

The Role of Metaphysics and Theology in the Contemporary Pro-Life Debate

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ABSTRACT: Recent debates over Altered Nuclear Transfer (ANT) and Embryo Transfer (also referred to as “Embryo Adoption”) are challenging moral theologians, philosophers, and scientists to define the boundaries of ethical pursuits. Critical to such discussions is the question of how we are to determine the nature of the embryo. Can science alone provide a definitive account of the embryo? In their recent book *Embryo: A Defense of Human Life*, Robert P. George and Christopher Tollefsen construct an argument defending the embryo from destructive experimentation based on this definition. The acceptance of certain modern presuppositions perhaps unwittingly lead the authors to accept a liberal conception of the human as an autonomous entity. This is revealed in the embryo’s need to behave and assert himself as an individual in order to be considered a human life. With no understanding of the ontological nature of the embryo as always in relation to a mother, a father, a family, and, ultimately, God, and no sense of the proper place for the embryo, there can be no adequate foundation for a proper ethical response.

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Christians are “guardians of a metaphysics of the whole person in an age that has forgotten both Being and God.” They bear responsibility for keeping alive the wonder-filled love that is the point of origin for authentic human existence and includes the entire cosmos in its breadth.

– David L. Schindler quoting Hans Urs von Balthasar¹

A RIFT HAS ARISEN LATELY within the Catholic pro-life community over emerging biotechnological interventions. Recent debates over Altered Nuclear Transfer (ANT) and Embryo Transfer (also referred to as “Embryo Adoption”) are challenging moral theologians, philosophers, and scientists to define the boundaries of ethical pursuits. Critical to such discussions is the question of how we are to determine the nature of the embryo. Can science alone provide a definitive account of the embryo? In their recent book *Embryo: A Defense of Human Life*, two such Catholic philosophers – Robert P. George and Christopher Tollefsen – construct an argument defending the embryo from destructive experimentation based on this definition. This book is representative of the thought of the New Natural Law theory, a particular strain within Catholic moral thought that has become quite prominent in public debates of morality. In language geared towards the more general public, George and Tollefsen consider the embryo from scientific, technological, and ethical standpoints. They claim to build their case on only “non-religious arguments” that rely upon “the facts of science” to determine what the embryo *is*. They then turn to moral philosophy to ascertain how one ought to treat this new life.

Embryo has met with favorable reviews from the pro-life community. Wesley Smith praises the authors’ ability to make “scientifically valid, entirely secular, and philosophically coherent” arguments that are supposedly acceptable to a pluralistic audience.² Rev. Alfred Cioffi recommends *Embryo* as a “must read” for “anyone interested in the question of the current status of the human embryo and anyone who wants arguments for why we should not

¹ David L. Schindler, quoting Hans Urs von Balthasar, <http://www.traces-cl.com/sep05/lovealone.html>. Last accessed 10-6-08.

² Wesley Smith, “Rock-Solid Logic,” *National Review* (January 28, 2008) Available online at http://findarticles.com/p/articles/mi_m1282/is_/ai_n24244133. Last accessed 10-8-08.

experiment with human embryos.”³ Another reviewer suggests, “One can only hope that *Embryo* will restore some common sense in an arena of the public square where it has become so very uncommon.”⁴

Considering the approval of their “secularized” arguments from within pro-life circles, it is important to examine the underlying presuppositions assumed by George and Tollefsen as well as the conclusions that result from their approach. Does science offer the metaphysically and theologically neutral space that they presume it does? How do these presuppositions fit with regard to biological science?

Throughout their book the authors explicitly rely on current science to reveal the “truth” about the embryo, as when they write: “Embryo science tells us two important things about human embryos: what they are, and when they begin.”⁵ Philosophy enters into the discussion only in the second instance, for determining the ethics of embryo manipulation or destruction. George and Tollefsen maintain: “Moral philosophy (or a religious tradition) might have something to say about how one ought to treat the human embryo. But embryology tells us the facts about the human embryo.”⁶ In their attempt to build the case for the dignity of the embryo, they focus on the biology of conception in order to show that the embryo is indeed a member of the human species. They go on to emphasize the independence and self-sufficiency of the embryo as one who “is fully programmed and has the active disposition to use that information to develop himself or herself to the mature stage of a human being.”⁷

This line of argumentation makes two important assumptions. First, by appealing to the “facts” of science to definitively explain the embryo, they assume an understanding of a “pure science” that imports no philosophical or theological conceptions. This assumption leads to their second assertion, that the moral realm is independent of the “objective” reality of science. The two

³ Rev. Alfred Cioffi, Book Review, *National Catholic Bioethics Quarterly* 8/2 (2008): 388-90.

⁴ Justin D. Barnard, Book Review, Director of the Carl F.H. Henry Institute for Intellectual Discipleship, posted: March 31, 2008. <http://www.uu.edu/institutes/henry/articles/review.cfm?ID=135>. Last accessed 10-7-08.

⁵ Robert P. George and Christopher Tollefsen, *Embryo: A Defense of Human Life* (New York NY: Doubleday, 2008), p. 7.

⁶ *Ibid.*, p. 28.

⁷ *Ibid.*, p. 50.

realms of science and ethics remain distinctly separate and self-contained. For the authors, no “ought” may be derived from an “is,” for they understand there to be a wedge between these two discrete realities. But does this metaphysically neutral concept of science in a schema that divides ethics from science provide an accurate description of reality?

While George and Tollefsen suggest that science can provide a “factual” (e.g., “neutral”) account of the embryo, other scholars, including Michael Hanby and David L. Schindler, argue that a scientific account always implies a metaphysics and a theology.⁸ They argue that science can never be philosophically and metaphysically neutral since it always implies an understanding of causality, matter, nature, the relationship of parts to the whole, a particular concept of truth, a nature of time and space, and ultimately a notion of being. These philosophical and metaphysical presuppositions are always the starting point, and they “exert profound internal pressure on the shape of the scientific enterprise from the outset.”⁹

In order to defend this assertion, it will be necessary to provide a short historical account of the transition from the classical understanding of science to the modern conception. The classical definition, as formulated by Aristotle, recognizes nature as “a source or cause of being moved and of being at rest in that to which it belongs primarily, in virtue of itself and not in virtue of a concomitant attribute.”¹⁰ Aristotle contrasts this internal principle of motion and rest that is distinctive of a natural substance with “products of art [that] have no innate impulse to change.”¹¹ This natural motion and rest characteristic of natural substances indicates a distinctive teleology, for each substance moves towards its own fulfillment. There is a mysterious interiority present within all natural things that helps to reveal their own integrity apart from human intervention.

To account for the nature of a particular thing, Aristotle asks what is a thing’s essence, how is it composed, where is it from, and what is it for. In his *Physics* this approach leads to the famous theory of the four causes (formal,

⁸ See Michael Hanby, “Darwinism, Intelligent Design, and Other Heresies” and David L. Schindler, “Biotechnology and the Givenness of the Good,” *Communio* 31 (Winter 2004).

⁹ Hanby, p. 9.

¹⁰ Aristotle, *Physics*, Bk. II, 192b22.

¹¹ *Ibid.*, 192b19.

material, efficient, and final) as the set of explanatory factors needed to know an object. In his *Metaphysics* he ventures beyond a this-worldly application of the four causes to a search for the first principles of all reality. Metaphysics as “first philosophy” is “a science that investigates being *qua* being.”¹² Because this subject concerns the study of the most universal and fundamental principles, he accepts it as necessarily theological. It is Aristotle’s understanding of the Unmoved Mover as the ultimate object of desire, and therefore the First Cause, that comes to be recognized as the ultimate source of motion in all things. Schindler explains this classical account:

The premoderns approached science and technology in the spirit of imitation of (or participation in) a nature or cosmological order given by God or the gods (cf. Plato’s *Timaeus*). Consistent with this approach, the premoderns conceived space, time, and motion primarily in terms of quality (e.g., movement was most fundamentally teleological movement toward God); causality primarily in terms of internal (“interior”) forming and finalizing acts, and indeed in terms of a mutual (if asymmetrical) influence of whole and parts (cf. Aristotle’s *De Anima*).¹³

Metaphysical and theological commitments are necessarily connected with the classical account of nature. The world is comprised of form and matter, such that

Form can be described as the ordering principle or blueprint of a thing, combined with act, which is its actualizing principle [*energeia*]. The pure form of the Unmoved Mover enables the world to have form. Form directs all movement within the world and also provides the *energeia*, or actualizing energy in order to achieve this motion. In natural things, form unfolds out of itself towards its own fulfillment. Interiority is simply a movement toward the perfection of being.¹⁴

Hence, the intelligibility of nature is directly connected to its ultimate source.

The modern era brings a decisive shift to the understanding of nature and the role of science. Already in the seventeenth century, Galileo and Descartes were transforming the meaning of knowledge, cause, matter, space, and motion. An emphasis on “certain knowledge” ostensibly placed metaphysics

¹² Aristotle, *Metaphysics*, 1003a19-20.

¹³ Schindler, pp. 613-14.

¹⁴ Taken from a paper I wrote entitled “The Impact of the Real Distinction on the Interiority of Nature” (unpublished).

and theology outside the boundaries of the “knowable,” for the focus shifted to a “‘know-how’ and not a ‘know-what.’”¹⁵ The attitude towards nature changed from wonder and respect to dominance and control. Empirical methods quickly replaced inquiry into the four causes of Aristotle essential to the structure of knowing a being. Formal and final causes grew unintelligible as they became disconnected from their source of Being. Certain knowledge could only be discovered through the radically diminished “external” efficient and material causes. Teleology (final causality) was thought no longer to be found in the natural end of a thing and was limited to mere human intention. Replacing a subjective element inherent in nature, nature came to be seen as “object” that no longer exhibited natural motion or interiority. The laws of nature replaced causality as natural motion gave way to violent external motion.

The integrity of nature is seemingly lost as the modern scientific enterprise seeks to limit nature to “phenomena, to what is evident and can be grasped.”¹⁶ In tracing modernity’s “reduction of truth to facts,”¹⁷ Joseph Ratzinger observes:

We have given up seeking the hidden “in-itselfness” of things and sounding the nature of being itself; such activities seem to us to be a fruitless enterprise; we have come to regard the depths of being as in the last analysis unfathomable. We have limited ourselves to this perspective, to the visible in the widest sense, to what can be seized in our measuring grasp.¹⁸

Kenneth Schmitz warns that in the “collapse of the famous four causes of Aristotelian philosophy, the traditional metaphysical sense of being was lost as well.”¹⁹ As a result of the supersession of causes by general laws of nature, Schmitz contends, “what in traditional metaphysics had been the primary source for the communication of existence (God as *causa prima*) was replaced

¹⁵ Hans Jonas, *Phenomenon of Life* (Evanston IL: Northwestern Univ. Press, 2001), p. 204.

¹⁶ Joseph Cardinal Ratzinger, *Introduction to Christianity* (San Francisco CA: Ignatius Press, 1990), p. 30.

¹⁷ *Ibid.*, p. 37.

¹⁸ *Ibid.*, p. 30.

¹⁹ Kenneth Schmitz, “First Principle of Personal Becoming” in *The Texture of Being* (Washington D.C.: The Catholic Univ. of America Press, 2007), p. 187.

by the various forces that initiate motion and rest.”²⁰ With no first cause, or unifying sense of being, the world becomes unintelligible – reduced to simple (uninformed) matter in motion.

This new metaphysics has vast implications for the modern scientific conception of the organism. Schindler argues:

This modern shift implies that the given natural order of things is not good, and that the goodness of things is not first naturally given. Being is drained of its original or constitutive goodness. This is referred to by some scholars as modernity’s “neutralization” of the cosmos. But as some of these same scholars also recognize, this term is somewhat misleading, since the cosmos is not merely neutral but in fact originally not-good. Which is to say, nature becomes good only insofar as man now intervenes and renders nature good. The convertibility of *verum*, *bonum*, and *ens* characteristic of the premoderns becomes in the moderns a *verum/bonum quia factum* (Vico).²¹

Schindler unpacks the consequences of this view for modern science by suggesting that “the cosmos in modernity is not neutral but on the contrary ‘pre-moral’: nature or cosmological order no longer provides an inner reference point for morality.”²² This leads us to the much-debated split between nature (or science’s interpretation of nature) and ethics (the “is/ought” or “fact/value” distinction) that is taken up by George and Tollefsen. A valueless, “pre-moral” account of nature would require that morality be imposed from the outside. We will return to this topic later in the paper.

The sharp distinction that George and Tollefsen draw between science and religion echoes the sentiments of Stephen Jay Gould, who refers to these two separate spheres as “Non-Overlapping Magisteria.” According to Gould, each field should limit itself to its own area of expertise. Science looks to the “empirical realm: what is the universe made of (fact) and why does it work this way (theory),” while religion should remain focused on “ultimate meaning and moral value.”²³ While calling for intense dialogue between the two magisteria, he suggests they must always maintain an attitude of “respectful non-interference.”²⁴ Religion and philosophy focus on the “ethical ‘ought,’ rather

²⁰ Ibid., pp. 186-87.

²¹ Schindler, p. 615.

²² Ibid.

²³ Stephen Jay Gould, *Rocks of Ages: Science and Religion in the Fullness of Life* (New York NY: Ballantine, 1999), p. 6.

²⁴ Ibid., p. 5.

than on a search for any factual ‘is’ about the material construction of the natural world.”²⁵ Here, the “facts” of science are heralded as true knowledge, while religion is reduced to morality.

George and Tollefsen seem to agree with Gould’s basic premise, for they say: “Science, which is concerned with what is the case, has nothing to say about what we ought to do, even in the domain of science.”²⁶ This creates a need to identify normative moral precepts to guide a person’s actions:

[S]cience is concerned primarily with questions of fact, questions that concern the way the world is. But the questions we are concerned with here – in particular, questions about the right treatment of human beings at early developmental stages... are not questions about the way the world is. Rather, such questions are...normative: they concern what ought to be the case, how one ought to act, what sorts of things one ought, and ought not, to do.²⁷

Whereas Gould collapses religion and ethics into each other, George and Tollefsen separate the two by suggesting that “our position in this book is that claims based on religious tradition or revelation are simply not necessary (and probably are not even sufficient) to arrive at correct understandings of embryo science, technology, and ethics.”²⁸ Ethics is in an entirely different realm than religion for these authors. While it is true that it is possible to make the case for the sanctity of human life from non-religious arguments, expressing this sentiment in this way seems to suggest that religion is something added on top of an already complete natural view of man, a position criticized by Henri De Lubac.²⁹ If the natural world can be entirely understood without the supernatural, then there arises a split between nature and grace in which seems superfluous. De Lubac suggests: “If we begin by dissociating the two orders completely, in order to establish the existence of a natural order that could be fully and finally self-sufficient, we are all too likely to end up seeing not so much a distinction as a complete divorce.”³⁰ It seems that this “pure nature” proposition goes hand in hand with the “pure science” myth espoused by

²⁵ Ibid., p. 55.

²⁶ George and Tollefsen, p. 8.

²⁷ Ibid., pp. 83-84.

²⁸ Ibid., p. 21.

²⁹ Cf. Henri De Lubac, *The Mystery of the Supernatural* (New York NY: Crossroad Publishing Group, 1998).

³⁰ Ibid., p. 35.

George and Tollefsen.

While it is helpful and necessary to make biological observations in order to understand the nature of the embryo, it is imperative to have a proper foundation undergirding our assessments. We must not give in to the temptation that the empirical results gained from reductive modern science reveal the whole picture of new human life, as if they presuppose no philosophical criteria. In defining the embryo, George and Tollefsen suggest:

To be a complete human organism (human being) an entity must possess a developmental program (including both its DNA and epigenetic factors) oriented toward developing a brain and nervous system; that it, it must, by virtue of its biological makeup, possess, at least in root form, capacities for characteristically human mental activities, even if disease or defect should at some point impede the further actualization of those capacities.³¹

This definition employs a systems biology perspective that, even though not recognized by our authors as such, is one *philosophical* method of interpreting the “facts” of science. This perspective has been criticized in the midst of the debate over altered nuclear transfer for being “subtly, but decisively, mechanistic.”³² In discussing the possibilities that an embryo might not have developed from the union of sperm and egg, the authors suggest in a footnote: “What would have to be known in any particular case of chromosomal abnormality was whether the defect was such as to eliminate entirely the active capacity for self-directed growth to a point where the human capacities for thought and choice could not be actualized. Only in such cases would there be no human being at all.”³³ This seems to give a decidedly functional (rather than ontological) account of the human person. If a “capacity for thought and choice” were required to be considered human, then certain humans would seem to be excluded, such as anencephalic infants, even though George and Tollefsen specifically include them among the human community.

Perhaps it is easier to see the error of this logic when it comes to altered nuclear transfer – a practice that George and Tollefsen support. A functional account of the human being requires the embryo to perform in a certain way (as

³¹ George and Tollefsen, p. 137.

³² See Adrian Walker, “Altered Nuclear Transfer: A Philosophical Critique,” *Communio* 31 (Winter 2004).

³³ George and Tollefsen, p. 137 n15.

a unified, growing organism) while an ontological account requires the condition of the union of sperm and egg (or DNA and egg in the case of cloning and altered nuclear transfer). William Hurlbut, who first conceptualized the practice of altered nuclear transfer, states:

Systems biology offers us the view of an organism as a living whole, a dynamic network of interdependent and integrated parts. If severed from the whole, these partial subsystems may temporarily proceed forward in development, but without the larger environment of their organismal system, they will become merely disorganized cellular growth. ANT proposes that small (but precisely selected) genetic alterations will allow us to harness these subsystems of partial development, apart from their full natural organismal context, in order to produce ES cells [embryonic stem cells].³⁴

As Adrian Walker and David Schindler argue, altered nuclear transfer allows an embryo to develop properly for several days before it loses its organismal integrity.³⁵ If we define an embryo by its organization, in itself a philosophical claim, then it is possible to classify the entity derived from ANT as merely a “biological ‘artifact’ – a human creation for human ends,”³⁶ as its proponents do, rather than as a human being. If instead we define the embryo on the basis of its creation as the union of sperm and egg or of DNA and egg, we have grounds for protecting the embryo produced by altered nuclear transfer that may only live for a few days, while also leaving room for the mystery that is inherent in the very act of creation.

George and Tollefsen would argue that defining the embryo by the manner in which it came into existence is not definitive since hydatidiform moles can occur, but who is to say whether or not such an entity may have been an embryo, even if only for a very short time. Fr. Tad Pacholczyk suggests that even in the case of a complete hydatidiform mole (CHM),³⁷ “the conceptual

³⁴ William Hurlbut, “Altered Nuclear Transfer as a Morally Acceptable Means for the Procurement of Human Embryonic Stem Cells,” *National Catholic Bioethics Quarterly* 5 (2005): 148-49.

³⁵ For papers representing both sides of the debate, go to <http://www.communication.com/ant.htm>.

³⁶ Hurlbut, p. 150.

³⁷ “A CHM can be generated by two sperm fertilizing an ovum which lacks a nucleus. The resulting mass that arises in the uterus is composed solely of trophectoderm-derived tissue. This means the CHM ends up as a growth of exclusively placental tissue, without fetal tissue, in contradistinction to the proposed ANT product

question remains whether even such an aberrantly growing entity like a CHM may not initially pass through a brief human organismic stage prior to becoming subject to powerful *dis*-organizing forces (in the form of non-expressed or inappropriately expressed genes) which cause it to fail as an organism.”³⁸ Recognizing the goal of the New Natural Law theory to protect human life, the possibility that a human organism could develop as a result of altered nuclear transfer should cause the authors of *Embryo* to call into question their underlying premise that an organism is defined by its organization. This example also highlights the problem of an apparently “pure science” to determine “facts.”

The philosophical claim of this particular view of systems biology³⁹ that organization determines an organism leads to another modern philosophical distortion of the relationship of the whole to its parts. George and Tollefsen assert:

In assessing the status of the embryo, we need to answer three questions. First, does the embryo act like a whole organism? Second, are the parts differentiated in any way, such that they seem to play the different functional roles in a whole characteristic of the parts of a multi-celled organism? And third, is there a relationship between the parts themselves, such that the behavior of some parts is coordinated with the behavior of others, possibly through communication mechanisms, or are the parts really only a loose aggregation of cells with little connection to one another?⁴⁰

This definition reveals the mechanism at the heart of our authors’ analysis. In basing the status of the embryo on how it acts, the authors, perhaps unknowingly, adopt a “whole is equal to the sum of its parts” approach. There is no sense of a wholeness or form pervading the embryo that directs and guides its development. Malcolm Byrnes, a molecular biologist, criticizes the view of Hurlbut (and others) “that the embryo, and indeed every organism, is

which would be required to yield inner cell mass cells or similar cells capable of generating fetal tissues. The CHM is thus clearly not a human organism, since it lacks any and all fetal components.” From Tadeusz Pacholczyk, “The Substantive Issues Raised by Altered Nuclear Transfer,” *National Catholic Bioethics Quarterly* 5 (2005): 18.

³⁸ Ibid.

³⁹ William Hurlbut’s interpretation of systems biology (explained below).

⁴⁰ George and Tollefsen, p. 151.

defined by its genetic makeup.”⁴¹ His reason: “For, if a human embryo is denied membership in the species *Homo sapiens* because it has an engineered genetic defect, then this means that we all are defined by our genetic composition.”⁴² While Byrnes praises systems biology in “revealing that organisms are holistic systems that cannot be defined as the sum or their parts,” he nonetheless criticizes Hurlbut’s “belief in genetic determinism, which says that our identity is determined by our genes.”⁴³ It seems that Hurlbut’s application of systems biology to ANT has unwittingly yielded a mechanistic conception of the organism that is at variance with the goal of systems biology.⁴⁴

The absence of wholeness (or form) for directing the organism eliminates a sense of teleology (finality). This loss is apparent in their complete disregard of the “parts” that comprise the embryo. In altered nuclear transfer, the oocyte (woman’s egg) is seen merely as providing useful material (its cytoplasm) for the creation of the resultant “biological artifact.” There is no sense of a purpose for the egg apart from human intentionality. Fr. Nicanor Austriaco, a scientist and a proponent of altered nuclear transfer, refers to the oocyte that has had its nucleus removed as a “cytoplasmic sac”⁴⁵ and continually dismisses the notion of any ethically-relevant teleology for the oocyte.⁴⁶ This reductionism is characteristic of the modern scientific mentality that does not discern a teleology, or interiority, in nature. The authors’ acceptance of altered nuclear transfer necessarily (although perhaps not consciously) commits them to an

⁴¹ Malcolm Byrnes, “Partial Trajectory: The Story of the Altered Nuclear Transfer-Oocyte Assisted Reprogramming (ANT-OAR) Proposal,” *Linacre Quarterly* 74.1 (2007): 56.

⁴² Ibid.

⁴³ Ibid.

⁴⁴ Walker states, “Again, this is not to say that the proponents of ANT are avowed mechanists. On the contrary, their emphasis on the coordinated systematicity of living systems is meant to be anti-mechanist. What I aim to show is that, despite this intention, the claim that ANT can procure human embryonic stem cells without creating an embryonic human organism in the process could be true only if something like mechanism, albeit in a more refined form, were true.” Walker, “Altered Nuclear Transfer: A Philosophical Critique,” p. 654.

⁴⁵ Nicanor Austriaco, “The Moral Case for ANT-Derived Pluripotent Stem Cell Lines,” *National Catholic Bioethics Quarterly* 6 (2006): 519.

⁴⁶ Nicanor Austriaco, “More on the Merits of ANT-OAR: A Response to Critics,” *National Catholic Bioethics Quarterly* 7 (2007): 450.

acceptance of these philosophical presuppositions.

Building upon the faulty philosophical premises of modern science, George and Tollefsen develop the case for the radical autonomy and independence of the embryo. Whereas it is important to show the integrity of the embryo with its capacity to develop and grow, it is likewise crucial to reveal the dependence and interdependence of the embryo on his mother in a vital mother-child relationship. This relationship is distorted as the authors state that the embryo's "first goal is to get itself to the uterus, where it can implant."⁴⁷ Here, the embryo is conceived as an independent agent who has to fight his way to his mother's womb rather than as interdependent with his mother. The embryo actively works for "the goal toward which implantation is directed: to receive adequate nourishment in a congenial environment, so as to be able to continue its growth and development."⁴⁸ The embryo is self-sustaining and independently transports itself to his mother's womb. William Saletan in *The New York Times Book Review*, criticizes the notion of this "autonomous embryo" as contrived and unrealistic when he states:

Nobody with a womb would describe pregnancy this way. The "congenial environment" is a woman. The embryo doesn't "get itself" around her like some Horatio Alger hero. Her body sustains it, guides it, and affects its direction of growth. Mother and child are a system.⁴⁹

Saletan makes a strong point. Mother and child have an intimate bond that is mutually enriching. But it is obvious that some might interpret this to mean that the embryo is only a part of a woman's body and unworthy of any moral standing of his or her own. This may partially be what drives George and Tollefsen to construct such a faulty, self-sufficient understanding of the embryo. Yet, in focusing on a one-sided emphasis on individuality as the mark of personhood, the authors too readily accept the modern liberal paradigm that bases human rights on an individual's immunity from coercion. Any efforts to protect the integrity of the embryo from within this context will ultimately be framed in terms of power and autonomy at the expense of relationality.

⁴⁷ George and Tollefsen, p. 151.

⁴⁸ Ibid.

⁴⁹ William Saletan, "Little Children," *New York Times Book Review*, February 10, 2008, <http://www.nytimes.com/2008/02/10/books/review/Saletan-t.html>. Last accessed 10-7-08.

Because modern liberalism allows no room for those without a voice, George and Tollefsen have fought to empower the embryo with its own voice. Rather than questioning the liberal foundation that allows for such domination of the weak, they assert the rights of the embryo based on its ability to direct and develop itself. It appears, however, from the above book review that not only is this logic not convincing to a secular audience, but it also damages the Christian witness to the fundamental truth of being.

In *The Human Embryo in its Preimplantation Phase* the Pontifical Academy for Life gives a much richer account of the intricate relationship between mother and child within the first few days of pregnancy that portrays a welcoming, rather than competitive, environment for the embryo. This report states: “The Fallopian tube is the meeting-place for the mature gametes and has an active role in maturation of the spermatozoa, in the process of fertilization, in development of the early embryo and in its transport towards the uterus.”⁵⁰ The embryo is almost carried along by the fallopian tubes into the welcoming womb of his mother. Further,

The oviduct is therefore not a mere passage-way, but a reproductive organ whose secretory and transport activities are necessary for the early events in reproduction; together with the epithelium of the uterus, the Fallopian tube provides a series of molecules necessary for the constitution of a more suitable environment for embryonic development. The embryo, in turn, produces hormones and other molecules important in interaction with the maternal environment. This “molecular communication” between mother and preimplantation embryo has been coined “cross talk.”⁵¹

This “intense biochemical dialogue” indicates that “the mother-child relationship, which begins at the moment of fertilization [and] continues throughout the entire course of pregnancy, thanks to biochemical, hormonal, and immunological communication. This inseparable relationship marks “the subsequent development of the individual, and a ‘memory’ remains of the biological contact and of channels of communication that existed during pregnancy.”⁵² This philosophical view of the relationship between the mother and child captures the reality of pregnancy and informs us of the true nature of

⁵⁰ The Pontifical Academy for Life’s XII General Assembly International Congress “The Human Embryo Before Implantation,” 15.

⁵¹ Ibid.

⁵² Ibid., 18.

the embryo.

There is a danger in overemphasizing a one-sided conception of the human person as autonomous. It is helpful to reflect upon the importance of relationality for the person. Schindler describes the relationality that is at the heart of the human being (and at the very heart of the Trinity) by saying: “The created person is from and for God in Jesus Christ, and is constitutively related to others in God. The person is thus structured intrinsically by a dynamic rhythm of receiving and giving, first in relation to God and then (ontologically, not merely successively) in relation to others.”⁵³ Relationality is intrinsic to the structure of the human being since “the individual person’s participation in community precedes his own initiative, and...the person’s most basic exigence is thus to receive what has always-already been given.”⁵⁴ A human person is born into a family, a community, and a tradition that he does not choose. All is first given to man as a creature who enters the world naked and utterly dependent.

In defending the dignity of the embryo from within a relational framework, Robert Spaemann states:

In the case of human beings, family relations are more than simply a matter of biology; they are also personal relations. Father and mother, son and daughter, brother and sister, grandfather and grandmother, grandson and granddaughter, male and female cousins, uncle and aunt, brother-in-law and sister-in-law are certain places within an interpersonal structure. Whoever fills such a place, holds this place from the very beginning of his or her biological existence and retains it for the rest of their lives and beyond. This is something quite different from almost all animals. An embryo is the child of his or her parents from the first moment of existence. As a member of the human community he or she is a member of the community of persons, and as a member of the community of persons he or she is person, quite independently of any properties.⁵⁵

This definition offers a much fuller understanding of the personhood of the embryo than the account by George and Tollefsen. In considering the embryo

⁵³ Schindler, “Trinity, Creation, and the Order of Intelligence in the Modern Academy,” *Communio* 28 (2001): 414.

⁵⁴ Schindler, *Heart of the World, Center of the Church* (Grand Rapids MI: Wm. B. Eerdmans, 1996), p. 277.

⁵⁵ Robert Spaemann, “Can a Human Individual not be a Person?” The Pontifical Academy for Life’s XII General Assembly International Congress “The Human Embryo Before Implantation.”

from within his or her family, his or her dignity is on much firmer ground than what a functional account can provide. By situating the embryo within his proper place of the family, rather than considering the embryo in abstraction from his mother or father, or worse yet, considering him as a scientific object sitting in a petri dish, we are better able to grasp the inherent dignity and worth of this precious life.

It is now apparent how *Embryo* falls short on many counts. The authors, in an attempt to persuade the general public of the dignity of the human embryo, end up accepting the faulty foundational premises of modernity rather than questioning them. While the authors are certainly well intentioned, by failing to recognize that “pure science” rests upon philosophical and metaphysical grounds that are antithetical to a proper understanding of nature, man, and God they actually may be doing more harm than good. Despite the brief footnote acknowledgment that “the findings of science must be supplemented by philosophical arguments, particularly when the import of the scientific findings is called into question,”⁵⁶ the authors fail to notice the underlying philosophical presuppositions inherent in every scientific pursuit.

These modern presuppositions perhaps unwittingly lead the authors to accept a liberal conception of the human as an autonomous entity. This is revealed in the embryo’s need to behave and assert himself as an individual in order to be considered a human life. With no understanding of the ontological nature of the embryo as always in relation to a mother, a father, a family, and, ultimately, God, and no sense of the proper place for the embryo, there can be no adequate foundation for a proper ethical response. Only in recovering the intricate connectedness of all created things to each other and to God can we begin to make a way towards the recognition and respect of every human life.

⁵⁶ George and Tollefsen, p. 21 n20.