

AQUINAS *on the Beginning
and End of Human Life*

Fabrizio Amerini

Translated by Mark Henninger

HARVARD UNIVERSITY PRESS
Cambridge, Massachusetts · London, England

2013

Contents

List of Abbreviations	ix
Preface	xi
Introduction	I
ONE General Principles of the Embryology of Thomas Aquinas	9
1. Some Constraints on Substantial Generation	17
2. Some Constraints on Substantial Form	28
TWO The Nature of the Human Soul	34
1. The Unity of the Human Being and the Soul as the Substantial Form of the Body	35
2. The Identity of the Being of the Soul and the Being of the Body: Some Problems	45
THREE The Status of the Embryo	52
1. The Origin of the Human Soul	53
2. Ensoulment of the Embryo: Opposing Positions	58
3. Two Different Intuitions concerning the Ensoulment of the Embryo	63
FOUR Some Problems	79
1. Discontinuity of Generation and Immediate Ensoulment	80
2. Formation versus Functioning of the Embryo	84
3. Natural Generation of the Body versus Creation of the Soul	99
FIVE The Identity of the Embryo	102
1. The Identity and Continuity of the Embryo	103
2. The Identity of the Subject of Generation	109

2.1. <i>Different Kinds of Identity</i>	112
2.2. <i>Incomplete versus Complete Identity</i>	117
2.3. <i>Some Difficulties</i>	124
3. The Identity of the Embryo and the Succession of Souls	133
4. Identity of Subject and Identity of Matter	137
4.1. <i>The Material Continuity of the Human Body</i>	142
4.2. <i>Identity of Matter, Quantity, and Extension</i>	146
SIX Bioethical Implications	164
1. The Origin of Human Life and the Affirmation That the Embryo Is a Human Being in Potency	166
2. The Elusive Human Nature of the Embryo	176
3. Some Bioethical Consequences: Abortion, Homicide, and the Suppression of Life	181
SEVEN The Beginning and End of Human Life	192
EIGHT The Contemporary Debate over the Hominization of the Embryo	210
Conclusion	227
Bibliography	243
Index	253

Preface

THE PURPOSE OF this work is to offer a philosophical reconstruction of Thomas Aquinas's teaching on embryology and an assessment of its possible bioethical implications.¹ As is well known, the term "bioethics" was introduced for the first time in the 1970s to signify the reflection of the medical profession on its limits and on the ethical implications of medical practice and scientific research.² Later on, the term acquired different connotations, coming to designate an area of applied ethics that deals specifically with moral problems concerning life and living organisms in general. Strictly speaking, there were certainly no discussions in the Middle Ages of bioethics in this technical, contemporary sense. Nevertheless, the nonappearance of the term "bioethics" and of bioethical discussions and theories similar to those of today does not mean that there was no attention in the Middle

1. In this study, the texts of Thomas Aquinas are cited according to the abbreviations given in the list of abbreviations; for the editions of the particular works, see the bibliography. Note that all Latin quotations are taken from the editions indicated in the bibliography, except for those from the Commentary on the *Sentences*, which have been downloaded from the website www.corpusthomicum.org (accessed May 1, 2012), and whose orthography and punctuation I have freely modified. Keep in mind that all texts of Thomas can be consulted easily at this website. For the dates of Aquinas's writings and a general introduction to his life and works, see Jean-Pierre Torrell, *Initiation à Saint Thomas d'Aquin: Sa personne et son oeuvre* (Fribourg: Éditions Universitaires-Les Éditions du Cerf, 1993). Finally, note that where it is not otherwise indicated, all the translations of Latin texts are mine.

2. The term was introduced for the first time by the oncologist Van Rensselaer Potter in *Bioethics: Bridge to the Future* (Englewood Cliffs, NJ: Prentice-Hall, 1971). For an introduction to contemporary bioethical debates, see Peter Singer, *Practical Ethics* (Cambridge: Cambridge University Press,

Ages to actions and behaviors that directly concerned life, whether human or, more generally, that of animals and plants. From this point of view, it is chiefly within medieval debates about embryology and animal generation that a historian of philosophy can find interesting parallels to contemporary bioethical discussions. In particular, the connection between medieval embryology and contemporary bioethics can be seen in at least two ways. The first is to put certain salient medieval embryological explanations in dialogue with contemporary bioethical debates, asking, for example, to what extent medieval explanations of animal generation can be used today to address questions of contemporary bioethics. The second is more straightforward: to investigate whether the medieval authors had raised and discussed questions that we today consider pertinent and relevant to bioethics.

In this study, the reconstruction of Thomas's embryological teaching is approached from both perspectives. On the one hand, we will see how the explanation of embryogenesis proposed by Thomas Aquinas is no longer tenable today in the terms worked out by the Dominican master. But we will also see how Thomas based his explanation of that process on certain philosophical intuitions and uses certain arguments that could be accepted today. On the other hand, we will show how Thomas strove to work out an explanation of animal generation that was philosophically consistent and rigorous, and how this afforded him the opportunity to treat some of the problems discussed by contemporary bioethicists.

In the Middle Ages, just as both philosophy and law devoted a certain amount of attention to actions and behaviors that impacted human life, so also there was a certain sensitivity to ethical questions connected

1979); H. Tristram Engelhardt, *Foundations of Bioethics* (New York: Oxford University Press, 1996); Helga Kuhse and Peter Singer, eds., *A Companion to Bioethics* (Oxford: Blackwell, 1998); John Harris, *Bioethics* (Oxford: Oxford University Press, 2001); Robert Veatch, *The Basics of Bioethics* (Upper Saddle River, NJ: Prentice-Hall, 2003); Helga Kuhse and Peter Singer, eds., *Bioethics: An Anthology* (Oxford: Blackwell, 2006). For an introduction to the specific problem of abortion, on which I shall especially focus in this book, see Leonard W. Sumner, *Abortion and Moral Theory* (Princeton, NJ: Princeton University Press, 1981); Joel Feinberg, ed., *The Problem of Abortion* (Belmont, CA: Wadsworth, 1984); David Boonin, *A Defense of Abortion* (Cambridge: Cambridge University Press, 2003); Michael Tooley, Celia Wolf-Devine, Philip E. Devine, and Alison M. Jaggard, *Abortion: Three Perspectives* (New York: Oxford University Press, 2009).

with medical practice. By checking medieval medical sources, for example, a historian of philosophy can find notable similarities to contemporary bioethical debates, such as important considerations on the status and ethical implications of medical science. Although worthy of further inquiry, our study does not follow this line of investigation. Rather, I consider medieval medical writings only in a limited way, i.e., insofar as they help us understand the embryological teaching of Thomas Aquinas; our viewpoint is philosophical, not medical. One of the aims of this study is to explore how and to what extent certain bioethical questions that interest us today can be approached from an Aristotelian philosophical perspective. In particular, I will investigate how they can be treated if we accept the process of animal generation proposed by Thomas Aquinas, one of the most important theologians and philosophers of the Middle Ages.

As mentioned earlier, bioethical questions are concerned principally with problems that involve the broad notion of life. Although in the Middle Ages there were discussions of moral problems concerning animal and plant life, and the relations of humans with animal and plant life-forms or with nature in general, in this work I am concentrating above all on a particular form of life, that of humans. Among the different life-forms, human life could be considered the most sophisticated, even taken to be, at least in the Middle Ages, the paradigmatic expression of life. It is well known that within the hierarchy of the physical cosmos that the medieval philosophers and theologians inherited from classic Greek philosophy humans occupy the highest level among creatures of the so-called sublunary world, the world of material reality. To be precise, then, this study will analyze the position of Thomas Aquinas concerning the nature of human life, specifically the problem of its beginning and its end.

We are in a very good position today to investigate these questions. Historians of medieval thought have explored extensively Thomas Aquinas's philosophy of human nature, producing excellent studies, from the pioneering work of Bruno Nardi and Sofia Vanni Rovighi to the more recent work of Jan A. Aertsen and Robert Pasnau, to cite only a few. Also the embryology of Thomas has drawn attention in the past few years. More specifically, the relation between Thomas's biological

teachings and their possible bioethical implications is beginning to be studied closely. But to my knowledge, a comprehensive and textually founded study dedicated to this aspect of Thomas's philosophy is still lacking. The present work seeks, at least in part, to fill this gap.

In his extensive philosophical and theological writings extending over twenty years (1252–1274), Thomas Aquinas discusses at length the problem of the beginning of human life, while he devotes little attention to the problems of the so-called end of life. Still, as will become clear in this study, Thomas adopts a strict criterion for the definition of human life, such that the conditions required for stating when life begins and ends seem, at first glance, to be the same. In fact, as we shall discuss at the end of this study, when one examines his writings more closely it turns out that there are at least two ways of understanding the symmetry that Thomas seems to establish between the gradual human ensoulment of the human embryo and the gradual loss of human ensoulment of a human being, and these ways are not completely compatible. As a result, while the position of Thomas concerning when human life begins is, when all is said and done, definitive, his position on when human life ends turns out to be elusive and unclear.

Although there have been careful reconstructions of Thomas's theory of human nature, scholars have not agreed on how to interpret certain aspects of this teaching. In particular, there is fundamental disagreement on two points: first, how to interpret the Aristotelian characterization of the soul as act or form of an organic, physical body that has life potentially—a characterization that plays a key role in Thomas's embryological account; second, how to explain the gradual character of the ensoulment of the embryo. Because Thomas's teaching on human nature has received contrasting readings, it is difficult to evaluate philosophically and objectively his own interpretation of Aristotelian embryology. This difficulty is further exacerbated by the strong ideological pressures that mark the contemporary bioethical debate (above all regarding abortion and artificial insemination) and also, for thinkers within the Roman Catholic tradition, because of the figure of Thomas Aquinas himself, whose teaching has so greatly influenced the doctrine of that church today. In an attempt to lessen the ideological pressures

that have always played on Thomas Aquinas, some move the debate concerning the beginning and end of human life to that of ascertaining the correct understanding of Thomas's thought and of his interpretation of Aristotelian embryology. But at times they use a tone that arouses opposing reactions and positions. The recent insightful work of Robert Pasnau on Thomas's theory of human nature provides an excellent example of this and has, among other things, provoked the lively reaction of two authoritative exponents of so-called "analytic Thomism," John Haldane and Patrick Lee.³ Pasnau writes:

There is an unfortunate tendency to conflate interest in medieval philosophy, especially the work of Thomas Aquinas, with sympathy for the Roman Catholic Church. Inasmuch as the Church's intellectual foundations lie in medieval philosophy, above all in Aquinas, sympathy for his work naturally should translate into sympathy for Catholicism. But the conflation is still unfortunate, because in recent years the Church has identified itself with a noxious social agenda—especially on homosexuality, contraception, and abortion—that has sadly come to seem part of the defining character of Catholicism. So it would be gratifying, for students of medieval philosophy, to see how in at least one of these cases Aquinas provides the resources to show something of what is wrong with the Church's position.⁴

As much as is possible, in this study I have tried to evaluate Thomas's embryological account prescinding from nonphilosophical considerations.

3. See John Haldane and Patrick Lee, "Aquinas on Human Ensoulment, Abortion and the Value of Life," *Philosophy* 78 (2003): 255–278, and "Rational Souls and the Beginning of Life: A Reply to Robert Pasnau," *Philosophy* 78 (2003): 532–540. In turn, Robert Pasnau replied to the first article quoted above in "Souls and the Beginning of Life: A Reply to Haldane and Lee," *Philosophy* 78 (2003): 521–531. On this debate see also Denis J. M. Bradley, "'To Be or Not To Be?' Pasnau on Aquinas's Immortal Human Soul," *Thomist* 68 (2004): 1–39. The debate between Pasnau and Haldane–Lee will be reconsidered in Chapter 8.

4. See Robert Pasnau, *Thomas Aquinas on Human Nature: A Philosophical Study of Summa Theologiae, Ia 75–89* (Cambridge: Cambridge University Press, 2002), 100–130, especially 105 (see

In particular, it is not a principal objective of this study to determine whether or not Thomas's teaching is or is not in conflict with the present teaching of the Catholic Church. Nor will I discuss whether the position of the Church regarding the beginning and end of human life is correct or mistaken—as Pasnau, on the other hand, seems to assume; from the point of view I take in this study, this is simply not able to be determined. It should be said, in addition, that the Catholic Church itself seems fully aware that the teaching of Thomas, as that of many Fathers and Doctors of late antiquity and the Middle Ages, does not coincide completely with the final teaching that it has worked out. For example, regarding the question of the beginning of human life, in the Middle Ages it was a rather common and widely shared teaching that the embryo receives a human soul and so becomes a human being only after a certain period of organic development during about the first six weeks. Today such views are referred to as “delayed hominization” of the embryo.

The purpose of this study, therefore, is different and consists, very simply, in offering a reconstruction of Thomas's embryological account. This will show that certain recent attempts to bring Thomas into agreement with the contemporary position of the Catholic Church, especially regarding abortion, are inaccurate from a textual point of view and are not completely convincing theoretically. What is more, they are totally unnecessary for excluding abortion from the acts that are ethically permitted. What is of most interest is the exploration of the philosophical reasons that impelled Thomas to adopt one rather than another embryological explanation (or one rather than another interpretation of Aristotelian embryology). It is certainly legitimate and could be very fruitful to use Thomas's embryological account, or a bioethical theory

also what Pasnau says at p. 125). We shall see how a limitation of the interpretation of Pasnau—who considers Thomas's embryology as a theory that allows us to attack the position of contemporary antiabortionists “at its weakest point: at its claim that an unformed mass of cells can genuinely count as a human being” (108)—is that of assuming Thomas's *arguments* are compelling for us as well (106). As we shall see, Thomas's embryology is a proposal that seeks to rationally organize some givens of common sense. None of Aquinas's arguments appears particularly compelling. On the other hand, Pasnau correctly maintains that the *conception* of human life flowing from Thomas's doctrine could be championed also today.

based more or less on Thomas's teaching, in the contemporary debate, but this is beyond the principal scope of this study. Contemporary bio-ethical or embryological discussions will be kept in the background and referred to only occasionally.

The problem of the status and identity of the embryo is the chief concern of this study, and as Thomas formulates it, this is primarily a problem of *definition*. Answering this question amounts to providing a procedure for identifying the properties necessary and sufficient for a correct definition of human being or human life. Such a procedure should give us a linguistic formula that allows us to distinguish the status of *being a human* from others, both more generic, as *being alive* or *being ensouled*, and more specific and dense in meaning, as *being a person*. It is not, then, a question of "deciding" what is the real or actual status of an embryo, but of arguing for what are the most relevant and appropriate properties for a correct and complete definition of human life. When Thomas discusses the human embryo and human life, he adopts the metaphysical viewpoint rather than the biological. We shall see how for Thomas a metaphysical, and so philosophical, explanation of generation is not eliminable by a purely biological or scientific/medical explanation. Thomas appears to be barely interested in medical questions or in an explanation of the biological details involved in the generation of animals. And this is probably the reason why one finds in his writings discrepancies, second thoughts, and a lack of precision in his explanation and a lack of clarification of some specific, especially scientific, aspects of the process of generation.

In the classification of the sciences, Thomas locates medicine among the so-called practical sciences.⁵ So if medicine studies the embryogenetic process, it does it for diagnostic and therapeutic purposes. Medical

5. See, for example, what Aquinas says in the Commentary on Boethius's *De Trinitate*, a work dating to the first Parisian teaching of Aquinas (1256–1259). See *Sup. De Trin.*, q. 5, a. 1, ad 4, 140, 277–283: "Cum autem medicina diuiditur in theoreticam et practicam, non attenditur diuisio secundum finem,—sic enim tota medicina sub practica continetur, utpote ad operationem ordinata—, set attenditur predicta diuisio secundum quod ea que in medicina tractantur sunt propinqua uel remota ab operatione." This classification has a long tradition. For instance, it was already adopted by Hugh of St. Victor in his *Didascalion*, II, ch. XVI, a work that dates to the first half of the twelfth century.

science, however, does not offer an overall philosophical explanation of this process; it does not attempt to determine the most appropriate conceptual framework for an explanation that describes facets of the process beyond the medical. From Thomas's point of view, only a philosophical explanation in Aristotelian terms can rightly frame the embryogenetic process within a more expansive and theologically grounded notion of humanity. At the same time, Thomas also seems to be aware that a purely philosophical explanation of the process of animal generation cannot determine by itself, in one sense or in another, (bio)ethical and legal questions concerning the beginning and end of human life. For example, an explanation of when an embryo becomes a human being or whether a certain embryo and the human that develops from it are one and the same entity is not strictly tied to any position for or against abortion. Such a connection is made only on the assumption that a human being, or more generally what is termed "human," is sacred and inviolable. All that a philosophical explanation can do is to show that certain natural properties can be considered more fundamental than others insofar as they have more explanatory power than others. Alternatively, a philosophical explanation can state precisely the logical relations that hold among the notions used by a given theory in order to prevent incorrect descriptions and assessments of the facts that the theory seeks to explain. We will see that for Thomas a sound and consistent philosophical account of the embryogenetic process, although it cannot prescind completely from some medical and biological data, nevertheless does not depend on them. This is true to such an extent that advances in science would not be a reason to change the theoretic structure of such an account.

What has been said in the previous paragraphs is important for correctly assessing the scope of this study. In order to avoid any confusion, recall that in this study the theme of the beginning and end of human life is not approached from an ethical perspective but only from a metaphysical perspective. Again, the present study is about Thomas's interpretation of the Aristotelian metaphysics that undergirds his theory of human embryogenesis. The main goals reached by this study—both metaphysical and bioethical—should be assessed from this perspective. Certainly, the metaphysical question of when a human being first

comes into existence and later dies informs responses to further ethical questioning on many bioethical issues—such as the moral permissibility of abortion, cloning, embryonic stem cell research, prenatal genetic diagnosis and genetic enhancement, certain assisted reproductive technologies, and decisions concerning irreversibly comatose patients, organ donation, and the like. But although an Aristotelian-inspired metaphysical investigation can generally inform our treatment of such themes, our final response to such bioethically sensitive questions is to a certain degree independent of the metaphysics that has been embraced. This is precisely one of the points for which this study argues. It is no doubt true that in correctly establishing Thomas's position on the value of human life it is crucial to take into account Thomas's ethics. And as for bioethics, a full-fledged moral analysis can help the interpreter of Thomas defend a given bioethical claim, for example, by situating it within a more general theory of a natural law ethic. In this study, however, no discussion of Thomas's ethics will be proposed. The use of Thomas's natural law ethic to derive specific bioethical positions informed by Thomas's metaphysical conclusions goes beyond the scope of the present book. Once again, the purpose of this study is preliminary and limited, namely, the reconstruction of Thomas's metaphysical framework of embryogenesis, the framework into which a properly bioethical analysis could then be inserted. Of course, the metaphysics endorsed by Thomas fixes some boundaries and puts some constraints on possible bioethical choices, even permitting one to draw broad conclusions about the moral permissibility or nonpermissibility of some (bio)ethically significant actions. But only a detailed analysis of Thomas's ethics could provide definitive arguments and justifications for our decisions in bioethical matters according to the spirit of Thomas's teaching. This is, however, the subject of a different study.⁶

This study has eight chapters. Chapter 1, "General Principles of the Embryology of Thomas Aquinas," provides the conceptual tools for a

6. For more on Thomas Aquinas's natural law ethic and its connection to bioethics, see John Finnis, *Natural Law and Natural Rights* (Oxford: Oxford University Press, 1980); Anthony J. Lisska, *Aquinas's Theory of Natural Law: An Analytic Reconstruction* (Oxford: Clarendon Press, 1996); Scott MacDonald and Eleonore Stump, eds., *Aquinas's Moral Theory. Essays in Honor of Norman Kretzmann*

correct understanding of the embryology of Thomas. In particular, it explains those aspects of Thomas's teaching on generation and substantial form that are indispensable for understanding his answer to various questions about the status and identity of the embryo. Chapter 2, "The Nature of the Human Soul," develops this theme by discussing some problems connected to Thomas's interpretation of the Aristotelian characterization of the soul as the substantial form or act of an organic, physical body that has life potentially. In Chapter 3, "The Status of the Embryo," I reconstruct Thomas's position regarding the nature of the embryo and the arguments he adopts to reject the thesis that the embryo becomes human from the moment of conception. Chapter 4, "Some Problems," discusses some complications involved in Thomas's explanation of the process of embryogenesis. In Chapter 5, "The Identity of the Embryo," I discuss the position of Thomas concerning the most philosophically significant problem, that of the identity of the embryo during the process of generation. The chapter shows the difficulties that Thomas has defending the unity and numerical identity of the embryo and the continuity between the embryo and the human being. Chapter 6, "Bioethical Implications," discusses possible bioethical implications, especially concerning abortion: those that Thomas himself draws and those that could be drawn from his explanation of the embryogenetic process. Chapter 7, "The Beginning and End of Human Life," examines the position of Thomas regarding the problem of the end of human life and the role played by the definition of a human being as a rational animal in determining when a human life ends. In particular, I ask whether or not Thomas saw a symmetry between the process of human ensoulment of the human embryo and the process of the loss of human ensoulment of a human being. Finally, Chapter 8, "The Contemporary Debate over the Hominization of the Embryo," critically examines some recent attempts to convert Thomas, a proponent of delayed hominization of the embryo, into a supporter of the position of

(Ithaca, NY: Cornell University Press, 1999); Mark C. Murphy, *Natural Law and Practical Rationality* (Cambridge: Cambridge University Press, 2001); Alfonso Gomez-Lobo, *Morality and the Human Goods: An Introduction to Natural Law Ethics* (Washington, DC: Georgetown University Press, 2002); Jean Porter, *Nature as Reason: A Thomistic Theory of the Natural Law* (Grand Rapids, MI: Eerdmans, 2005); and Jason T. Eberl, *Thomistic Principles and Bioethics* (London: Routledge, 2006).

the Catholic Church which holds, as is well known, that the hominization of the embryo takes place at the moment of conception.

A few final clarifications. Although this study is concerned with themes of medieval philosophy, it is not intended exclusively for readers familiar with medieval philosophy. I introduce technical concepts and terms, both philosophical and medical, in a gradual way, explaining them as much as possible in everyday language. It should be expected, however, that alongside general philosophical considerations of Thomas's embryology and theory of human nature, readers will encounter more fine-grained discussions of the writings of Thomas Aquinas. I hope readers will understand that this is indispensable if one wishes to come to a correct philosophical assessment of the position of the Dominican master.

On the other hand, this study is not a strictly historical and contextual reconstruction of the embryological teaching of Thomas Aquinas. Although I do pay close attention to the internal development of the thought of Thomas as well as to the sources of his thinking, one should keep in mind that this work is systematic rather than historical. The teachings of Thomas have been reconstructed by focusing on and discussing his arguments that either clearly or even possibly have bioethical consequences. A further caveat, however, is called for. Despite the intended systematic purpose of the book, the reader will soon come to realize that the style adopted in this book is "aporematic" rather than apodictic or assertive. What motivates this choice is simply respect for Thomas's texts. As the historian of medieval philosophy well knows, the embryological teaching of Thomas is difficult. It may often appear unclear, scientifically inconclusive, or unexplanatory, and in most cases it escapes the interpreter's attempt to project onto it contemporary accounts of human embryogenesis. For these and similar reasons, in this book I have chosen to reconstruct Thomas's reasoning, so to speak, "from the inside," bringing Thomas's conception of human embryogenesis and its difficulties gradually to light, instead of forcing simplifying solutions onto interpretative problems involved in his writings. In particular, in this book I have endeavored to show that Thomas leaves unexplored certain important aspects—both biological and metaphysical—of the human embryogenetic process, and he hesitates

or evolves on certain crucial points. Thus, in order to bring out the complexity of Thomas's thought, I have chosen to discuss it in a dialectical way, highlighting one aspect of his complex teaching before highlighting another that may or may not cohere with the former. I hope readers will not be perplexed by this stylistic feature but will be able to follow patiently the thread through the "argumentative labyrinth" I have constructed.

This book is the English translation of *Tommaso d'Aquino: Origine e fine della vita umana* (Pisa: ETS, 2009). Although the present translation faithfully follows the original Italian, it should be noted that the text has been improved and supplemented through exchanges between the author and the translator and by comments of the anonymous reviewers. In particular, the final bibliography and the footnotes have been enhanced and updated.

In conclusion, some acknowledgments. I take this opportunity to sincerely thank Luciano Cova for his valuable suggestions and detailed and constructive comments. My thanks also to Chiara Crisciani, Luca Fonesu, Paola Bernardini, Gabriele Galluzzo, Sergio Filippo Magni, and the anonymous referees for having contributed in various ways to the discussion and the improvement of issues found in this study. A priceless thanks to Mark Henninger not only for translating this book into English but also for contributing to perfect it with his insightful questions and observations.

A dear and special mention goes to Romana Martorelli Vico, recently and prematurely deceased. I shared with her many important exchanges about the contents of this book, and her works on medieval embryology were an irreplaceable guide for me. I wish to remember here her extraordinary humanity and generosity, as well as her great passion for medieval philosophy. Finally, a warm thanks to all the students that enlivened the course and seminars of mine at Parma, Italy, during which was born the idea to write this book. Of course, the responsibility for the content and any possible errors is entirely mine.

Introduction

AS MENTIONED IN THE PREFACE, the term “bioethics” refers to normative and applied ethical theories about actions concerning life, whether human or, more generally, that of animals and plants. A typical way of formulating a bioethical question is the following: Is the act of abortion morally licit? In general, bioethical questions involve decisions about the *boundaries* of human life, its beginning and end, or have to do with questions about the *conditions* for identifying it. Philosophically, these are questions about definition, since defining a thing amounts to providing the necessary and sufficient conditions for identifying a thing, distinguishing it from other things different or similar to it in kind. For example, in the seventeenth chapter of the fifth book of the *Metaphysics*, Aristotle brings together the notions of definition and of limit.¹ The definition of the essence of a thing provides the limits of the knowledge of that thing. Aristotle adds that the limits of knowledge are also the limits of the thing, in that one can be in contact with

1. See Aristotle, *Metaphysics*, V, 17, 1022a8–10.

a thing only by knowing it, and when one knows it, one knows what that thing is. To define a thing, therefore, is to delimit it, and this is to list all and only those properties that allow us to determine the contours of that thing.

There is a certain complexity hidden within the question, Is the act of abortion morally licit? One must first clarify what is meant by “licit,” and especially “morally licit,” and also have at least some intuitive clarity on what is meant by an act, and in particular, what is an act of abortion. This last, obviously, depends on defining what abortion is. It is commonly held that abortion involves the suppression of a human life. Once the principle that what shows signs of human life should be protected is accepted, one’s stance for or against abortion depends on the answer to the question of when does human life begin. If the question of abortion were only about establishing when human life begins, one could hold that such a question is simply unanswerable since there seems to be nothing in how things are that forces us to take one property or one biological condition as marking out human life more than another. On the other hand, if one does not make abortion only a question of establishing when human life begins, things become more complicated. For then, a stance for or against abortion begins to include other factors: the moral autonomy of the mother, the degree of intentionality or awareness of the act of conception, whether there was violence involved, the quality and dignity of life, demographic or health considerations about overpopulation of the planet, and so forth. On all these issues it is even more difficult to find a common ground. Furthermore, provisions aimed at regulating abortion could also prescind completely from biological considerations or from answering when human life begins.² In fact, one should not assume that abortion involves *only* the question of the beginning of human life, nor that one’s stance toward it depends *strictly* on the response one gives to that question.

2. A paradigmatic example is given by John Rawls’s “political and juridical approach.” See his *Theory of Justice* (Oxford: Oxford University Press, 1981). A theoretical account of bioethical questions regarding abortion could be done exclusively in juridical or political terms, i.e., by giving the formal criteria for ordering and assessing behavioral and decisional acts with no commitment to metaphysical or biological disputes about the *real* beginning of human life.

One can be against abortion without recognizing the embryo as any form of human life, as also one can be favorable, in certain cases, toward the interruption of pregnancy while granting that human life begins at conception.

It makes little sense to ask in general whether performing an abortion is licit without first specifying the set of norms to be used in determining whether an act is morally licit, illicit, or indifferent. For example, if one does not accept the possibility of specifying an absolutely fixed or universal system of norms, one could reformulate the above-mentioned question as follows: Is an act of abortion morally *acceptable*? The condition of being acceptable could be distinguished from that of being licit not only in that the former can be interpreted as implying a more subjective stance but also because it could imply a set of norms that is only relatively fixed, i.e., relative to a historical or social context. Not only that, but one could also discuss the acceptability of an act of abortion on the basis of a conception of norms that is conventional.

Two things, then, seem to be required as the basis for a bioethical theory. First, there is needed a set of norms for making moral assessments of certain types of acts. Second, there is needed, at least in a preliminary way, some definition of the basic terms used. Returning to the above-mentioned example, the question of whether an act of abortion is licit or acceptable makes sense only if a given theory or a given community recognizes such an act as the suppression of the *life* of a determinate subject, assuming that such an act of suppression is held to be a threshold not to be crossed or is simply illicit or unacceptable by the same theory or community. But exactly what type of life does an act of abortion suppress? How are we to describe the entity, i.e., the embryo, to which our act is directed? The definitions for being alive and for being human, or even for being a person, are not conceptually interchangeable, and different ways of treating the question of abortion arise from whether one attributes to an embryo only the property of being alive or also that of being human. On the one hand, the inquiry about whether an act of abortion is licit or acceptable reveals that what is at issue is the choice of a criterion for working out a bioethical theory that has normative force concerning abortion. But on the other hand, more fundamentally, the problem of the definitions of “being alive”

and “being human” presupposes that a given community be disposed to accept that determinate biological characteristics can be associated with such properties. But what biological characteristics should we use to answer the question, When does human life begin?

Certainly biology makes an important contribution to individuating the natural characteristics to be associated with the general properties of being alive or being human. For example, as the medieval philosophical tradition commonly assumed, being capable of taking nourishment and of growth could be good defining conditions for the property of being alive, just as being capable of movement and of sensation could be good defining conditions for the property of being an animal. And to be capable of rational acts could be an excellent defining condition for the property of being human. These various characteristics, in turn, could be refined in various ways given the biochemical and neurological science we have today. But it is quite clear that the association of select and specific natural characteristics with the general properties expressed by the terms “being alive” and “being human” is an act of choice, and as such the act of choosing one set of natural characteristics rather than another is an act of judgment. It depends on the significance that one assigns to one rather than another class of properties, and that significance has to be justified by rational argument, i.e., proposed and defended philosophically. In the end, the final decision about which biological functions to select and how to associate them with the general properties of being human or being alive turns out to be the result of stipulation, albeit rationally justified. What cannot be conceded, in any case, is that advances in science concerning these biological functions might bring about an abandonment of the imperative to “save the appearances” on which is founded, ultimately, a philosophical explanation.

To make these abstract considerations more concrete consider more closely the case of abortion. In the present-day debate over abortion, legal questions (Is the act of abortion an act of homicide, and so liable to legal prosecution?) are not always clearly distinguished from moral questions (Is the act of abortion morally licit or illicit?). Apart from their specifics, these questions have a feature in common: they both call for a preliminary definition of what is meant by human life. As

mentioned earlier, biology can come to our help. For example, it can help us determine *when* the first neural development and nerve connections occur, and it can propose the appearance of such connections as a criterion for distinguishing what is human from what is not (or not yet) human. A move of this sort tends to distinguish the property of being alive from that of being human; before the appearance of such connections, something could be said to be alive, but not (or not yet) human. It is clear, however, that biology cannot defend this criterion as the criterion to be followed in defining human life. For why should the presence of primordial nerve connections, even if they can be likely associated with the presence of pleasure and pain in the embryo, be considered the fundamental condition for defining human life? Someone could require a weaker condition, for example, the presence of basic vital organs which are normally developed later on. Alternatively, one could insist on a more radical condition, such as the act of conception itself or the mixing (or the copresence) of the parents' genetic code, and in this way tend to put on the same plane being alive and being human.

Formulating the debate in this way shows that when we begin to define human life, we usually are working with two factors: (1) the *selection* of certain natural characteristics, i.e., those able to be associated with the presence of nerve connections, to conception in the ovum, to the formation of basic vital organs, and so forth, and (2) the *choice* of such characteristics as the properties relevant for defining human life. Framing the problem in this way, it is evident that emphasis is being placed above all on the *temporality* of the process of generation. A presupposition of the debate is that there is or can be found a discriminating condition—based on verifiable scientific data—with respect to which what undergoes the abortive act is seen as *already* a human being, or as something that *already* has the fundamental characteristics of human life, either completely or only in a partial or imperfect way.

But why must the debate over abortion and the beginning of human life be framed in these terms? Someone could be dissatisfied with this way of posing the problem and suggest another way. One could reject from the start the suppression of an embryo not because what is suppressed is at a certain moment *already* a human being, but because an

embryo is potentially exactly that *same* thing that would actually become a human being if it were not suppressed. Reframing the problem in this way places the emphasis above all on the *identity* of the subject or the *identity* of the process involving a determinate subject. In this case, the criterion of the definition of human life is more extrinsic: something has human life not when it has all or some of the natural characteristics that we might associate with being a human, but if it has the potentiality to become a human; that is, if it is the subject of a process that will end (assuming no interruptions or breaks of any sort) in what is a human being. The difficulty then would be not so much the selection of natural characteristics, but rather establishing the continuity or identity of the process or of the subject of the process. This way of framing the problem, obviously, is not completely disconnected from the preceding one, for to establish the identity of the subject requires in any case a selection of characteristics. But in this second way of framing the debate, the characteristics involved are more general. Also in this case, biology can help by providing us with data for determining whether the supposed identity of the subject continues from conception. But again, biology is not able to settle the question of the beginning of human life.

Choosing as the defining condition for being human either (1) the individuation of determinate biological characteristics or (2) the identity or continuity of the subject (or process) is the result of a philosophical decision. Here philosophy can carve out a space, making itself independent of biology, and this in various ways. For example, it can justify the relevance of certain natural characteristics as the basis for working out a normative bioethical theory. It can also make a case for the choice between (1) and (2). In the first way, someone could allow for abortion by distinguishing between before and after in the process of human generation, while in the second way, one could accept abortion only by distinguishing between what is actually a human being and what is only potentially a human being. In any case, such a choice has to be argued for and justified rationally, and neither of the two alternatives can be discounted out of hand.

In Thomas Aquinas's way of approaching this whole question, he shows himself fully aware of the qualifications that we have attempted

to introduce in these pages. On the one hand, we shall see how in Thomas's writings both (1) the explanation that insists on the individuation of a set of natural properties and (2) the other that insists on the identity or continuity of the subject (or of the process) are both present and, in the end, are not completely in accord. Although for Thomas the subject of the process of generation remains the same during the whole process since the whole process remains the same, nevertheless such a subject does not retain anything, either formal or material, of the various species to which it gives rise in the process. On the other hand, we will see how in his treatment of abortion Thomas keeps well in mind the difference between the data that medical science is able to furnish us and the philosophical treatment of this data. Scientific, and more precisely, biological considerations can be enormously helpful in coming to a finely considered, judicious assessment of the factors involved in the debate concerning the beginning and end of human life, but such considerations are totally nonessential for determining the criteria for what is meant by "human life." As we will seek to show, Thomas had *philosophical*, i.e., Aristotelian, arguments rather than biological to reject the thesis that human life begins with the insemination of the female matter by the male semen. These arguments hold regardless of the level and type of scientific knowledge that one may have concerning what happens at the moment of conception.

This does not mean, however, that Thomas is neutral, or worse, favorable to abortion. Thomas believes that taken within the natural and ordinary process of conception (the case of a conception induced by violence or brought about by deception could be treated differently) the act of suppression of the embryo is a highly unnatural act, since it stops a process that, without a break in continuity, would lead to the formation of a human being. In his first theological work, his Commentary on the *Sentences* of Peter Lombard, Thomas remarks that even "animals look forward to their own offspring," and so there is no reason why humans should not do the same. Moreover, procreation is the final end of the human species; that is, it is essential for the conservation of the species. The act of abortion, therefore, is morally unjustifiable and, in the end, unacceptable. However, it is not an act that is juridically illicit or criminally punishable, at least not until around the first month

and a half of gestation, since, as we shall see, until then the embryo cannot yet be said to be a human being.

One should not be greatly surprised that this teaching conflicts so openly with the present-day doctrine of the Catholic Church. In the first place, it is not an innovation of Thomas Aquinas, but is a position held also by Augustine and was generally shared by most theologians of Aquinas's day. In the second place, this position is nothing but a reformulation of the biological teaching of Aristotle which comes from accepting certain constraints on animal generation and on the soul understood as the substantial form of the body, as we shall show. In this light, Thomas's philosophical account of embryogenesis aims to place two givens within one system. The first given is that the embryo can in no way be considered a human being until the basic vital organs are completely formed, which takes place, on the average, about six weeks into gestation; such a formation is necessary to guarantee the possibility of a correct and complete exercise of those vital functions that can be associated with the human soul, above all the intellectual functions. The second given is that the embryo ought not to be considered as something different, as a subject, from the human being to which it will give rise, for the embryo acquires its own metaphysical identity from the moment of conception. Thomas's philosophical proposal precisely seeks to hold together these two givens: (1) the process of generation taking place in stages, entailing discontinuity of substance, and (2) the identity and continuity of the subject of this process. In the final analysis, the philosophical value of this proposal depends on the success of the attempt to balance the weight of the criterion that is based on natural properties with the weight of the criterion that is based on the identity or continuity of the subject when setting out the definition of what it is to be a human being.