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## Human Enhancement Technologies, Transhumanism and Religion

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**Abstract**

The advent of new bio-technologies has heralded the growth of the philosophy called transhumanism. Transhumanism is a school of thought which contends that future humans will be radically different due to technological forays into the human body and brain. However, transhumanism has yet to answer human rights concerns by ethicists and philosophers. To what extent will the emergence of human enhancement technologies change human societies and the way in which we define our humanity? On what grounds does the development of human enhancement technologies pose a threat to human rights? Such questions demand the emergence of a wisdom ethic which will hopefully be promulgated by the world's religions. The use of a wisdom ethic may also be enjoined by scientists in their engagement with theologians and laypeople who are uneasy with biotechnologies and needing to become better informed.

### **What is Transhumanism?**

In this paper I will discuss the use of human enhancement technologies in the future and their human rights and religious ramifications. The advent and growth of new biotechnologies such as genetic engineering and recombinant DNA, nanotechnology and information technology have impressed global audiences. These new technologies promise a new world which will alleviate human suffering and improve and augment human capacities. Genetic engineering, for example, has in the past ten years created recombinant animals which contain the DNA of human beings. These pharm animals have been used for various human medical purposes and medicines. An outgrowth of such technology has been the use of genetically modified animals whose organs can be used for xenotransplantation.

An important philosophical aspect of the human enhancement technologies has been the increasing popularity of transhumanism in the western world. Transhumanism is a school of thought which contends that future humans will be radically different due to technological forays into the human body and brain. Transhumanists view the future world as a “process of evolutionary complexification toward evermore complex structures, forms and operations” (Young 2006:19). According to noted transhumanists such as Ray Kurzweil, Nick Bostrom, Gregory Stock and Simon Young, current human cognitive and physical capacities are limited due to evolution. The futurist artist Stelarc goes so far as to claim that the human body is obsolete and weak and needing revamping via new technologies. According to Stelarc, who accords with transhumanist thought, “the human body is neither very efficient nor a very durable structure”, which malfunctions, fatigues easily and is susceptible to disease and aging. In other words, humans are prisoners to their bodies due to their inherited limitations. What the transhumanist foresees is a future in which the human body shall transcend from its biological constraints and be enhanced via genetic engineering and nanotechnology.

The transhumanist movement towards body enhancement may also be viewed as the ancient human drive to alter and improve upon the human form. Many societies, both ancient and modern, have engaged in various body altering techniques in order

to improve its physical performance (Naam 2005:9). The transhumanist project is inherently promethean, in which modern humans will eventually become posthumans - an interface between human and machine, beings who will tinker with their own evolution. Posthumans will have markedly improved cognitive and physical abilities, will live longer, perhaps be immortal, and not succumb to congenital and chronic disease. Furthermore, the increased cognitive capacities of future humans will be able to develop new ways for dealing with the environmental crisis and creating alternative, clean energies. For the astrophysicist, Stephen Hawking, the augmentation of future humans will be essential for inter-stellar space travel since current human abilities are insufficient.

What transhumanism also proposes is the inevitability of the coherence between evolution and technology. This conmingling will benefit each other towards an in-built purpose or entelechy. In Kurzweil's words, "The purpose of the universe reflects the same purpose as our lives; to move toward greater intelligence and knowledge ... we will within this century be ready to infuse our solar system with our intelligence through self-replicating non-biological intelligence" (Kurzweil 2005:372).

Allhoff (2008) note that as future technology advances the use of machine interfaces via computers and neural and other prosthetic implants will diminish the barrier between human and machine. This will prompt a re-definition of what it is to be human. In addition, the neuroscientist Susan Greenfield (2003) avers that the way human beings conceive their bodies will be completely different by the turn of the 21<sup>st</sup> century. In Greenfield's future, humans will have their brains connected to computers which will offer them a range of virtual worlds. Virtual reality will be preferred over ordinary reality to the point that future humans will become increasingly indifferent about the world around them. Greenfield's dystopia, however, is not taken up by transhumanists in general.

## **Transhumanism and Human Rights**

Kernel to this debate about the use of human enhancement technologies and human enhancement deals with human rights; how they should be constituted in this area and why? The emergence of human enhancement technologies has both the power to seduce human beings as well as to re-define our humanity. On what grounds does the development of human enhancement technologies pose a threat to human rights? This is a complex area which is beyond the scope of this paper. To begin with if human enhancement can be suggested to be a reasonable practice, there still may need to be restrictions in order to mitigate some of its less desirable circumstances or “unintended consequences” (Allhoff 2008). A fundamental question in this debate of pro and against human enhancement technologies is should “individuals and families have the right to alter their minds and bodies, or should that power be held by the state” (Naam 2005:6). In democratic societies governments are not called upon to restrict individual rights but protect them. However, all technologies have the power to both expand liberty and equality and open up new opportunities. The need here is for policy makers to democratically engage with human enhancement technologies in order to maximise their social benefits and discover the liberating uses of technologies.

At present there are various human rights treaties such as the European parliament resolution which has adopted a resolution to maintain the integrity of a person’s genetic identity (Gunderson 2008). Other international treaties have explicit prohibitions against non-therapeutic genetic engineering on human rights (Gunderson 2008). The sentiment here echoes Fukuyama’s concern that biotechnologies in the future may engineer human beings to the point where *Homo Sapiens* may become a separate species. On this note, it may be asked to what extent will recombinant DNA between humans and non-humans reach a point that the definition human is questioned. To put it another way, how much non-human DNA is allowed before the integrity of a person’s humanity is called into question?

We need to put this human rights argument into perspective. While present genetic enhancement technology is ambiguous, there may come a time in the future whereby

its dangers are minimised and be applied safely and “not be objectionable to those who are enhanced” (Gunderson 2008). The use of blanket prohibitions which are now in effect on the grounds of human rights may in the future become increasingly tenuous as human attitudes towards human enhancement technologies may change. The example of in-vitro fertilisation (IVF) is a case in point. When IVF therapy was first developed it was met with revulsion and resistance from many social sectors who demeaned it as creating “test tube babies” (Marks 2002:122-123). However, over time IVF became morally and ethically accepted in many societies.

A major issue deals with the scope of human rights due to the rapid transformation of human societies and new technologies. The problem is that the nature of human rights treatises which prohibit non-therapeutic genetic enhancement must also condemn it in the future (Gunderson 2008). Furthermore, what counts as genetic enhancement in one society may vary in another. Again, this relativist position can be shown in a 1995 survey conducted by Darryl Macer et al called “International perceptions and approval of gene therapy.” An interesting revelation was that in “India and Thailand more than 50% of the 900+ total respondents in each country supported enhancement of physical characters, intelligence, or making people more ethical” (Macer et al 2000). Similarly, it was also noted that results from “Chinese medical staff and students in 1993 found 73% “willing” for personal use and 80% “willing” for children's use (Lo et al., 1994). What this survey indicates is how different societies perceive genetic enhancement which do not accord with the prohibitionist stance of the West.

Finally, I would hypothesise that the nature of future societies may demand that human beings are enhanced in some way via germ line engineering or neural prostheses. In such societies, non-enhanced people could have distinct disadvantages in accessing information or link up to the varieties of technologies which are available to enhanced people. From a human rights point of view, this may raise questions as to what this may mean for non-enhanced people. Would such societies eventually develop into a two tiered caste system between enhanced and non-enhanced people? Where would be the place for people choosing non-

enhancement? Would they suffer from discrimination? Would they be allowed to have non-enhanced progeny? If so, would society have to carry the burden of having a pool of non-enhanced people who are minimally productive? The problem envisaged here is in accordance with Fukuyama's homily which maintains that it is not so much human enhancement per se which is also problematic, but rather the kinds of inequalities such technologies may unintentionally create.

### **Religion, Transhumanism, and the Need for a 'Wisdom Ethic'**

The role of religion in the ethics of human enhancement is fundamental. So far, religion has tended to be on the side of the enhancement prohibitionists due to the conservative nature of religion in general. This does not mean that the major world religions should be classified as neo-Luddites. This would be an unfair assessment. The problem facing religions and their response to new human enhancement technologies is that there is no common point of reference. This is an unprecedented phenomenon for the major world religions. Considering that the power of these promised human enhancement technologies will transform human beings, the major world religions have sided with caution, but not outright condemnation. While the Abrahamic religions, along with western nations, have strongly disapproved of future human cloning, human enhancement technologies have yet to receive an authoritative theological critique. I would contend that this nascent stage in new technological developments is an opportune time for religions to make their presence felt.

At present, I would argue that a way in which the world's religions can develop an engagement with the new technologies is via a wisdom ethic. The use of a wisdom ethic may also be enjoined by scientists in their engagement with theologians and laypeople who are uneasy with biotechnologies and needing to become better informed. It is a truism that each religion is founded by a set of moral and ethical principles which are founded on wisdom. Since wisdom is the edifice of religion it stands to reason that wisdom can mediate between religion and science at this crucial time.

In the Old Testament wisdom is associated with the beginning of creation. In Deane-Drummond's words "wisdom is rooted in life" and is a mysterious gift (Deane-Drummond 2001:89). Wisdom becomes a way of living in the world which acknowledges its fullness and diversity.

In Islam, humanity is frequently encouraged to observe creation since God has strewn it with signs (*ayat*) which only the wise can discern. In this sense, wisdom works in tandem with a special kind of discernment for understanding nature and humanity's role in it. In Buddhism, wisdom is linked with compassion. According to Buddhist principles, reality is impermanent and illusory. Wisdom tempers the human mind to understand the temporality of existence and to diminish personal suffering. The role of compassion is cognate with the creational principle of divine mercy in Islam.

According to the theologian Thomas Aquinas wisdom is practical and coheres with God's creativity. It is the goal of the aspiring believers to conform with the creational order which is an expression of wisdom (Deane-Drummond 2001:92).

The Abrahamic religions view the human race as being the steward of the earth. Humans are also identified as being in a superior position for engaging with creation through various rational and intuitive faculties. Concomitant with stewardship is the wisdom to understand the kaleidoscopic nature of existence which is fecund with limitless possibilities. This is at the heart of the medieval sufi Ibn Arabi's philosophy. The limitless evolutionary possibilities which are evident in nature are ways in which the Divine discloses itself to the universe. In this way, human ingenuity may also be viewed as the Divine disclosing itself to the world.

Homo Sapiens have always excelled in improving technology. The religious and social implications of scientific and technological innovations have been profound since they have led to the complexity of human societies. The present revolution in biotechnology and nanotechnology highlights moral and ethical concerns about the direction of science. It is true to say that a wisdom ethic is needed to curb the potential hubris of human technology. A major concern is that the aforementioned



technologies place an onus on controlling matter at atomic and molecular levels. I suggest, that the onus in controlling matter supplants ways of understanding it at a biological level. Biotechnological and nanotechnological manipulation gives human beings the power to tinker with their own evolution. For this reason a wisdom ethic offered by the world's religious traditions provides a way of engaging with the new technologies and for examining future human evolution. While transhumanism addresses ancient human concerns for enhancing and improving upon human life, a wisdom ethic would address issues arising from new technologies such as the increasing "commodification of life", "industrialisation of human conception", human rights violations and possible deleterious social changes (Bowring 2003:5). The human enhancement technologies stand at the forefront of the "technocratic rationality" of organised science and its advocacy in some instances for self-modification. While transforming humans to a human/machine interface as proffered by transhumanists may be a "consummate act" of re-inventing ourselves (Bowring 2003:7), the more we succeed in modifying human biology the more will be the human need to reclaim an ontological balance via an emerging wisdom ethic.

In the words of the theologian Thomas Berry we need a new story or narrative which will educate us and enkindle a rapprochement with the world. This story will act as a unifying element of human knowledge and experience. Transhumanism offers a possible new world in which humankind may engage in ways of thinking and experiencing which may enhance and revolutionise our understanding of life and the universe. Concomitant with such a transformation may emerge a new evolutionary direction based on an entirely new set of guiding principles which are unimaginable to us now. If we are heading towards the singularity, as Kurzweil proposes, then it behooves us to rediscover an ethical and spiritual awareness in ourselves that befits a positive future evolution.

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Human enhancement lies at the heart of Christianity, so much so that the idea of "Christian transhumanism" is justified. The word "transhumanism" first arises in a Christian context in Dante's *Paradiso*, which speaks of "going beyond the human." In addition, several biblical texts suggest that radical human transformation is the destiny of humanity. Herzfeld examines three technologies central to transhumanism—"genetic modification, nanotechnology, and artificial intelligence"—considering the promises and limitations of each to either repair or replace the human body, with extreme longevity or immortality as the goal. The chapter critiques transhumanist hopes for immortality, outlining the limitations of current scientific knowledge and technological capabilities. Transhumanism is a philosophical movement, the proponents of which advocate the enhancement of the human condition by developing and making widely available sophisticated technologies able to greatly enhance longevity, mood and cognitive abilities. Transhumanist thinkers study the potential benefits and dangers of emerging technologies that could overcome fundamental human limitations as well as the ethical limitations of using such technologies. Some transhumanists believe that human beings may Human enhancement is a toned down version of transhumanism, where there is a belief that science and technology can enhance humans to extend their capabilities beyond the norm. Of course, the latter is often confused with merely correcting defects, so that while genetic therapies and technology can help those with difficulties, it isn't actually an enhancement, when it is intended to simply return normal functionality to an individual. There is no difference between transhumanism and human enhancement. Transhumanists seek to achieve better quality of life, most importantly radical life extension, through science-based human enhancements. Human enhancement refers to any attempt to temporarily or permanently overcome the current limitations of the human body through natural or artificial means. The term is sometimes applied to the use of technological means to select or alter human characteristics and capacities, whether or not the alteration results in characteristics and capacities that lie beyond the existing human range. Here, the test is whether the technology is used for non-therapeutic purposes. Some bioethicists restrict the