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George J. Annas

ISSUES ARISING FROM IN VITRO FERTILIZATION (VICTORIA), REPORT ON THE DISPOSITION OF EMBRYOS PRODUCED BY IN VITRO FERTILIZATION, chaired by Prof. Louis Waller (Melbourne: Government Printer, 1984), par. 3.29.

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8. Report on the Disposition of Embryos, *supra* note 6, par. 3.27.

9. *See* Prof. Waller's testimony before the Australian Senate Select Committee *supra* note 2, at 1458–59.

The Ethics of Embryo Research: Not as Easy as It Sounds

by George J. Annas, J.D., M.P.H.

Mark Twain once said of Wagner's music, "It's not as bad as it sounds." Likewise, it may be said of Peter Singer and Helga Kuhse's stroll through the issues involving embryo research: "It's not as easy as it sounds."

Today it seems clear that Aldous Huxley's version of a *Brave New World* is much closer to the mark than George Orwell's *1984*. We will not have to be dragged into a technologically dominated future by a totalitarian government; we will go willingly, cheering almost any change as "better" and accepting science as always "improving" on nature. This childlike faith in science is at the heart of Prof. Singer and Dr. Kuhse's hymn to embryo research. They seem to believe that embryo research will not only lead to the prevention and cure of genetic disorders but also to a cure for cancer, and cultured tissues for transplantation. Even if one accepts this rosy view, the acquisition of important scientific knowledge is only a necessary, *not* a *sufficient* justification for experimentation.

Unrestricted embryo experimentation could also lead to a less rosy future. A future in which "motherhood" is abolished and made-to-government-specification children are the norm. A future in which prefabricated human embryos are frozen and sold in supermarkets and through mail order catalogues. A future in which a woman could order twins or triplets, and a future in which a daughter could give birth to her genetic sister, who could, in turn, give birth to her genetic mother.[1]

We can also picture a world in which human embryos are fabricated not for reproduction but purely for experimental purposes. The embryos could be used for such things as testing the toxicity of new drugs, chemicals, and cosmetics, much the way in which rabbits' eyes are now used. Are these developments we should look forward to and encourage? Fairy tales we can afford to ignore? Or real dangers we should attempt to avoid by reasonable legislation and regulation?

IVF, Embryo Transfer, and Motherhood

The birth of Baby Louise in England in 1978 ushered in the current wave of enthusiasm for *in vitro* fertilization (IVF) and embryo transfer, and the related requirements for embryo research to improve the process. The plight of infertile couples is devastatingly painful. The IVF process has permitted thousands of infertile couples to have children. Pictures of these children have graced the covers of popular magazines around the world, and their images have become the major justification for artificial reproduction. Techniques for creating children without sex close a circle opened by effective contraception, which made sex without reproduction dependable. Society seems as supportive of these new techniques as it was of contraception, but more anxious about the implications, which will likely prove at least as profound as those that have resulted from effective contraception. For example, that an embryo can be transferred to a woman genetically unrelated to the woman from whom the egg was obtained means that now children can be born with five distinct parents: a genetic father, a rearing father, a genetic mother, a rearing mother, and a gestational mother.[2]

Separate genetic and rearing fathers have long been recognized as a possibility, summed up by Redd Foxx's aphorism, "Momma's baby, Papa's maybe." But how should society react to the completely novel possibility of the separation of a child's genetic and gestational mother? Who should be given the legal rights and responsibility to rear the child—the woman who contributed the genetic material or the woman who gestated the embryo?

George J. Annas is Utley Professor of Law & Medicine at the Boston University School of Medicine and chief of the Health Law Section of the Boston University School of Public Health.

Experimentation on the human embryo unfortunately has the same divisive potential as abortion, since one's opinion of its propriety may depend exclusively on one's view of the moral status of the embryo itself.[3] Compromises are therefore difficult, and the use of inherently arbitrary definitions is to be expected.

Rights, Interests, and Protections

The first argument that can easily be disposed of is that embryos have "no intrinsic value and no right to life." The problem with this argument is that one can easily agree with the latter proposition without ascribing to the former. Embryos have no more "right to life" than do fish, horses, or pigs. But that does not mean that we cannot *legally protect* embryos because of what they represent to us. In Australia, for example, the Great Barrier Reef and its inhabitants are "completely protected" by legislation, even though it would be correct to say that the islands, coral, and fish composing the reef have no "right to life." It would, however, be incorrect to assert that because the Great Barrier Reef, redwoods, dolphins, or whales have no "right to life," they therefore have "no intrinsic value." The latter demands a response to the questions: Value to whom? And based on what measure? It can be wrong for us to harm creatures (like whales) that do not have rights, and it can even be wrong to destroy vegetation (like redwoods). We can, of course, legally protect such entities without granting them rights.

Species Membership and Potentiality

Thus we *can* protect human embryos from would-be experimenters if we want to. Does the embryo's membership in the species *Homo sapiens* provide us with sufficient justification? I believe it does. We can protect human embryos simply because they are a compelling symbol of human regeneration and the future of humankind. It is silly to assert that viewing human embryos this way permits us to kill Steven Spielberg's ET and similar extraterrestrials. Of course we would still afford ET moral (and legal) rights, since he possesses the intelligence qualities of *Homo sapiens* that we agree are relevant to this status. But speciesism of this sort would permit us to destroy (and experiment with) ET's embryos, while not permitting the same experimentation with *Homo sapiens* embryos. Likewise, as Leon Kass has noted, eating human embryos would at least raise the question of cannibalism.[4] Eating ET's embryos would not.

This alone is sufficient grounds to regulate human embryo research, but there is more. The potentiality argument is not terribly compelling, but it is much more compelling than Singer and Kuhse give it credit for. Although a human embryo is another development along a continuum, it is a *significant* one. It will not do simply to equate it with an egg and a sperm: the embryo is an entity quite distinct, and is rightly looked at and valued as more than the sum of its parts. Jonathan Glover's analogy notwithstanding, I assume that neither he nor Singer and Kuhse would be pleased if he ordered cake in a restaurant and was presented with milk, sugar, flour, eggs, and a mixing bowl.

Views from Around the World

Governmental commissions in the United States, England, and Australia have considered the status of the human embryo. In the United States, the researcher-dominated thirteen-member Ethics Advisory Board (EAB) concluded in 1979 that the human embryo was worthy of "profound respect" but that, nonetheless, research on IVF was "ethically defensible" if restricted to the fourteen-day period after fertilization. This period was chosen because it is the stage normally associated with the completion of implantation. The U.S. Department of Health and Human Services rejected the EAB's conclusion, and as a result no embryo research has been federally funded in the United States.

The United Kingdom's Warnock Committee was split. All agreed with the EAB that the "embryo of the human species should be afforded some protection in law." Accordingly it was recommended that embryo research be done only in licensed clinics and that unauthorized research be a criminal offense. The fourteen-day limit was also adopted, but on the basis that day 15 marks the time of the formation of the primitive streak and "the beginning of individual development of the embryo." The committee did recommend that scientists be permitted to create embryos for research purposes alone, but the vote was very close (9–7). Even so, the Warnock Committee was unanimous in condemning the routine testing of drugs on human embryos because of the large number of embryos this would require. Why numbers themselves should be significant, however, was a question the commission did not answer.

In Australia, Victoria's Waller Commission approved embryo research "in order that the success rate of the clinical IVF program may be improved." It also permitted embryos to develop no more than fourteen days because this marked the end of the stage of implantation, and "after this stage the primitive streak is formed, and differentiation of the embryo is clearly evident." The committee approved this by a 7–2 vote. But by the same 7–2 margin it voted

that no human embryo be brought into existence solely to be used in research because it was morally unacceptable to use a "genetically unique human entity" solely as a "means to an end."

All of these groups support Ian Kennedy's statement that "we intuitively do not equate a fertilized human egg with a hamster or a piece of mouse tissue."[5] That is why, Singer and Kuhse's view notwithstanding, there is international agreement that the human embryo is worthy of legal protection and cannot be treated like a hamster or other experimental animal. If one is concerned about the use to which laboratory animals are currently put,[6] the answer is to work to protect those animals, not to substitute human embryos for them.

Singer and Kuhse's characterization of the state of affairs in Victoria as a "perverse and grotesque distortion of ethics" misses the mark. The fact that Prof. Wood and Dr. Trounson could *legally* perform their experiment in an unethical manner in no way reflects on the ethics of either the Waller Commission or the Victoria Parliament. If Wood and Trounson performed their experiment in an unethical manner, it would, of course, be their ethics that would be in question. Singer and Kuhse's mischaracterization rests upon an assertion that neither the Waller Commission nor the Victoria Parliament was willing to accept: that one cannot distinguish between "spare" human embryos and ones "manufactured" just for research purposes. It was not only the means/end rationale but the belief that producing human embryos *just* for research, with no chance to live, was an inherently dehumanizing and degrading venture, that led to this conclusion.[7]

The Fourteen-Day Limit

Singer and Kuhse are, as I'm sure they'll be pleased to learn, correct about one thing. Even though there is international agreement that no research should be conducted on human embryos fourteen days after fertilization, the reasons for this boundary vary, and we have no principled cutoff point at present. Unless the basis of the fourteen-day limit is more clearly articulated and publicly accepted, it cannot long serve as a legitimate regulatory boundary.[8] Singer and Kuhse's suggestion of "brain death" as a cutoff seems bizarre, even by analogy. We have no accepted definition of brain death in children under the age of five; and even the most ambitious criteria apply only to neonates at least seven days old. Prior to this, the concept of brain death has no meaning. The notion of ability to feel pain has some inherent appeal, but will ultimately be undefinable in the fetus, and thus not useful as a regulatory boundary.

Commercialism

We can, of course, acknowledge a slippery slope without sliding down it. But if research on embryos will likely cheapen our view of human life and lead to the commercialization and sale of prefabricated human embryos, then achievement of all the research goals will not be worth the price paid. We have already decided that human kidneys should not be bought and sold. Forbidding the sale of manufactured human embryos is even more compelling.

Embryos, like babies from surrogate mothers, will be bought and sold in the belief that they will produce a healthy child, and possibly a child of a certain physical type, IQ, or stature. When the child is not born as warranted or guaranteed, what remedies will the buyer have against the seller: return the defective goods for a refund, partial refund, or exchange? Because the sale of human embryos will quickly become confused with the sale of human children, the sale of human embryos should be legally prohibited, regardless of how we come out on embryo research.[9]

On the related issue of defining motherhood, it seems most reasonable legally to assign rearing rights to the gestational rather than the genetic mother. This woman will have contributed more biologically to the child in terms of the pregnancy, will have risked more in terms of her own health, will have physically (and probably psychologically) bonded to the child, and will definitely be with the child at the time of birth. Thus, not only will she be identifiable, she will also have made the greatest contribution to the child and, therefore, for both her own and the child's protection, she should be considered the child's legal mother.

In the United States, a model state law designed to clarify the identity of the gestational mother as the legal mother and to outlaw the sale of human embryos should be drafted and enacted. The moratorium on discussion of human embryo research should end, and the public examination of the issues it raises, begun by the EAB, should be renewed. The EAB, or its equivalent, should be re-established with a non-researcher majority, to oversee all human embryo research.

Almost thirty years after he wrote *Brave New World*, Huxley wrote in *Brave New World Revisited*: "That we are being propelled in the direction of 'Brave New World' is obvious. But no less obvious is the fact that we can, if we so desire, refuse to cooperate with blind forces that are propelling us." It's time to take off the blindfold and confront the extracorporeal human embryo. It will not be as easy as it sounds.

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able from an individual patient's point of view, active euthanasia raises so many insurmountable practical problems that it should never be legalized. For example:

- Who should decide?
- What if the patient is unconscious or incompetent?
- How could prior consent be proved?
- What safeguards could ever be strict enough to ensure that doctors will not abuse these god-like powers?

I do not deny that there are practical difficulties when life-or-death decisions are at issue; what I do deny is that they apply to active euthanasia only. Because both active and passive euthanasia are instances of the intentional termination of life, these difficulties apply to passive euthanasia as well—and that practice, as I have suggested throughout this paper, has become standard in the modern hospital.

Take the practically very important question: Who should decide? It takes very little to see that this question has the same difficulties, and substantially demands the same answers, regardless of whether it is raised in the context of active or passive euthanasia—for in either case, the outcome is death. There is no distinction in the gravity of the decisions that must, and already are, being made.

Just one final point. It will be said that it is impossible to frame laws and provide safeguards against abuse. But the opportunity for abuse already exists. If doctors wanted to abuse the powers they already have, they could do so by simply allowing their patients to die unjustifiably. What is more, detection would be less likely than it would be in the case of unjustified killings. There would be no direct evidence, the patient having died "naturally" of whatever life-threatening disease afflicted her. Thus there is an argument that active euthanasia, properly institutionalized, would decrease, not increase, the scope for abuse.

To conclude, then, I believe that the case for active voluntary euthanasia is a persuasive one. An autonomous person may well decide to request to die so as to avoid unnecessary suffering when terminally ill, or to avoid the indignity of a dehumanized existence. Those who would deny a person this final request must give relevant and forceful reasons—especially if they think that passive euthanasia is justifiable in similar circumstances.

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