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The Stem Cell Dilemma – An Overview

by

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Some people are really confused about the whole concept of stem cell research and the many variations which seem to go by that name. I think some clarification is in order.

As every biologist knows, human life begins at conception when the sperm of a man and the ovum from the woman unite and almost immediately begin to multiply. In about five days, the multiplication of cells is still primitive with cells which are pluripotent (about 100), that is, they may develop in any number of ways directed by the internal mechanism of the whole entity. These cells may be removed from the embryo, resulting in its death. Scientists about five years ago managed to remove and separate those stem cells from the blastocysts, or five-day-old embryos. Stem cells can transform themselves into any kind of tissue and can keep dividing indifferently. The theory is that these cells may be placed in areas where people are suffering from degenerative diseases (Parkinson's, Alzheimer's, diabetes, spinal injuries, etc.). There, the stem cells would be directed to repair or replace damaged tissue or broken parts of the body. Although there has been some success in mice with spinal cord injuries, this remains a theory, as of this writing.

By in vitro fertilization, ova previously removed from a woman are fertilized in a petri dish with sperm and are allowed to multiply for a few days. Many embryos are created since a number of them are inserted into the woman in the hope that one will implant itself in the womb. The rest of the blastocysts are frozen.

Usually four to six embryos are injected into the womb, each having an equal opportunity to become implanted in the woman's womb resulting (hopefully) in pregnancy (sometimes multiple births). The ones not embedded in the womb simply die. Other embryos are frozen for future attempts and can be stored for about five years, after which they are either given to another woman (adoption) or they are destroyed. There are hundreds of thousands of these embryos which are frozen for a maximum period of five years and are destroyed each year from these clinics. It is also held by scientists in the field that embryonic stem cells are better suited for this task than stem cells taken from adults (there has been some success in this area) or from the blood from the placenta of newborns. Not much research has been done in the latter areas so it is difficult to know whether research in this area is better than embryonic stem cells. The NIH spent 243 million dollars on this research in the year 2000. The recent approval by President Bush of funding for these morally neutral stem cells may give us greater knowledge in this area.

The argument of those who support embryonic stem cell research (even those who are staunchly pro-life, such as Senator Hatch, R-Utah) is that these embryos are going to die anyway since they are discarded and destroyed, usually after about five years of storage in fertility clinics. Therefore, rather than have them go down the drain where they will be pure waste, we should use them to promote life of the living for those suffering from degenerative diseases. In that way at least these embryos will realize some good for humanity, rather than being destined for the garbage incinerator. This seems to make a lot of sense to a lot of people in America.

But this process puts into question the whole process of in vitro fertilization (fertilization outside of the womb in a petri dish by combining an egg and sperm – with all kinds of possible variations). Given the fact that so many embryos are held in storage and destroyed afterwards, does this not make the whole process of in vitro fertilization morally dubious? And what of the fact that this is simply a technological process and not an act of love between a man and a woman prepared for the responsibility and education of a new life, born of that loving union? We have therefore reduced that loving relationship between two committed people to a technique which is impersonal and technological in which the human dimension is unrecognizable. Given the results and the methods used to accomplish birth, the whole process of in vitro fertilization is morally dubious in the extreme.

On the other hand, the argument against embryonic stem cell research is clear: to obtain the stem cells necessitates killing the embryo to remove these cells for the benefit of others. We cannot deny that the blastocyst is

human life because it is what it will always be except for the addition of time, food, and oxygen. Nothing more of a substantive nature is added ever again. It is therefore most emphatically human life and again, taking its cells is the intentional killing of human life. That is immoral in the extreme and may never be done morally. It is what can be called intrinsically evil – the intentional taking of innocent human life, which is inherently wrong.

That is why legislation is pending which would forbid all forms of “therapeutic cloning,” that is, an egg and sperm are joined in a petri dish to produce an embryo which is destined exclusively to be destroyed by the removal of its stem cells for research purposes. This is seen as immoral by almost everyone and is already forbidden in Europe. At the same time there seems to be no real fundamental difference between this and killing frozen embryos for stem cell removal because both are destined for death *by someone*. Both are destined to be killed.

The only difference, it is argued, is that we who use these stem cells do not do the actual removal-killing. We simply use them as presented to us. Should we refuse to use them for the good of other human beings when we had nothing to do with their death? It is the same dilemma faced by scientists after World War II. They were face with a large body of knowledge obtained by Nazi doctors from un-consented experimentations on human subjects in the death camps (Jews and other *untermenchen*). The response of the scientists there was affirmative since none of them had anything to do with the torture and death of the innocent victims of Nazi atrocities. It is the same argument used by President Bush in his talk to the nation.

Unfortunately, the analogy is not the same with embryonic stem cell research since this assault on human life is an ongoing phenomenon, not a static body of knowledge already complete after the evil deeds. The evil deed of stem cell removal is going on now, every day. The research depends on the death of the embryos. Moreover, any federal funding of such research will increase the demand for stem cells which will make the whole process more profitable – increasing the demand which this paid research by the federal government will do. Does this not make all who participate in that federally funded research materially liable for what others are doing? When you make something profitable, are you not encouraging another to do what you are calling evil, even murder? Therein lies the slippery slope danger even for those who say “They are going to die anyway.” That, incidentally, was the argument used by the Nazi doctors before their experiments on human subjects: those Jews, those *untermenchen* are going to die anyway so why not use them for the good of humanity so that their lives have some meaning. We never make such an

argument for the comatose, the elderly, the dying, prisoners condemned to death; only for embryos who have no defense or constituency.

This was the dilemma which President Bush faced in his fateful decision in a speech on August 9, 2001. The President pretty much outlined the salient points which we have given in this paper and he decided to go forward on research on embryonic stem cells which have already been garnered. The President's justification for this was that these stem cells have already been harvested and the embryos already killed. All this amounts to about sixty lines (a line is the stem cell removed from an embryo, placed in a test tube and allowed to multiply. These last about two years.). Further harvesting of embryonic stem cells will not be funded but it will be difficult to limit this to sixty when there are between 300,000 – 1,000,000 blastocysts in frozen state in fertility clinics. What if more lines are harvested by private research? Will these be covered by federal funding? Probably not. Many see this as simply the first step along a slippery slope to permit research on all these embryos since "they are only going to be discarded anyway." It may well be that the Congress, by overwhelming majorities, will pass legislation to permit research and funding on the remaining embryos donated to science by parents.

The President also emphasized research on stem cells from adults and placentas which also hold great promise. But this whole enterprise which many hope will produce great results for the cure/alleviation of degenerative diseases is fraught with questions of whether it will work at all. When fetal brain matter, for example, was put into the brains of those suffering from Parkinson disease, the results were catastrophic, rendering the patients' conditions worse than before. In any case, the die is cast and we shall have to await the results.

There, in a nutshell, is the debate about the ethics and morality of federally funded embryonic stem cell research – the pros and cons. No matter which way the final decision goes, the debate will go on because we deal here with a fundamental moral issue which cannot be resolved by a majority vote. Nor by a legislature since its decision is legal in nature, which does not change the moral quality of the procedure itself.

One more note. This type of research on human subjects is simply the last phase of *Roe V. Wade*, the abortion decision of 1973. That case decided that the unborn are not humans in being and therefore are not protected by the equal protection/due process clauses of the U.S. Constitution (exactly similar to *Dred Scott V. Sanford*, the slavery decision of 1857.). If the unborn are not persons, and indeed are not even viable as blastocysts, then there is absolutely no protection afforded these embryos in the U.S. (destroy them, research on them, etc.). As a result of *Roe*, I do not understand how the law can forbid a clinic or research laboratory from

producing embryos exclusively for research (since the blastocysts are only property under federal and state law and we can do what we wish with our property). That was the argument of the slave holders in 1820-1861. But that is a question for the courts to determine under the rule of *Roe v. Wade*.

And finally we should consider this: what if the funding which is now granted for this research by the President or expanded by law by Congress turns out to be successful in treating these degenerative diseases? The question then becomes: may those of us who have opposed this whole process as essentially immoral and forbidden use that knowledge for our benefit and that of our loved ones? That is a very difficult question to answer since we look like hypocrites if we do and holding up science as Luddites if we do not.

In this respect, what scientists did with knowledge garnered from Nazi experiments on Jews and other victims may be revelatory. The difference is, as we have noted, that stem cell lines are an ongoing process which will become even more common, the more successful this research on embryonic stem cells becomes. The question must be left for a future date.
