

Stem cell research



Every technology with that has had any transformative effect on civilization has always been confronted with controversy. This is true of the printing press, the long-range aircraft, and the contraceptive pharmaceutical and it continues to hold true in an era of genetically modified food, biofuels and the Internet. Yet perhaps the most politically charged technological controversy today is that which centers upon stem cells and cloning. (AAAS, 2007) When biologists announced the successful isolation of human embryonic stem cells that can potentially differentiate into any other human cell type, much controversy arose.

The vast majority of techno-liberals maintain that the development and application of this breakthrough should be free from outside interference in the form of policy and legislation. Although the applications of stem cell research are still in trial stages rather than available as approved therapies, it is hypothesized that embryonic stem cells could have great potential in the area of regenerative medicine and tissue replacement. (Thomson, et. al; 1998; Wu, et. al; 2007)

However, there also exists a significant opposition to stem cell applications. Such opposition is grounded in the belief that human life begins at the cellular stage, immediately after fertilization. This is because, despite the potential boon which stem cell applications may bestow in this regard, it is counted as the use of human life and is therefore an immoral technology. Therefore any manipulation and use of these cells for whatever purpose, even if it is for the treatment of disease, is regarded as the unethical use of human life.

However, others maintain that human life does not begin at the cellular level, and because embryonic stem cells are not sentient, they do not possess the same kind of personhood as say, a 6 month old fetus. (Robinson, 2008) Previously, the U. S. policy has been that all embryonic research must be conducted on embryos discarded following in-vitro fertility treatments and no embryos are to be created expressly for stem cell research and experimentation. Simply put, research can only be conducted on surplus cells, rather than on those generated through cloning.

Presently, the Bush administration charges that federal funding may only be provided for research on cells already in existence. Bush concluded that research is permissible on embryos already destroyed, but that further destruction of human embryos must be curtailed. (AAAS, 2007) While this was an unsurprising decision given Bush's relatively conservative stance towards technological policy, it has not been welcomed with broad satisfaction even among opponents of stem cell research, some who declare that there should be no research under any circumstances.

In any case, it is quite likely that no one policy taken towards human stem cell research is ever going to satisfy all camps of the debate, whether its techno-liberal atheists or religious conservatives or even the indifferent. Perhaps the only sensible policy approach to adopt towards stem cell research is to embrace it with cautious skepticism. It is practically impossible to ban technology.

As Vinay Gupta (2008) maintains, any technological discovery ripples beyond the confines of governments and geography such that “ a college professor

8000 miles away can make a discovery which will be at your doorstep in 48 hours, and make an entire area of policy obsolete. ” As such the only reasonable means by which we can control and scrutinize controversial technologies such as geo-engineering, nanotechnology and stem cell research, is to welcome it with intelligent regulation.

As Stewart Brand (2005) opines doing otherwise leaves it wholly in the hands of enthusiasts who find nothing questionable about such technologies. Therefore, while ethical controversies which attend stem cell research most certainly impede their potential to be applied in beneficial ways, they should not be disregarded entirely at the cost of unleashing uncritical application. Rather, the future of stem cell research policy should be directed towards critical engagement and the empowerment of those researchers who would utilize such embryos in the most responsible fashion possible.