would still wish the body to attain to its share.⁵²⁴

Consequently, the resurrection of the body is required in order to restore the natural order and it does so by reintroducing matter. Now although it is true that the resurrected body will not be subject to corruption (which is one aspect of matter's causality in this life),⁵²⁵ it is not true that in the resurrected state matter no longer exercises any causality.

Now, without going into every detail concerning the nature of the resurrected body, let us at least indicate the veracity of our claim that the

⁵²² See, for instance, *Sententia libri Ethicorum*, I, lect. 9 (Leonine edition, pp. 32-33, l. 136-180): "Bonum perfectum videtur esse *per se sufficiens*; si enim quantum ad aliquid non sufficit, iam non videtur perfecte desiderium quietare; et ita non erit perfectum bonum [...] *per se sufficiens* dicitur illud quod, etiam si solum habeatur, facit vitam eligibilem, *nullo exteriori indigentem*. Et hoc maxime convenit felicitati: alioquin non terminaret motum desiderii si extra ipsam remaneret aliquid quo homo indigeret".

⁵²³ *Summa theologiae*, I-II, q. 4, art. 5, ad 5 (tr. by the Dominican Fathers). The Latin text (Ottawa edition) reads: "[...] desiderium animae separatae totaliter quiescit ex parte appetibilis; quia habet id quod suo appetitui sufficit. Sed non totaliter requiescit ex parte appetentis, quia illud bonum non possidet secundum omnem modum quo possidere vellet."

⁵²⁴ *Summa theologiae*, I-II, q. 4, art. 5, ad 4 (tr. by the Dominican Fathers). The Latin text (Ottawa edition) reads: "Et ideo quandiu ipsa fruitur Deo sine corpore, appetitus eius sic quiescit in eo, quod tamen adhuc ad participationem eius vellet suum corpus pertingere."

⁵²⁵ See, for instance, *Summa contra Gentiles*, IV, cap. 85 (Leonine edition, pp. 272-273).

resurrection significantly reintroduces the causality of matter. We must first point out that the resurrected body is not an ethereal body or some other sort of body other than a corporeal one. For, according to St. Thomas, it is made of flesh and bones and so forth:

Some [...] have held that our bodies do not rise in a bodily nature, but are changed into spirit. [...] But the error of these opinions is quite evident. For our resurrection will conform to the resurrection of Christ [...] After His resurrection, of course, Christ had a body one could touch, constituted of flesh and bones [...] Therefore, when other men rise, they will have bodies one can handle, composed of flesh and bones.⁵²⁶

Secondly, in the resurrected state, man will have the *capacity* to exercise all of his nutritive, sensitive and intellective operations according to his nature (though not all these operations will need to be exercised, for example, there will be no need to reproduce in the resurrected state⁵²⁷). The resurrected body will, thus, be in every respect the same as the one we have in this life with the one exception that it will no longer be corruptible and, consequently, the causality of matter at each level of perfection will be reintroduced by the resurrection: our bodies will be composed of elements;⁵²⁸ be of a certain weight, size, height; have organs of reproduction; have organs of sensation; have again the proper *complexio* of elemental qualities;⁵²⁹ and our matter will continue to exercise its

⁵²⁶ *Summa contra Gentiles*, IV, cap. 84 (tr. by Charles J. O'Neil). The Latin text (Leonine edition, p. 268) reads: "Quorum [...] posuerunt corpora nostra non in natura corporali resurgere, sed transmutari in spiritum [...] Sed harum opinionum error manifeste apparet. Nostra enim resurrectio conformis erit resurrectioni Christi [...] Christus autem post resurrectionem habuit corpus palpabile, ex carnibus et ossibus consistens [...] Ergo et alii homines resurgentes corpora palpabilia habuerunt, ex carnibus et ossibus composita." See, also, *Summa theologiae*, suppl., q. 82, art. 1, in corp. (where he argues that the bodies of those who rise again will contain flesh and bones and like parts) and *Summa theologiae*, III, q. 54, art. 2, in corp.

⁵²⁷ See, for instance, *Summa contra Gentiles*, IV, cap. 88 (Leonine edition, p. 278).

⁵²⁸ See, for instance, *Summa theologiae*, III, q. 54, art. 2, ad 2.

⁵²⁹ For, the sense of touch will not be lacking or inadequate in the resurrected state. See, for instance, *Summa contra Gentiles*, IV, cap. 84 (Leonine edition, pp. 268-269).

causality in the soul's operations (from living, to seeing⁵³⁰ and even to thinking⁵³¹).

Lastly, it is interesting to note that even though there will be no need to reproduce in the resurrected state, our resurrected bodies will nevertheless be gendered. For, although sexual organs will not be necessary in the resurrected state, they contribute to the completeness of our nature.⁵³² And, in a similar fashion, although communion with other human beings does not belong to the objective essence of beatitude (for, only God is the object of beatitude), it will be a part of the resurrected state because, according to St. Thomas, it contributes to the well being of beatitude (*ad bene esse beatitudinis*).⁵³³

As we can see, St. Thomas's teaching regarding the resurrected body is not just consistent with the principles of his anthropology and his theory of knowledge but, also, gives to the human materiality and its causality an essential, positive and important role not only during this life but, even, in the next.

This is significant, because, he could have certainly maintained that the resurrected body was quite different from our bodies in this life if he did not believe that our bodies, such as they are, contributed positively to who we are as human beings or, perhaps, could have maintained a thesis similar to that of

⁵³⁰ St. Thomas says that the operations of the senses, for instance, belong to the happiness of the resurrected state. See, for instance, *Summa theologiae*, I-II, q. 3, art. 3, in corp.

⁵³¹ When reunited with its body, the soul's mode of knowledge will again be to turn to phantasms. See, for instance, *Quaestiones de anima*, q. 19, ad 18 (Leonine edition): "Eorum igitur que apprehendit anima separata secundum modum sibi proprium, idest absque fantasmatis, remanet cognitio in ea postquam ad pristinum statum redit, corpori iterato coniuncta, secundum modum tunc sibi conuenientem, scilicet cum conuersione ad fantasmata."

⁵³² See, for instance, *Summa contra Gentiles*, IV, cap. 88 (Leonine edition, p. 278): "cum per resurrectionem sint reparandi defectus naturae, nihil eorum quae ad perfectionem naturae pertinent, a corporibus resurgentium auferetur. Sicut autem alia corporis membra ad integritatem humani corporis pertinent, ita et ea quae generationi deserviunt, tam in maribus quam in feminis. Resurgent ergo membra huiusmodi in utrisque."

⁵³³ See, for instance, *Summa theologiae*, I-II, q. 4, art. 8, in corp.

Benedict Ashley (who argues that we each only need an iota of matter in the resurrected state), which clearly regards corporeality as negative and unnecessary.⁵³⁴

However, as B. C. Bazán has aptly noted, St. Thomas's teaching regarding the resurrection of the body gives to corporeality, to materiality the highest form of praise:

[...] with the reintroduction of the body in the state of beatitude, a whole new understanding of happiness is gained, a whole new perspective is made possible. With the recuperation of our embodied reality all the dimensions that are attached to it reenter the state of beatitude. [...] Never before had the body been so clearly recognized as having so high a value, a value capable of determining the fulfillment of beatitude. This highest encomium of the human body is also a great encomium of philosophy. Even in his most sophisticated theological discourse, even in dealing with the perfect Good whose possession could have tempted him to forget the earthly status of human beings, Thomas remains faithful to his anthropological principles, and does so even when they might seem to retard and to limit the élan of theological wisdom.⁵³⁵

⁵³⁴ Benedict Ashley, "Aquinas and the Theology of the Body," in *Thomistic Papers III* (ed. by Leonard Kennedy, Houston: Centre for Thomistic Studies, 1984), pp. 55-89. See, also, his *Theologies of the Body: Humanist and Christian*, Massachusetts: Pope John Center, 1985.

⁵³⁵ B. C. Bazán, "The Highest Encomium...", p. 116.

CONCLUSION

MATTER AND THE BODY ACCORDING TO THOMAS AQUINAS

What this dissertation has shown is that St. Thomas ascribed a rich and important causality to human corporeality/materiality in his mature works. By considering the soul not merely 'abstractly' (i.e., from the 'viewpoint of soul') but, also, 'concretely' (i.e., from the 'viewpoint of body'), we have seen how the human body *conditions* almost every act conferred by the human soul, including not only the nutritive and sensitive acts of the soul but, also, its intellectual acts. This 'conditioning' of the acts of the human soul was, moreover, shown to *contribute* positively to (and not merely *limit*) the quality and nature of human existence.

What is, for us, the most striking about St. Thomas's anthropology is precisely the importance he gave to human corporeality. It is our very nature to be intelligent, corporeal substances. Our corporeality allows to breathe, to grow, to procreate, to hear, to sing, to dance, to touch, to desire, to feel sad, to feel glad, to make particular decisions, to know, etc. Its importance, moreover, does

not end with death. For, with death comes, not a wondrous release from the 'prison cell' of the body, as some philosophers and theologians have been inclined to think, but an unnatural and severely impoverished state for our souls. In that state, we will not enjoy our beatitude fully because we will not be whole, will not be human *persons* but, simply, human *souls*. When, then, our souls will be reunited with our bodies in the resurrection, our human nature will be restored and only then will we enjoy our final end in all the ways possible for human beings.

By truly integrating corporeality into what it means to be a human being, St. Thomas enriches the meaning of human existence and gives to the human body a respect which is unparalleled by any other thinker, except Aristotle, in Western culture. What true respect for the body entails regarding the use of reproductive technologies and such issues as gender and human sexuality (does human sexuality differ from that of other corporeal creatures and, if so, how?), bears looking into.

It is our hope that having provided, in this dissertation, the first accurate, concrete and complete account of the human body in St. Thomas's philosophy and, in so doing, shown the value and importance of man's corporeality that we have contributed to the scholarship of St. Thomas's thought, to further research into St. Thomas's anthropology and to the study of issues related to the human body.

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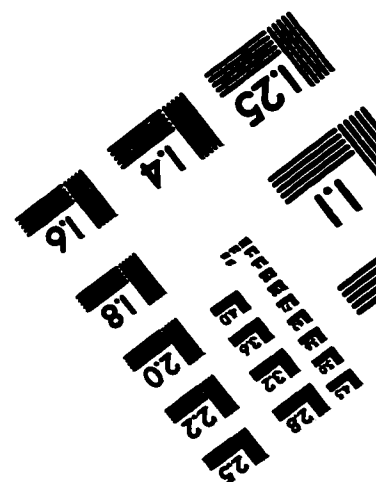
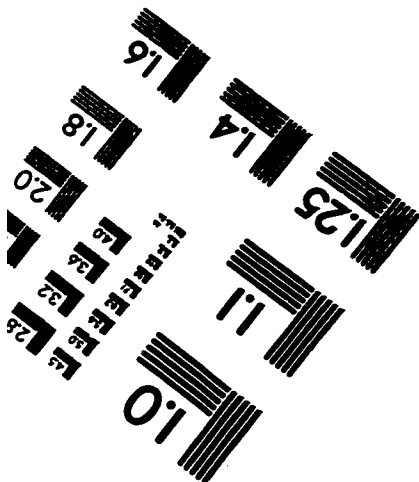
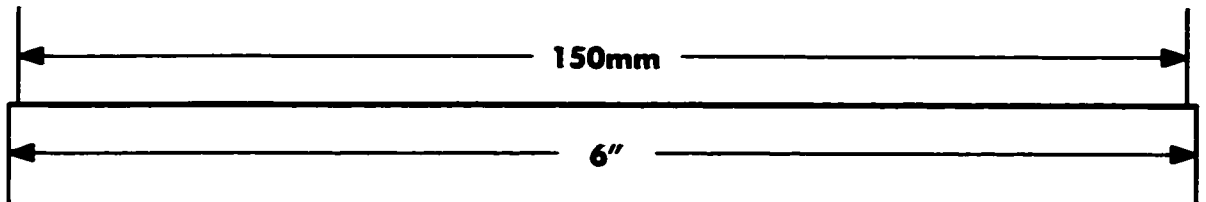
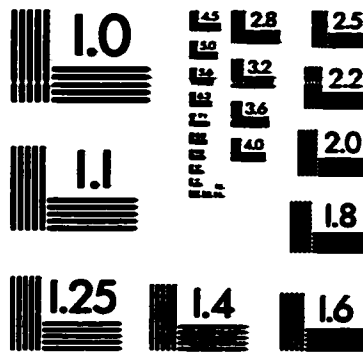
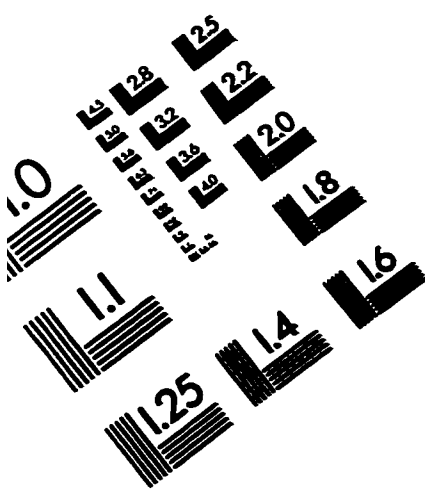
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