Demythologizing the Stem Cell Juggernaut

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The national debate on embryonic stem cells and research cloning has brought out the best and the worst in American culture. The best is on display in many ways. It is a debate that has been marked by an outpouring of sympathy for those suffering from disease or disability or threatened with death. It has drawn on the deep historical reservoir in America of a devotion to research and technological innovation to relieve the human condition. Despite these intensely partisan times, support for the research has easily crossed party lines, among legislators and the public. And it has given hope to perhaps thousands of people suffering from tenacious afflictions and disabilities. Those elements of the debate are impressive and commendable.

Far less commendable were many of the ways in which the campaign in favor of the research was waged to gain money to carry it out. The main focus of this paper is on the early years of the stem cell debate when that effort was most intense. There were, for openers, inflated claims about the value of the research, often in the face of cautions from the researchers themselves. There was also an egregious promotion of what I believe to be an utterly wrong view about a so-called moral obligation to pursue the research. And there was a full display of that most ancient of logical fallacies, the *ad hominem* argument. Many research proponents did not hesitate to label those on the other side as a noxious coalition of right-wing religious fanatics, the fearful, the superstitious, the ignorant, and those invincibly indifferent to human suffering. Some of that kind of rhetoric has been thrown in my direction. The right, sometimes not to be outdone in throwing mud, labeled proponents as enemies of human dignity, who were well down a slippery slope to manufacturing and instrumentalizing human embryos and thus life itself, the crudest kind of utilitarianism.

There may have been bits of truth in each of these stereotypes, but they did not serve well to advance the discussion. There were some larger issues at stake in this conflict, most notably the excessive hype and hyperbole deployed by research supporters, the use of bad arguments, some ethical window-dressing to move the cause along, and a failure to take account of some little-noted but highly relevant facts.

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I confess at the outset that I oppose embryonic stem cell research for either research or human cloning purposes. It is by now evident that I was on the losing team and, as someone who thinks of himself as a liberal, I found myself in the company of many whose values I do not share. I also happen to be pro-choice on abortion, which probably puts me in some odd, idiosyncratic class, maybe a class of one.¹ I will try to reconcile this combination later in the paper.

I most want to demythologize the stem cell juggernaut. The late Protestant theologian Rudolf Bultmann used the term “demythologize” as a way of describing his effort to downplay or altogether deny some key beliefs of Christianity, but without altogether rejecting Christianity. Analogously, I want to deflate the case made for research cloning but not for, say, adult stem cell research (even if it is less “promising”). I use the term “juggernaut” to convey my perception that the force of the research drive, and the public relations work that was invested in it, were remarkable. If it did not persuade President George W. Bush to change his mind, it has otherwise swept away most other opposition. President Barack Obama has already lifted some of the restrictions on the limited use of embryos now in place in government-supported research, although further Congressional action is needed before federal funding may be used in the creation of new cell lines.² The fact that many states, some of them facing large budget problems, decided to support the research is just one piece of testimony about the intensity of the enthusiasm. These states include California, Connecticut, Illinois, and Wisconsin.³

I. IS THERE A MORAL OBLIGATION TO DO EMBRYONIC STEM CELL RESEARCH?

I begin with the leading candidate for demythologization—the claim that there is some kind of powerful and inescapable moral obligation to carry out the research.

A. Considerations that Weigh Against a Moral Obligation

Well before the stem cell era, the Nobel Laureate Joshua Lederberg once said to me that “the blood of those who will die if biomedical research is not pursued will be upon hands of those who do not support it.” Much more recently the distinguished stem cell researcher, Irving Weissman, used almost identical

1. See DANIEL CALLAHAN, *ABORTION: LAW, CHOICE AND MORALITY* (1970).

2. See Exec. Order No. 13,505, 74 Fed. Reg. 10,667 (Mar. 9, 2009); Sheryl Gay Stolberg, *New Stem Cell Policy To Leave Thorniest Issue to Congress*, N.Y. TIMES, Mar. 9, 2009, at A1; David Stout & Gardiner Harris, *Obama Reversing Stem Cell Limits Imposed by Bush*, N.Y. TIMES, Mar. 7, 2009, at A1, available at <http://www.nytimes.com/2009/03/07/us/politics/07stem.html>.

3. For a listing of state funding, see James W. Fossett, *Beyond the Low-Hanging Fruit: Stem Cell Research Policy in an Obama Administration*, 9 YALE J. HEALTH POL'Y L. & ETHICS 523 (2009).

language on behalf of stem cell research. According to this line of thought, regenerative medicine has the promise and potential of saving millions of lives, afflicted by conditions from heart disease to Alzheimer's, from diabetes to Parkinson's disease. There is said to be a "negative responsibility" for the lives of those that could be lost in the absence of the research.

What a rhetorical club to use—but this claim seems specious and bombastic.⁴ I advance three considerations to support my view. The first is that there is a common impression that stem cell research holds out the only hope of curing various prominent diseases—heart disease, diabetes, Alzheimer's and Parkinson's disease, and spinal cord injury. Not so. The National Institutes of Health has invested tens of billions of dollars to cure or ameliorate exactly those same diseases over the years; and it now invests at least \$2.8 billion on them each year.⁵ The private for-profit sector has invested at least that much as well, and of course each of those diseases has an advocacy group that raises additional research money. Unless we think that the private and public research sectors are simply squandering their money, which no one has said, and unless we believe that none of that ongoing research is "promising" (the most oft-repeated term with stem cell research), then it is simply wrong to assert that the omission of research cloning would amount to an egregious indifference to human suffering.

Many scientists and others say that embryonic stem cell research is the most promising approach. But no one (so far as I know) has even dared to offer statistical probabilities of eventual success, and many are willing to concede that there may never be a dramatically effective clinical application (though they usually add that there will be great gains in basic knowledge).⁶ In sum, if there is a moral obligation to do medical research on various deadly diseases, that obligation is already being discharged. To say that the omission of *one* line of research among many others, embryonic stem cell research, constitutes a moral failure of the first magnitude—"blood on our hands"—is insupportable. But it certainly plays well.

The second consideration bears on what economists call "opportunity costs": that is, what else might usefully be done with the money going into stem cell research? At the same time that the \$3 billion California referendum was being debated, for instance, the newspapers in that state were reporting that 2.2 million (mainly immigrant) adults were functionally illiterate, almost certainly dooming

4. See DANIEL CALLAHAN, *WHAT PRICE BETTER HEALTH?: HAZARDS OF THE RESEARCH IMPERATIVE* (2003).

5. National Institutes of Health, Research Portfolio Online Reporting Tool (RePORT), Estimates of Funding for Various Research, Condition and Disease Categories (RCDC), <http://report.nih.gov/rcdc/categories> (last visited Apr. 30, 2009).

6. Nicholas Wade, *Some Scientists See Shift in Stem Cell Hopes*, N.Y. TIMES, Aug. 14, 2006, at A18.

them to poverty, low level jobs, and little upward mobility.⁷ The spending of \$3 billion on educating them would produce certain and not just promising social benefits, definite and not just speculative community gains—unlike the speculative clinical gains from stem cell research. But no celebrities, leading scientists, biotechnology entrepreneurs, prominent businessmen, or politicians proposed any referendum on that problem. Nor have many of the states initiating stem cell research, sometimes into the hundreds of millions of dollars, been hesitant about simultaneously cutting back on Medicaid benefits, as if the future benefits for future sick people are more important than present benefits for present people.

The third consideration bears on medical progress and medical need. Proponents of the research treat illness and disease as the greatest of threats to human welfare. I would say they are serious harms but by no means the worst facing our society. Even more threatening are the failures to provide insurance for those who do not have it, various forms of inequitable distribution of available resources of many kinds, global warming, racial and immigrant prejudices, poor support of working mothers, and many of the harms that were done to our society by the Bush administration's threats to civil liberties and sensible social priorities.

The developed countries of the world, including the United States, have an average life expectancy (accounting for male and female differences) of about seventy-seven years. This level of life expectancy is perfectly sufficient to sustain generally healthy, economically successful societies. The fact that heart disease (a stem cell target) is our nation's leading killer in no sense entails that it should be considered a major societal problem—unless anything and everything people die from should be considered a national disaster.

In spite of these indicators of disordered priorities, recent conventional research and improved clinical care are, for instance, steadily reducing heart disease mortality. The greatest threat of diabetes does not now come about only from the lack of a cure, but by increasing obesity, a far harder problem to deal with than inadequate treatments. It is also obvious that most of the stem cell target diseases are, save for diabetes and spinal cord injuries, diseases of aging societies, with heart disease, cancer, and increasingly Alzheimer's at the top of the list. Unless we think it an inherent evil that people die in old age, and that nothing less than all-out warfare is required to stamp out diseases that primarily afflict them, then it is reasonable to give a lower research priority to them.

As far as I can make out, the most evil events of the twentieth century came from man's inhumanity to man—world wars, genocide, racial and ethnic

7. Felix Montes & Roy L. Johnson, *The New State of Illiteracy in San Antonio and the Nation*, INTERCULTURAL DEV. RES. ASS'N NEWSL., April 2005, available at http://www.idra.org/IDRA_Newsletter/April_2005_Self_-_Renewing_Schools_Reading_and_Literacy/The_New_State_of_Illiteracy_in_San_Antonio_and_in_the_Nation.

violence—not from death by disease, save in poor countries, which are often bereft of research on those tropical and other diseases (such as malaria) that kill them. I believe there is an obligation to carry out research on those tropical diseases as well as HIV/AIDS, which destroys young lives and civic infrastructures in a way far worse than any disease that might be cured or ameliorated by regenerative medicine.

None of the considerations I have offered tell against stem cell research as such, simply against the use of embryos as research material. Adult stem cell research is fine, and if a way can be found to gain embryonic stem cells without destroying embryos that is fine as well. Although I do not believe there is any moral duty to advance the research, to do so could still be considered a human *good*, well worth a public and private investment. But if it is characterized as a good, not an overriding obligation, then it must pass the test of competition and comparison with other goods that need to be pursued for the sake of a better society. What I reject is the high pedestal on which it has been set. For a yet-unproven research possibility, stem cell research does not deserve that honor—though it surely helps to raise money and generate publicity.

B. The Campaign in Support of Stem Cell Research: Origins of a "Moral Duty"

How did embryonic stem cell research get put on such a high pedestal? Historians may someday aptly characterize the drive on behalf of stem cell research as "the perfect PR campaign," one of the best ever waged for medical research. This campaign began in 1998 with a rash of media stories about James Thomson's derivation of the first embryonic stem cell lines from frozen human embryos.⁸ Those stem cells, the public was told in often breathless ways, hold the promise of a whole new medical field, that of regenerative medicine, restoring damaged or destroyed cells in many organs of the body.

But it soon became evident that there would be opposition to the research—and particularly against federal support of it—mainly from conservative quarters. At that point the advocates ratcheted up the campaign. Its organizers, led by well-funded research advocacy organizations and various scientific societies, turned to the tried and true methods pioneered in the 1950s by two wealthy philanthropists, Mary Lasker and Florence Mahoney, at that time on behalf of larger appropriations for the National Institutes of Health. Their key tactics were to put together a coalition of prominent scientists, politicians, business people, and celebrities; amass a war chest to pay for publicity; and skillfully use the media.⁹ It was a tactic that worked well in the 1950s, and it worked no less well as the

8. James A. Thomson et al., *Embryonic Stem Cell Lines Derived from Human Blastocysts*, 282 SCIENCE 1145 (1998).

9. Elizabeth Brenner Drew, *The Health Syndicate: Washington's Noble Conspirators*, ATLANTIC MONTHLY, Dec. 1967, at 75.

1990s drew to a close and the new millennium arrived. It also had an added touch, which did not hurt. Bush's rejection turned out to be, among Bush critics, an added benefit: if he did not like it, there must have been something going for it.

The Alliance for Aging Research set the tone with its much-cited claim that up to 150 million lives could (and would, and should) be saved if the research was allowed to go forward.¹⁰ Thomas Okarma, CEO of the leading biotechnology firm, Geron, said that "not to develop the technology would do great harm to over 100 million patients in the U.S. alone."¹¹ A powerful endorsement of the research by dozens of Nobel laureates from all fields of science was publicized,¹² as was a comparable statement of 100 college presidents¹³ (most of whom, it is fair to assume, are hardly expert on the subject). Highly supportive public opinion surveys were released, as were enthusiastic declarations by prominent federal senators and representatives. Christopher Reeve, Michael J. Fox, and the journalists Michael Krondack and Michael Kinsley, each the victim of one of the target diseases, played the celebrity role. The National Academy of Sciences and the Institute of Medicine provided glowing endorsements. The media had no trouble finding stories about desperate parents hoping for a cure to their child's diabetes, or spouses taking care of Alzheimer's patients, or paraplegics trapped in wheelchairs. The real estate tycoon behind the push for the California bond initiative, Robert N. Klein, spoke perfectly the inflated language of the national campaign, calling the discovery of the potential of stem cells "one of the great watershed discoveries in history."¹⁴

It soon became hard to find many in my field, bioethics, who spoke out against the research. As a well-known journalist once asked me, "Why are bioethicists in such lock-step on this issue?" I could think of no answer that would not bring further embarrassment to a field that likes to think of itself as open, evenhanded, and non-partisan. Cynicism greeted the appointment of Leon R. Kass, a longstanding opponent of both reproductive and research cloning, to chair President Bush's Council on Bioethics. That appointment was railed against in the press and in bioethics chat rooms, treated as nothing more than a far-right

10. See generally Alliance for Aging Research, *Embryonic Stem Cell Research To Save the Lives of Millions*, Spring 2001, <http://www.agingresearch.org/content/article/detail/917> (outlining hopes for future stem cell technologies).

11. See T. Hviid Nielsen, *10 Years of Stem Cells: What Happened to the Stem Cells?*, 34 J. MED. ETHICS 852, 853 (2008).

12. See Rick Weiss, *Nobel Laureates Back Stem Cell Research*, WASH. POST, Feb. 22, 2001, at A2.

13. Tinker Ready, . . . and *ES Cell Strategy*, 7 NATURE MED. 518, 518 (2001) (describing the open letter from college presidents to Health and Human Services Secretary Tommy Thompson).

14. John M. Broder & Andrew Pollack, *Californians To Vote on Spending \$3 Billion for Stem Cell Research*, N.Y. TIMES, Sept. 20, 2004, at A23.

move to put an ethical polish on an intolerable, ideology-driven hostility to life-saving research. The columnist Robert Kuttner spoke out against the religious dogmatists standing in the way of the research.¹⁵ No such label is attached to those religious figures who oppose the war in Iraq.

Notably missing from the campaign was any recollection of some earlier advocacy efforts, each accompanied by excitement, hostility toward conservative critics, and unbounded hopes. Well over a decade ago there was a similarly controversial effort to support the implantation of fetal tissue in the brains of Parkinson's patients. It failed, and decisively so. Then there was the effort, beginning around the same time, to test gene therapy as a means of curing disease. That therapy has had meager results and, along the way, claimed the life of a research subject, Jesse Gelsinger.¹⁶ But no letdown seemed quite so striking as that following the completion of the highly touted \$3 billion effort to map the human genome, the Human Genome Project. Bill Clinton celebrated the end of that effort by saying it would now be possible to "eradicate once-incurable diseases."¹⁷ Such talk is muted these days. It turns out that there are many fewer human genes than projected, and that in any case proteins—the delivery system for genetic expression—may be more important for medical applications than genes alone. The mantle of eradicating "once-incurable diseases" has now been passed to stem cell research.

There is a scientific response to stories of that kind. Each of the cited failures or disappointments may not, in the long run, turn out to be failures after all. Good science takes time, with many disappointments along the way. The contention that adult stem cells, which can be harvested without embryo destruction, may be as promising as embryonic stem cells regularly draws a brisk response: the embryonic form looks theoretically more promising but, whatever view turns out to be right, good science wants to go down *all* available roads, never knowing in advance which will eventually work best. No doubt that kind of general argument about scientific progress is, historically taken, perfectly true. It is also no less true that it has provided cover for outlandish and improbable scientific promises and possibilities.

I raise the issue of hype, however, not as an argument against the research. Its real harm is that it feeds the notion of a "negative responsibility" or a "moral obligation" to pursue the research. That latter is an argument meant to disarm critics, to overcome ethical objections and resistance, and to characterize opponents as immoral or soft on human suffering. George W. Bush, ironically, must have been reading the same rhetorical playbook by calling the terrorism

15. For an example of this rhetoric, see Robert Kuttner, *When We Trust Science to Religion*, SAN DIEGO UNION-TRIB., Dec. 9, 2001, at G3.

16. Sheryl Gay Stolberg, *The Biotech Death of Jesse Gelsinger*, N.Y. TIMES, Nov. 28, 1999, § 6 (Magazine), at 137.

17. Gail Collins, *Public Interests; A Shot in the Dark*, N.Y. TIMES, June 30, 2000, at A25.

problem a threat to our “national security,” and the fight against it a “war.” And those who oppose the “war” are, to be sure, labeled as unpatriotic at best and indifferent to the suffering imposed by terrorists at worst.

What about the present case: excessive hype or reasonable hope? The common sense answer is that it is too early to know. But there have been many warning flags along the way, almost always buried at the end of media stories that headline new mouse breakthroughs, further lives to be saved, hopes for support from the new administration, and voices of indignation at the foot-dragging of George W. Bush (for whom, it should be noted, I did not vote). Yet even the most hopeful of scientists have been saying, since 1998, that turning the research promise into useful clinical applications, if possible at all, could take years or even decades to accomplish.

The May 2005 announcement that South Korean researchers had created new lines of embryonic stem cells that, for the first time, carry the genetic signature of diseased or injured patients, and which can be derived in fewer than twenty tries, signaled a great increase in efficiency.¹⁸ It was hailed by other scientists as a dramatic and spectacular advance. Yet it all turned out to be a fraud and an acute embarrassment to the research community. But, if anything, too much was made of it. Fraud has always been present in science. The main importance of the South Korean case was to demonstrate that a well-hyped campaign, with glittering prizes at the end, invites abuse: the greater the prize, the greater the temptation.

Yet at more or less the same time, in June of that year, James Thomson, while continuing to call for federal support of the research, laid out a number of cautions in an interview, in addition to the common scientific reservations about the long time it will take to get any useful clinical results. He said, as the interviewer summarized his comments, “that supporters of stem cell research are overestimating the prospects for transplantation cures, that the current stem-cell lines [and not just those authorized by President Bush, but new ones as well] are not well-suited for such applications anyway, and that there’s no need to resort to therapeutic [research] cloning now—or perhaps ever.”¹⁹

While I am not competent to assess his scientific views, it is noteworthy that he had a good word to say for President Bush’s compromise position: “[I]t did get the field started, and I think that’s a positive way of looking at it.”²⁰ However, he also echoed a frequent criticism of opposition to stem cell research: “[M]ost of the people who oppose this research, and most of those who support this research, do it with a profound amount of misinformation . . . [Everyone

18. Gretchen Vogel, *Korean Team Speeds Up Creation of Cloned Human Cells*, 309 SCIENCE 1096 (2005).

19. Alan Boyle, *Stem Cell Pioneer Does a Reality Check: James Thomson Reflects on Science and Morality*, MSNBC.COM, June 25, 2005, <http://www.msnbc.msn.com/id/8303756>.

20. *Id.*

should have] real facts.”²¹ Well, what should we know? Thompson’s interview was interlaced with what he acknowledged to be guesses, uncertain predictions, and varying future scenarios. What facts, if any, would make the prognostication more reliable? For the future of financial and political support, it is important to assess the future of the research. We need to know whether it is a good bet or not, and so far that remains uncertain. There have been, as of 2008, no striking breakthroughs on the clinical front, and the fact that some prominent researchers are now saying that the greatest gain may come from the knowledge generated rather than for the cure of disease may be telling a different story than the one initially advanced. The first clinical trial using cells derived from embryonic stem cells was announced in 2009 (though there was controversy about whether this trial was premature).²²

It is a fact that a great deal of money and energy, and the best of American public relation and advocacy skills, have been invested in the selling of stem cell research, particularly the embryonic kind. As the California bond drive demonstrated, a combination of biotechnology entrepreneurs, wealthy real estate tycoons, grant-seeking scientists, a muscular governor and other leading politicians, and an eager public have deeper pockets for advocacy than even the Southern California religious right. In the United States, any cause that proclaims improved health and the conquest of disease is usually an easy winner in ideological combat, especially if its cause is pressed with big money and media savvy, and given medical credibility by credentialed experts.

II. EMBRYOS, EMBRYOS, AND MORE EMBRYOS: THEORIES ON THE PERSISTENT DISAGREEMENT OVER THE MORAL STATUS OF THE EMBRYO

I now turn to the moral status of the embryo. For about thirty-five years now I have puzzled and struggled over that status. Some people have sublime and calm self-confidence in the rightness of their views on this issue, and this trait seems to be evenly displayed on the right and left. There is also persistent perplexity on the part of many others—that is, most of us. Wherever one stands, however, it might readily be agreed that there is no end of the disagreement in sight. I have puzzled about why it is hard to achieve consensus. As my wife (pro-life) and I (pro-choice) long ago noted, after decades of argument, we each know all the relevant science and all the relevant moral and philosophical arguments; it is hard to find anyone who can say anything new to either of us. Still, we disagree. I have three theories about this difficulty of overcoming disagreement: one bears on our interests and self-interests, another on our modes of moral analysis, and the third on devising public policy and a regulatory framework for research.

21. *Id.*

22. Andrew Pollack, *Milestone in Research in Stem Cells*, N.Y. TIMES, Jan. 23, 2009, at B1.

A. Interests and Self-Interests

My way of understanding the methodological problems of determining the moral status of the embryo, which has helped me to see why there is no decisive general method of solving problems that mix scientific evidence and moral evaluation, has ineluctably (and sometimes unpleasantly) led me to consider the role played in the process by our interests and self-interests. There are two ways of framing the problem I want to point to. One of them has been to ask why it is that the passions run so high for pro-life and pro-choice advocates in the abortion wars. Each of them has, in my observation, invested their stand with symbolic and policy considerations that go beyond abortion and the moral standing of embryos (or fetuses). Let me call this the “interest” problem: important matters are at stake, bearing on what each side sees as the kind of world in which they want to live, and the only kind of world that anyone should want to live in.

For many feminists, abortion has been a decisive index issue, one whose outcome determines what women’s role and social status will be in many areas other than reproduction. If we lose that battle, they have in effect said, we will have lost the war for women’s rights. For pro-life advocates, the moral status of embryos and fetuses is no less a decisive index issue, determining how we think of and treat the weakest and most defenseless among us. If we lose this battle, they are saying, we will have lost the war for human dignity. At the extremes, some pro-choice feminists say that the moral status of embryos and fetuses is solely a matter of a woman’s decision: they have value insofar as women confer value on them—and that is the kind of absolute power women should have. For their part, some pro-life proponents want abortion, however early the stage, to be understood as nothing less than murder of the innocent, justifying for some violence and non-peaceful protest against those who carry out such atrocities. These attitudes are mainly found at extreme edges of the abortion struggle, but they are less surprising (if not less disturbing) when it is understood that there are larger causes and concerns at stake, of which the moral status of the fetus is the tinderbox, not the whole story.

What I will call the “self-interest” problem raises a number of delicate puzzles. By this I mean the extent to which people, wittingly or unwittingly, allow their self-interest to determine their moral judgments. If my reading of the methodological problem of determining the moral status of the embryo is plausible—we lack any decisive criteria for making a decision—the self-interest issue must consequently raise its head. The way is open, and it is a wide avenue, for the introduction of ideological, political, and self-interested judgments. That is what patently appears to happen.

At least two senses of self-interest can be distinguished. One of them is what might be called acceptable or legitimate self-interest: a minority group seeking an end to discrimination against itself, the disabled lobbying for access to public

facilities, or homeowners seeking the end of industrial pollution practices that threaten their water supply or the health of their children. Each group seeks something of direct benefit to them, perhaps of no particular benefit to the rest of the community, and perhaps even imposing some burdens on everyone else—but it is considered a legitimate claim and a tolerable burden even on those who have nothing special to gain.

But then there is what I will call an ambiguous sense of self-interest, which might be those situations where we at least wonder if the self-interest is crass, that is, where narrowly self-serving desires are at stake. Here we might think of the industrial polluter who knows that there is hazardous pollution that it could well afford to stop. But it persuades itself that the pollution is not all that bad, that nature will eventually take care of it as it biodegrades, and that any serious efforts on its part would endanger its economic strength and thus put at risk the many jobs the community needs. I stress in this example that the company “persuades itself,” in order to recognize that most people who display crass self-interest may admit that some self-interest is at stake but not the grossly self-serving kind.

What are we to make of embryonic research scientists who, we assume, must have persuaded themselves that embryos do not have a high enough moral status for concern, and maybe none at all, and thus see no problem in using them for their research? Is it a mere coincidence that, seemingly, only a handful of scientists interested in doing the research appear to have any serious dilemma about using embryos, a far lower proportion than the population as a whole? This can be seen as a classic chicken-egg problem: which came first, their desire to do the research and thus an adaptation of their moral stance toward embryos through self-persuasion; or was there a preexisting stance toward embryos that made it morally tolerable to use them for research?

The same kind of questions can be raised about the lay supporters of the research and particularly those suffering from some disability or life-threatening disease that the research might alleviate. At the least we might say that, for those who want the research to go forward, there are some powerful disincentives against granting embryos so high a status that the research could not proceed. Or, to put it a different way, if the destruction of embryos is understood to be one of balancing their value against that of research benefits, it is not exactly unpredictable that many people will persuade themselves that embryos have a lesser value than those benefits.

I focus on this line of thought because, if science cannot tell us what the moral status of an embryo is, and therefore if the moral values at stake must, so to speak, be imported from the outside, then there is room to seek those moral principles and modes of reasoning most compatible with our other values. If we are as scientists eager to carry out the research, and as patients eager to have its benefits, we will be likely to bring those values to bear on our assessment of

embryos—and to decide against them. But my mode of analysis here cuts two ways: for those who see in various forms of scientific research a threat to human dignity (an important value for their way of life) or the beginning of a slippery slope, they have a powerful incentive to give the embryo a high and inviolable status.

I do not conclude from my line of analysis that the obvious self-interest of either the researchers or their opponents is a matter of crass self-interest; however, I also do not believe that either group is disinterested. The scientific interests of researchers (their notions of the goods to be pursued) are best served by minimizing the moral status of embryos, just as the moral interests of opponents (their notions of the higher goods at stake) are served by maximizing it. What all of this proves to me is that the ambiguous status of the embryo—inescapable since it requires a mode of combined scientific/moral analysis for which we have no good methods—invites and perhaps makes necessary the introduction of values and perspectives drawn from other ways of understanding what we take to be the human good; and these values and perspectives open the way for a self-interested stance. It only gets crass when our own view of what that good might be is utterly self-serving. I do not hesitate to ascribe this judgment to the view of some feminists that the value of the embryo depends entirely on the value a woman chooses to confer upon it, or to politicians who boorishly court conservative support for their election by pandering to pro-embryo forces, treating their enemies as killers.

*B. Moral Analysis, Uneasiness, and “Respect”:
Deriving an “Ought” from an “Is”*

There persists a widespread conviction that the answer to the status of the embryo can be found in science. Hence, there are endless debates about the embryological evidence, about whether one can speak of a pre-embryo, about whether human life could someday be derived from a single skin cell, about whether more scientific evidence might one day solve the problem, and so on. But to ask about the moral status or standing of an embryo is an ethical question, and if there was ever an instance when it is not possible logically to derive an *ought* from an *is* (known to philosophers as the naturalistic fallacy), this is it.

Science may eventually be able to empirically explain everything to be known about embryos, their genesis, and their development. But it is beyond the capacity of science to tell us how we ought to treat embryos or evaluate their moral status. That evaluation falls into the category of issues that requires a blend of empirical analysis and moral judgment, but each mode of reasoning draws upon different methods and standards of judgment. To further complicate matters, those different forms of judgment can influence each other: our moral concerns can lead us to look at one among many aspects of the scientific evidence, selecting those that seem relevant (itself a non-scientific judgment),

while the scientific evidence can lead us to reconsider our moral judgments, sometimes whether we like it or not.

Could one conclude from my analysis above that there is nothing more to an evaluation of the moral status of the embryo than our various interests and self-interests at play and manifesting our different views of the good life? There are surely some grounds for thinking so, but there are some reasons to hesitate as well. While there are many research proponents who seem to believe that embryos have no value whatever, they seem to be in the minority. I characterize the stance of many if not most proponents as one of uneasiness, displaying some residual uncertainty about the status of embryos. This uneasiness seems to me to come out in a number of ways: an acknowledgement that, if implanted and not destroyed, embryos have the potential to develop into full persons; a reluctance, other than as a last resort, to create embryos solely for research purposes; an aversion to commercializing the use of embryos, and finally by the adoption of the word “respect” as an apparent effort to find a symbolic compromise characterization of what we owe embryos.

Just what is it that bothers people, even those readily willing to trade off embryos for valuable research? I cannot say for sure, but I suspect that, however much some philosophers may deride the importance of potentiality (“acorns are not oak trees, are they?”), it is hard to entirely put out of our mind and emotions that we all began as embryos; undeniably they are part of everyone’s personal history. Even if, as is customary, a distinction is made between the beginning of individual life, on the one hand, and protectable moral standing on the other, that beginning is hard to ignore.

But I can only speculate about the sources of the uneasiness. I want to take a look instead at the word “respect,” a much-employed way of placating and domesticating the discomfort. A 1979 report of the Ethics Advisory Board of the Department of Health, Education, and Welfare stated that the early embryo merits “profound respect,” though not all “the full legal and moral rights attributed to persons.”²³ A 1994 NIH Human Embryo Research Panel said that “the preimplantation human embryo warrants serious moral consideration as a developing form of human life.”²⁴ The National Bioethics Advisory Commission said in 1999 that “human embryos deserve respect as a form of human life.”²⁵

Since the context of that usage of “respect” is that of the destruction of the embryo, this amounts to what I would call cosmetic ethics. The dictionary

23. Office of the Sec’y, Dep’t of Health, Educ., & Welfare, Protection of Human Subjects: HEW Support of In Vitro Fertilization and Embryo Transfer: Report of the Ethics Advisory Board, 44 Fed. Reg. 35,033, at 35,056 (June 18, 1979).

24. 1 NAT’L INST. OF HEALTH, REPORT OF THE HUMAN EMBRYO RESEARCH PANEL, at x (1994), available at http://bioethics.gov/reports/past_commissions/human_embryo_vol_1.pdf.

25. 1 NAT’L BIOETHICS ADVISORY COMM’N, ETHICAL ISSUES IN HUMAN STEM CELL RESEARCH, at ii (1999), available at <http://bioethics.georgetown.edu/nbac/stemcell.pdf>.

definitions of “respect” appear to leave little room for its use as a balm to the conscience, demanding something more of us than a deferential nod in their direction as they are destroyed strictly for our ends, not their own. Their death is certain, the research results wholly speculative. Try fitting the notion of respect as used by the various commissions into the standard dictionary definitions of respect: “1. To feel or show esteem for; to honor; 2. To show consideration for; avoid violation of; treat with deference.”²⁶

How can I criticize this symbolic deference paid to embryos and, at the same time, defend the legalization of abortion? In the most defensible abortions, for a serious threat to a woman’s health or the certain likelihood of a crippling genetic defect for her embryo or fetus, an abortion can have almost certain beneficial results, at least from the perspective of a woman who believes that it is necessary. Hence, the destruction of the embryo (or, much more likely, a fetus) in that case brings an almost certain benefit to a woman: a life is taken but another life gains, and in that case a life already fully developed gains, not hypothetical future patients who may, in any event, be cured by means of research other than the use of stem cells. I would not want to call the destruction of the embryo or fetus in that case a respectful act, even for a defective fetus. This is still destruction pure and simple, but for very different reasons than clinical research. In short, a different kind of case can be made for abortion, with equally deadly results, than can be made for embryo research. An acceptance of abortion does not entail an acceptance of embryo destruction for research purposes.

C. Public Policy: Embryonic Stem Cell Alternatives, Excess Embryos, and Regulation of Research

I have already tried to make the case that there is no moral obligation to pursue embryonic stem cell research, particularly in light of the vast amount of money already being spent to combat the same conditions at which the research is aimed. Whether the various ideas for deriving stem cells by means other than embryo destruction will succeed is uncertain at this writing, but it would appear to be a worthy goal. That very effort has been challenged on the grounds that there are already thousands of frozen embryos available for research, otherwise to be discarded. That is a tantalizing argument, hard to resist because of its commonsensical nature. Even so, on balance I do resist it, but for a cluster of reasons, not one in particular.

Excess frozen embryos exist as a result of IVF, which in itself seems to me perfectly acceptable. Much less acceptable are the reasons why there are so many frozen embryos available. Most of them come from the treatment of infertile women, but most (though not all) of those women are infertile because of two well-known causes, late procreation and sexually transmitted infection. I would

26. THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 1107 (1st ed. 1969).

classify excess embryos, then, as a public health problem—yet one that we have medicalized as an inherent biological problem, to be clinically treated rather than the subject of efforts to change the underlying cause (particularly creating social and economic contexts that encourage women to procreate earlier rather than later, in their twenties rather than thirties).²⁷ Of late, it might be mentioned, efforts are underway to improve IVF to reduce the number of spare embryos, and of course there have been many scientific doubts about whether many or most frozen embryos would be useful anyway.²⁸ I will not take up here the effort to find ways of gaining stem cells without destroying embryos, but it is an obviously useful effort.

I am not greatly impressed with the argument that spare embryos will be destroyed anyway, and that their use in research is better than simply wasting them. I come to that judgment for a variety of reasons, not one of which is (even to me) fully persuasive in itself, but which add up to a moral gestalt that tilts me against that use: 1) spare embryos need not, and should not exist in the first place—they enhance the chances of an eventual pregnancy, but do not guarantee it, and the recent efforts to reduce their number reflects, at least in part, some level of discomfort; 2) research on dying human beings without their informed consent was once accepted in medical research on the grounds that they were dying anyway and it would be a waste not to make use of them; 3) the one-time (now defrocked) champion of euthanasia, Dr. Kevorkian, contended that the organs of those who were going to suffer capital punishment should routinely be salvaged without their consent because, after all, they were going to be dead soon, and thus would have no further use for their organs and that—clincher of clincher—the salvaged organs could save lives (and Chinese penal authorities have used an identical argument); and 4) the Nazi doctors, who did all kinds of horrible things to concentration camp inmates prior to their certain death in the name of medical research, consoled themselves with the thought of all the medical benefits that could accrue from enlisting the inmates without consent. The research was mainly useful for militarily valuable purposes but at least some seems to have been for saving lives in general. Do we want contemporary medical research placed in such unsavory company? As I said, there is a response to each of the points (we're not Nazis, Chinese penal authorities, or Kevorkian—just good people trying to reduce suffering and death), but their net weight leaves a bad odor in the room, too much for me, at any rate. I would be more impressed with Gene Outka's argument based on a "nothing is lost" principle if I believed it legitimate to have spare embryos, which I do not (it is not medically necessary), and if I believed that there was some obligation to carry out research with embryos, which I do not either. I would argue that "nothing is lost"—to turn

27. See *REPRO-GEN ETHICS AND THE FUTURE OF GENDER* (Frida Simonstein ed., forthcoming June 2009).

28. Gretchen Vogel, *Embryo-Free Techniques Gain Momentum*, 309 *SCIENCE* 240 (2005).

Outka's argument on its head—by not doing the research at all (as I explained earlier).

CONCLUSION

I conclude with a few observations on the regulation of stem cell research. For at least three decades, the strategy of choice for dealing with morally controversial scientific initiatives which have strong scientific support has been to establish commissions, which propose some limits and then turn the problem over to a regulatory approach. The National Academy of Sciences on stem cell research put together a commission that set forth a number of regulatory ideas (hoping, it appears, to avoid a similar government move), and the state of California as well as some academic research centers have set standards for carrying out the research.²⁹ But we should not expect commissions and regulations to stop the research. Their purpose is to reduce anxieties about it and to curtail evident abuses. It would be a miracle if any ardent research opponents were appointed members of those commissions or asked to help write the regulations. The aim of the commissions is, after all, to facilitate the research—to make sure it goes forward—but in ways that keep hostile legislators and a worried public at bay.³⁰ That's the American way, and it well serves those ends, even if at times we pay an ethical price for it. The most important price is that it allows us to keep going with the research but salves our conscience in the process, and it is hardly noticed.

I end my paper with one sentence. The moral status of early embryos is weak and uncertain, but not nearly as weak as the moral status of research cloning.

29. See COMM. ON GUIDELINES FOR HUMAN EMBRYONIC STEM CELL RESEARCH, NAT'L RESEARCH COUNCIL, GUIDELINES FOR HUMAN EMBRYONIC STEM CELL RESEARCH (2005), *available at* <http://www.nap.edu/openbook.php?isbn=0309096537>.

30. JOHN H. EVANS, *PLAYING GOD? HUMAN GENETIC ENGINEERING AND THE RATIONALIZATION OF PUBLIC BIOETHICAL DEBATE* (2002).