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Techno-progressives versus bio-conservatives

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Summary. *The aim of this article is to present the intellectual debate between techno-progressive and bio-conservative thinkers. The examination of the clash between these two schools of thought will take the form of an examination of their respective arguments and will go on to explore the possibility of a middle way between the two positions. The final section of the article consists of a critique of transhumanism from the perspective of the ethical principle of equity.*

Key words: *transhumanism; bio-conservatism; techno-progressivism; human betterment*

Tecnoprogressistes versus bioconservadors

Resum. *L'objectiu d'aquest article és presentar la confrontació intel·lectual entre els pensadors tecnoprogressistes i els bioconservadors. A partir d'aquesta confrontació, s'estudien els arguments dels uns i dels altres i s'explora la possibilitat d'una vida mitja entre ambdues posicions. En la darrera part de l'article, es realitza una crítica del transhumanisme a partir del principi ètic de l'equitat.*

Paraules clau: *Transhumanisme; bioconservadorisme; tecnoprogressisme; millorament humà*

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An approach to transhumanism

Notions of transhumanism never fail to spark reactions. Whoever delves into the inevitably feels compelled to grapple with it intellectually, some embracing it, others expressing reservations and still others wholly rejecting it. Some of the brightest minds of our time have approached the issue from a range of sometimes clashing perspectives.

Among the greatest defenders of this new technocentric utopia are the technology writer Zoltan Istvan, the author and computer scientist Ray Kurzweil, and the philosophers Nick Bostrom, Julian Savulescu and Ronald Bailey. Some of the most prominent critics include humanist thinkers like Marcel Gauchet, Luc Ferry, André Comte-Sponville, Hans Jonas and Jürgen Habermas. Transhumanist thinkers brand the attitudes of these critics as conservative and retrograde.

While it did not employ the term transhumanism, a 2003 report issued by the US President's Council on Bioethics features a detailed argument against the aims of this movement. The authors make various kinds of claims in their case against transhumanism, but in all the arguments it is apparent that they diagnose in this ideology certain fundamental problems that can be classified as anthropological in nature.

Many of those engaged in this fascinating debate between proponents and critics of transhumanist ideas seem to fall into one of two broad schools of thought. Firstly, there are bio-conservatives, those who would, as the word suggests, be willing to use biotechnology to address human problems but not to improve the nature of humanity itself. The opposing group, techno-progressives, are believers in human advancement through the use of implanted devices and drugs. The goal here is not to undertake a meticulous analysis of the arguments made by the adherents of each of these approaches, but it is worth taking a moment to identify the central figures in the debate and to examine the conventional wisdom espoused by the two sides.

The bio-conservative position

Chief among the thinkers who have expressed opposition to the transhumanist dream is Jürgen Habermas (1981), the author of *The Theory of Communicative Action*. Habermas is the most prominent representative of the second generation of the Frankfurt School. His critique centres on the inviolability of emerging human life. From a philosophical perspective that is heir to heterodox Marxism, a point of view inimical to arguments founded on metaphysics and spirituality, he defends the integrity of emerging human life.

Habermas writes that human life must not be viewed as belonging to the category of property. In other words, life is not a possession or a mere good at one's disposal. It is an indispensable good, one that cannot be used by it progenitors in their own interests. It is an indispensable reality, fragile and dependent, and it must be accepted just as it is. According to Habermas, steps toward genetically altering human life in order to perfect it must lie outside the sphere of decision of its progenitors, because life is not a mere good that belongs to them, not comparable to an object, a thing, a piece of property. It belongs neither to the mother, nor to the father, nor the state, nor to any private corporation.

Francis Fukuyama, meanwhile, hails from the neoliberal school at Harvard, a cultural world far removed from Habermas, and he emerges from a very different philosophical tradition. Nonetheless, he coincides with the German writer in his clear opposition to transhumanist utopian thought (Fukuyama, 2002). The author of *The End of History and the Last Man* (Fukuyama, 1992) served on President George W. Bush's Bioethics Advisory Commission from 2001 to 2009, and he considers it essential to place constraints on scientific use and experiments with emerging human life. During his time on the Commission, he was vocal in his criticism of transhumanist ideas,

Fukuyama acknowledges the seductive allure of the transhumanist utopia, which is why he calls it one of the most dangerous ideas of the century. He views the wish to improve the human species as highly understandable, especially in light of the perils faced by the species on our planet and the multitude of global problems and conflicts that plague us. Disease and epidemics, the suffering of violence and war, our physical limitations and the brevity of our lives are all painfully but intimately linked to the human condition.

The sort of sweeping narrative that might suggest that we can improve ourselves as a species through the use of all sort of technologies seems to Fukuyama to offer a small glimmer of hope. This, he says, is how transhumanism casts its ideological spell. However, Fukuyama believes that this ideology carries with it the danger of the mechanisation of human life, reducing it to a mere object. This would mean the emergence of an inhuman world and the collapse of our civilisation.

Yet another prominent critic of transhumanism is George J. Annas, an expert in bioethics, health and human rights. He is especially well known in the United States for having put forward the notion of a Convention on the Conservation of the Human Species (Annas, Andrews, & Isasi, 2002). This thinker maintains that a new posthuman species would be likely to view old "normal" humans as inferior beings or as savages and might attempt to enslave or even exterminate them. Unmodified human beings would see posthumans as a threat, and if they could would rebel against them. Thus, Annas predicts a planetary class struggle that goes beyond the classic Marxist dialectic of the bourgeoisie and the proletariat to become a battle between humans and posthumans. In this scenario, posthumans would play the role of masters, and humans the role of slaves, to employ the terminology used by Hegel in *Phenomenology of Spirit* (1807).

In order to avoid this dire future, Annas believes it is necessary to ban any research that could lead to al-

terations in the species. To this end, he has proposed an international treaty to guarantee the conservation of the human species, which he believes is far from assured. From this perspective, cloning and hereditary genetic alterations are themselves construed as crimes against humanity, because these techniques are capable of changing the essence of humanity and thus of eroding the very foundations of human rights.

Another significant thinker from the US context, also from Harvard, is Michael Sandel. This author (Sandel, 2015) has also argued unambiguously against this new emerging utopia in a number of texts and speeches. The Harvard professor believes that transhumanism displays and promotes an attitude of control and dominance over human nature and over other species. He accuses transhumanist thinkers of failing to acknowledge that human capacities and achievements as the great gift that they are, and of forgetting that freedom consists, in a certain sense, of a permanent negotiation with this legacy. There will be more on this author's theories in the second part of this essay.

Ethics professor Leon Kass also maintains that nature should be valued as a gift. His reasoning is founded upon Jewish philosopher Hans Jonas's heuristics of fear. According to Kass, technological modification will inevitably dehumanise us as it undermines our traditional senses (smell, hearing, touch, taste, and vision) as well as our sense of our life cycle, our sense of sex and our sense of work. In the face of these threats, Kass suggests a reliance on "the wisdom of repugnance," a sort of innate intuition or sense that allows us to identify developments we must resist because they are offensive to our very nature.

Other critics of transhumanism include authors like Ulrich Beck and Hans Jonas. The former offers a discourse centred on the notion of risk that he details in his famous work *Risk Society* (*Risikogesellschaft*), while the latter, in his essay *The Principle of Responsibility* (Jonas, 1977), formulates a heuristics of fear founded upon the ethical notion of responsibility (*Verantwortung*). While neither of the two writers makes explicit reference to transhumanism, later bio-conservative thinkers have used their ideas to bolster arguments against transhumanist utopianism.

The existence of posthuman individuals or of societies populated by subjects with greatly expanded capacities would of course have environmental implications. The effects on the planet beings who would undoubtedly inhabit the world very differently from the way we do now, and whose range of behaviour would be beyond what we can imagine, are worthy of serious thought as we plan the future of our society.

Bio-conservatives view humans as a static, "given" reality, rather than as beings immersed in an evolutionary process. Transhumanism, meanwhile, takes as its starting point the idea of rupture, a break with what has come before. Transhumanists believe that we are the way we are as a result of the chance evolution of live matter. Thus, the human being is an entity in perpetual evolution, and there is a need to create the conditions that make possible a rupture with the human condition. Humankind thus becomes the locus of experimentation, much like a website under construction that never completes its beta testing. In other words, humans are prototype organisms, bound to engage in an endless quest to come closer to perfection.

The thought of an eventual victory for the transhumanists is the source of great anxiety for the bio-conservatives. Francis Fukuyama, for example, has no doubt that these developments are on the horizon. In his essay, he criticises the technologies that he believes will transform humanity, and he expresses his unease with the political implications of this revolution.

Bio-conservatives believe that medicine does have a therapeutic role to play in healing and restoring the body and in curing diseases. However, it must be noted that medicine has already gone beyond its traditional roles of healing and prevention. Vaccination and contraception are examples of the ways medicine has transcended its traditional sphere. As George Canguilhem (1998) points out, any distinction drawn between therapy and improvement is essentially normative rather than natural. A treatment that would be considered a therapy if given to a disabled person would likely be seen as an improvement if administered to a person in full health.

The best strategy, according to bio-conservatives, is to impose global limits on the expansion of technologies for human improvement in order to avoid starting off down a slippery slope. This sort of slippery slope argument is very often invoked in bioethical debates touching on both the origins and the end of life.

While it is true that bio-conservatives and transhumanists agree that through technology it is possible to change human conditions, bio-conservatives are opposed to causing changes in human capacities or to modifying human nature, framing their opposition in appeals to dignity.

In this debate, it is important to avoid simplifications and caricatures. The bio-conservative position should not be misrepresented as simply fundamentalist or vitalist and obsessed with conserving a fixed entity or an immutable stasis. Such a mischaracterisation would reduce bio-conservatism to a reactionary, anti-progressive stance, nearly creationist in its position.

The notion of life that bio-conservatives seek to preserve might be described as a continuous process of individuation, a dynamic reality marked by the interplay of possibilities, to draw upon the French writer and winner of the Nobel Prize for Biology François Jacob (1999).

Thus, it might be said that there is something subversive, something adventurous about this vision. The intention here is to conserve this view of life, to protect it from the onslaught on the part of techno-progressives who would render it a mere regimented product of programming. Bio-conservatives maintain that one of the ultimate aims of biotechnology is to do away with

chance, to turn human life into a manufactured product and, in so doing, to exert scientific control over the very evolution of the species. There might even be a temptation to replace sexual reproduction based on random combinations of gametes with a wholesale duplication of the genome.

A closer look at techno-progressivism

The euphoria of the demiurge is a constant presence in techno-progressivism. In Plato, the Demiurge is a minor god who shapes the raw material of the world while at the same time contemplating the ideas shining down from the heavens, ideals of truth, beauty, goodness and unity. As Plato writes in *Timeaus*, this minor god shapes matter into the world that we as humans know and perceive. Techno-progressives believe that we can in fact shape ourselves using biotechnology, that we can sculpt our own species into the form we desire. Humans thus are no longer just a sculpted object, taking on the role of active subject in this process of creation.

In fact, a certain metaphysical perspective underlies biotechnology's assault on the chance that is inherent in biological reproduction. While bio-conservatism would choose to conserve the messy, random quality of life, techno-progressives would rather it be governed by the logic of programming.

On such zealous proponent of techno-progressivism, Laurent Alexandre, criticises bio-conservatives for what he sees as their excessive devotion to fragility (see, for example, Alexandre & Besnier, 2016). According to this critic, bio-conservatives would condemn humanity to be forever undeveloped, with the species resigning itself to the weakness that is the mark of its unfinished evolution. Far from defending this sort of surrender and resignation, Alexandre believes humans must be committed to embracing transformation and that they must strive to defeat mortality.

In contrast to the bio-conservative mentality that would seek to guarantee the permanence of human life as we know it today, techno-progressives argue for the value of granting ourselves the freedom to create something new, to shape new entities. These thinkers assert a conception of life that makes room for potential variations and mutations.

Any accounting of this debate must also grapple with the writings of the Jewish philosopher Hannah Arendt, who wrote that if we are to preserve the revolutionary potential in each successive generation, the education system must be conservative. Permissiveness in upbringing, then, does more harm than good, as it nips in the bud any prospective revolution by the younger generation. However, the aim of transhumanist revolution is to give rise to a new kind of being, to bring an end to human life as we have always known it.

Of great relevance to the intellectual struggle between transhumanists and bio-conservatives is the so-called "naturalistic fallacy". The empiricist philosopher David Hume defines this fallacy as the mistaken tendency to deduce what "ought to be" from what actually is, or in other words to found one's prescriptive judgements on descriptive judgements. Hume believed that such thinking was not legitimate. Neither duties nor requirements can be derived from nature. The fact that human nature has always been a certain way, fragile and lacking, should never be taken to mean that it must remain that way, especially if it is technologically possible to make qualitative improvements.

Transhumanists underline that prescriptive propositions cannot be derived from descriptive propositions. The fact that human beings have always had two legs does not necessarily mean that this must always be so. The same argument can be applied to the senses of sight, hearing and smell, and of course also to humans' psychological and creative abilities and their memories. It is worth highlighting, however, that transhumanists do not advocate any and all uses of these technological advancements, but rather defend their responsible application, ethical transhumanism.

According to transhumanists, arguments based upon the naturalistic fallacy have long been used to impede historical changes and advancements, to hold back those seeking emancipation from the yoke of tradition. The fact that women have traditionally played the role of household caregivers does not necessarily mean that they are duty-bound to do so, that this is their mission, and it does not mean they would be neglecting their nature if they were not to perform these tasks. The same reasoning can be applied to ethnic minorities and other vulnerable groups.

Transhumanists argue that nature cannot and must not be allowed to dictate our limitations and our values. Instead, these values and limits must be the fruit of a consensus reached by a community of adults, all of them free, autonomous citizens.

However, Michael Hauskeller (2009) has suggested that transhumanists also base their arguments on the naturalistic fallacy. For example, Julian Savulescu writes that the biological manipulation embodies the human spirit – the capacity to improve ourselves on the basis of reason and judgment. And when we exercise our reason, we only do what humans do (Savulescu, 2012).

Underlying both transhumanist and bio-conservative discourse is a latent conception of human nature. For the transhumanists, our ability to improve ourselves is what defines our presence in the world, and our attempts to change humanity are right because they mean that we are acting in harmony with our essence. Once again, transhumanist thinkers here commit the same naturalistic fallacy that they denounce in bio-conservatives.

Transhumanist thinkers believe that the essence of the human spirit lies in the overcoming of obstacles. For them, there is nothing more human than transcending humanity, than freeing oneself from the bonds of our restrictions, leaving behind biological limitations and the constraints imposed upon us by our bodies and nature. Human beings are capable of creating new values (*neue Werte,* to use a highly Nietzs-

chean term), and can thus move beyond what is circumscribed by biological prerogatives.

Transhumanism has also been a target for criticism on theological grounds. Renowned Catholic and Protestant theologists have spoken out against it. They believe that transhumanists have a God complex, that they are laying claim to terrain that should be outside the realm of human freedom and decision making. Along these lines, the Vatican in 2008 issued an instruction on bioethics entitled *Dignitas Personae*, which made reference to the use of biotechnology to "introduce alterations with the presumed aim of improving and strengthening the gene pool". The instruction rebukes in strong terms what it calls the "eugenic mentality" fostered by this kind of manipulation. This mentality stigmatizes inherited traits seen as imperfect and fuels prejudices against people exhibiting them, while it favours people with supposedly desirable qualities. The conclusion of the instruction says that it must be noted that in the attempt to create a new type of human being there is an ideological element in which man tries to occupy the place of his Creator (27). The attempts made to manipulate human nature in this way "could end up… damaging the common good" (27).

In the theological discourse arising from Genesis, the human being is created in the image and likeness of God and given dominion over the Garden of Eden. Humans were not allowed to violate God's law, the *logos* that rules over nature, nor to replace it with their own law. Being made in the image and likeness of God imbues humankind with a role of sublime dignity within creation, but creation is an orderly, interdependent whole, and humans are called upon to ensure that this gift is conserved in the present and for future generations (see the recent cyclical by Pope Francis, *Laudato si*, 2015).

Meanwhile, the transhumanists question the very foundations of the theological criticisms levelled against them. Specifically, they reject two assumptions made by theologists because they believe they lack a scientific basis: the idea that God exists, and the notion that the world is God's creation. These premises are essential to the theological criticism of transhumanism. For transhumanists, human beings have emerged as the result of an evolutionary process, and they answer to no other law but their own. The differences between theological discourse and transhumanism go to the very foundation (*Grund*) of their arguments, to the premises and preconceptions that thinkers of the respective persuasions take as given.

Lately, however, there has emerged a generation of academics engaged in the study of bioethics and located somewhere between the techno-progressives and the bio-conservatives. These new thinkers reject both the *laissez-faire* attitude of technology worshippers and the radical condemnation of the bio-conservatives.

Many of these writers are academics from the English-speaking world who have published their texts at prestigious universities and in influential journals like *Nature*. They espouse a prudent attitude toward technological innovation. They wish to achieve a position of Aristotelian virtue, a happy medium between the two extremes: one unwilling to go far enough and the other going too far.

Fritz Allhoff and his colleagues, in their report financed by the National Science Foundation (NSF) on the ethical challenges involved in nanotechnology and human improvement, place this school of thought at an intermediate point between strict regulation and respect for individual freedom[1].

Unlike bio-conservatives, these writers maintain that opposition to improvements to the human condition cannot be justified, because in reality there are already a range of practices in use that are moving us toward this end.

Psychotropic medication is an example of how this sort of technology aimed at human improvement is already playing a role in everyday life. The consumption of drugs intended to improve cognitive capacities, mood and resistance to pain has grown exponentially over the past few years.

The boom in consumption of these medications is due in large part to the use of certain "blockbuster" drugs like Viagra, el Valium, Prozac, Zoloft and Ritalin. While it is true that these drugs are given to patients to treat supposedly new diseases like erectile dysfunction, depression and hyperactivity, it is also the case that they are used by citizens with the aim of improving their capacities. These medications serve to address our fundamental deficiencies and come to be seen as indispensable even to those merely wishing to function "normally".

The ubiquity of doping in both professional and amateur sport, regularly documented in the media, is another manifestation of this. Much was made in the United States of the epidemic of anabolic steroid use. Elsewhere, in a case that garnered global attention, Lance Armstrong was stripped of seven Tour de France titles. Meanwhile, university campuses are becoming veritable laboratories for technological experimentation in ways to improve cognitive capacities.

The reasons people turn to technology for this sort of improvement can sometimes be banal, but some professions lend themselves to steps like this for pressing reasons. For people like airline pilots, air traffic controllers, surgeons and soldiers, a lapse in attention can be deadly. Beyond medical tourism, there is now improvement tourism. Thousands of people are travelling to countries where the legislation governing treatments for human improvement is lax or non-existent.

1. Articles by Fritz Allhof can be found at http://www.allhoff.org/research/, for example: *What is nanotechnology and why does it matter?: from science to ethics* (2009), *Ethics of human enhancement: 25 questions & answers* (2009), *Nanoethics: the ethical and social implications of nanotechnology* (2007), *The coming era of nanomedicine* (2007); *Terrorism and torture* (2003); *On the autonomy and justification of nanoethics* (2007); *Nanotechnology and society* (2008); *Untangling the debate: The ethics of human enhancement* (2008); *Terrorism, ticking time-bombs, and torture: A philosophical analysis* (2012); *Germ-line genetic enhancement and Rawlsian primary goods* (2005).

Those who advocate for a third way between the bio-conservatives and the transhumanists argue that in such a context outright bans would only encourage more travel to these countries, further fuelling social inequality based on purchasing power. Prohibition would thus be a prime contributor to inequality, producing an unequal distribution of these improvements.

For this group of proponents of the middle way, opposition to these techniques for improvement is totally unjustifiable. Any ban would be based not on empirical criteria, but on a purely moral argument founded upon a conservative ideological position.

An appeal to meritocracy also fails to deal a conclusive blow to the idea of human betterment. Technologies for improvement do not replace effort, grit, hard work or training. Steroids, for example, do not save you from the need to spend hours in the gym, but rather they equip the body to better withstand your workout. They allow you to recover more quickly and train more exhaustively. Thus, transhumanism does not undermine meritocracy.

If all the athletes in a competition are doping, then there is no need to be concerned about fairness, because the participants will be on equal footing and merit will still determine the winner. With suitable regulation, these technologies could even favour equality of opportunity and level the playing field, wiping out the advantages that some obtain from the genetic or social lottery.

However, a liberalised approach to techniques for human improvement without effective regulation would have far-reaching and serious consequences, especially in our context of economic globalisation. The citizens benefitting from these technologies in emerging and more permissive countries would be able to enhance their performance in ways that citizens of countries with stricter laws would not be able to access, likely causing grievances and leading to unfair competition.

In the framework of global economic competition, a ban by one state would not only be unenforceable, it would lead to competitive imbalance. This is an issue, then, that requires global consensus and the implementation of a worldwide system of biotechnological ethics. For the time being, this sort of consensus has only been reached when it comes to the cloning of humans.

In light of this situation, the proponents of the middle way are in favour of improvements in the human condition, but they do not want to give in to the neoliberal *laissez faire* and *laissez passer* attitudes of the techno-progressives. They advocate for responsible, pragmatic use of these technologies within the framework of universally applicable regulations. In short, improvements in human capacities can be beneficial as long as they are subject to regulations on a global basis.

Worldwide regulations?

Any hypothetical planetary system of regulations would certainly need to be based on a series of essential principles, among them freedom and autonomy.

These thinkers defend the rights of healthy adult citizens with full ethical competency to make decisions about the improvement of their own capacities. Any regulation would have to guarantee the exercise of individual freedom and autonomy in order to ensure that consent to such procedures is given freely and voluntarily and that no one is subjected to any form of coercion.

From a health and safety perspective, regulations on human improvement should be designed to maximise the benefits while minimising the risks. Risks that might be acceptable for people with certain diseases might not be for healthy people. When the aim of a certain treatment is an improvement, this should go along with a greater standard of precaution when it comes to the side effects of these technologies.

A third class of precaution is connected with justice and fairness. If those who opt for this sort of improvement obtain some sort of advantage, those who do not submit to this kind of technique will be left at a disadvantage. The former group will most likely (or perhaps even invariably) dominate competition in the workplace and in sports. The result will be an exacerbation of social inequality, with these technologies serving to make the gap between the powerful and the vulnerable even wider.

The regulations placed upon biotechnological improvements should favour fairness and equality when it comes to accessing these technologies. Human beings would truly become bio-medicalised beings, adaptable to the ever-changing demands of a society shaped by the cult of appearances and by competitiveness.

It is clear, then, that between the techno-progressives and the bio-conservatives there is space for a middle way, a position in favour of regulation founded upon the principles above. The catch here is the supposedly global reach of the proposed regulation. There has been a difficult struggle to build a degree of basic consensus on very idea of a system of global ethics, to use the term employed in the US, or *Weltethik*, in German (see Küng, 1991, 1999), and the creation of international legal regulations would be even more of an uphill battle.

It seems overly optimistic to take for granted that regulations on the use of technology for human improvement could be implemented on a global scale, especially in light of the history of international law since the signing of the Universal Declaration of the Rights of Man on December 10, 1948 in the Palais de Challiot in Paris.

Transhumanism and fairness

Many of the most cutting critiques of transhumanist ideas revolve around the ethical notion of fairness. Most of the European thinkers who have spoken out against this ideology have made appeals to fairness.

For example, the Italian philosopher Elena Postigo has been highly critical of this movement. She writes of transhumanists that all these authors discriminate

between human lives based on their physical condition, and in so doing they violate fundamental rights such as the equality of all human beings (Postigo, 2016).

It is well known that transhumanism places great value on personal autonomy, the recognition of individuals' rights to freely and responsibly choose their own destinies, but this does not mean that transhumanists are wholly unconcerned with fairness. In fact, some more socially-minded transhumanist thinkers from France emphasise the importance of this value. Nevertheless, there are many serious questions as to how to guarantee this fairness.

In fact, one of the thorniest questions that tends to arise in the context of transhumanist deals with this very issue: how to reconcile the ever-greater diversification of the human race that may result from individual decisions with equality of rights and responsibilities.

The legacy of this ideology might be a world in which different communities coexist as strangers, not just in a religious or moral sense, but from an ontological perspective.

Fukuyama (2002) argues that there is a link between human nature itself and the idea of fairness. The notion of equal rights, the core of the *Universal Declaration of Human Rights* (1948), is based on the idea that all humans share a certain essence. Fukuyama writes that beyond any differences in race, language, intellectual abilities, beliefs or gender, all human beings share the same nature, and it is this very nature that forms the foundation of equal rights.

For Fukuyama, the technological modification of human beings represents a tear in the fabric of human nature. Technologically modified human beings would be qualitatively different from others who remained unmodified, and it would consequently be impossible to maintain equal rights among them, much less equal responsibilities.

Biotechnologically modified beings would make up one collective, and non-modified beings would form another, but in the middle would be a wide range of other collectives who had made different sorts of changes and technological modifications to their bodies. In such a context, would it be possible to continue to advocate for a single, universal charter of human rights? If human nature is no longer shared by everyone, why should human rights be? Why should our responsibilities be?

These problems are hardly new, however, as the situation of humanity is already highly unequal, with some individuals able to afford access to treatments and improvements (such as psychopharmacology) that others cannot. Even more importantly, some people can offer their children a privileged education and upbringing, while a great mass of humanity lacks access to basic technologies such as running water, sewage systems and electricity.

In a structurally unjust world like our own with an unequal distribution of wealth and of technological innovations, there can hardly be true peace, because peace is a work of justice (*pax opus iustitiæst*).

It is hard to imagine that the victory of transhumanist ideology will lead to greater peace, either worldwide or within regions. With greater gaps between people come greater tension, resentment, fear and, finally, violence. Inequality gives rise to turmoil of all sorts and poses a great threat to peace.

If citizens are allowed to access this kind of biotechnology, the State will have to take on the role of levelling the playing field, according to social transhumanists. In other words, governments would have to offer disadvantaged populations access to these services.

In the words of the bioethicist Hottois, this process of improvement of society as a whole could benefit everyone, as long as those who have difficulty accessing these benefits are not forgotten or excluded (Hottois, 2013).

We believe that the alliance between transhumanism and neoliberalism would spell inevitable doom. If access to enhancements obeys the laws of the market and is only available to the rich, there will be grave injustices. The State must be able to enforce regulations to guarantee that some improvements are available to all citizens, regardless of their social or economic status.

However, moving forward in this way would require a strong state rather than the sort of bare bones state defended by ultraliberals in the US (such as Robert Nozick, for example, with his theory of the minimal state, 1977). A strong state would not only have to guarantee social services to all citizens, but also provide access to biotechnological improvements as they become possible. Determining which improvements should be paid for by the State and which should be financed by individuals will not be an easy task, especially given the great economic burden on the welfare state represented by social guarantees and universal health care.

Transhumanist ideologues maintain that it is wrong to prohibit something just because not everyone can access it. It would be absurd, for example, to ban the use of mobile phones until every human being had one. Unequal access to technological advances is not a reason to suppress them, according to these thinkers.

All kinds of technology have, at some point in their existence, been subject to unequal access, either for economic or for other reasons. The greatest cause for concern, however, is when this difference brings about a situation of dominance of one group over another or the exclusion of a group from society. According to social transhumanist writers, it is important to implement public policies to guarantee the access of vulnerable groups in society to this kind of technology.

It goes without saying that the intentions behind this proposal are laudable, but in light of the current weaknesses of the welfare state, it is hard to imagine that governments will be able to afford to offer everyone this kind of modifications when now, in fact, they cannot guarantee coverage for certain basic, universal needs.

In light of the fragility of the welfare state, it is easy to conclude that these biotechnological modifications would be financed privately, meaning that they would

widen the already huge gap between those with greater wealth and those who are most vulnerable.

Conclusions

After this overview of the phenomenon of transhumanism, it seems reasonable to place this school of thought in a decidedly post-social tradition, arising as it does from a libertarian perspective with links to the new spirit of capitalism. Underlying this cultural, social and scientific movement, there is fundamentally utilitarian, individualistic and biocentric vision of human improvement.

According to the liberal transhumanist paradigm, neither social nor political regulations should be allowed to stand in the way of humanity's technological and scientific progress or to impede the rational decisions of free and autonomous citizens to apply biotechnological advancements on their children or themselves. The ideologues of this movement believe that citizens have the right to refashion their own bodies and spirits in accordance with their own desires and with the potential of biotechnology and pharmacology. They even have the right to live forever if they want to.

We live in hopeful times. The biotech revolution is moving forward at a vertiginous pace. Thought does not move as fast, and social consensus in the contemporary world moves even slower. However, this debate cannot be left exclusively in the hands of biotechnologists, judges, scientists and philosophers. The issue of what constraints to place on technology applied to life must be the subject of a bio-political debate with a prominent place on the agenda of our society. No one can be excluded from this process because the effects, sooner or later, will be felt by everyone.

It is important to encourage participation, raise awareness and foster public deliberation. The media also have a role to play in painting a clear and accurate picture of biotechnological innovations and the ethical, political and social dilemmas they bring with them.

There are clearly some parties who would prefer that this debate not take place, who would rather allow private industry free reign to explore the possibilities of biotechnology. There is a market that eagerly awaits these products and is willing to pay a fortune to guarantee their biotechnological betterment. Just as public institutions and forums for political debate cannot remain on the side lines, neither can international organisations stand idle. We have to rise above our provincial debates and come to the realisation that we live in a globalised world and that this issue will affect our individual lives.

The aim of this modest essay has been to offer a humble contribution to the debate by identifying the dominant trends in this movement in the hope that in our own cultural context we will be better equipped to engage in serene yet rigorous debate, one far removed from sensationalism and from the rhetoric of science fiction.

While we wait to see what is to come, it is necessary to consider these issues in a public forum and to prepare ourselves for the future. There is no way to know exactly what it holds in store, and we cannot make predictions with much certainty. Everything is very volatile and unstable. However, we want to continue to be the protagonists of our own history and to be able to change the course of events when needed, and we will have to find a way to wisely and sensibly regulate the extraordinary possibilities that biotechnology has to offer.

References

Alexandre, L. & Besnier, J.-M. (2016). *Les robots font-ils l'amour ?: le transhumanisme en 12 questions*. Paris: Éditions Dunod.

Annas, G.J., Andrews, J., & Isasi, R. (2002). Protecting the endangered human: toward an International treaty prohibiting cloning and inheritable alterations. *American Journal of Law Medicine 28(2-3),* 151-178.

Canguilhem, G. (1998). *Le normal et le pathologique*. Paris: PUF.

Fukuyama, F. (1992). *El fin de la Historia y el último hombre*. Barcelona: Planeta.

Fukuyama, F. (2002). *Our posthuman future. Consequences of the biotechnology revolution,* Oxford: Oxford University Press.

Habermas, J. (1981). *Teoría de la acción comunicativa*. Madrid: Taurus.

Hauskeller, M. (2009). Prometheus unbound: transhumanist arguments from (human) nature. *Ethical Perspectives 16*(1), 3-20.

Hottois, G. (2013). Humanismo, transhumanismo, posthumanismo. *Revista Colombiana de Bioética 8*(2), 186.

Jacob, F. (1999). *La lógica de lo viviente*. Barcelona: Tusquets.

Jonas, H. (1975). *El principio de responsabilidad: Ensayo de una ética para la civilización tecnològica*. Barcelona: Herder.

Kass, Leon R. (June 2, 1997). "The Wisdom of Repugnance". The New Republic. 216 (22). Washington, DC: CanWest. pp. 17–26.Küng, H. (1991). *Proyecto de una ética mundial*. Madrid: Trotta.

Küng, H. (1999).*Una ética mundial para la economía y la política*. Madrid: Trotta.

Nozick, R. (1988). *Anarquía, Estado y Utopía*. México: Fondo de Cultura Económica.

Postigo, E. (2016). Naturaleza humana y problemas bioéticos del transhumanismo y el mejoramiento humano. A A. Cortina & M. A. Serra (Coords.), *Humanidad infinita. Desafíos éticos de las tecnologías emergentes*. Madrid: Ediciones Internacionales Universitarias.

Sandel, M. (2015). *Contra la perfección. La ética en la era de la ingeniería genètica*. Barcelona: Marbot Ediciones.

Savulescu, J. (2012). *¿Decisiones peligrosas? Una bioética desafiante*. Madrid: Tecnos.