The Embryo as Person

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Abstract

In order to determine the human rights of the embryo, we must first determine whether or not it is a person. Certainly, it does not look like a person when its life begins, or in the first stages of its existence. But in its genetic makeup, it has the active potency that enables it to develop the characteristics that we associate with personhood. The modern concept of personhood, following the thought of John Locke, focuses upon consciousness as the essence of personhood. Modern philosophers believe that consciousness is acquired over time, and is at times latent. Thus the concept of potency is not foreign to modern thought concerning personhood.

There are many bioethicists who admit that the embryo or zygote is a living being, but they are not willing to affirm that it is a human being at the time of its formation. An analysis of their arguments results in an affirmation that the embryo is a person in the sense indicated above. While the Church has not stated definitely that the embryo is a human person, it has affirmed the need to respect it as such. Maintaining that human life begins at fertilization does not imply that human life is an absolute good.

Is the human embryo a person? The answer to this question is found in the sciences of biology and philosophy, but for practical purposes, the answer has significant implications for human rights. If the human embryo is not a person, then it would not seem to have any rights. In that case, human embryos could be subjected, without opposition, to research and experimentation that might result in their destruction. If the embryo is a human person, what rights does it have? Embryos, even though they are self-directed, do not exist as autonomous organisms. They are subject to the care of other people. What is the responsibility of individuals who

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care for a human embryo? What is the responsibility of the community to make it possible for the human embryo to survive and flourish? If the human embryo is not a person at the first stages of its existence, it seems necessary to determine when it is endowed with humanity; at what stage of its existence can we predicate personhood? In order to consider this question adequately, we shall depend on the biology of human development and the concept of person as it has been utilized through the ages.\(^1\) Hence, we shall consider (1) the meaning of the term person, (2) whether the human embryo fits into the category of person, and (3) the implications of the foregoing considerations. Before proceeding to these considerations, however, we must consider the concept of potency, because it is fundamental for our considerations.

**Note on Potency**

In the philosophical construct that we shall be using in this presentation, all reality is divided into act and potency. A being-in-act exists here and now. Things exist in act as substance or as accidents inhering in substances. Thomists speak of a substance as being in first or second act.

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That is, a substance exists (first act) and performs actions in accord with its nature (second act). A being-in-potency is not in act here and now, but has the intrinsic capacity to be rendered into act, that is, to become what it is not here and now. There are various modes of being-in-potency. Passive potency means that an agent may be rendered into act by another being-in-act. For example, a pale man has the potency to become tan by exposure to the sun. Before exposure to the sun, he was not tan, but he had the potency to acquire this quality. Active potency implies that a being-in-act has the capacity to become something else, or to act in a different manner, by reason of its own power. The agent goes from not acting to acting.

Experience teaches that beings act in accord with their nature (operatio sequitur esse). An active potency may be remote or proximate, depending on the stage of development of the being with the potency. A rose bush has the potency to bloom and produce flowers; in the winter this potency is remote, but in the spring this potency is proximate. A grain of corn has the potency to grow into a large stalk of corn, given the proper environmental conditions – but not the potency to grow into an oak tree. When it is still a grain of corn, it does not look like the large stalk that it has the potency to become. The concept of potency enables us to explain changes in a being when we know that the subject under consideration remains the same, even though appearances change. Moreover, the concept of active potency is significant in the discussion of the embryo as person. Certainly, an embryo does not look or act like the entity that we usually refer to as a person. But as we shall see, it does have the active potency to develop into a mature adult, the entity that we usually refer to as a person.

What Is a Person?

In Catholic philosophical and theological considerations, the definition

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2 Thomas Aquinas, *Summa theologiae* I.76.4 ad 1; Heaney, p. 36; Bracken, p. 62.

of person is usually derived from Boethius, a philosopher and theologian who lived in the fifth century. Boethius defined *person* as “an individual substance of a rational nature.” The two key terms are *individual* and *rational*. When commenting on this definition, St. Thomas Aquinas indicated that this definition applies to human beings because they are separate from one another; thus they are individuals, and because they are rational, that is, they “have control over their own actions and are not only acted upon as are all other beings, but act of their own initiative.” He considered the term *person* to be a special name that differentiated substances of a rational nature from other substances; and it is clear that the use of the term followed on intrinsic qualities, not on a decision based on social acceptance or law. As Aquinas uses the term, “the mere presence of the intellective soul is sufficient for personhood.” Furthermore, for him “the name of ‘person’...does not belong to the rational part of the soul, nor to the whole soul alone, but to the entire human substance,” body and soul as an integral unity. As we shall see, the notions of initiative and rationality referred to by Aquinas are carried over into the concept of person as it is used by most modern bioethicists and philosophers.

Aquinas also used this definition of *person* when explaining the Trinity, but he stated that “the word is not used in the same sense of God as of creatures, but in a higher sense than that by which we name creatures.” The divine persons, of course, are not the topic of our study. When Aquinas uses the word *person* in reference to human beings, he maintains that they are creatures composed of matter and form, that is, of body and soul. *Person* is simply a specific name for a human being

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6 Eberl, p. 140.
8 Aquinas, *Summa theologicae* I.29.3.
following from the form of a human being. When the rational form is present, then the entity in question is a person. Moreover, Aquinas maintains that the matter and form of any living being must be commensurate with or conformed to each other. This concept is known as the hylomorphic theory. Hence, the powers of the soul and biological capacities must correspond to each other. That is, the form must be able to function in the matter that it enlivens. The form of a giraffe would not be able to function in the body of a lion. Nor would the form of a daisy be able to inform the body of a chicken. Both the concept of rational activity and the concept of matter and form being commensurate with each other will be significant when we consider the embryo at the time of fertilization. The need to have the matter commensurate with the form leads to many of the theories that even in the modern day opt for delayed hominization.

The Modern Concept of Personhood

From Aquinas to the present day is quite a leap. But our consideration is not so much with the historical development of the concept of person as with its connotation and denotation in our present culture. Present-day thinking in regard to the concept of person is founded on the writings of John Locke. Locke was not concerned with the ontological structure of the human person, as was Aquinas. Locke was not concerned with the concept of substance and did not seem to deny its validity, but he did not consider it necessary for his deliberations. Rather, he concentrated on the activities that are associated with being a person. Locke defined a person as

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11 Aquinas, Summa theologiae I.90.4 ad 1.


13 Wade, p. 247.
a conscious thinking thing (whatever substance made up of, whether spiritual or material, simple or compounded, it matters not) which is sensible, or conscious of pleasure and pain, capable of happiness or misery, and so is concerned for itself, as far as that consciousness extends. ¹⁴

Following Locke, many present-day philosophers, especially those interested in bioethics, concentrate exclusively on the activities or attributes that indicate personhood. They are not concerned with the substratum, or the ontological nature of the conscious subject. One observer states, “Most present authors regard consciousness as the *sine qua non* of personhood.”¹⁵ But in addition to consciousness, some bioethicists indicate other capacities or attributes that are associated with personhood. Stephen Tooley lists seventeen different capacities for personhood, beyond consciousness, that have been proposed by other philosophers or bioethicists.¹⁶ Most of these capacities indicate a permanent basis for consciousness, but because these authors are not concerned with the ontological substratum of human activity, they do not investigate explicitly substance or potency. Joseph Fletcher, an American famous for situation ethics, mentioned neocortical function, self-awareness and euphoria (as found in retarded children), and human relationships as constituent factors of personhood.¹⁷ For our purposes, it is significant to note that these capacities are innate, not due to an extrinsic source, and that the subject develops them over time. Although not derived from law, the implications of personhood may be defined or defended in law as human rights.

By the same token, according to the Lockean paradigm that associates personhood with consciousness, it is possible for one to be a human being and not be a person, if the human being never acquires or

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¹⁵ Gordijn, p. 353.


ever loses the capacity of consciousness. One of the more famous statements of this conviction was proposed by an American pragmatist, H. T. Engelhardt, Jr., who maintains:

Not all humans are persons.... Fetuses, infants, the profoundly mentally retarded, and the hopelessly comatose provide examples of human nonpersons. Such entities are members of the human species [but] they do not in and of themselves have standing in the moral community. They cannot blame or praise or be worthy of blame or praise.... For this reason, it is nonsensical to speak of respecting the autonomy of fetuses, infants, or profoundly retarded adults, who have never been rational.\(^{18}\)

Engelhardt is not alone in this conviction. It is shared by many in the field of bioethics.\(^{19}\) Pope John Paul II referred to this conviction when speaking about the care of patients in a permanent vegetative state (PVS):

Faced with patients in similar clinical conditions [PVS], there are some who cast doubt on the persistence of the “human quality” itself, almost as if the adjective “vegetative,” ... which symbolically describes a clinical state, could or should be instead applied to the sick as such, actually demeaning their value and personal dignity.... A man, even if seriously ill or disabled in the exercise of his highest functions, is and always will be a man, and he will never become a “vegetable” or an “animal.”\(^{20}\)

Bioethicists writing in the Catholic tradition do not exclude from personhood human beings who have permanently lost or never attained “consciousness.” Many in this tradition now use a more acceptable phrase, coined by Australian bioethicist Nicholas Tonti-Filippini, and refer to permanently unconscious patients as “post-coma unresponsive


\(^{19}\) J. P. Lizza maintains that “there is a consensus among philosophers that they [PVS and other noncognitive patients] are not persons.” Lizza, “Persons and Death,” *Journal of Medicine and Philosophy* 18/4 (1993): 351-74.

In sum, it seems that there is a considerable gulf between the meaning of the word *person* in the Catholic tradition and its meaning among contemporary bioethicists. Is there any way of bridging this gulf? It seems that there is. Contemporary bioethics offers a very static concept of personhood. The Thomistic concept, on the other hand, is dynamic; it envisions a developing entity, a body that changes and develops under the impetus of its own form. If one were to take the consciousness criterion for personhood literally, an adult human being with competent intellectual faculties would not be a person when asleep. Yet contemporary bioethicists will admit that the attributes associated with personhood are acquired over time, that the individual who acquires consciousness is the same individual who at one time did not possess consciousness, and that “the essential powers of personhood need not be actualized for a person to be present.” Thus, contemporary bioethicists admit that there is a continuity observable in the conscious person, an implicit admission of potency. The adult was at one time a child, an infant, and even a fetus, with the capacity, or active potency, to develop consciousness. Having achieved some semblance of agreement in regard to the term *personhood*, let us move on to consideration of the human embryo.

**The Embryo and its Human Development**

Knowledge concerning the development of the human embryo has increased over the past fifty years to the present day.\(^{21}\) In our generation,

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\(^{22}\) Eberl, p. 141; cf. Tooley, *Abortion and Infanticide* and Fletcher, “Four Indicators.”

\(^{23}\) For a brief and accurate account of embryo development, see *Monitoring Stem Cell Research* (Washington, D.C.: President’s Council on Bioethics, 2004), Appendix A: “Notes on Early Human Development,” pp. 157-81; see also T.
this knowledge has increased exponentially, mainly as the result of improved electronic magnifying devices and the ability to observe fertilization in the process of \textit{in vitro} fertilization. Our purpose will not be served by presenting detailed biological information. Rather, I shall present agreed-upon conclusions concerning embryology. It is true that some disparate interpretations are often presented concerning the implications of human biological development, but there is a consensus among embryologists concerning the scientific facts of early human development. Specifically, there is agreement among renowned human embryologists on the following biological findings:

(1) The process of human development begins when the sperm and ovum are united; that is, human life begins at fertilization, when a one-celled zygote is formed by fusion of a sperm and an ovum.

(2) The zygote is not a small homunculus (not a preformed image of the human person), but develops in an epigenetic manner. The structure and organs of the future fetus, infant, child, youth, and mature adult are present potentially in the one-celled zygote.

(3) The zygote has a genetic package (the human genome) that is the basis for future human development. In potency, it contains all the matter needed for the development of the fetus into a mature adult with consciousness. This genetic make-up is the blueprint and efficient cause of human development.

From the viewpoint of hylomorphism, the matter of the zygote is

\begin{quote}
Salder, \textit{Langman’s Medical Embryology}, 8\textsuperscript{th} ed. (Philadelphia PA: Lippincott, Williams & Wilkins, 2000).

\textsuperscript{24} For an account of the agreement among embryologists, I am indebted to C. Ward Kischer, “The Beginning of Life and the Establishment of the Continuum,” Linacre Quarterly 63/3 (1996): 76.

\textsuperscript{25} Epigenesis as a form of biological development is the opposite of preformation. Thus, the entity develops through activation of potentiality. Irving states that in genetics this is called “a cascading effect,” whereby “each previous direction [causes] the specific formation of each succeeding direction.” Irving, \textit{Philosophical and Scientific Analysis}, p. 27.
\end{quote}
commensurate with the form (the human soul). The matter of the embryo, the genome, consisting of forty-six chromosomes and numerous genes, must be activated by a form that is able to enliven the matter in accord with its potential. We call this form the human soul.\textsuperscript{26} Thus, the zygote at the time of fertilization is not a potential human being; rather, it is a human being with active potential.

The beginning of the human person with active potential for future development is present at the time of fertilization. There are no other marker events in the development of the zygote that would indicate “that it receives the capacity to develop biologically through the several stages of gestation and become an adult human person.”\textsuperscript{27}

Those with opinions contrary to this statement do not question that the zygote is a living being. Rather, they question whether it is a human being from this initial point of its existence. There is general agreement that at the time of fusion the zygote is a living entity. But is this living entity an individual? Mainly because of three factors, voices have been raised against the proposition that humanity or personhood, or ensoulment, begins at the fertilization of ovum by sperm:\textsuperscript{28}

1) Many zygotes are never implanted. The mortality rate for zygotes before implantation is usually estimated to be anywhere from 20 to 60 percent; some estimate it to be as high as 80 percent.\textsuperscript{29} The intuition is offered that it seems ridiculous to claim that God creates a human soul for each zygote and then shortly afterwards allows it

\textsuperscript{26} Aquinas, \textit{Summa theologiae} I.76.1.


\textsuperscript{29} President’s Council on Bioethics, \textit{Monitoring Stem Cell Research}, p. 88.
to die.\textsuperscript{30}

(2) Multiple births may occur after the one-celled zygote has been formed. In the case of monozygotic twins, for example, was one person present, or were two persons present, when the zygote was formed? If only one, what happened to this person when the second person appeared? If there were two persons to begin with, were they both living in the same body? Those who present this argument prefer to delay hominization until the time when multiple births are impossible, and use the term \textit{pre-embryo} to designate the zygote from the first days of its existence.\textsuperscript{31}

(3) The matter must be commensurate with the form. To prove that the matter and form are commensurate, some semblance of the organs which signify human consciousness should be visible. The primitive streak, the beginning of the central nervous system, at least, should be present in its initial stages to presage the compatibility between the human body and the human form, the spiritual soul.\textsuperscript{32}

\textit{Response to the Objections}

(1) In regard to the number of zygotes that are created, we must admit a quandary. Clearly, many of the zygotes that do not survive are not human from the time of fusion of sperm and ovum.\textsuperscript{33} Often the fusion is not successful because the requisite number of chromosomes is not present. Aneuploids (cells with the wrong number of chromosomes) are not uncommon events in germ cell development, but aneuploid survival is uncommon; nearly all aneuploids are fatal very early in development.\textsuperscript{34}

\begin{thebibliography}{9}
\bibitem{Ford} Ford, p. 298.
\bibitem{Bracken} Bracken, pp. 52-54.
\bibitem{Council} President’s Council on Bioethics, “Notes on Early Human Development,” p. 163.
\end{thebibliography}
When the fusion does result in a human zygote that is never implanted in the uterus and dies shortly after fertilization, there is no facile explanation. The Creator seems to provide in abundance “seeds” that never bear fruit. But are we to say that historically, when more than half of the infants born died during childbirth, they were never living human beings?

(2) Although the cause of multiple births is not well understood, its use as an objection to challenge the time of humanization is not well founded. Multiple births (e.g., monozygotic twins) often occur when a pluripotent cell in the morula breaks loose and develops as another human organism, a process similar to cloning. There is one human person before twinning occurs, and that human person continues in existence after a new human person develops through parthenogenesis. Moreover, monozygotic twinning may occur well after implantation and the formation of the primitive streak. Thus, the term pre-embryo loses any relevance and is considered to be “scientifically inaccurate and erroneous.”

(3) The matter must indeed be commensurate with the form for an organism to develop to maturity. However, modern science makes abundantly clear that the sufficient matter for the development of the human person is the genome in the one-celled zygote. The genome is the formal cause (the blueprint or program) for future development of the zygote, as well as the efficient cause of its future development. Thus, the theories set forth for delayed hominization, often utilizing the thought of Aquinas as proof, become implausible. The zygote has its own molecules to start operating and starts producing its own enzymes and


proteins at syngamy.\textsuperscript{39}

Implications

(1) Although it seems highly probably that the human form, the soul, is infused in the matter at the time of fertilization, this has not been defined by the Church. The Second Vatican Council declared, “Life once conceived must be protected with the utmost care; abortion and infanticide are abominable crimes.”\textsuperscript{40} The Congregation for the Doctrine of the Faith, after once again condemning abortion, added: “This declaration expressly leaves out the question of the moment when the spiritual soul is infused.”\textsuperscript{41} In a more comprehensive document in 1987, however, the Congregation went a bit further and yet still did not make a definitive statement in regard to the moment of conception when it stated:

the conclusions of science regarding the human embryo provide a valuable indication for discerning by human reason a personal presence from the first appearance of human life: how could a living human creature not be a human being? The magisterium has not expressly committed to this affirmation of a philosophical nature.\textsuperscript{42}

In the encyclical \textit{Evangelium vitae}, Pope John Paul II strongly affirmed these statements, but once again he did not define the moment when ensoulment takes place. Would it be possible for the Church to define the moment when human life begins, on the basis of philosophical evidence? Other spiritual truths have been defined on the basis of philosophical evidence, for example, that the rational intellectual soul is the form of the


\textsuperscript{40} Paul VI, \textit{Gaudium et spes} (December 7, 1965), §51, as quoted in Congregation for the Doctrine of the Faith (CDF), \textit{Donum vitae}, (February 22, 1987), I §1 (Vatican translation).


\textsuperscript{42} CDF, \textit{Donum vitae}, I §1, in AAS 80 (January 12, 1988).
human body.\textsuperscript{43} Personally, even though I am convinced that there is sufficient philosophical knowledge for a definition of ensoulment at the time of fertilization, I understand the apprehension of the Church. Biological knowledge is continually developing and changing.\textsuperscript{44} Even though there is much that is known about human generation, and all this knowledge points to the rational form existing from fertilization, there is still much that is not known about the operation of the human form (soul) and the process of human generation.

(2) Human beings who do not have the capacity to perform all the actions associated with being human are still human. They have the human form, the human soul, at least in first act. This form may not be able to activate all the human capacities because of physical debilities; that is, it may be incapable of second act in regard to some human functions. But it still has a remote potency, the virtual power,\textsuperscript{45} to perform these actions. Depriving retarded or debilitated human beings of moral personhood is a grave injustice.

(3) As a result of the nature of a human fetus, it has the right to life, the most basic of all rights. How best to protect and foster the recognition of this right by individuals and society? Surely, widespread education is needed concerning the beginning of human life. In other words, our first task is to win the hearts and mind of the people through education and persuasion, so that they understand when human life begins and grasp the evil of abortion. It seems that the first task is to establish that the beginning of human life is a scientific, not a religious, question.

As we seek to alert people to the evil of abortion, I think that the words of Pope John Paul II must be kept in mind when he wrote:

> Decisions that go against life sometimes arise from difficult or even tragic situations of profound suffering, loneliness, a total lack of economic prospects, depression and anxiety about the future. Such circumstances can


\textsuperscript{45} Aquinas, \textit{Summa theologiae}, I.77.8.
mitigate even to a notable degree subjective responsibility and the consequent culpability of those who make these choices, which in themselves are evil.\textsuperscript{46}

In other words, as we engage in the effort to protect the rights of the unborn, we must realize that women seeking abortions are often in need of help, and that condemning them does not have much effect.\textsuperscript{47} Moreover, we must avoid becoming self-righteous and hard-hearted ourselves as we seek to improve the mores of society.

(4) Maintaining that human life begins at fertilization and that society has a responsibility to protect unborn children does not imply that human life is an absolute good. Human life, even of unborn infants, need not be prolonged until prolonging life is a physical impossibility. The Catholic tradition in regard to prolonging life is well developed: if the means to prolong life do not offer hope of benefit or if they impose an excessive burden upon the patient or family, the patient or the proxy for the patient may forego these means, even if death would result.\textsuperscript{48} Applying these norms to cases involving the unborn and infants is indeed a difficult proposition, but one truth of our tradition should not be overemphasized to protect another truth.

CONCLUSION

Is the embryo a human person? It seems that there can be no equivocation; the answer is affirmative. Convincing our peers of this fact will not be easy. The appearance of the zygote and its lack of physical develop-
ment in the first stages of existence are the main arguments put forward to deny this truth. But we have made progress. I recall that when the pro-life movement started in the United States in the mid-1970s, many people considered a fetus to be a growth within a woman’s body, similar to the appendix. Now there is a general consensus that the unborn infant in the womb, after one or two months, has a life of its own. Convincing the public that this life starts at fertilization is our mandate and our debt to humanity.