

seems both right and reasonable: "The death penalty cannot be justified as a legitimate tool of society's justice system."<sup>26</sup>

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#### THE EMBRYO AND THE FETUS: NEW MORAL CONTEXTS

The ambiguous status of unborn human life contributes to the interminability of the debate about the morality of abortion. New medical research and therapies are implying questions about the value and protectability of life in its earliest stages,<sup>1</sup> to which in vitro fertilization now gives more access. This essay will address especially the interplay of scientific information about embryonic development with philosophical interpretations of personhood. The ultimate question is whether full moral status in the human community ("personhood") can be tied to a physiological indicator or developmental line.

Some ancient authors (Augustine, Aquinas) favored a theory of delayed ensoulment or "animation," on the premise that a human soul could be infused by God only when the body had reached an adequate level of development. The modern Church, drawing on improved scientific data about genetics, fertilization, and embryology, has tended to view human life as personal from "conception," on the assumption that at fertilization a new genetic code is created which establishes individuality and controls all further growth. Current controversy really has two centers. The first is essentially *empirical and descriptive*. It focuses on the question whether the best information available supports the view that individuality and the integrated function of the new organism are established at fertilization. The second is *philosophical and normative*. It raises questions about how to interpret the data: What aspects of human existence does the term "person" denote? What are the minimum criteria of being a person? What is the relevance to present moral standing of the potential to actualize personal characteristics? And are the Thomistic categories form and matter still useful in conceptualizing the relation of soul to body?

<sup>26</sup> Arizona Ecumenical Leaders, "The Retaliatory Violence of Capital Punishment," *Origins* 21 (1992) 517-18, at 517.

<sup>1</sup> Scientists now usually use the term "preembryo" for the first fourteen days, reserving "embryo" for the conceptus after implantation. Richard A. McCormick, S.J., deflects accusations that the term is designed simply to remove the zygote from the sphere of condemnations of embryo research by citing the intentions of scientists to designate by its use a stage of development clearly demarcated on its far end by the formation of the embryo proper ("Who or What is the Preembryo?" *Kennedy Institute of Ethics Journal* 1 [1991] 1).

Related practical issues are genetic testing and counseling, in view of the selection of in vitro embryos for implantation;<sup>2</sup> the availability of a new abortifacient birth-control drug, RU 486, which acts early in pregnancy;<sup>3</sup> and the use in medical research and potentially in therapy of tissue obtained from aborted fetuses.<sup>4</sup> Although prior to the 20th century, the value of the conceptus before the time when pregnancy could be detected was pretty much a moral non-issue, the question today has a good deal of practical importance. Couples considering in vitro fertilization as part of infertility treatment will be concerned about procedures in which several embryos are created, three to five healthy ones are selected for implantation, and the remaining ones destroyed, donated for research, or frozen for future use.<sup>5</sup> Women seeking to forestall pregnancy may soon have a nonsurgical option which acts before development progresses far, and which will be especially

<sup>2</sup> See the *Journal of Medicine and Philosophy* 16 (1991) 587–698; this entire issue, edited by Eric T. Juengst, is devoted to the philosophy and ethics of “Human Germ-line Engineering.” See also the four-essay debate between Noam J. Zohar and Jeffrey P. Kahn over whether a “therapeutic” change in the genetic code changes the identity of the person, in *Bioethics* 5 (1991).

<sup>3</sup> Anna Glasier et al., “Mifepristone (RU 486) Compared with High-Dose Estrogen and Progesterone for Emergency Postcoital Contraception,” *New England Journal of Medicine* 327 (1992) 1041–44, accompanied by an editorial by David A. Grimes and Rebecca J. Cook, “Mifepristone (RU 486)—An Abortifacient to Prevent Abortion?” 1088–90. See also William Regelson, “RU 486: How Abortion Politics Have Impacted on a Potentially Useful Drug of Broad Medical Application,” *Perspectives in Biology and Medicine* 35 (1990) 330–38; a Vatican report sent worldwide to bishops’ conferences, by Gonzalo Herranz, “RU 486: The ‘Abortion Pill,’” *Origins* 21 (1991) 28–33; Kristine M. Severyn, “Abortifacient Drugs and Devices: Medical and Moral Dilemmas,” *Linacre Quarterly* 57 (1990) 50–67; and Mary E. Hunt, “RU 486/PG and Ethics: Women’s Moral Property—Not for Sale,” Cynthia Gibson, “Feminists Debate RU 486,” and Frances Kissling, “The Vatican and RU 486,” all in *Conscience* 13 (1992) 3–17.

<sup>4</sup> An excellent review of recent public-policy debates, which focuses on the outstanding moral issue of complicity, is James F. Childress, “Ethics, Public Policy, and Human Fetal Tissue Transplantation,” *Kennedy Institute of Ethics Journal* 1 (1991) 93–121. See also Richard B. Miller, “On Transplanting Human Fetal Tissue: Presumptive Duties and the Task of Casuistry,” *Journal of Medicine and Philosophy* 14 (1989) 617–40; Robert Barry, O.P., and Darrel Kesler, “Pharaoh’s Magicians: The Ethics and Efficacy of Human Fetal Tissue Transplants,” *The Thomist* 54 (1990) 575–607; Carson Strong, “Fetal Tissue Transplantation: Can It Be Morally Insulated from Abortion?” *Journal of Medical Ethics* 17 (1991) 70–76; and D. Gareth Jones, “Fetal Neural Transplantation: Placing the Ethical Debate within the Context of Society’s Use of Human Material,” *Bioethics* 5 (1991) 23–43.

<sup>5</sup> John A. Robertson, “In the Beginning: The Legal Status of Early Embryos,” *Virginia Law Review* 76 (1990) 437–517; Board of Trustees, American Medical Association, “Frozen Pre-embryos,” *Journal of the American Medical Association* 263 (1990) 2484–87; and Alexander Morgan Capron, “At Law—Parenthood and Frozen Embryos: More Than Property and Privacy,” *Hastings Center Report* 22/5 (1992) 32–33.

attractive in cases of sexual assault. The germ-line diagnosis of genetic disease is already making it possible to inspect embryos for the cystic-fibrosis gene, and to implant healthy prospects while discarding others.<sup>6</sup>

The status of the embryo in U.S. medical-research policy has been ambiguous at least since the mid-1970s, when the National Commission for the Protection of Human Subjects produced a set of recommendations, subsequently reflected in federal regulations, which afforded to early human life significantly more protection than did *Roe v. Wade*.<sup>7</sup> For instance, even aborted fetuses are not to be kept alive solely for the purpose of experimentation, nor are they to be subjected to "added risk . . . resulting from the activity" of research.<sup>8</sup> A federal regulation also provides that all research on in vitro fertilization which is submitted for federal funding must be reviewed by an Ethics Advisory Board, as had been recommended by the National Commission. The EAB submitted a report in 1979 approving study of "spare" embryos in vitro up to fourteen days after fertilization, as long as the objective was the improvement of infertility treatments, the gametes were from married couples, the woman gave consent, and the research had passed review by the Institutional Review Board of the facility at which it was to be conducted. The recommendations of the EAB still await approval; the Department of Health, Education, and Welfare (now Health and Human Services) allowed the EAB to lapse in 1980 when its funding ended; no federal support of IVF research has since been permitted.<sup>9</sup> Whether or not the Clinton administration modifies

<sup>6</sup> Alan H. Handyside et al., "Birth of a Normal Girl after In Vitro Fertilization and Preimplantation Diagnostic Testing for Cystic Fibrosis," *New England Journal of Medicine* 327 (1992) 905–9, accompanied by an editorial by Joe Leigh Simpson and Sandra Ann Carson, "Preimplantation Genetic Diagnosis," 951–53, which addresses technical problems and cost but not the status of the embryo.

<sup>7</sup> National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, *The Belmont Report*, 18 April 1979 (U.S. Government Printing Office: 1986-181-296:41238).

<sup>8</sup> *Protection of Human Subjects: Code of Federal Regulations 45 CFR 46* (Washington, D.C.: OPRR Reports: NIH, PHS, HHS, 8 March 1983) 46.209.

<sup>9</sup> In 1991, the American College of Obstetricians and Gynecologists and the American Fertility Society established a privately funded National Advisory Board on Ethics in Reproduction to formulate guidelines for research in areas which would have fallen within the purview of the EAB. A key motive was to question the ban on funding of fetal tissue research, to be discussed below. Meanwhile, in England, the Warnock Committee had approved research on embryos up to the appearance of the primitive streak at fourteen days, as well as the fertilization of embryos specifically for research (Department of Health and Social Security, *Report of the Committee of Inquiry into Human Fertilization and Embryology* [London: Her Majesty's Stationery Office, 1984]). In 1990, these provisions received royal approval as The Human Fertilisation and Embryology

this policy, ethical criteria for assessing embryo research need clarification.

Most current moral discussion revolves around research up to the fourteen-day limit postulated by the EAB. Engaging with scientific data about the preembryo, moralists debate whether it is reasonable to conclude that it has less moral status than at later stages. Roman Catholic authors rarely fail to allude to the stipulation of *Donum vitae* that, although the Church has not taken a final position on when a "person" begins, human life must be given the benefit of the doubt from conception onward.<sup>10</sup>

Science now indicates that fertilization is a twenty-four to thirty-six hour process, not a "moment." The embryo fortunate enough to implant will also have negotiated the zygote, morula, and blastocyst stages, during which there is "in nature" approximately a 60% chance that the process will result in failure. The embryo relies on genetic cues from the mother, as well as on its own genetic information, in order to develop to successive levels. Moreover, before implantation, change has concentrated in the outer cellular layer, so that the blastocyst can implant in the uterine wall, rather than in the inner cell mass to become the embryo proper. The primitive streak (embryonic axis) appearing at implantation marks a shift of developmental focus. It also signals an integration of embryonic cells sufficient to preclude "twinning." With the appearance of the primitive streak and implantation, the *individual identity* of the embryo has become stable (even though it has been characterized by *genetic uniqueness* since completion of fertilization).

Several authors now question whether it is reasonable to treat the preembryo from conception as a "person." Contrary indications include the high level of "wastage" before implantation; the fluid individuality of the preembryo, since for at least the first three days of development each of the cells, if separated, would have the same developmental potential as the zygote ("totipotentiality"),<sup>11</sup> and since for the first fourteen days, twinning and recombination are possible; and the insufficiency of the genetic code to govern development apart from ma-

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Act (relevant excerpts are published in the *Bulletin of Medical Ethics* 63 [1990] 13–21). A German law, on the other hand, has prohibited the creation in vitro of any embryo whose ultimate preservation and birth is not intended (see the text in *Bulletin of Medical Ethics* 64 [December 1990] 9–11), even in order to enhance the success of infertility therapy, in the course of which only three embryos can be implanted simultaneously.

<sup>10</sup> Congregation for the Doctrine of the Faith, *Donum vitae* (*Respect for Human Life*), *Origins* 16 (1987) 697–711. See also *Gaudium et spes*, in Walter M. Abbott, *The Documents of Vatican II* (New York: America, 1966) 256.

<sup>11</sup> Totipotentiality may last considerably longer, up to two or three weeks.

ternal genetic influence. On the other side, as we shall see, the defenders of personhood from conception cite other biological evidence, using their own set of experts. More importantly, they reconfigure that evidence in light of different philosophical commitments. For instance, they may emphasize existence of human life over its eventual "waste" or loss, the original individuality of a unique genetic code in the zygote over the possibility of its multiplication or its dependence on maternal co-direction.

The current literature on the topic verifies the warning of *Donum vitae* that scientific "information" alone can never settle questions of a philosophical nature—not only because facts require interpretation, but also because investigation of facts requires a framework of intelligibility which itself incorporates notions of meaning and importance. In addition, scientific investigation is hardly ever truly conclusive, and knowledge about genetics and prenatal development is far from fully advanced. And often, it is precisely because the interpretive frameworks and value questions have shifted that "empirical data" on a topic are explored again, that previously "irrelevant" aspects are granted new importance, and that the sum total of information is presented in a different constellation. A challenge for moral theology will be to learn to live with ambiguity, avoiding the paralysis of judgment on the one side, and the tyranny of preconceptions on the other.

The significance of "potentiality" in debates both about the embryo and about abortion is an important problem. The distinctive characteristics of fully realized persons (rationality, free will, and derivative abilities) are not manifest prenatally at any point, and for some members of the species are never realized throughout a lifetime. Therefore, it is necessary to regard the embryo and fetus as acquiring moral status or value from their relation to qualities which they share in anticipation or by association with the functioning persons they as a rule will become.<sup>12</sup> Two recent questions in the literature take this essentially dynamic and relational view of personal development seriously. First, what is the relation of that which has potential to that toward which it is said to be developing (the eventual reality)? Is it adequate to speak of "mere" potentiality, or does potentiality denote, more strongly, an actual relation to or "capacity toward" the outcome

<sup>12</sup> The "association" category would be necessary to cover individuals who are members of the human species but who lack either the inherent capacity to sustain development of "personal" characteristics or the external conditions which would permit the full unfolding of inherent potential into actuality. For instance, Francoise E. Baylis argues that in vitro human embryos which are not implanted do not have any potential for continued growth, and therefore are legitimate research targets ("The Ethics of Ex Utero Research on Spare 'Non-Viable' IVF Human Embryos," *Bioethics* 4 (1990) 311–29.

in view, which may confer on the stage a good deal of the value of the end? Second, even allowing that many individuals' potential will not finally be realized (especially true, it seems, for zygotes), is it appropriate or even necessary to understand each stage of development as one part of a process within a whole, so that the meaning of the part can take its shape from the entirety?

Thomistic discourse about potentiality incorporates Boethius's definition of a "person" as "an individual substance of a rational nature,"<sup>13</sup> and assimilates it to Aristotle's idea that the rational soul is the form of the individual body as matter, and that the proper form is required in order to bring potency of matter into actuality. In debates about the embryo, this philosophical approach can lead in two different directions. On the one hand, those interested in reviving delayed hominization argue (as above) that if the human individual is not present until a certain point after conception, then the rational soul (person) is obviously not present either. On the other, defenders of personhood at fertilization maintain empirically that the physical individual does exist at conception, sometimes adding the philosophical argument that the rational soul must be present from that time in order to account for the continual transcendence of earlier stages toward the final full realization of personhood.

Most of the critics of fertilization as decisive for personhood focus on individuality. In 1988, Norman M. Ford, an Australian priest, produced a widely noted study, *When Did I Begin?*<sup>14</sup> Averring that he in no way intended to challenge the magisterium's present decision to protect the zygote from its first moments, he nonetheless was determined to subject that teaching to scientific and philosophical scrutiny, and even to take on the responsibility "to prove that the commonly accepted assumptions of the broader community and of the Church lack the necessary biological and philosophical support."<sup>15</sup> Ford focuses his thesis on "the concept of a living ontological individual," whose activities must have an "intrinsic directiveness" toward "the achieving of set goals or purposes within the organism." But this, in his judgment, is not yet accomplished as long as the cells of the zygote are in their totipotential state, or while twinning is possible. It is only at the primitive-streak stage that ensoulment can thus take place.

<sup>13</sup> Boethius, *De duabus naturis* 3; see this and parallel citations from Aquinas and Rahner in McCormick, "Who or What is the Pre-embryo?" 9.

<sup>14</sup> Norman M. Ford, S.D.B., *When Did I Begin? Conception of the Human Individual in History, Philosophy and Science* (New York: Cambridge Univ., 1988). Ford summarizes his position in "When Did I Begin—A Reply to Nicholas Tonti-Filippini," *Linacre Quarterly* 57 (1990) 59–66.

<sup>15</sup> *Ibid.* 64.

Explicitly supporting Ford, Thomas Shannon and Allan Wolter also stress the importance of irreversible individuation as a precondition of personal human life: "An individual is not an individual, and therefore not a person, until the process of restriction is complete, and determination of particular cells has occurred. Then, and only then, is it clear that another individual cannot come from the cells of this embryo."<sup>16</sup> Richard McCormick likewise contends, in a clear and orderly article which outlines briefly both public policy and magisterial statements, that "the moral status—and specifically the controversial issue of personhood—is related to the attainment of developmental individuality (being the source of one individual). This contrasts with the view that holds that personhood occurs earlier, at the point of genetic uniqueness."<sup>17</sup>

Two Roman Catholic scientists, Carlos Bedate and Robert Cefalo (cited by Shannon and Wolter as well as McCormick), have emphasized the importance of the *genetic dependency* of the embryo. They rebut the presupposition that the zygote already contains all the genetic information necessary to produce the future adult. To the contrary, "more than the zygote's chromosomal genetic information" is involved, "namely, the genetic material from maternal mitochondria, and the maternal or paternal genetic messages in the form of messenger RNA or proteins."<sup>18</sup> This extra-zygotic genetic information is necessary to the differentiation of cell function (also called "restriction") within the zygote, forming placenta, membranes, and embryoblast, and eventually producing particular organs in which all but the very few relevant genetic instructions are "turned off."

In summary, the zygote makes possible the existence of a human being, but does not in and of itself possess sufficient information to form it. The formation of the embryo depends on a series of events that will have to occur during the course of the ontogenesis, some of which are outside the control of the genetic program.<sup>19</sup>

Bedate and Cefalo also note that some embryos with normal genetic constitutions fail to develop into fetuses precisely because they lack complementary external information, and become nonpersonal biological entities such as tumors or hydatidiform moles. They therefore conclude that although the zygote may have value, "the status of the

<sup>16</sup> Thomas A. Shannon and Allan B. Wolter, O.F.M., "Reflections on the Moral Status of the Pre-Embryo," *TS* 51 (1990) 603–26, at 614.

<sup>17</sup> McCormick, "Who or What is the Preembryo?" 2.

<sup>18</sup> Carlos A. Bedate, S.J., and Robert C. Cefalo, M.D., "The Zygote: To Be or Not To Be a Person," *Journal of Medicine and Philosophy* 14 (1989) 641–45.

<sup>19</sup> *Ibid.* 644.

zygote cannot be the same as that of the person it will become."<sup>20</sup> Giving the Bedate and Cefalo proposal immediate philosophical reinforcement, Thomas Bole contends in the same issue of the same journal that the empirical facts have now falsified the metaphysical claim that the zygote is a person.<sup>21</sup>

What McCormick, as well as Ford, Cefalo and Bedate, Shannon and Wolter, are attempting to demonstrate is that the likelihood that the preembryo up to fourteen days is a person is so small as to be negligible, and that it is not reasonable to protect it absolutely in the event of serious risk of harm or loss to others. Positions which demand full and exceptionless protection in the face of "doubt" about its status usually fail to take account of the relevance of degree of doubt to the determination of acceptable risk. For instance, there may not be a *certain* obligation not to shoot when one is not absolutely sure that it is an animal rather than a human moving in the underbrush. If one is simply on a hunt, yes; or if one's companion is out of sight and a flash of red has been visible through the leaves. In the first case, there is no compelling reason to shoot; in the second, a quite reasonable suspicion that the target is indeed a person. Contrast the case (offered by McCormick) in which the hunter has starving dependents; or imagine another in which, in an area known to be uninhabited and virtually inaccessible, one has just seen a charging boar enter the thicket at which one now aims. *Certain* obligations in the face of vast unlikelihood, not to mention grave risk, would require all suburbanites parked in locked garages to check for derelicts under their cars before they leave for work in the morning; and all parents to have every jar of baby food chemically investigated immediately prior to serving.

One pitfall difficult to avoid in any position which draws a physiological "line" between personal status and nonstatus is giving the impression that, before the fateful divide is crossed, the prepersonal but human entity is of little protectable worth whatsoever. However, defining what worth it may in fact have is not easy, given the emphasis unavoidably placed on its lack of characteristics closely resembling those of fully realized persons. Ford is willing to recognize "a special moral significance" in "whatever has human life."<sup>22</sup> He also distinguishes degrees of potentiality, since, while gametes as well as embryos have a certain "potential" to become "persons," that potency is

<sup>20</sup> Ibid. 644-45. See also Robert C. Cefalo, "Eggs, Embryos, and Ethics," *Hastings Center Report* 21/5 (1991) 41.

<sup>21</sup> Thomas J. Bole, III, "Metaphysical Accounts of the Zygote as a Person and the Veto Power of Facts," *Journal of Medicine and Philosophy* 14 (1989) 647-53, at 647.

<sup>22</sup> Ford, *When Did I Begin?* 99.



clearly more remote in the former.<sup>23</sup> Shannon and Wolter suggest that even in a being which does not actively manifest characteristics "such as intelligence or capacity for relationships," the zygote and blastomeres "are in themselves valuable" because they have the human genetic code and possess genetic uniqueness. Therefore, "some claims to protection are possible. But these may not be absolute and, if not, could yield to other moral claims."<sup>24</sup> McCormick concludes that if the preembryo is not a person, it cannot be the subject of human rights, but excludes the idea that it is "simply disposable tissue." In assessing its value more precisely (as McCormick attempts the most extensively to do), it is crucial to take into account two factors. These are potentiality and the likely social results of policies about how to treat it, especially the "slippery slope" effect by which an attitude or practice at one level is likely to slide onto another, e.g. from the preembryo to the embryo to the fetus to the infant to the elderly to the disabled, etc.

McCormick regards the potential of the preembryo to "move through developmental individuality then progressively through functional, behavioral, psychic, and social individuality" as statistically slim in comparison to the embryo. However, he does place heavy weight on its potential. In his words, its status is sufficient, even in the initial stages, to command "profound respect," so interference can never be "a light undertaking." McCormick concludes to a "strong" but still "prima facie" obligation to treat the preembryo "as a person." A procedural precaution, in view of the dynamic of technological "progress," is to establish policy about exceptions at the national level rather than, for instance, through the local Institutional Review Boards that now apply federal research regulations to specific proposals.<sup>25</sup>

These modifying moves have not gone without refutation, both from the left and, in much greater quantity, from the right. A representative of the former is a response to McCormick from lawyer John A. Robertson, who considers the former's limits on treatment of the preembryo too strict if the embryo is not an actual person. In Robertson's view, treatment of preembryos as nonpersons is not a matter of "moral obligation" but of "policy." As human tissue, embryos may have great symbolic value but are not in themselves owed moral duties. Hence we ask whether "the loss to symbolic respect for human life" is "outweighed by the good from a less respectful stance," or whether "we wish to constitute our stance toward human life as so protective of

<sup>23</sup> Ibid. 97.

<sup>24</sup> Shannon and Wolter, "Moral Status of the Pre-Embryo" 623-24.

<sup>25</sup> McCormick, "Who or What Is the Pre-Embryo?" 12-13.

preembryos that other goods are foregone.”<sup>26</sup> Robertson puts his finger on the crux of the debate when he surmises that “reasonable” persons could well disagree about the precise importance of preembryos in the face of competing considerations. He is not persuaded, for instance, that discarding preembryos before developmental individuality amounts to any such disregard for human life that it would diminish respect for human life generally.<sup>27</sup> Quite to the contrary, Robertson sees it as “the prevailing view” that “embryos deserve some respect but not the respect due persons,” and that this is why “preembryo research for legitimate scientific or medical reasons has been found acceptable by most bodies that have examined the subject.”<sup>28</sup> In a lengthy legal review of issues surrounding the preembryo, Robertson reinforces his assessment of its status as deriving from its symbolic value, and also quite rightly calls for more nuance in the way development is handled ethically. Too many authors treat all previable stages as worth either all or nothing.<sup>29</sup>

Yet Robertson’s own moral assertions make it clear that degree of nuance often depends on judgment calls that are hard to defend in precise and universally persuasive terms. For instance, he asserts that a mass of “undifferentiated cells” “cannot seriously be considered a person or even a rights-bearing entity”; and that “a woman’s interest in her bodily integrity and other competing interests may take priority over concern for an early embryo and even more developed fetuses.”<sup>30</sup> Robertson himself seems to place the line at creation of embryos specifically for research purposes, noting that “many people” find this “inherently offensive because it so clearly uses the embryo as a means to benefit others.”<sup>31</sup>

But positions and policies which are reasonable, seriously to be considered, or inherently offensive, may be very differently defined. Nicola Poplawski and Grant Gillett observe that the person evolves through “a series of linked development stages,” but, contrary to Robertson, they believe that each stage then acquires moral value from the “longitudinal form” of the whole.<sup>32</sup> A final twist, however, is their

<sup>26</sup> John A. Robertson, “What We May Do with Preembryos: A Response to Richard A. McCormick,” *Kennedy Institute of Ethics Journal* 1 (1991) 293–302, at 295. See also “Ethical and Legal Issues in Preimplantation Genetic Screening,” *Fertility and Sterility* 57 (1992) 1–11, at 3.

<sup>27</sup> Robertson “What We May Do” 297.      <sup>28</sup> *Ibid.* 298.

<sup>29</sup> John A. Robertson, “In the Beginning” 438.

<sup>30</sup> *Ibid.* 444–46.

<sup>31</sup> *Ibid.* 505.

<sup>32</sup> Nicola Poplawski and Grant Gillett, “Ethics and Embryos,” *Journal of Medical Ethics* 17 (1991) 62–69, at 63. Patrick Lee also takes a strong view of potentiality, noting

conclusion that a "setback" in an earlier phase of the process is of less moral weight than a later one, allowing them to avoid the "counter-intuitive" conclusion that infanticide is morally no worse than the morning-after pill, as well as to suggest that embryos need not be bearers of a full set of rights. The authors still see lower stages as valuable enough to require weighty reasons for destruction (such as "significant" risks to a pregnant woman). Poplawski and Gillett thus agree with Robertson that nuance is necessary regarding the protectability of life at various stages, but they tip the scale more heavily toward limits on treatment of preembryos, because they stress the congruence of all embryonic life with personal development rather than the distance between life's first stages and its mature ones.

Augustine Regan also sets the preembryo in the context of personal identity, but sees full value as inhering in it from the beginning. He regards any position that the preembryo is propelled by anything other than a "rational" (human) soul from conception as dualistic; moreover, the soul is required to account for the eventual emergence of the final product.<sup>33</sup> Regan argues against Ford that even in early cell division (or twinning), the original individual does not cease to exist. It is not *replaced* by two different daughter cells, but remains intact while giving rise to its genetic double.<sup>34</sup> Setting out a Thomistic philosophical framework, he adds that the "living body" has its form, "an immortal soul, immediately from the Creator, moulding already from the moment of its infusion what is already a true human body, building the whole composite on its fabulous journey to babyhood, young man- or womanhood, adulthood and maturity, and finally to launch itself into the mysteries of Eternity."<sup>35</sup> Yet the debated issue is precisely what is essential to constitute a "true human body," and also whether, if it is not in fact reasonable to regard one as existing before implantation, it is not just as dualistic and inappropriate to see God as "infusing" a soul

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that it is an *actual* ability to develop the capacity rationally to pursue the basic human goods, and that it is this ability to develop—not the actual ability to so pursue those goods—which constitutes personhood ("Personhood, the Moral Standing of the Unborn, and Abortion," *Linacre Quarterly* 57 [1990] 80–89).

<sup>33</sup> Augustine Regan, C.S.S.R., "The Human Conceptus and Personhood," *Studia Moralia* 30 (1992) 97–127, at 122.

<sup>34</sup> In another reply to Ford, Nicholas Tonti-Filippini holds that twinning is like asexual reproduction and does not threaten individuality ("A Critical Note," *Linacre Quarterly* 56 [1989] 36–50). A similar argument is advanced by Paul Flaman, "When Did I Begin? Another Critical Response to Norman Ford," *Linacre Quarterly* 58 (1991) 39–55. Tonti-Filippini also agrees with Regan that the "infusion" of a soul is a dualistic notion ("Further Comments on the Beginning of Life," *Linacre Quarterly* 59 [1992] 76–81).

<sup>35</sup> Regan, "The Human Conceptus" 126.

at conception. Starting out with a discussion of one of the first proposed revivals of delayed hominization,<sup>36</sup> Stephen Heaney goes back to the Thomistic texts.<sup>37</sup> He notes that defenders of mediate animation appeal to Thomas's idea that in the fetus, a "merely sensitive" soul is followed by one which is "both sensitive and intellectual."<sup>38</sup> But Heaney produces evidence that Thomas did not regard one sort of soul as able to transcend itself so as to produce a body capable of receiving a higher form. Instead, Aquinas appears to have held that it is the soul of the father, acting through the semen as instrument, "that is responsible for the development of the embryo body until it is capable of supporting a rational soul."<sup>39</sup>

Heaney does not believe that Aquinas would defend a theory of successive souls today, for our knowledge about the role of semen and the origin of the body is different. Neither the genetic material from the sperm nor that from the ovum work independently; the development of the embryo results from activity internal to itself. Aquinas provides the principle that it must be a rational soul which is responsible for the development of the person; but this soul is the form of the new individual, which is from conception a human person.<sup>40</sup>

Although admitting it to be "jarring" that perhaps 55% of fertilizations end in miscarriage,<sup>41</sup> Heaney faults McCormick, Shannon, and Wolter for neglecting the "utterly foundational axiom that an effect cannot be greater than its cause,"<sup>42</sup> and so failing to ask, not what are the material conditions requisite before the presence of the soul, but what is the cause which must be *presupposed* in order for the human individual to exist in the first place. (That axiom might have a less foundational character or a revised meaning in a less thoroughly Thomistic system.<sup>43</sup>)

Yet Heaney quite honestly acknowledges that Bedate and Cefalo's

<sup>36</sup> Joseph Donceel, S.J., "Abortion: Mediate v. Immediate Animation," *Continuum* 5 (1967) 167-71; "Immediate and Delayed Hominization," *TS* 31 (1970) 76-105.

<sup>37</sup> Stephen J. Heaney, "The Human Soul in the Early Embryo," *The Thomist* 56 (1992) 19-48.

<sup>38</sup> *Ibid.* 25, citing *ST* 1, q. 76, a. 3, ad 3.

<sup>39</sup> *Ibid.* 27, citing *SCG* 2.89.8, and *ST* 1, q. 118, a. 1, ad 4, among other texts.

<sup>40</sup> *Ibid.* 37.

<sup>41</sup> Another author, Philippe Caspar, invokes the doctrine of the resurrection, with its promise of a glorified body, to ameliorate the prospect of such prodigality on the part of nature and its God ("Éléments pour une eschatologie du zygote," *Revue Thomiste* 92 (1992) 460-81.

<sup>42</sup> Heaney, "The Human Soul" 44.

<sup>43</sup> See Shannon and Wolter's use of Bonaventure to argue that a new substantial form can arise from the elements of the existing organic system, which can develop out of the previous material stage ("Moral Status of the Pre-embryo" 620).

thesis that the zygote requires supplemental genetic information from the mother caused him to rethink the idea that in its earliest stages the new life is still being formed by that of the parent. Fortuitously, Heaney seems to discover testimony from a pro-life doctor which gets his theory off the hook. "Lejeune has proven that the hydatidiform mole is formed not from a healthy zygote but from a 'pseudo-zygote' formed by two male gametes, two sets of male chromosomes."<sup>44</sup> Jerome Lejeune's advocacy agenda, however, advises caution in interpreting his claims as proof.

Some confirmatory evidence is provided by Antoine Suarez, who directly takes issue with Cefalo and Bedate, citing recent research on hydatidiform moles and teratomas (tumors). The latter arise from the abnormal parthenogenic division of germ cells. According to Suarez, observation of hydatidiform moles also demonstrates that they arise, not from a normal embryo, but from eggs with two paternal nuclei, a result of certain abnormal fusions of egg and sperm. The decisive point is that such eggs could never develop to term, and do not have a "human" genotype to begin with; furthermore, their abnormal path is determined intrinsically, and not by any maternal information or lack thereof. Suarez concludes that the humanity of the adult depends on principles which are present in the embryo; hence, "the rational soul is present in every moment (and therefore also at the beginning) of the life of a human mammal."<sup>45</sup>

With the ball back in the developmentalists' court, Bole again supplies an immediate follow-up. The unity of the zygote is still in question, due to its ability to divide into distinct individuals. In addition, he claims, at least some "normal" embryos develop into hydatidiform moles ("partial" if not "complete" ones).<sup>46</sup> What is all too clear from this (ongoing) exchange of scientific trumps is that moral theologians should be wary of finalizing their analysis on the basis of research likely to be indefinitely in progress. Moral judgment amounts to the best assessment presently possible of the most responsible course of action.

Some authors believe even more is required for personhood than the developmental individuality settled at implantation. Taking a further

<sup>44</sup> Heaney, "The Human Soul" 46, citing Donald DeMarco, "Zygotes, Persons, and Genetics," *Ethics and Medics* 16 (January 1991) 3-4. Jerome Lejeune's testimony in the Tennessee frozen embryo case (August, 1989) is published in *Child and Family* 21 (1989/90) 7-52.

<sup>45</sup> Antoine Suarez, "Hydatidiform Moles and Teratomas Confirm the Human Identity of the Preimplantation Embryo," *Journal of Medicine and Philosophy* 15 (1990) 627-35, at 633.

<sup>46</sup> Thomas J. Bole, III, "Zygotes, Souls, Substances, and Persons," *Journal of Medicine and Philosophy* 15 (1990) 637-52, at 645.

step, Bole suggests that not even biological integration would be sufficient to constitute a person; psychological integration is needed too. He finds it plausible that human personhood requires "sufficient neural development" to ground an experienced "I" that is "cognitive, free, and self-conscious," and that "the rational soul cannot be present in material insufficiently organized to manifest rational operations."<sup>47</sup> Even Shannon and Wolter suggest that a necessary if not sufficient condition of personhood is the biological potential for rationality, set no earlier than eight weeks, by the integration of the nervous system.<sup>48</sup> In some of the literature, the possibility of defining a point of "brain life" or "brain birth," parallel to brain death, has been both pursued and subjected to trenchant criticisms.<sup>49</sup> Germain Grisez points out that the level of development so deemed adequate to personal status is but the "precursor" of intellectual operations, not their actual bodily basis.<sup>50</sup> But if the precursor at eight weeks or twenty weeks is sufficient, why not even earlier ones, which will also give rise eventually to the physical conditions of cognition, emotion, memory, and choice?

The search for this particular line also has provoked critiques of the project of finding developmental lines for personhood at all. Reviewing the history of the discussion, Mario Moussa and Thomas Shannon fault the ostensible parallel with death on which it is built, demand a philosophical defense of the ideas that it is consciousness which defines persons and that the clear seat of consciousness is the brain. They also call into question the assumption that personhood can be attached to some biological marker in the first place. Moussa and Shannon's particular target is "metaphysics that masquerades as science." "Personhood cannot be discovered biologically, as it is a social and moral construct." The selection of biological preconditions of certain human capacities is important insofar as it sensitizes our moral appreciation of developmental differences, but the selection process itself is philosophical rather than scientific. The "biological realities neither guarantee

<sup>47</sup> Ibid. 648

<sup>48</sup> Shannon and Wolter, "Moral Status of the Pre-embryo" 624.

<sup>49</sup> A few of the more recent ventures are Hans-Martin Sass, "Brain Life and Brain Death," *Journal of Medicine and Philosophy* 14 (1989) 45–59; D. Gareth Jones, "Brain Birth and Personal Identity," *Journal of Medical Ethics* 15 (1989) 173–78; and Grant Gillett, "Consciousness, the Brain and What Matters," Robert D. Truog and John C. Fletcher, "Brain Death and the Anencephalic Newborn," and Jocelyn Downie, "Brain Death and Brain Life: Rethinking the Connection," all in *Bioethics* 4 (1990) 181–226.

<sup>50</sup> Germain Grisez, "When Do People Begin?" *Proceedings of the American Philosophical Association* 63 (1990) 37.

the presence of nor constitute the definition of a person."<sup>51</sup> McCormick's converse is equally true: "If science cannot decide the question of personhood, neither can it be decided without science."<sup>52</sup>

In the preembryo debate interpretation is crucial, as several authors note explicitly and many more demonstrate in their particular constructions of the data. William E. May points out that the debate between Ford, Bedate and Cefalo, Shannon and Wolter, McCormick, and Bole, on one side, and Suarez, Grisez, and others, on the opposite side, is partly a matter of empirical investigation into imperfectly known embryological territory, but heavily also a matter of weighing and interpreting what one discovers there.<sup>53</sup> A good example is the judgment whether individuality is or is not compatible with the totipotentiality of aggregate cells. Which should be weighted more, the potential to divide, or the present cohesion, however "loose"? Another illustration is the commitment of some to dignify the embryo by insisting on the unity of the process of which it is a part, while others relativize its value by highlighting instead the difference in developmental stages. Certainly it is biologically true that a unique human genotype exists after the fertilization process, and that individuality is not as clear and cohesive in the preembryo as after implantation. But the debate over the preembryo would not maintain its momentum or command such emotional and moral investment were it not also recognized by parties on both sides that even the preembryo is not only a member of the human species, but also the indispensable precursor of fully personal life. About these facts in themselves there would be little controversy; but the moral tinting of facts in coloring the whole is a matter of worldview, perception, and judgment. The time in development at which one places full moral recognition, and the degree of protection afforded before it, are both dependent on balancing information about prenatal development with the priority of other values which compete with that of incipient human life.

An essay by Anthony Fisher takes up the critique of Ford by Nicholas Tonti-Filippini,<sup>54</sup> agreeing that Ford does not have a convincing case against the individuality of the preembryo, especially because "untwinnability is not a criterion of individuality for other objects or

<sup>51</sup> Mario Moussa and Thomas A. Shannon, "The Search for the New Pineal Gland: Brain Life and Personhood," *Hastings Center Report* 22/2 (1992) 30-37, at 36.

<sup>52</sup> McCormick, "Who or What is the Pre-embryo?" 2.

<sup>53</sup> William E. May, "The Moral Status of the Embryo," *Linacre Quarterly* 59 (1992) 76-83.

<sup>54</sup> See note 34 above.

other living species.”<sup>55</sup> But the more interesting aspect of this contribution is hermeneutical.

Modern philosophers of science have exposed some of the assumptions behind naive inductivism and shown how illusory are the classical distinctions between fact and interpretation, neutral objective science and committed subjective metaphysics. They have identified the ‘theory-dependence of observation’ and shown that the presumed objectivity of the scientific observer actually reflects considerable personal involvement, commitment and, accordingly, interpretation.<sup>56</sup>

Fisher speculates that “embryo experimenters” will have vested interests at stake in advising moralists about developmental facts; of course, the same is true of those religiously pre-committed to treating the preembryo as absolutely a person. Further, Fisher believes recourse to common sense realism will not resolve the problem. “The ‘common-sense understanding of ordinary people’ has yielded all sorts of regrettable conclusions,” such as denial of humanity to Blacks, Jews, and the handicapped.<sup>57</sup> Fisher’s critique of naive objectivism is right on target, but one wonders whether some sort of reliance on common sense is not necessary to the prospect of ever gaining enough consensus on such issues to guide decisions and policy, and even to his own assumption that certain denials of personhood are self-evidently “regrettable.” Is it not a common moral sense that, before and above any theoretical evaluation, allows slavery and the Holocaust to be discerned in retrospect as aberrant and evil? Perhaps a longer historical and a cross-cultural view, informed by something like a common moral sense, will be indispensable in placing the value of the very beginnings of human life both in relation to the human community as a whole and in relation to values with which it might conflict.

Common moral sense, of course, is no more a “given” than so-called biological data. It is essentially the shared moral orientation of a community, the “received wisdom” about practical reasonableness, the refinement of which is hard-won through internal refinement and the deeper reconsiderations that are forced by contact with challenging worldviews or with new experiences which the old sense of things

<sup>55</sup> Anthony Fisher, O.P., “‘When Did I Begin?’ Revisited,” *Linacre Quarterly* 58 (1991) 59–68, at 67.

<sup>56</sup> *Ibid.* 60.

<sup>57</sup> *Ibid.* 62. A similar point is made by Sidney Callahan, in Clifford Grobstein et al., “Defining Personhood: A Dialogue,” *Conscience* 13/1 (1992) 24. Callahan puts great weight on the genetic potential of embryos, and rejects the idea that “degree of emotional investment determines the value of their lives.”



cannot accommodate. There may be no one site of objectivity which transcends all perspectival views of matters. But even if an objective moral order is the bedrock of communal orientations and practical casuistry, perhaps we can find our footing on it only by careful excavation of the concrete problems which instigate reexamination of moral practices.

These excavations require teamwork; they require the constant sharing of tools and improvement of methods, both among contemporaries and with our forebears. For instance, we may learn that it would be an affront to many Jews, Blacks, handicapped persons (and women) to say their resemblance to "full persons" was on a par with that of an embryo; and it would be difficult to find much support historically, even in the Christian tradition, for the proposition that all human life is in its own right inviolable from the moment of conception.<sup>58</sup> On the other hand, a similar survey of Christian Scriptures and tradition, as well as a cross-cultural and historical investigation of human experience and values, might very well support a strong suspicion of the pragmatic, individualist, and technocentric ethos within which the creation, manipulation, and destruction of the earliest instances of human life is instrumental to improved control of conception, genetics, and pregnancy. The selection of the relevant facts, the discernment of the appropriate values by which to interpret them, and the translation of values into action agendas demands dialogue, empathy, prudence, and the sort of moral courage which is compatible with modesty.

The controvertibility of "facts" and their tenuous relation to philosophical claims threatens to leave the moralist in a quandary. We cannot afford nor need we accept moral paralysis, but the alternative cannot be an empiricist or legalist approach which wants to turn inevitably provisional biological data into the demarcating moats of moral fortresses. Another approach would be relational, gradational, and cautiously inductive, self-consciously placing value judgments in the contexts of the social practices and problems that evoke the moral debates in the first place.

Although his policy conclusions do not bear out fully the promise of his principles, the British theologian Kevin Kelly provides an example of such an approach in some presentations which address legislation on

<sup>58</sup> Shannon and Wolter cite Anselm as holding that "no human intellect accepts the view that an infant has a human soul from the moment of conception," because the consequences of so doing would be "utterly absurd" (Anselm of Canterbury, *De conceptu virginali et de peccato originali* chap. 7, quoted in "Moral Status of the Pre-embryo" 618 n. 59).

the embryo.<sup>59</sup> He begins by elucidating those points on which there is already consensus, such as the designation of individuality as an "essential prerequisite" of personhood; "self-awareness, reasoning, moral evaluation, freedom and responsibility" as the distinguishing human characteristics; the appropriateness of describing severely impaired individuals as handicapped, not as nonpersons; and our willingness likewise to categorize babies as having a "human dignity" making them immune from killing. Whether this regard should be extended to the embryo on the basis of its similar potential is the "extremely difficult question." The available certainty, with reason termed "moral certainty," will not be empirical or scientific, but of the sort "sufficient to justify our human decision making in most other important areas of human life." Kelly outlines some alternative views of embryonic status, before suggesting that embryos have, not "the intrinsic dignity of a human person," but enough to preclude creating them for research.<sup>60</sup>

He goes on to draw a parallel between the organization of scientific knowledge, as explained by Thomas Kuhn's theory of paradigms, and ethical knowledge, insofar as both are dependent on experience or experimental knowledge. Perception necessarily comes into our understanding of the human reality, giving it a historical and even subjective dimension.<sup>61</sup> Even a shared commitment to the dignity of the person is thus hardly adequate to ground legislation about the embryo when there is major disagreement about how to interpret what kind of a reality the embryo is. Given deep divisions among "good, highly-principled, conscientious citizens," Kelly advises, we should consider whether each side's vision is insightful but inadequate alone. His solution, not as strong perhaps as his epistemological caveats, is to "wonder" whether in such a case the law should protect freedom of conscience and action, permitting holders of either view to act as they see fit. The weakness of this endpoint is that it does little to advance a substantive consensus as the product of real exchange and compromise among those who initially disagree. Kelly originally asserted that the question, "Where do you draw the line?" deserved a "satisfactory answer," which would be "a major breakthrough in our ethical understanding of a particular problem."<sup>62</sup> Kelly's conclusion illustrates the

<sup>59</sup> Kevin T. Kelly, "Embryo Research: The Ethical Issues," "The Embryo Research Bill: Some Underlying Ethical Issues," and "Catholic Doctors, Philosophers, and Moral Theologians in Dialogue," all in *The Month* 23 (1990) 59–64, 116–22, 144–47.

<sup>60</sup> Kelly, "Embryo Research" 61, 64.

<sup>61</sup> Kelly, "The Embryo Research Bill" 116–17, 120.

<sup>62</sup> Kelly, "Embryo Research" 59.

difficulty of arriving at such breakthroughs and the seductiveness of procedural substitutes.

We might allow, however, that the tough practical questions will not usually be settled at the theoretical, conceptual level, but worked out against the heat and weight of practical options, roads, dangers, and dead ends. (It was for this reason, after all, that Kelly was addressing himself to legislators.) In a noted book on casuistry, Albert Jonsen and Stephen Toulmin mention the National Commission. Surprisingly to the commissioners, while they were usually able to debate their way to consensus on practical recommendations, they inevitably disagreed when explaining their conclusions in relation to higher principles. The "locus of certitude," it turned out, did not lie in an intrinsically convincing set of general rules, but in "a shared perception of what was *specifically* at stake in particular kinds of human situations." In Jonsen and Toulmin's view, this demonstrates the difference between theory and practice—"between the demands of scientific understanding and those of practical good sense"—and displays "a capacity for 'practical wisdom' that Aristotle would have applauded."<sup>63</sup> Possible additional examples of prudent deliberation might be the committees convened by professional groups, provided that their membership is not only pluralistic but also serious about self-criticism toward consensus. (The spectre of interests which cloud "common sense" is rightly discerned by Fisher.) If genuinely representative national bodies could be one avenue of moral discernment, local activism and debate around legislative options should not be underplayed. As June O'Connor notes with regard to the Supreme Court's 1992 Pennsylvania abortion decision, local communal decision making may be more effective than national edicts in giving moral seriousness a practical profile.<sup>64</sup>

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#### CONFIDENTIALITY, DISCLOSURE, AND FIDUCIARY RESPONSIBILITY

Questions concerning the release of information have recently been raised in several areas, such as the Gulf war, the physical- and mental-health histories of public persons, the identification of rape victims, and the threat of AIDS. Ensuing discussions have been guided by an important insight: the responsibilities entrusted to particular professions contribute to the determination of whether release of information is considered right and proper. These responsibilities distinguish two

<sup>63</sup> Albert R. Jonsen and Stephen Toulmin, *The Abuse of Casuistry: A History of Moral Reasoning* (Berkeley: Univ., of California, 1988) 16–19.

<sup>64</sup> June O'Connor, "The Summer of Our Discontent," *Hastings Center Report* 22/5 (1992) 28–29.