What Dignitas personae Does Not Say

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Abstract. Dignitas personae has garnered significant attention both inside and outside Roman Catholic circles, but it lacks the argumentative force not only to present the Church’s ethical judgment but also to persuade non-sympathetic readers. More direct engagement with contrary views would provide a stronger foundation for constructing arguments in public discourse. This article highlights various assertions found in Dignitas personae which call for greater explicit argumentation. Subjects treated include the ontological and moral status of human embryos, prenatal adoption, potentially abortifacient contraceptives, reproductive cloning, and alternatives to human embryonic stem cell research, such as induced pluripotent stem cells and animal–human chimeras.

The purpose of Dignitas personae (DP), the recent instruction of the Congregation for the Doctrine of the Faith (CDF), is not to engage the various arguments concerning bioethical issues at the beginning of human life which have arisen and been debated since Donum vitae was promulgated in 1987. Certainly other venues, such as the NCBQ, exist for robust scholarly exchanges. Nevertheless, as a document that carries the authority of one of the most important and publicly recognized offices of the Vatican, DP garners attention from secular media—and not just within academe—in a way that other publications from a Roman Catholic viewpoint do not. Thus, DP is a more visible target for responses or criticisms from non-Catholic quarters.¹

¹One example of a recent article that responds from a Jewish perspective to various conclusions asserted in Dignitas personae is Ari Zivotofsky and Alan Jotkowitz, “A Jewish
Dialogue is welcomed by the CDF when it states in DP n. 3 that it is addressing not only the Catholic faithful but also “all who seek the truth.” From the standpoint of public engagement, though, DP lacks the argumentative force to accomplish the task of not only presenting the Church’s ethical judgment, but also persuading non-sympathetic readers of the validity of its conclusions. As an instruction, this is not the essential purpose of DP; rather, DP is a product of the Church’s “ordinary magisterium.” Nevertheless, the degree of attention DP merits from those who do not unequivocally acknowledge the authority of the Church’s magisterium would seem to require a document whose nature is not merely to assert but to argue. As noted in DP n. 2, none of the pronouncements contained in DP were reached in an academic vacuum; furthermore, there is a wealth of literature representing supportive, critical, and contrary theses from both Catholic and non-Catholic philosophers, theologians, clinicians, and scientists.

More direct engagement, particularly with contrary views, would have provided a stronger magisterial foundation on which Catholic bioethicists could develop firm premises for constructing arguments in the realm of public discourse. Furthermore, such dialectical discourse in a prominent authoritative document would hopefully yield greater understanding among critics of the Church’s views—instead of the caricatures that are often encountered.

In this article, I will highlight various assertions found in DP which, as stated, may be subject to critical scrutiny by those holding contrary viewpoints and which therefore require more explicit argumentation. Perhaps a supplementary volume, in which the CDF could render its deliberations on each of these points transparent and in the process further explicate the philosophical and theological foundations for its conclusions, would provide an opportunity for a more incisive dialectic that would enhance the authority of its teachings beyond the realm of Catholic bioethics.

Human Ensoulment

A fundamental assertion that underlies nearly all the other conclusions reached in the document is the reiteration in DP n. 5 of the teaching of Donum vitae with respect to ascertaining whether a human embryo is ensouled from conception:

Although the presence of the spiritual soul cannot be observed experimentally, the conclusions of science regarding the human embryo give “a valuable indication for discerning by the use of reason a personal presence at the moment of the first appearance of a human life: how could a human individual not be a


The Congregation for the Doctrine of the Faith notes in Dignitas personae n. 2 that it “has benefited from the analysis of the Pontifical Academy for Life and has consulted numerous experts with regard to the scientific aspects of these questions.” It is unclear, however, to what extent the CDF may have consulted philosophical or theological experts outside the Pontifical Academy for Life.
human person?” [Donum vitae I.1]. Indeed, the reality of the human being for the entire span of life, both before and after birth, does not allow us to posit either a change in nature or a gradation in moral value, since it possesses full anthropological and ethical status. The human embryo has, therefore, from the very beginning, the dignity proper to a person. (original emphasis)

There are two significant problems with the presentation of this conclusion. First, the CDF does not explain the specific concept of “the spiritual soul” to which it is appealing in support of its claims that (1) science can help us rationally discern that a human embryo is ensouled from conception, and (2) ensoulment from conception entails that a human embryo “possesses full anthropological and ethical status.” Second, without such elucidation of the ontological and moral nature of ensoulment, the CDF appears to beg the question when it states that we cannot “posit either a change in nature or a gradation in moral value” as a human embryo develops from conception onward; the putatively supportive premise that follows this assertion merely restates it without providing any further justification for why a human embryo “possesses full anthropological and ethical status.”

These problems arise because there are alternative theories of ensoulment and of what constitutes human personhood which DP does not directly engage. When the CDF, in Donum vitae I.1, asks rhetorically, “How could a human individual not be a human person?” there are myriad responses in the bioethical and wider metaphysical literature. For example, “performance theorists,” such as Peter Singer, Mary Ann Warren, and Michael Tooley, argue that a person is any being that exhibits the capacity for self-conscious rational thought, augmented perhaps by other capacities such as using language to communicate, having non-momentary self-interests, and possessing moral agency or autonomy.3 According to Singer, Warren, and Tooley, the capacities essential to personhood are not manifested until some time after birth, leading to the conclusion that abortion and even infanticide within the first few weeks after birth may be morally permissible.

Other philosophers, such as Richard Swinburne, discuss human personhood in terms of “ensoulment,” but adopt a Platonic/Cartesian view of the human soul in

3See Peter Singer, “Embryo Experimentation and the Moral Status of the Embryo,” in Philosophy and Health Care, ed. E. Matthews and M. Menlowe (Brookfield, VT: Avebury, 1992), 81–91; Helga Kuhse and Peter Singer, Should the Baby Live? The Problem of Handicapped Infants (New York: Oxford University Press, 1985); Michael Tooley, Abortion and Infanticide (Oxford: Clarendon Press, 1983); and Mary Ann Warren, “On the Moral and Legal Status of Abortion,” in Contemporary Issues in Bioethics, 4th ed., ed. Tom L. Beauchamp and LeRoy Walters (Belmont, CA: Wadsworth, 1994). These thinkers are not unanimous in their understanding of what the essential activities of persons are or what is biologically required to assert that a human being exemplifies such activities. For example, Singer links the existence of a person with higher-brain functioning, while Warren ties a person’s existence to the presence of conscious activities regardless of any brain functioning that may support such activities. These nuanced distinctions, however, do not undermine the general hypothesis held in common by these thinkers: that a human being is a person only insofar as he or she exemplifies the activities definitive of personhood.
which it is identified with the mind. Due to the evident correlation of the human mind with a functioning cerebral cortex (if not the absolute dependence of the former on the latter), Swinburne’s view leads to the conclusion that the soul cannot function until the cerebrum forms and begins to function approximately twenty weeks after conception:

So, given that the soul functions first about twenty weeks after conception, when does it come into existence? There exist normal bodily processes by which the fertilized egg develops into a foetus with a brain after twenty weeks which gives rise to a functioning soul. If the soul exists just because normal bodily processes will bring it one day to function, it surely therefore exists, once the egg is fertilized, at conception. On the other hand one might say that normal processes need to be fairly speedy ones if the soul is to exist during their operation; and so that the soul begins to exist, only shortly before it first begins to function. ... It seems to me somewhat more natural to describe things in the second way.4

We may safely presume that the CDF does not have Swinburne’s concept of the human soul in mind, but rather the Aristotelian concept adopted and further developed by St. Thomas Aquinas.5 For Aristotle and Aquinas, the mind is only one faculty of the human soul, which also includes sensitive and vegetative faculties, and which functions essentially as the substantial form of a living human body.6 The Aristotelian-Thomistic perspective would concur with Swinburne in pointing to the presence of the “normal bodily processes” by which a human embryo or fetus will develop into a fully actualized self-conscious and rational person as indicative of ensoulment. However, since a human embryo is not just potentially sentient and rational, but is alive in the first place by virtue of the soul, it makes more sense on the Aristotelian-Thomistic view to locate ensoulment at conception, when the embryo first exists as “an individual substance of a rational nature”—the classical Boethian definition of person that Aquinas adopts and applies to all human beings.7

7See Jason T. Eberl, Thomistic Principles and Bioethics (New York: Routledge, 2006), 23–42; Jason T. Eberl, “Aquinas’s Account of Human Embryogenesis and Recent Interpretations,” Journal of Medicine and Philosophy 30.4 (August 2005): 379–394. This conclusion represents a modification of Aquinas’s explicit account of human embryogenesis, which was based on the Aristotelian biological understanding of his day, leading to his conclusion of “delayed hominization.” Nevertheless, it is consistent with Aquinas’s overall metaphysical understanding of human personhood in light of the contemporary scientific understanding of a human embryo’s genetic identity.
Human Embryo Adoption

Given the Church’s well-grounded and firm stance regarding the ontological and moral status of human embryos from conception onward, a key issue concerns the disposition of cryopreserved human embryos created for the purpose of in vitro fertilization. In discussing what could licitly be done with such embryos, DP n. 19 asserts that “proposals to use these embryos for research or for the treatment of disease are obviously unacceptable because they treat the embryos as mere ‘biological material’ and result in their destruction. The proposal to thaw such embryos without reactivating them and use them for research, as if they were normal cadavers, is also unacceptable.” One possible course of action the CDF does not address is to thaw embryos without reactivating them, not for the purpose of using them in research, but to allow them to die if other avenues, such as prenatal adoption, are morally closed off.

Nicholas Tonti-Filippini proposes this as a “natural” way to resolve the issue of what to do with cryopreserved human embryos, in that they would be exposed to the natural effects of time from which their frozen environment had artificially sheltered them. Recommending Tonti-Filippini’s proposal is its “rescue” of embryos from the offense against human dignity arising from cryopreservation; yet it may not be fully accurate to construe it as “natural.” A death that comes in vitro, isolated from any physical human connection, in which an embryo is merely allowed to return to a natural temperature is far from being in accordance with nature. When a cryopreserved embryo is deliberately removed from storage without any subsequent implantation, death will inevitably result. In contrast, Donum vitae I.5 asserts, “It is therefore not in conformity with the moral law deliberately to expose to death human embryos obtained ‘in vitro.’” This passage is referring to scientific experimentation, as is DP n. 19; yet it is not difficult to see how this general principle may be extended to any other practice that knowingly and inevitably exposes embryos to death, such as that proposed by Tonti-Filippini.

It is arguable that we have a positive duty not to allow cryopreserved embryos to be destroyed for research or any other purpose if we can do something to prevent it. It is also not acceptable to continue to expose embryos to the physical harm and indignity of being left in cryopreservation. The only option remaining is to give such embryos an opportunity for postnatal life, an opportunity that offers the active respect and human care affirmed by the Church repeatedly through its emphasis on our positive duties to human life. Prenatal adoption takes up the responsibility

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8 This section includes material from Brandon P. Brown and Jason T. Eberl, “Ethical Considerations in Defense of Embryo Adoption,” in The Ethics of Embryo Adoption and the Catholic Tradition: Moral Arguments, Economic Reality and Social Analysis, ed. Sarah-Vaughan Brakman and Darlene Fozard Weaver (Villanova, PA: Springer Science, 2007): 103–118.

for care and respect in the most intimate way possible. _DP_ n. 19, however, seems to close the door to this option when it cites unspecified “problems” with this proposal and concludes that “the thousands of abandoned embryos represent a situation of injustice which in fact cannot be resolved.” The CDF is taking a laudably strong stance against any further creation of embryos who will end up in cryopreservation: the practice of prenatal adoption should not be conceptualized as a moral escape route for those who wish to continue creating and freezing embryos for in vitro fertilization or any other purpose.

Realistically, though, the consciences of those who participate in the industry of assisted reproduction as either providers or consumers are unlikely to bother them, whether or not prenatal adoption becomes a morally approved and widespread practice; such individuals generally see no moral problem with creating, selecting, or freezing human embryos and thus experience no moral qualms. Conversely, the risk of scandal is perhaps greater in rendering a negative judgment of prenatal adoption, insofar as it may appear hypocritical for the Church to refer to embryos as “subjects of essential rights” and assert that they “should therefore be protected by law as human persons,” while denying the fulfillment of the positive duty to safeguard, and not merely avoid ending, innocent human life afforded by prenatal adoption.

**Potentially Abortifacient Contraceptives**

With the already established premises regarding a human embryo's ontological and moral status in mind, _DP_ n. 23 distinguishes between “interceptive” and “contragestative” methods of preventing pregnancy which involve, respectively, interfering with the embryo before implantation or causing the elimination of an already implanted embryo. The CDF then asserts,

In order to promote wider use of interceptive methods [such as the IUD and so-called “morning-after pills”], it is sometimes stated that the way in which they function is not sufficiently understood. It is true that there is not always complete knowledge of the way that different pharmaceuticals operate, but scientific studies indicate that the effect of inhibiting implantation is certainly present, even if this does not mean that such interceptives cause an abortion every time they are used, also because conception does not occur after every act of sexual intercourse. It must be noted, however, that anyone who seeks to prevent the implantation of an embryo which may possibly have been conceived and who therefore either requests or prescribes such a pharmaceutical, generally intends abortion.

This statement has evident implications for the use of emergency contraception in cases of rape. EC may function as an interceptive abortifacient by altering the lining of the uterus so that the embryo, if one is present, will not implant;¹⁰ there is also some

risk that an ectopic pregnancy could occur as a result of EC affecting the transport of the embryo through the fallopian tube. The CDF affirms that the use of any postcoital drug or contraceptive device that functions as an abortifacient would be morally impermissible insofar as it directly causes an embryo to be aborted. EC, however, in the form of progestin-only levonorgestrel, may function simply as a contraceptive by preventing ovulation or fertilization, or it may not function at all, given the uncertainty that a victim of rape was in her fertile period at the time of the attack.

Norman Ford analyzes statistical data regarding the frequency of pregnancies after rape and the various potential causes of some of those pregnancies failing naturally, as opposed to being caused by EC. He concludes that when EC is used after rape, “conservatively, one could assume that the risk to the life of an embryo would be about 8 percent or less.” In the absence of confirmatory evidence that fertilization has occurred in a woman who has been raped, the risk that using EC would cause an embryo to abort may be sufficiently low to justify its use in such a case:

It would seem to be ethically permissible to administer [emergency contraceptive pills] as soon as possible within 72 hours of rape to prevent conception if,


after inquiry, there were no reasonable grounds to believe an embryo had been already conceived. In this case a risk of loss of an embryo due to the medication would not be more than about 8 percent, not disproportionate or significant after rape. ... But an [emergency contraceptive pill] could not ethically be taken if a test showed conception had, or most likely had, occurred.14

EC may be administered for the solely intended purpose of preventing ovulation or fertilization, which is a morally acceptable good worth pursuing in comparison to the overwhelming emotional burden—along with other potential burdens—faced by a victim of rape who becomes pregnant.15 If, however, there is certainty or a reasonable probability that an embryo already exists, then the use of EC would be abortifacient—at least in intention if no embryo is actually present. Any form of directly intended abortion is morally impermissible; nevertheless, for proportionally grave reasons, the loss of an embryo may justifiably be risked—given a sufficiently low probability of its existence and of the post-fertilization effects of EC—in order for a victim of rape to avoid the burdens associated with pregnancy in such a tragic situation.16


15 For reasons cited in footnote 14, prevention of ovulation alone may be morally justifiable, inasmuch as a human embryo arguably exists at the beginning of the fertilization process.

16 In light of the debated points noted above concerning the potentially abortifacient effects of emergency contraception (see footnotes 10 and 12), an alternative form of emergency contraception, gonadotropin-releasing hormone antagonists, has been proposed, but has yet
A pertinent question is the extent to which the proposed criterion of “reasonable probability” concurs with, or is contrary to, Pope John Paul II’s exhortation in *Evangelium vitae* that “what is at stake is so important that, from the standpoint of moral obligation, the mere probability that a human person is involved would suffice to justify an absolutely clear prohibition of any intervention aimed at killing a human embryo.”¹⁷ The question under consideration in the case of utilizing EC after rape is not whether a human embryo counts as a human person, but whether an embryo is present in the fallopian tube; nevertheless, the Holy Father’s exhortation is equally applicable to the latter question. One point worth noting is that “mere probability” is not logically the same as “mere possibility”; and while the latter, stricter concept would morally disallow an 8 percent chance of an embryo being present—or, for that matter, a chance smaller than 0.000001 percent—it is an open question whether the concept of “probability” utilized by the Holy Father would permit or preclude an 8 percent risk of preventing an embryo from implanting.

Further conceptual work on the specific requirement of “moral certitude” is thus needed to effectively resolve the issue of utilizing EC in cases of rape, particularly in light of the continuing debate in the medical literature regarding the potentially abortifacient effects of EC.¹⁸ While the CDF may have compelling reasons to disagree with the conclusions drawn by Ford and others who argue that the use of EC in cases of rape is morally justified, *DP* does not directly address this specific argument and spell out the implications of its stated judgment for the case at hand.

**Reproductive Cloning**

In discussing various novel forms of human reproduction, the CDF concludes in *DP* n. 29 that human reproductive cloning is “intrinsically illicit,” as it would impose on the resulting individual a predetermined genetic identity, subjecting him—as has been stated—to a form of biological slavery, from which it would be difficult to free himself. The fact that someone would arrogate to himself the right to determine arbitrarily the genetic characteristics of another person represents a grave offense to the dignity of that person as well as to the fundamental equality of all people. The originality of every person is a consequence of the particular relationship that exists between God and a human being from the first moment of his existence and carries with it the obligation to respect the singularity and integrity of each person, even on the biological and genetic levels. (original emphasis)

The CDF’s central concern echoes the judgment of Leon Kass, former chairman of the President’s Council on Bioethics, who argues against reproductive cloning on

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¹⁷ John Paul II, *Evangelium vitae* (March 25, 1995), n. 60, emphasis added.

¹⁸ For contrasting conclusions regarding whether the criterion of moral certitude is satisfied in the case under discussion, see Mulligan, “Peace of Conscience for Rape Victims”; Hamel and Panicola, “Low Risks and Moral Certitude”; and Hilliard, “Dignitas personae and Emergency Contraception.”
the basis of two philosophical concerns: personal identity and the right to an open future:

Cloning creates serious issues of identity and individuality. The cloned person may experience concerns about his distinctive identity not only because he will be in genotype and appearance identical to another human being. . . . The cloned individual, moreover, will be saddled with a genotype that has already lived. He will not be fully a surprise to the world. People are likely always to compare his performances in life with that of his alter ego. True, his nurture and his circumstance in life will be different; genotype is not exactly destiny. Still, one must also expect parental and other efforts to shape this new life after the original—or at least to view the child with the original version always firmly in mind. 19

Cloning, Kass argues, raises serious questions about personal identity: How distinct is a clone from her progenitor? Would a clone be sufficiently different so that neither she nor her progenitor would consider herself to be “less” of an individual? The metaphysical questions regarding the distinct personal identities of a clone and her progenitor invoke both physical and psychological criteria of personal identity.

Clearly, a clone and her progenitor are not physically identical, since they do not have the numerically same body: that is, they are not the same biological organism even though they share the same type of body with the same genotype and physical appearance. The CDF is concerned, however, with a clone possessing the same type of body as her progenitor when it asserts in DP n. 29 that that “the singularity and integrity of each person, even on the biological and genetic levels” must be fundamentally respected.

This assertion is apparently challenged, though, by the natural existence of genetically identical twins; the existence of a twin does not seem to threaten the integrity of a human being’s existence as a unique, individual person. Of course, clones differ from naturally occurring identical twins in two ways that may be morally significant: (1) twins are contemporaries, whereas a clone and her progenitor are temporally separated; and (2) twins are not intentionally created to be genetically identical, whereas one directly intends a clone to have the same genotype as her progenitor. The issue at hand is whether these distinctions make a moral difference, and the CDF does not directly address this question; furthermore, a response is warranted insofar as the CDF asserts an apparently general principle regarding the intrinsic value of a human person’s unique genetic identity—which may be universalized outside the context of cloning—that is regularly violated by the laws of nature. 20


20 To draw a normative conclusion regarding the value of a human person possessing a unique genetic identity solely from the premise that the laws of nature allow for genetically identical human twins would be to commit the naturalistic fallacy. Nevertheless, this fallacy can be avoided given the additional premises that (a) identical twins are not “aberrations” of nature and (b) the laws of nature are intrinsically normative insofar as they are part of God’s eternal law that, in addition to meta-ethically grounding the natural moral law, is God’s rational, teleological, and providential plan for the created universe. See Thomas Aquinas, Summa theologiae I-II, q. 93, aa. 1, 5.
The hypothesis that a human person’s unique genetic identity is sacrosanct is further challenged by the fact that identical twins raised in the same familial environment have personalities that develop distinctly over time, which illuminates the psychological differences that would also accrue between a clone and her progenitor.\(^1\) The concern that cloning violates a clone’s “right to an open future” (as Kass argues) and thereby subjects the clone to “a form of biological slavery” (as the CDF puts it) seems to rest on a mistaken belief in genetic determinism—that a person’s genetic identity determines to a great extent, although not to the point of completely precluding free will, his or her future traits, both physical and psychological. According to the National Bioethics Advisory Commission,

Althought genes play an essential role in the formation of physical and behavioral characteristics, each individual is, in fact, the result of a complex interaction between his or her genes and the environment within which they develop, beginning at the time of fertilization and continuing throughout life. As social and biological beings we are creatures of our biological, physical, social, political, historical, and psychological environments. . . . In other words, there will never be another you.\(^2\)

As indicated earlier, Kass acknowledges that “genotype is not exactly destiny,” but he also allows for the misperception on the part of a clone that her future choices are constrained by her progenitor having already, so to speak, “lived her life” to be a compelling reason against cloning, and the CDF would apparently concur with this conclusion.

Nevertheless, the question persists regarding precisely the “harm” that is committed against a person created through cloning insofar as the allegedly arbitrary nature of how a clone’s genome is determined appears, on the surface, to be no more arbitrary than the combination of genes determined through the natural process of mate selection followed by sexual procreation.\(^3\) In other words, we already engage in a rudimentary form of “genetic engineering” naturally by selecting, whether consciously or subconsciously, mates with certain traits that we wish to pass on to our offspring. Of course, we cannot naturally control the exact combination of genes that will occur when a particular sperm fertilizes a particular ovum; but the fact that we let “nature take its course” in this regard is arguably an arbitrary surrender to a procreative process that we know to yield numerous genetic maladies.


\(^3\) Of course, such a reductionist view of natural procreation does not do justice to the greater moral and spiritual significance of sexual union within the context of marriage as affirmed in DP n. 6. Hence, there are clearly other philosophical and theological principles from which a categorical moral objection to human reproductive cloning could be derived; not the least of which is the fact that it is an artificial procreative endeavor wholly removed from the sexual act.
These challenges do not call into question the CDF’s judgment of the morally illicit nature of reproductive cloning—there are myriad reasons supporting a negative moral assessment of such an endeavor acknowledged by both religious and secular bioethicists—but rather call attention to the fact that the stated reasons appear insufficient on their own to demonstrate the intrinsic wrongness of cloning by not fully explicating the exact harm that accrues to either a clone or her progenitor through the possession of a shared genotype.

Alternatives to Human Embryonic Stem Cell Research

The CDF not only condemns reproductive cloning but also concludes in DP n. 30 that “so-called therapeutic cloning is even more serious” because it destroys cloned human embryos in order to obtain human embryonic stem cells that are genetically compatible to the embryos’ progenitor—thereby mitigating the risk of the progenitor’s immune system rejecting transplanted cells, tissues, or organs developed from such stem cell lines.24 The CDF notes in the same paragraph that

the ethical objections raised in many quarters to therapeutic cloning and to the use of human embryos formed in vitro have led some researchers to propose new techniques which are presented as capable of producing stem cells of an embryonic type without implying the destruction of true human embryos. These proposals have been met with questions of both a scientific and an ethical nature regarding above all the ontological status of the “product” obtained in this way. Until these doubts have been clarified, the statement of the Encyclical Evangelium vitae needs to be kept in mind: “what is at stake is so important that, from the standpoint of moral obligation, the mere probability that a human person is involved would suffice to justify an absolutely clear prohibition of any intervention aimed at killing a human embryo.”

Among the proposals the CDF has in mind are the use of human parthenogenesis, altered nuclear transfer (ANT), and oocyte-assisted reprogramming (OAR).

Not mentioned by the CDF is the use of induced pluripotent stem cells, which are adult cells that have been reprogrammed to function like human embryonic stem cells.25 The threefold advantage of induced pluripotent-stem-cell research at both the therapeutic and moral levels is that (1) a patient’s own cells are being utilized to develop stem cell treatments, thereby avoiding the risk of immune system rejection, (2) donated ova are not required to create genetically identical embryos from


which rejection-proof stem cells may be derived, as in therapeutic cloning, and
(3) the derivation of such cells does not involve the destruction of human embryos.26
Although certain technical and legal hurdles must be surmounted before induced
pluripotent stem cell research can lead to the development of effective, safe, and
widely available treatments,27 there are no evident moral objections in principle to
this alternative to human embryonic stem cell research, and the CDF could morally
affirm it alongside the other forms of research noted in DP n. 32 that utilize stem
cells not derived from human embryos.

ANT and OAR represent more problematic alternatives to human embryonic
stem cell research. As originally proposed by William Hurlbut, ANT involves the
use of somatic cell nuclear transfer—the same technique by which Dolly the sheep
was cloned28—but with alterations made to the somatic nucleus prior to transfer so
that the entity formed is not a totipotent zygote but rather an “embryo-like” artifact
from which pluripotent stem cells can be derived.29 Hurlbut’s initial proposal involved
deleting the Cdx2 gene in the nucleus, leaving the cloned blastocyst unable to form a
functional trophectoderm, which is necessary for embryogenesis beyond the initial
stages.30 This proposal met with severe criticism, primarily centered on the question
of whether ANT produces an “embryo-like” artifact or a “disabled embryo,” since
the cloned blastocyst undergoes normal embryonic development initially, when the
Cdx2 gene is naturally inactive, and does not suffer any developmental defects until
the late blastocyst stage, when Cdx2 is expressed in forming the trophectoderm.31

26See Mahendra Rao and Maureen L. Condic, “Alternative Sources of Pluripotent
Stem Cells: Scientific Solutions to an Ethical Dilemma,” Stem Cells and Development 17.1
(February 2008): 1–10; Maureen L. Condic, “Getting Stem Cells Right,” First Things 180
(February 2008): 10–12; John R. Meyer, “The Significance of Induced Pluripotent Stem Cells
for Basic Research and Clinical Therapy,” Journal of Medical Ethics 34.12 (December 2008):
849–851; and W. Malcolm Byrnes, “Direct Reprogramming and Ethics in Stem Cell

27See Maureen L. Condic and Mahendra Rao, “Regulatory Issues for Personalized

28See I. Wilmut et al., “Viable Offspring Derived from Fetal and Adult Mammalian

29William B. Hurlbut, “Altered Nuclear Transfer as a Morally Acceptable Means for the
Procurement of Human Embryonic Stem Cells,” Perspectives in Biology and Medicine 48

30See Maureen L. Condic and Samuel B. Condic, “Defining Organisms by Organiza­

Catholic Bioethics Quarterly 5.2 (Summer 2005): 226; Paul J. Hoehner, “‘Altered Nuclear
Transfer’: Probing the Nature of Being Human,” National Catholic Bioethics Quarterly 5.2
Is Unethical: A Holistic Systems View,” National Catholic Bioethics Quarterly 5.2 (Summer
In light of the criticisms launched against Hurlbut’s initial proposal, a new method of ANT has been proposed in which somatic cell or oocyte reprogramming prior to the nuclear transfer ensures that “the epigenetic state of the resulting single cell would immediately be different from that of an embryo and like that of a pluripotent stem cell: the somatic cell nucleus would be formed into a pluripotent-stem-cell nucleus and never pass through an embryonic stage.”32 This method—termed ANT-OAR or just OAR—has been subject to vigorous criticisms and defenses.33 ANT-OAR been defended cogently and effectively with sound Aristotelian-Thomistic arguments.34 Nevertheless, sufficient doubts persist such that both proponents and opponents of ANT-OAR agree that thorough testing on animal models must be completed prior to any experimental trials with human cells.35 It is worth noting that the CDF does not rule out ANT-OAR in principle, but is concerned only with doubts regarding the entity produced through this technique; hence, the CDF has either not considered or judged to be erroneous the objection that ANT-OAR inherently involves illicit interference in the natural process by which a human being is created—similar to the standard “contra-life” objection to contraception.36

**Hybrid Cloning**

Another alternative to human embryonic stem cell research, which may yield additional therapeutic benefits, is addressed in DP n. 33:

Recently animal oocytes have been used for reprogramming the nuclei of human somatic cells—this is generally called hybrid cloning—in order to extract embryonic stem cells from the resulting embryos without having to use human oocytes. From the ethical standpoint, such procedures represent an offense against the dignity of human beings on account of the admixture of

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32 “Production of Pluripotent Stem Cells by Oocyte-Assisted Reprogramming,” Joint Statement with Signatories, National Catholic Bioethics Quarterly 5.3 (Autumn 2005): 581, original emphasis.


human and animal genetic elements capable of disrupting the specific identity of man. The possible use of the stem cells taken from these embryos may also involve additional health risks, as yet unknown, due to the presence of animal genetic material in their cytoplasm. To consciously expose a human being to such risks is morally and ethically unacceptable.

The CDF limits its discussion to only one form of mixing human and nonhuman DNA. Equally as urgent an issue to address is the creation of animal–human chimeric embryos by grafting human stem cells into nonhuman animal embryos.37

There are several potential uses of animal–human chimeras that may justify their creation.38 First, a full-term chimera—one that is implanted and allowed to develop beyond the embryonic and fetal stages—could serve as a source of transplantable organs.39 Second, full-term chimeras could be used as novel research models with the potential to offer great insight into the study of cellular maturation and migration, as well as oncogenesis. The chimera known as the SCID-hu mouse is one example, in which an animal has been altered to develop a complete human immune system in order to conduct HIV research.40 A more recent study that has received a great deal of attention is the human–mouse neural chimera created by Irving Weissman. Transplanted human neural stem cells were grafted into mouse fetuses, creating chimeric mice whose brains are about 1 percent human.41

This section includes material derived from Jason T. Eberl and Rebecca A. Ballard, “Metaphysical and Ethical Perspectives on Creating Animal–Human Chimeras,” Journal of Medicine and Philosophy 34.5 (October 2009): 470–486. Another important discussion would concern animal–human chimeras which result from grafting nonhuman animal cells into human embryos; such experiments, however, are less likely to be pursued in the near future, if at all. Of course, the ethical evaluation of this form of animal–human chimerism would be quite distinct from what is discussed in this section.


39Esmail Zanjani, professor and medical researcher at the University of Nevada, has created full-term human-to-sheep chimeras with the hope of creating a human liver. Between 7 and 15 percent all the cells in the sheep’s livers were human and a few human liver cells formed clusters, giving functionally and fully human liver units available for transplantation as auxiliary organs. See Sylvia Pagán Westphal, “Growing Human Organs on the Farm,” New Scientist 180.2426–2428 (December 20, 2003–January 9, 2004): 4–5.


neural stem cells with defects that cause Parkinson’s disease, amyotrophic lateral sclerosis, and other brain ailments to study how these cells make neural connections, with the hope of creating cell replacement strategies in the adult human brain as cures.42 On the condition that the grafted human stem cells in such experiments are illicitly obtained—i.e., not derived from destroyed human embryos—this research could provide an ethically viable alternative to human embryonic stem cell use that is also distinct from the research condemned in DP n. 33.

A similar form of animal–human transgenesis—involving the transfer of specific human genes as opposed to the grafting of stem cells—has been morally approved in principle, within certain defined parameters, by both the Pontifical Academy for Life43 and the International Association of Catholic Bioethicists. The IACB states that “transferring human genes with a relatively discrete and well-understood function into a nonhuman organism, under controlled conditions and specifically for a major therapeutic benefit to human beings, such as to produce human insulin, may be ethically warranted.”44 In DP n. 33, the CDF is primarily concerned about “the admixture of human and animal genetic elements capable of disrupting the specific identity of man.” The question at hand is whether the mere admixture of human and animal genetic elements entails a disruption of the specific identity of man, or whether some genetic mixing may proceed without such ontological and moral harm ensuing.

At the ontological level, we must explore whether the grafting of human cells into an animal embryo, or vice versa, would be sufficient to result in a substantial change (one kind of being becomes another kind of being, and hence the same being does not persist through this change) or an accidental change (the same being adds or subtracts certain non-essential traits, but remains the same kind of being). The former type of change would involve disrupting the subject’s “specific identity,” if the interspecies grafting changes an animal into a human being (or a human being into an animal, if animal cells were grafted into a human embryo). The Aristotelian-Thomistic perspective, as noted earlier, conceptualizes a human embryo as a person from conception and holds that an embryo undergoes a series of accidental changes as it proceeds from being an embryo to a fetus to a newborn baby and so on; but its substantial nature as a rational animal remains the same throughout these developmental stages. Thus, a human embryo is a person from conception, despite the fact that it must go through a series of accidental, though naturally ordered,


changes before it can exhibit what is arguably the definitive activity of personhood: self-conscious rational thought.

An animal–human chimera is not a person simply by virtue of having some cells with human DNA in its constitution. In fact, even a biological entity constituted entirely and exclusively of human DNA is not necessarily a human person—for example, a complete hydatidiform mole. The ontological question at hand is whether an animal–human chimeric embryo, through the addition of human cells, possesses the intrinsic capacity to produce a cerebral cortex supportive of self-conscious rational thought. If it does, then it qualifies both ontologically and morally as a person; thus, to create or use such an entity in harmful or destructive research would be morally illicit. If, however, the grafting of human cells were insufficient for the embryo to become capable of developing self-conscious rational thought, then its acquisition of any other human-like traits would constitute a change that leaves the embryo firmly in the ontological category of nonrational sentient animal.

Not every animal–human chimera would possess the intrinsic capacity to develop a brain supportive of self-conscious rational thought. Four factors have been offered as predictive indicators of such a chimera being produced: (1) quantity of human material transferred, (2) timing of the grafting, (3) the type of cells grafted, and (4) the host animal utilized. The SCID-hu mouse, for example, clearly exhibits no evidence of the capacity for self-conscious rational thought. At the other end of the spectrum, grafting a significant quantity of human neural stem cells into an embryo that belongs to a close evolutionary cousin of Homo sapiens, e.g., a member of one of the Great Ape species, involves a greater likelihood of resulting in a being

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45 A complete hydatidiform mole is a mass of placental tissue with the same genetic identity as a human embryo. What distinguishes a complete hydatidiform mole from a developing human embryo is that the former can never develop into an organism with a functioning cerebral cortex, despite its intrinsic genetic structure, even if it is placed in a supportive uterine environment; rather, a complete hydatidiform mole will develop into a tumor. A partial hydatidiform mole, however, while it will also never develop into a fully actualized human being, is arguably a disabled human embryo. See Austriaco, “Are Teratomas Embryos or Non-embryos?”

46 It does not matter ontologically whether an embryo is implanted in a uterus such that its intrinsic capacities will be actualized; even if none of its intrinsic capacities, beyond those related to being biologically alive, are ever actualized, the embryo’s essential ontological nature remains unchanged. See Eberl, Thomistic Principles and Bioethics, 69–70.


with sufficient cranial capacity to develop a brain that supports self-conscious rational thought. This would be a paradigmatic case of morally illicit research—a judgment based on the CDF’s principle that human identity has been “disrupted” in an ontologically and morally significant fashion.

The creation of a chimera not involving large quantities of human neural stem cells or primates most likely results in an accidental change in the animal, in which the addition of non-essential elements, e.g., human immune system cells or human skin cells, yields an entity that remains a nonrational sentient animal. We may thus treat animal–human chimeras with no rational capacity as we would other evidently nonrational sentient animals. A relevant moral question remains, however,

49 This conclusion differs from that of Thomas Berg, who argues that, from an Aristotelian-Thomistic perspective, the notion that a substantial change may result in a nonrational animal embryo becoming rational by the engrafting of human neural stem cells is philosophically flawed insofar as rationality is endowed through matter being informed by an immaterial human soul, which can only be created directly by God; hence, it would be “theologically problematic, to say the least,” Berg claims, to hypothesize that God would create a rational soul as the substantial form of an animal–human chimera. See Thomas Berg, “Human Brain Cells in Animal Brains: Philosophical and Moral Considerations,” National Catholic Bioethics Quarterly 6.1 (Spring 2006): 89–107. Berg neglects, however, two key Thomistic assertions. First, a sufficient degree of material change can warrant a body becoming informed by an immaterial soul created directly by God, as is the case in Aquinas’s description of human embryogenesis with delayed hominization (see Eberl, Thomistic Principles and Bioethics, 24–26). Second, God evidently cooperates with any procreative activity which produces a material body that is apt for rational ensoulment regardless of whether such activity is morally illicit, as in cases of adultery (see Aquinas, Summa theologiae I, q. 118, a. 2 ad 5). Therefore, it is evident that, from an Aristotelian-Thomistic perspective, if the body of an animal–human chimera is suitable for rational ensoulment, God would infuse such a soul as the chimera’s substantial form despite the artificial and immoral way in which the chimera was produced. This case is no different than that of human embryos produced artificially and immorally through in vitro fertilization or cloning.

50 The resulting change may be substantial if the animal–human chimera is of a distinct biological species from the original animal embryo—akin to the creation of a mule, which is a hybrid of two other species—but ontologically the new substantial entity would still be a member of a biological species that belongs to the category of nonrational sentient animal.

51 Nicholas Tonti-Filippini and colleagues raise the concern that utilizing “rationality” as the criterion by which to ontologically distinguish types of animal–human chimeras undermines the fact that possession of a human genome has historically grounded the recognition of human rights, including, relevantly, the rights of disabled human beings who are not “demonstrably rational.” See Nicholas Tonti-Filippini et al., “Ethics and Human–Animal Transgenesis” National Catholic Bioethics Quarterly 6.4 (Winter 2006): 689–704. This concern, however, stems from a view of rationality being defined in terms of performance and thereby as existing in degrees. While many postmodern metaphysicians and ethicists may construe rationality in such a manner—as with the “performance theorists” mentioned above—the Aristotelian-Thomistic concept of human beings’ essential rationality
concerning whether the risk of crossing the line between an animal with human cells to a chimera who is capable of self-conscious rational thought is justified, based on the potential benefit of creating such entities.52

It is not clear whether the CDF would concur with this analysis of the ontological and moral status of certain types of animal–human chimeras, such as the SCID-hu mouse or Weissman’s mice, that possess only 1 percent of human neural material in their brain and therefore fail to exhibit the capacity for self-conscious rational thought. The CDF’s foundational moral principle may be interpreted narrowly to restrict any form of animal–human genetic combination; on the other hand, it may be interpreted more widely to allow for the creation and experimentation on the SCID-hu mouse or Weissman’s mice, while disallowing various other types of animal–human chimeras that may be conceived. Given that this type of research is already under way and will likely continue even if induced pluripotent stem cells provide a more readily accessible and safer source for stem cells in therapeutic regenerative medicine, an informed judgment from the CDF on this particular form of transgenetic research would prove most valuable.

is understood in terms of capacity and is thus an all-or-nothing affair; either a being possesses the capacity for rational thought—along with attendant capacities for self-consciousness and autonomy—or it does not. Hence, any minimal exhibition of this capacity—say, in a human being who is severely mentally disabled but nonetheless self-consciously aware—would suffice for the attribution of rational ensoulment and, concomitantly, personhood and human rights. A further case can be made for attributing rational ensoulment even in cases where the ability to exhibit the capacity for rational thought has been occluded by some sort of material defect—as in patients in a persistent vegetative state. See Eberl, *Thomistic Principles and Bioethics*, 95–98; and Eberl, “A Thomistic Understanding of Human Death,” *Bioethics* 19.1 (February 2005): 29–48. Therefore, with an adequately formulated Aristotelian-Thomistic understanding of the minimum material requirements for rational ensoulment, rationality—together with self-consciousness and autonomy—can serve as an adequate criterion for ontologically distinguishing types of animal–human chimeras in a way that does not inherently undermine the ontological and moral status of human beings with varying degrees of ability to exercise the rational capacity they possess by virtue of their essential nature, which is not reducible, as Tonti-Filippini and his colleagues assert, to possession of the human genome in whole or in part.

52See Eberl and Ballard, “Metaphysical and Ethical Perspectives.” Given a reasonable expectation of significant therapeutic benefits accruing to human beings as a result of research utilizing animal–human chimeras, the risk of producing a rational animal—assuming that certain types of experiments are avoided, such as grafting a large number of human neural stem cells into the embryo of a close evolutionary cousin of ours—is sufficiently low to justify proceeding with such research. On this point, Ballard and I differ from Tara Seyfer and Marilyn Coors who each claim that a “chance,” even a slight one, of producing a rational animal negates the ethical validity of research utilizing animal–human chimeras. See Tara L. Seyfer, “An Overview of Chimeras and Hybrids,” *National Catholic Bioethics Quarterly* 6.1 (Spring 2006): 48; and Marilyn E. Coors, “Considering Chimeras: The Confluence of Genetic Engineering and Ethics,” *National Catholic Bioethics Quarterly* 6.1 (Spring 2006): 79.
Cooperation with Illicit Human Embryonic Stem Cell Research

Given the fact that research utilizing illicitly obtained human embryonic stem cells will undoubtedly proceed and, if the hopes of the medical community are realized, treatments will be developed from such research, the CDF addresses the question of whether participation in such research involves illicit cooperation. In DP n. 35, the CDF begins by citing Donum vitae, which states that corpses of human embryos and fetuses “must be respected just as the remains of other human beings. . . . Furthermore, the moral requirements must be safeguarded that there be no complicity in deliberate abortion and that the risk of scandal is avoided” (I.4). Then, in the same paragraph, the CDF applies this principle to the case of utilizing “biological material,” such as human embryonic stem cell lines that have been illicitly obtained, and judges that one cannot “avoid a contradiction in the attitude of the person who says that he does not approve of the injustice perpetrated by others, but at the same time accepts for his own work the ‘biological material’ which the others have obtained by means of that injustice.” However, the CDF also draws a distinction in this section between the “differing degrees of responsibility” of a researcher and, say, parents who elect to utilize a vaccine developed from human embryonic stem cell lines to treat a child whose health is in danger.

A question arises at this point concerning whether the permissibility of parents utilizing treatments developed from illicit sources for their children extends also to adults electing to utilize such treatments for themselves. In DP n. 35, the CDF cites a clear example of the parental obligation to meet the health needs of innocent children regardless of the parents’ moral objections to certain types of treatment—an obligation that has been affirmed by U.S. courts in cases involving blood transfusions for children of Jehovah’s Witness parents.53 But would the CDF’s call for conscientious objection on the part of biomedical researchers apply also to adults who may make the choice to sacrifice their own health needs for the sake of avoiding cooperation in evil? Conversely, does an adult’s desire to safeguard his or her own health constitute a sufficiently “grave moral reason” that is “morally proportionate” to justify the use of treatments derived from human embryonic stem cell lines? Perhaps so, since such a decision does not appear any different in object, intent, or end from a parent’s decision to utilize such treatment for his or her child. But the question remains whether the call to avoid illicit cooperation would justify an adult electing to forgo his or her own health needs—say, in a life-threatening situation—by not accepting such a treatment when there is no licit alternative treatment available. Does the moral duty to avoid complicity in evil justify the sacrifice of one’s health or life in heroic witness?

Turning to Aquinas, we can see the tension at hand in this type of case. In his commentary on the Second Letter to the Thessalonians, Aquinas contends, “It is prescribed that a human being sustains his body, for otherwise he murders

53 This example also applies to parents who elect to vaccinate their children against rubella, hepatitis A, and varicella using vaccines developed from cells from aborted fetuses. See Edward J. Furton, “Vaccines and the Right of Conscience,” National Catholic Bioethics Quarterly 4.1 (Spring 2004): 53–62.
himself... Therefore, one is bound to nourish his body, and we are bound likewise with respect to all other things without which the body cannot live.” 54 This passage could be interpreted to support a moral duty for individuals to seek any necessary life-saving or life-sustaining medical treatment. Aquinas, however, recognizes that what he has asserted does not entail an absolutely binding obligation. As Juan Carlos Iscara notes,

There are certain situations, certain conditions in which this positive duty does not bind, in which we can abandon the duty of preserving our own life for the attainment of the higher good—the service and attainment of God. The temporal good, that is, our life, must be sought if it helps us to attain our spiritual end, but it may be relinquished if it is an obstacle in our way towards God: “It is inbred for a man to love his own life and those things which contribute to it, but in due measure; that is, to love things of this kind not as though the goal were set in them, but inasmuch as they are to be used for his final end [the attainment of God, the salvation of his soul].” [Aquinas, Summa theologiae, II-II, q. 126, a. 1] In consequence, there is a binding obligation to preserve one’s life, but it is circumscribed by considerations related to the proper pursuit of our final end.55

Hence, it seems that one may forgo a life-saving treatment derived from human embryonic stem cell lines in order to affirm the value of human life, which would constitute a heroic moral witness that contributes toward the attainment of one’s final end; however, one is not morally obligated to do so and may accept such treatment if there are no morally licit alternative treatments available. Nevertheless, clarity on this point from the CDF, beyond the one cited example of parents being “permitted” to make the latter choice for their children, would be significantly helpful.

**Behind Every No Is a Yes**

There remain many issues at the beginning of human life—not to mention throughout the course and at the end of life—that require clear, principled moral judgments from the CDF in documents such as Donum vitae and DP. These instructions, along with other authoritative writings such as Evangelium vitae, provide a foundation from which Catholic bioethicists may derive premises for arguments designed to dialectically engage the contrasting views of certain secular bioethicists. The comments expressed in this article reflect the need for continued and more explicitly detailed ethical analysis on the part of the CDF, as well as supportive scholarly bodies such as the Pontifical Academy of Sciences and the Pontifical Academy for Life, in order to more effectively argue against, and not merely assert to the contrary, those views which attempt to promote the positive duty to safeguard human life and health but, in so doing, misguidedlly violate the duty not to harm or end nascent human life.

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54 Aquinas, Super secundam Epistolam ad Thessalonicenses lectura, cap. III, lect. 2, translated by J. Eberl.

The CDF invokes the twofold nature of our moral duties when it states in *DP* n. 37 that “behind every ‘no’ in the difficult task of discerning between good and evil, there shines a great ‘yes’ to the recognition of the dignity and inalienable value of every single and unique human being called into existence.” Certain practices—such as prenatal adoption, induced pluripotent stem cell research, and the creation of certain types of animal–human chimeras—may help, in a morally licit fashion, to affirm this yes. While the CDF is right to be cautious in evaluating such practices, more thorough investigation of these and other novel biomedical research initiatives by Catholic bioethicists is warranted if the judgments asserted in *DP*, or future judgments promulgated by the CDF and other moral authorities within the Church, are to be given the merit they are due in public bioethical discourse and thereby enjoy greater effectiveness in promoting the culture of life.