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A Catholic Reflection on Embryonic Stem Cell Research

by

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The focus of my analysis will be to frame what I believe to be the key theological and ethical issues related to the production and use of embryonic stem cells in both research and therapy from the perspective of the Roman Catholic tradition. The theological issues that I will raise shape and inform the tradition's process of moral reasoning about this topic but do not by themselves determine the morality of stem cell research. From these key theological issues I will move to two sets of ethical issues: the first is concerned with what might be called micro issues and the second is concerned with the macro or key social issues. In the conclusion I will offer two of my own recommendations on the topic.

I. Theological Issues

There are two theological themes that inform and shape the Catholic community's moral reasoning about stem cell research. The first is the tradition's interpretation of the doctrine of creation and the moral implications of such a doctrine. All that is created is considered to be good, and illness and death are viewed as lacking the intrinsic goodness of creation. In addition, the divine has created us to pursue a range of goods or values, the acquisition of which defines human well-being and flourishing. Health is certainly one of these goods that we naturally seek after, but so also are the goods of security, culture, art, education, etc. The reason why

this theme is informative is because it helps us think about our moral duties that correspond to each one of these goods or values. We have the duty to heal the sick, but we also have the duty to educate, to protect members of society, etc. The question here is whether the duty to heal deserves some type of special moral priority over other duties to pursue goods. Is the good of health an absolute good or is it a relative good? Asked in another way: is the duty to heal an absolute duty or is it a relative duty subject to other duties that are competing with it? Should we grant the duty to heal Parkinson's patients or to alleviate the suffering of injured patients a special duty that overrides or trumps all other moral duties? For example, Glenn McGee and Arthur Caplan have argued that the moral imperative of compassion is what compels us to sacrifice human embryos and to move forward with stem cell research.¹ As the Lutheran theologian Gilbert Meilaender has remarked about their moral justification for stem cell research:

McGee and Caplan never consider analogous possibilities. Only unconditional surrender of Parkinson's disease will do. Progress at relieving human suffering does not seem to be an optional goal. Nor apparently is slower progress, achieved by research techniques not involving the destruction of embryos, acceptable.²

If there are multiple goods that humans should be seeking on behalf of themselves and society, then it might be dangerous to single out one of these goods (health) and pursue it, as the late Paul Ramsey used to call it, with "messianic ambition."³

The second, and related, key theological theme that is derived from the doctrine of creation is concerned with the view that humans are created in the image and likeness of God (Gen 1:26-27). Though Catholics have interpreted this belief somewhat differently, nonetheless each of the interpretations frames the extent or range of our moral responsibilities as humans for making sure that the human future turns out well. Asked in the form of a question, how much moral responsibility should be accorded to our medical scientists to make sure that all human suffering and illness that result from disease, injury, infertility⁴ and cancer are ameliorated? If stem cell research can or might cure these misfortunes, then has God given us the absolute moral responsibility to make sure that they are treated and/or cured? Or, are our moral responsibilities somewhat different: that is, do we have the moral duty to make sure disease and injuries are cured to the extent that we honor our other moral duties to humanity and the non-human world?

The third theme related to the doctrine of creation is concerned with the notion of a common good for society. Many times we focus our

attention only on the individual's good in society and do not also consider our moral responsibilities to a common good of society. It is obvious that the Catholic tradition grounds its understanding of the human person in a communitarian anthropology in which we all have moral responsibilities to the good of the whole. Again, this then focuses the key issue of our duties to heal and cure the sick and injured. If we consider only the individual's good of healing, then we might not respond to the competing duties that we have to all of society and the just relations among individuals and structures in society.

In addition to the doctrine of creation there is also the theological theme of the solidarity with the poor and with those who are most vulnerable in society. The Catholic tradition has regularly argued in its recent social teachings for a commitment to or option for the poor and disadvantaged.⁵ This theological commitment, as we will see, will have an important impact on the way that Catholics go about reasoning morally about such issues as stem cell research and the equitable distribution of medical resources in society. To the extent that the poor and disadvantaged are left out of the picture entirely or their interests not protected, it is to that extent that the Catholic tradition would morally question the research under consideration.

II. Micro Ethical Issues

Though there are many ethical issues at stake in this topic, I will briefly note only four. First, there is the key issue of the moral status of the embryo, whether embryos are used from IVF labs or whether they are created for research purposes. There are three prevailing views in society about the embryo's status: 1) the view that holds that the embryo possesses no inherent worth; 2) the view that holds that the embryo possesses some pre-personal status but not the worth of a person; and finally 3) the view that the embryo ought to be treated as a person, a position that official Catholic teaching has adopted.⁶ For official Catholic teaching, and for some others in society, this crucial ethical issue settles whether or not one may destroy the embryo to derive the pluripotent stem cells for therapeutic goals. Though the tradition does not philosophically define exactly when the embryo becomes a person, nonetheless it has consistently argued in the past several decades that the embryo must be treated as a person from the moment of conception.⁷

Some contemporary Catholic theologians disagree with this position, and their disagreement is based on embryological data.⁸ They argue that the preimplantation embryo deserves respect because it possesses a pre-personal status, but since developmental individuation has not yet

occurred, the embryo does not warrant the respect due to persons. It is important to note this theological disagreement with the teaching office of the Catholic Church, but it is also important to note that it would be shortsighted to accord this ethical issue the final say in the debate. Though the moral status of the embryo is certainly an extremely important ethical issue, it is by no means the only one that is relevant to this topic.

The second key ethical issue is concerned with whether there are other options, less morally controversial, that could be pursued for procuring stem cells for therapeutic ends. Margaret Goodell and scientists at the Karolinska Institute in Stockholm were able to differentiate adult mice stem cells in May 2000, which captured the interest of many scientists to begin research on human adult stem cells, e.g., hematopoietic stem cells.⁹ Another alternative course of research might be with multipotent adult progenitor cells or MAPCs, which were discovered by Catherine Verfaillie and her colleagues at the University of Minnesota in 2002. She found that these cells co-purifying with mesenchymal stem cells in bone marrow could differentiate at the single cell level not only into mesenchymal cells but also cells with visceral mesoderm, neuroectoderm and endoderm characteristics *in vitro*.¹⁰ Umbilical cord blood also seems to contain stem cells that can be differentiated into other types of cells,¹¹ and lastly there is the possibility of using parthenotes. In mice, parthenogenesis has successfully produced embryos that matured long enough to grow embryonic stem cells in the labs at the Advanced Cell Technology, Inc., in Massachusetts.¹² Because parthenotes seem to lack the intrinsic capacity to successfully survive the process of embryogenesis, I would not consider them to be embryos. Consequently, I do not see any special moral problem with using these cells, as long as a woman has given the appropriate permission to use her eggs for such research. My point here is to suggest from the Catholic perspective that we should not move vigorously forward with embryonic research before becoming clearer about the feasibility of using alternative sources of human stem cells.

The third micro ethical issue deals with the success of this research. We have seen in the past that a lot of hype had been given to other research projects that did not in the end offer any therapeutic benefits to patients. For example, fetal tissue implants were promised to offer Parkinson's patients, spinal cord injury patients and others hope of rehabilitation or cure back in the 1980s and 90s. However, as we have recently discovered, none of the patients with Parkinson's disease who had fetal tissue cells implanted in their brains reported any benefit in the control of their symptoms. In fact, fifteen percent of these patients actually showed rapidly worsening symptoms of Parkinsonism.¹³ In addition, notwithstanding the recent protocol for human gene transfer in the case of X-SCID syndrome in London, it does not appear that there has been one unambiguous success

with all the attempts to insert genes to correct genetic diseases. In fact, we are discovering that many patients have been harmed by these experiments or even killed, e.g., Jesse Gelsinger at the University of Pennsylvania. This extremely low rate of success should give us some humility and pause in rushing forward into another avenue of research that many find morally problematic.

Finally, at the micro level there is the type of moral reasoning that seems to undergird the efforts to push forward with this research. There is a certain strong utilitarian calculus that is used to justify these scientific efforts, i.e., we need to push forward in order to benefit so many sick patients.¹⁴ Other moral concerns and issues also need to be considered in properly assessing any new medical research, e.g., human rights, moral obligations, virtues, etc. I find that this utilitarian calculus is essentially the only reason given to sacrifice the human embryo. As I had discussed earlier in this analysis, I question whether our moral obligations to the sick and injured are as absolute as some lead us to believe. Of course, we have strong moral obligations to these patients, but do these obligations trump all other obligations that we have to them and to society?

III. Macro (Social) Ethical Issues

There are several socio-ethical issues that need to be raised, but I will focus on only four. The first is concerned not with the moral status of the preimplantation embryo but with the public funding of research that would destroy the embryo. As many recent national polls have shown, there are a substantial number of US citizens who oppose the use of public money to fund research that destroys the human embryo.¹⁵ In other words, if we use public funds to support such research, we are asking people to contribute money for what they believe to be immoral research. We are asking them to cooperate in something that they frankly judge to be wrong to do. Some Catholic ethicists have tried to justify cooperation in the use (not derivation) of already-existing cell lines according to President Bush's plan,¹⁶ but this is quite different from either deriving the cell lines or creating research embryos in order to derive pluripotent stem cells.

Second, we should be concerned about claims to intellectual property rights for medical discoveries and the profit motive that is driving much of contemporary medical research, especially by the large pharmaceutical companies. We will need to navigate these important issues in order that we are able to balance the rights of the researcher with the needs of those who will not be able to pay for these advances.

Third, we as a society should be concerned about the next logical and sociological steps that might occur as a result of going forward with this research. The National Bioethics Advisory Commission (NBAC) under the

Clinton administration made several important recommendations at the end of its report on stem cell research in September, 1999. Two recommendations are particularly important:

Recommendation 3: Federal agencies should not fund research involving the derivation or use of human ES cells from embryos made solely for research purposes using IVF.

Recommendation 4: Federal agencies should not fund research involving the derivation or use of human ES cells from embryos made using somatic cell nuclear transfer into oocytes.¹⁷

In just a few years since this report was written scientists are claiming that they now need to create research embryos and to use somatic cell nuclear transplant cloning techniques to carry out their research.¹⁸ We are beginning to commodify human eggs; will we soon be willing to buy and sell human embryos to carry on research? This issue, of course, is concerned with the "slippery slope," so we will need to have clear plateaus where we know we will not go any further. I am not encouraged about the future, especially given the fact that we have been so quick to overturn NBAC's clear recommendations.

The last socio-ethical issue may be one of the most important key issues. It is concerned with social justice and the equitable distribution of health care in this country. It is also concerned with social justice and our moral responsibilities to prevent fatal illnesses that take the lives of millions around the world every year.¹⁹ Pluripotent stem cell research, like the human genome project, with all their importance, tends to continue the standard paradigm of contemporary medicine: high-tech, interventionist, and rescue medicine. Preventative medicine is understressed in this paradigm, and the rich are chiefly the only ones who get access to these cutting-edge technologies. The Roman Catholic tradition is committed to the moral principles of the common good, on the one hand, and solidarity with the poor and oppressed, on the other. Thus, this tradition raises important questions about the justice of our current health system and its future embodiments. How will future healing possibilities, which might become available through stem cell research, benefit those who are marginalized in society and the uninsured?²⁰ When the United States bishops fashioned their document on the economy back in 1986, they made several recommendations about economic policy in our country. One of these key recommendations was that, "the impact of national economic policies on the poor and the vulnerable is the primary criterion for judging their moral value."²¹ We as a society need to use a similar criterion whenever we are about to embark on a new frontier of medical science.

IV. Two Conclusions

Though several conclusions might be drawn from my analysis, I will briefly discuss only two. The first is that we need to think much more clearly about how to balance the good of health with the other goods that we pursue, e.g., the creation of a more just society. Our obligations to the sick are indeed enormous, but they should not be viewed as near absolute such that they almost always trump all other moral obligations to other goods in society. Second, we are at a point in our history in medical research in this country where we have the opportunity to engage in a "teaching moment." We should pause and reflect much more than what we have done about our priorities in both society and in medical research and then raise the question about whether or not our taken-for-granted medical paradigm is in fact the one we should be promoting in the future. Thus, rather than continuing the standard paradigm, should we not question its validity and then possibly fashion a new way of conceiving our moral responsibilities for a more just society. This is certainly one of the challenges that I see the Roman Catholic tradition puts before us on the issue of pluripotent stem cell research.

References

1. Glenn McGee and Arthur Caplan, "The Ethics and Politics of Small Sacrifices in Stem Cell Research," *The Kennedy Institute of Ethics Journal* 9 (1999): 153.
2. Gilbert Meilaender, "The Point of a Ban or, How to Think about Stem Cell Research," *Hastings Center Report* 31(January-February 2001): 12.
3. Paul Ramsey, *Fabricated Man: The Ethics of Genetic Control* (New Haven: Yale University Press, 1970), pp. 92-96.
4. I list infertility in this context because in May 2003, US scientists had managed to grow egg cells from early mouse embryonic stem cells, and in the same month Japanese scientists found that they could use ES cells to produce immature sperm cells. Thus, some believe that human embryonic stem cells could become a cure for some types of infertility, especially in cases where the woman does not produce her own eggs or the man does not produce any or enough sperm.
5. This "option" or "preference" for the poor and oppressed has become a regular theme in nearly all Catholic social teaching (encyclicals) since the Second Vatican Council in 1965.

6. For a further discussion of each one of these views, see Michael R. Panicola, "Three Views on the Preimplantation Embryo," *The National Catholic Bioethics Quarterly* 2(Spring 2002): 69-97.

7. In the *Declaration on Abortion* from the Sacred Congregation for the Doctrine of the Faith in November 1974, it is stated in footnote #19 that, "This declaration expressly leaves aside the question of the moment when the spiritual soul is infused." The same Congregation in its *Instruction on Respect for Human Life in its Origin and on the Dignity of Procreation* in March 1987 reiterated this view on the beginnings of personal life, but then claims that, "The human being is to be respected and treated as a person from the moment of conception and therefore from that same moment his rights as a person must be recognized" (§1. 1). See also Pope John Paul II's encyclical *Evangelium Vitae*, §60.

8. For some recent examples, see Margaret Farley, "Roman Catholic Views on Research Involving Human Embryonic Stem Cells," in the National Bioethics Advisory Commission's report *Ethical Issues in Human Stem Cell Research, Volume III: Religious Perspectives* (Rockville, MD: June 2000): D-3-5; Norman Ford, S.D.B., "The Human Embryo as Person in Catholic Teaching," *The National Catholic Bioethics Quarterly* 1 (Summer 2001): 155-160; and Thomas A. Shannon and Allan B. Wolter, "Reflections on the Moral Status of the Preembryo," in Thomas A. Shannon and James J. Walter, *The New Genetic Medicine: Theological and Ethical Reflections* (New York: Sheed and Ward, 2003), pp. 41-63.

9. For example, see Richard M. Doerflinger, "The Ethics of Funding Embryonic Stem Cell Research: A Catholic Viewpoint," *Kennedy Institute of Ethics Journal* 9 (June 1999): 137-150.

10. Catherine M. Verfaillie et al., "Pluripotency of Mesenchymal Stem Cells Derived from Adult Marrow," *Nature* (June 20, 2002): 1-9.

11. See Nicanor Pier Giorgio Austriaco, O.P., "Notes on Bioethics," *The National Catholic Bioethics Quarterly* 3 (Summer 2003): 367-370.

12. Aaron Zitner, "Scientists Try Unfertilized Eggs as Source of Stem Cells," *Los Angeles Times* (August 12, 2001): 1 & A20. Also, in September 2003 Wake Forest University Baptist Medical Center in North Carolina used parthenogenesis to extract stem cells from monkey eggs and then grew them into a variety of different cells, including heart, nerve and muscle cells.

13. See *New England Journal of Medicine* 344 (2001): 710-14 and Arthur Caplan and Glenn McGee, "Fetal Cell Implants: What We Learned," *Hastings Center Report* 31 (May-June 2001): 6.

14. See Meilaender, "The Point of a Ban," pp. 10-11.

15. For example, the International Communication Research survey in June 2001 showed that 69.9% of those polled opposed the use of public money for purposes of destroying the human embryo for such research. See: <http://www.usccb.org/comm/archives/2001/01.htm>.

16. See Mark S. Latkovic, "The Morality of Human Embryonic Stem Cell Research and President Bush's Decision: How Should Catholics Think About Such Things?" *Linacre Quarterly* 69 (November 2002): 289-314, especially pp. 295-97.

17. National Bioethics Advisory Commission, *Ethical Issues in Human Stem Cell Research: Executive Summary* (Rockville, MD: September 1999): p. 5.

18. On the issue of using somatic cell nuclear transplant cloning (SCNT) in stem cell research, see two important scientific reports: Committee on Stem Cells and the Future of Regenerative Medicine, Board on Life Sciences and Board on Neuroscience and Behavioral Health, *Stem Cells and the Future of Regenerative Medicine: Report of the National Academy of Sciences and the Institute of Medicine*, September 2001; and The National Academy of Sciences, *Scientific and Medical Aspects of Human Reproductive Cloning*, 2002. Both committees recommended the creation of embryos by using SCNT cloning techniques for research purposes on stem cells. The recent President's Council on Bioethics report *Human Cloning and Human Dignity: An Ethical Inquiry* (2002) discussed the possibility of using SCNT cloning for stem cell research, but the majority recommendation was to establish a four-year moratorium on this type of research.

19. Around the world, 1.1 billion people are without clean water and 2.4 billion people are without sanitation. The result is that more than 2.2 million die each year from both of these preventable factors. Furthermore, approximately two-thirds of the world population (4 billion people) is without adequate nutrition at some point during the year, which can be the cause of many preventable illnesses.

20. For a further discussion of this issue, see Andrea Vicini, S.J., "Ethical Issues and Approaches in Stem Cell Research: From International Insights to a Proposal," *Journal of the Society of Christian Ethics* 23 (Spring/Summer 2003): 71-98.

21. US Bishops, *Economic Justice for All: Catholic Social Teaching and the U.S. Economy*, in *Origins* 16 (November 27, 1986): 443.