

Bioethics Essay:

The Relevance of An Embryo's Status as Concerns IVF and Genetic Testing

Modern reproductive strategies such as in-vitro fertilization and prenatal genetic testing are intimately connected with how policies are generated, from state to state, due to the perception of the embryo's 'moral status'. Interestingly, although most policies take into account how embryos are perceived and treated, and how parents of the embryos fit into the process, as some feminist bioethicists have opined, less emphasis seems to be placed on the overall status of women, which such strategies annually chisel in our society.

Some right-winged scientists, theologians, and politicians might opine that the embryo should be perceived as a human subject, post-fertilization. As such, it should be afforded the same rights as a baby, a child, or an adult, the right to survive. Therefore, both parents and clinicians are ethically obliged not to engage in practices (e.g., freezing and research) that could potentially harm the embryo. Interestingly, however, such freezing methods are employed with the embryos, around the time they reach the eight-celled stage (48-72 hours post-conception). However, it is the later, blastocyst stage, which allows embryos to be implanted into the uterine lining. Freezing embryos at the cellular level, therefore, is actually as safe as the implantation process itself, which always carries its risks. Additionally, the risks to the embryo are probably not greater than the risks of 'natural' conception and implantation.

Such right-winged opponents also believe that since the embryo's rights as a human subject (to survive) should outweigh other measures, prenatal (e.g., in-utero) genetic testing should be exercised only to target serious disease, and not if doing so would harm the fetus (regardless of

the health implications for the mother). Additionally, such conservatives generally remain excessively opposed to some very-close-to-fruition genetic methods, such as human cloning. The latter manmade manipulation, involving IVF, would violate the moral rights of the embryo to a unique existence. In the collective vision of such opponents, only 'natural' twinnings, decided by 'God' can be deemed acceptable, worthy, and morally just. Never mind the fact that 'God' allowed medicine to achieve the knowledge and accomplishments it already has in now preventing what was once merely treatable disease forms.

Stemming from the opposite pole of the ethical spectrum are the leftists, who assume the stance that embryos are entities like any other human tissue. Therefore, manipulations on such 'tissues' should remain equivocal to those of other parts of the human body, as long as consent over ownership issues are adequately appeased. Such a viewpoint disregards the fact that within such a 'tissue' lays the genetic potential of a new, unique human life form. Such leftist thinkers would also agree to further manipulations of prenatal genetic testing, even for the purposes of research, alone. Within the contexts of such a 'same as any other human tissue' view, it would be considered acceptable to embrace methods of genetic engineering. By doing the latter, one could bring the growing tissue to a more 'superior' level of physical existence. Also, it would be okay to readily eradicate/terminate the pregnancy, due to perceived genetic deficits, that would render the growing tissue 'inferior' and compromised at a later date.

I tend to agree with the overwhelmingly popular position that an embryo, while not an actual 'person', should nonetheless be accorded a special moral status, which respects its rights to potentially become a person. Ethical and legal committees derived from both capitalistic and socialistic countries (e.g. USA, Canada, Great Britain) have agreed upon the latter stance.

However, while such a vantage may have its advantages, disagreements between the realms of reproductive strategies and state practices still ensue. For instance, in order to increase the success rates of the incredibly expensive IVF methods for infertile couples, multiple eggs must be generated during each cycle. After fertilization, multiple embryos that have achieved blastocyst statuses are inserted into either the fallopian tubes or onto the uterine linings of their mothers/hosts. The reasoning behind this is that it will increase the chances of a successful implantation of a singular embryo. The problem with this technique is that if too many embryos are successfully implanted, the health of the mother (not biologically constructed to bear a litter) will be compromised. IVF clinics in Canada apparently have chosen to ignore the status of the mother in lieu of that of the embryo. In other words, every in-vitro fertilized embryo that has successfully achieved the blastocyst stage is implanted into its mother/host. Within this country, the three states of Minnesota, Louisiana, and Illinois have banned the intentional destruction of extra-corporeal embryos. However, in most other states, the law does not recognize the legal status of embryos.

Another issue related to/with an embryo's moral status as far as reproductive technologies are concerned surrounds who has dispositional control over them. In the case of IVF, many people, ranging from clinicians and embryologists, to the gamete-providing couple, themselves, are involved. However, the egg and sperm donors hold the strongest ties to the embryo's ownership. In the case of prenatal genetic testing, the parents also seem to hold the strongest claims. Limits on the spectrum of authority over embryos are mostly involved with their discard and freezing. The question remains, about how much government control should be afforded. Under the 'Roe-Casey' decision, the state would be allowed to treat external embryos (i.e., those not implanted) as persons and protect their potential lives, as long as the latter didn't entrench on a woman's

bodily integrity and procreative rights. If the latter involved embryo donation, then so be it, regardless of the fact that the couple's decisions about having biologic offspring and procreative choices would have been violated.

Opponents to embryo discard in IVF also find embryo freezing and long-term storage unacceptable, as the freeze-thaw process can either harm or destroy an embryo. By banning embryo-freezing, fewer IVF pregnancies would be probable. Still, such proponents would hold the moral status of the embryo as higher than that of its parents. While opponents of embryo freezing ignore the fact that fewer embryos are destroyed via this method than with discard (i.e., more protective than destructive a method), they also cite as an open sore the issue of limitless storage times of the frozen embryos. I agree with John Robertson, that policies limiting such times should at least involve informing the gamete-producing couples in advance, in allowing them to move the embryos to other facilities. However, I also agree that some limits should be imposed, as such issues as posthumous implantation would be held at bay, and the chances of cellular decay/mutation would be reduced (i.e.. cryogenics has its limits in slowing down, but not completely stopping the aging process).

As concerns the contexts of genetic testing, conservatives, who hold the embryo's moral status as elevated to that of its parents, would perceive termination of a pregnancy due to a predetermined, genetically-altered position (e.g., cystic fibrosis, Down's Syndrome) as intolerable. Furthermore, if some predetermined genetic disposition of the fetus could seriously injure or impair the mother during the birthing process without injuring the baby itself, such advocates would opt for the baby's rights as superior to the mother's.

As far as reproductive technologies are concerned, the kind of policy I'd defend embraces all of the following. For one, as concerns IVF, I do agree with bioethicist, John Robertson, that prior dispositional, binding contracts should be exercised, which take into consideration the choices and desires of both husbands and wives. After all, each has made an equal genetic contribution towards the embryo. In this era of common divorce and separation, at least the embryos would not be used as weapons (i.e. would be protected). I also feel convicted, that multiple embryos should be generated per cycle, and extras should be stored until a definite period of time. IVF is too physically taxing for the woman and expensive for the couple to allow more than a few cycles of egg generation to be employed. Additionally, by limiting the period of time for a couple's embryo(s) to be stored (e.g., 10 years), one also limits the chances of embryo loss, theft, exchange, or injury. I do believe that embryos should be donated, but only under a couple's consent. Ultimately, it should be the couple's right to decide on their procreational fate. Additionally, this right should be afforded to all couples, regardless of socioeconomic background. Therefore, once other options have been eliminated, IVF methods of treating infertility should be covered by insurance policies (e.g. Medicare).

As far as prenatal testing is concerned, I tend to agree with James Watson's stance, that too much of a sinister tone has been associated, thanks to the previous histories of eugenics, Hitler, and the critics, who opine that evolution would be corrupted. However, if the Human Genome Project continues to prevail, prenatal genetic testing of embryos could be coupled with engineering, in eradicating 'disease,' rather than perceived 'character' flaws. As long as essential attributes (i.e., personality, height, hair color, sex) were not genetically altered, why not opt for 'healthier' embryos/human beings? Isn't the latter the ultimate goal of medicine, anyway?

Ultimately, I do agree with Susan Sherwin's warnings about the insidious, covert exploitation of women, as far as reproductive technologies are concerned. Rather than use and abuse women's bodies for IVF purposes, which are always emphasized, why not spend more NIH dollars on researching and treating infertility issues with men (e.g., increasing sperm production) and educating more communities on STD's? Just as human cloning seems ever more probable (post-Dolly's birth), in this age of genetic advances, so does the possibility of in-vitro uterus factories. Women need to be seriously aware and continually reeducate themselves concerning their role, in a still-oppressive world, where even just and good men still dominate over good and just women in bioethical and medical circles.