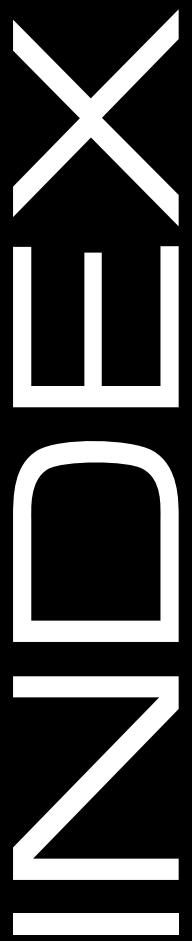


TRANSHUMANISM and the ENHANCEMENT of NATURE

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Abstract

In this age of advancing technology we are becoming increasingly impatient with what the body nature has given us with our frailties and limitations. While our minds soar, our bodies seem to frozen in time, but what if we can build a better body using all available technology to fix this human form and then improve upon it? Make it stronger, faster, smarter and create the human of the future. But what for? Transhumanists, or those who are loyal to the ideals of the improvement of the human species through great enhancement as a moral obligation, believe they are the suppliers of the torch that will take us to an enlightened future. Transhumanism upholds the domination and modification of the human nature, take control of mankind's evolutionary process to turn it into a posthuman society, and by this make the course of nature's future a malleable property. In the present moment humankind has the power to alter its environment and its own nature; things that before were just mere wishes or pure imagination. This new possibilites of intervention have exposed the long debate of the relationship between humanity and nature and raise new questions about the consequences of this attainable interference. Throughout this work, I will argue about the implementation of transhumanist assertions and their philosophical ethics, counterposing them with the notion of nature, and the eager of humankind to possess control over it. As Transhumanism is a revolutionary ideology, I researched and analysed in depth their technological developments taking into account both the benefits and possible harms of its implications, as well as the consequences on the shift of the definition of human nature.

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The topics of research in this paper are focused on the principles of the philosophical movement Trans-humanism and its relationship the enhancement of nature and the human being. Besides investigating the theory, I researched illustrative examples that are displayed with descriptions and graphics. The selected material was interdisciplinary taken from several times of humanity. My intention is to bring awarness of the usage of technology as some of my examples are historical milestones. I wondered about the world, the nature, and the human; what do we imagine about them, what do this words mean in the present moment, and what are the risks of the misusage of technology in human history.

Worl

Living in the Artificial World

We were born in a world that was already designed. The humans in their aim to improve their quality of life had been modifying their bodies and how they relate with the environment in which they inhabit. Transforming and reworking the world and their existence in response to their needs, desires and expectations, creating a more artificial than natural atmosphere. That with property we can call "artificial world". Herbert A. Simon, in his book 'The Sciences of the Artificial' wrote: "The world we live in today is much more a man-made or artificial world, than it is a natural world. Almost every element in our environment shows evidence of human artifice as using "artificial" in as neutral a sense as possible, as meaning man-made as opposed to natural¹". Gary Krug wrote that "within the technological system people exist in spaces already constructed, and they have adapted themselves to this world as simply the way things are."² In the actual world, if we talk about progress we immediately associate it with technology, because as we currently conceive it is linked to the all the qualities that life has. It is almost impossible to think about this aspects if we separate them from technology³.

Each human being lives in a constantly changing reality and adaptation to technological advancements. Taking into account that although the relationship: humanity - nature is a subject that has deserved and deserves our attention, now we must start to worry about the relationship: humanity - artificial world⁴. This implies that we

- ¹ Simon, H.A. "The Sciences of the Artificial". MIT Press, 1996.
² Krug, G. "Communication, Technology and Cultural Change". SAGE Publications, 2005. P. 16.
³ Schulz, R. "Quality of Life Technology". CRC Press, 2013. P.111.
⁴ Tymieniecka, A.T. "Does the World Exist? Plurisignificant Ciphering of Reality". Kluwer Academic Publishers, 2004.

Fig. 1: Satellite image of the Flevopolder in the Netherlands. Screenshot from NASA's World Wind. 2005



should study the interactions humanity - artificial world and artificial - world, natural - world; and study the generation, evolution and control of the technological aspects of the environment.

The Artificial World: Technology can be found or exists everywhere. We can affirm this just by simply look of what surrounds us and put on evidence that everything has been a creation of the man; how do we behave, how did societies developed and as a consequence our culture that bears the indelible stamp of technology⁵. The artificial world is everything that surrounds us that is made by a human. On every present moment technological action leaves as a consequence the artificial world we live in. Now, we must understand it as a global unit and the elements that surrounds it, have an opinion and take actions based on this understanding. In the last decades the speed of growth of this artificial world and the innovative rhythm that its development has taken.

This artificial world, which is not a fictitious world, it actually helps mankind to improve life's obstacles, and it is a substantial part of the cultural and social frameworks. The artificial world conditions our everyday life; and to avoid problems we should examine, know, understand and control which are the conditions it applies to humanity. The artificial world in several occasions behaves as a true interface between man and the natural world, making the relationship between both more indirect and complex. The complexity, density and amplitude that it has acquired poses the risk of isolating and completely enclosing the human, blocking his perception of the natural world. To avoid this, a clarification effort is required that makes it comprehensible and controllable; in other words, to make it transparent⁶.

The Dutch Polders are an illustration of engineered nature and the mankind's desire to alterate the landscape. The biggest Dutch polder is in the Flevoland province, where the largest artificial island of the world, the 'Flevopolder' (*Fig. 1*) is located⁷. An encounter with water reclaiming land. The Province is newest created province for the Netherlands and it's conformed by the Flevopolder and the Noordoostpolder. This example displays how the power and usage of technology has grown overtime.

Heyward C. Sander, in his book 'Creator, Creation and Betrayal', said that "the artificial world is a creation that will work on our behalf. It will destroy the way their communities think and make their bodies react real different from the way they are supposed to function. It will also create mood swings so that they will not understand what is happening to them. [...] Nature is the last of the resisters [...] we've been creating the master plan of how to take the natural world out from controlling everything, and in the future [...] the artificial world is king of the land"⁸.

Transhumanism emerged as a cultural construct that considers the relations between humanness and social and technological change. Especially by developing technologies to eliminate ageing and to greatly enhance human intellectual, physical, and psychological capacities⁹. Many people are excited talking and writing about the prospects for the technological enhancement of human brains and bodies and a transition to new versions of humanness. The most avid and optimistic of these people call themselves transhumanists. The meaning of Transhumanism sounds obvious - between states of humanness- yet is re-

⁵ Society for Philosophy & Technology (U.S.), "Democracy in a Technological Society Vol. 9". Kluwer Academic Publishers, 1992.

⁶ Arbesman, S. "Overcomplicated: Technology at the Limits of Comprehension". Current Publishers, 2016. P.3.

⁷ Probst, J. "Amazing Places". Penguin Books, 2015. P. 25.

⁸ Sander, H. C. "Creator, Creation and Betrayal". Universe, 2010. P.29.

⁹ Allenby, B. R., Sarewitz, D. "The Techno-Human Condition". The MIT Press. P. 5.



Fig. 2 : Chips implanted in the Swedish company Epicenter, 2018

markably difficult to specify the variables. A significant part of the ambiguity arises from the notion of what it means to be human.

Transhumanism: "Julian Huxley, the first director of the UNESCO , used for the first time the term transhumanism saying: "I believe in transhumanism: once there are enough people who can truly say that, the human species will be on the a of a new kind of existence, as different from ours as ours is from that of Peking man. It will at last be consciously fulfilling its real destiny." With his vision the man is still a man, but transcending himself, becoming aware of the new possibilities of and for human nature ¹⁰."

The transhumanist technologies that intervene with human physiology to cure diseases and repair injuries have accelerated to a point in which they also can increase human performance outside the realms of what is considered to be normal for humans. These technologies are referred to as emerging and speculative and include, for example, vaccination, artificial intelligence, nanotechnology, nanomedicine, biotechnology, genetic engineering, stem cell cloning, and transgenesis, etc. Other technologies that could extend and expand human capabilities outside physiology include virtual reality, artificial intelligence, robotics, and brain-computer interface, which form the domain of bionics. Because these technologies, and their respective sciences and strategic models would take the human beyond the normal state of existence, society (including bioethicists and others who advocate the safe use of technology) have shown concern and uncertainty about the downside of these technologies and the possible outcomes for our species¹¹.

Biohacking without fear of technology, in Sweden 3.000 citizens (Fig. 2 &3) have implanted an electronic data chip under their skin¹². This chip's technology allows

¹⁰ Huxley, J. "New Bottles for New Wine", pp 13-17. London: Chatto & Windus, 1957.

¹¹ Humanity Plus Organization: <https://humanityplus.org/>

¹² "Why Swedes are inserting microchips into their bodies" August 2nd, 2018. <https://www.economist.com/europe/2018/08/02/why-swedes-are-inserting-microchips-into-their-bodies>



Fig. 3: Chips implanted in the Swedish company Epicenter, 2018

people to do their daily tasks such as opening doors, travelling on public transport and having their identification number on it. It is replacing the usage of tickets, cards and keys¹³. But what would happen if things go wrong? We can take as an example the case of the scientist Mark Gasson, who claims that he has become the first human with a hacked chip infected by a computer virus¹⁴. The researcher introduced an electronic chip in one hand as part of an investigation to evaluate the potential risks of implantable devices. However, the small device turned out to be contaminated by a computer virus. This virus could have been transferred to other electronic systems with which the scientist has been in contact. This event uncovers the unsettling possibility that, in the future, advanced technological devices or implants or transhumanist prostheses may be susceptible to cybernetic attacks or hacks. If in the future, perhaps not too far away from now, if we have implanted chips or other technological devices in our bodies, will the new doctors be the technologists? Will computer antivirus companies be the new pharmaceutics?

Biohacking: “Synthetic biology is a rapidly emerging field, drawing both on the advances in biotechnology and the engineering approach to creating controllable, modular systems. It also often draws on the open-source ethic, seeking to give more people access to modifying biology.”¹⁵

¹³ Bostrom, N., Sandberg, A. “The Future of Identity”. Oxford University Publication. 2011.
<https://nickbostrom.com/views/identity.pdf>

¹⁴ “Mark Gasson. British scientist infects himself with computer virus”. Written by Humphries, M. May 26th, 2010.
<https://www.geek.com/chips/british-scientist-infects-himself-with-computer-virus-1259227/>

¹⁵ The Royal Academy of Engineering. “Synthetic Biology: scope, applications and implications”. 2009.

Transhumanist Politics and Ideal World

In their most radical version, transhumanists wish to take total command of their human capabilities in ways which, at certain point, would require developing into a new species achieved by these means: a posthuman¹⁶. As well they promote that in a future, with the distance of thousands or millions of years, the human being as we know it now will no longer be here, and his descendants, could be biological, mechanical, technological, or a mixture of both. That, of course, if we do not finish earlier with the conditions that make the life of our species possible¹⁷.

The idea of a speculative posthuman “eden” is inherently linked with the philosophical principles of the Accelerationism movement. The term ‘Accelerationism’ was firstly used by the science fiction writer Roger Zelazny in his 1967 book ‘Lord of Light’. In a part of the book, the author referred to an aggregation of revolutionaries, the ones who he called “Accelerationists”, which was looking forward to a higher level of being a higher level to transform their lives through the agency of technology. The foundations of the Accelerationism theory are in favor of automation and aspire to the “fusion of the digital and the human”. Accelerators believe that with the help of technology, they must accelerate and intensify to their maximum capacity, because this is the best way to advance for humanity “or because there is no alternative”¹⁸.

Transhumanists tendencies perhaps could be materialized by the basis of Accelerationism, however, transhumanists believe in an colossal exponential use of technology. They aim to reach super intelligence as distant over any current human capabilities; to have boundless youth and the illusion of eternal lives; to have immunity to illness; to exert total control over their own bodies, temperaments, and mental states; to have the capability of getting rid of feeling tired or, as well, almost all negligible things that occur on the daily life; to have an expanded capacity for joy and cherish; to achieve the fantasy state of awareness that current human capacities are just limited only by the imagination and fantasy.

A transhumanist technology that makes us experience the limits of imagination and awareness is Virtual Reality. We can take as an example of it the game ‘Nature Treks’¹⁹, which explores diverse replicates of enhanced natural landscapes (*Fig. 4*). The players can give shape to their desired “perfect” world by dominating the weather and “natural” resources. The game’s images are an almost hyper-realistic simulation of natural spaces. This technology allows us to transcend our physical and mental limitations, and to construct a pretended promising land of peacefulness and dreams²⁰. But, Virtual Reality makes us question the relationship of our bodies, our physicality, with natural spaces. What is our perception of what we can really achieve or not ruled by our conscious or unconscious fears or what makes us happy. As well, it

¹⁶ Fukuyama F. “Our Posthuman Future: Consequences of the Biotechnology Revolution.” Profile Books Publishers, 2002.

¹⁷ Mehlin, M. J. “Transhumanist Dreams and Dystopian Nightmares: The Promise and Peril of Genetic Engineering.” JHU Press, 2012.

¹⁸ “Accelerationism: how a fringe philosophy predicted the future we live in”. Written by Beckett, A. May 11, 2017. <https://www.theguardian.com/world/2017/may/11/accelerationism-how-a-fringe-philosophy-predicted-the-future-we-live-in>

¹⁹ “Nature Treks VR Game.” <https://www.oculus.com/experiences/rift/12410595593726/>

²⁰ O’Connell, M. “To Be a Machine: Adventures Among Cyborgs, Utopians, Hackers, and the Futurists Solving the Modest Problem of Death.” Granta Books Publishers, 2017.

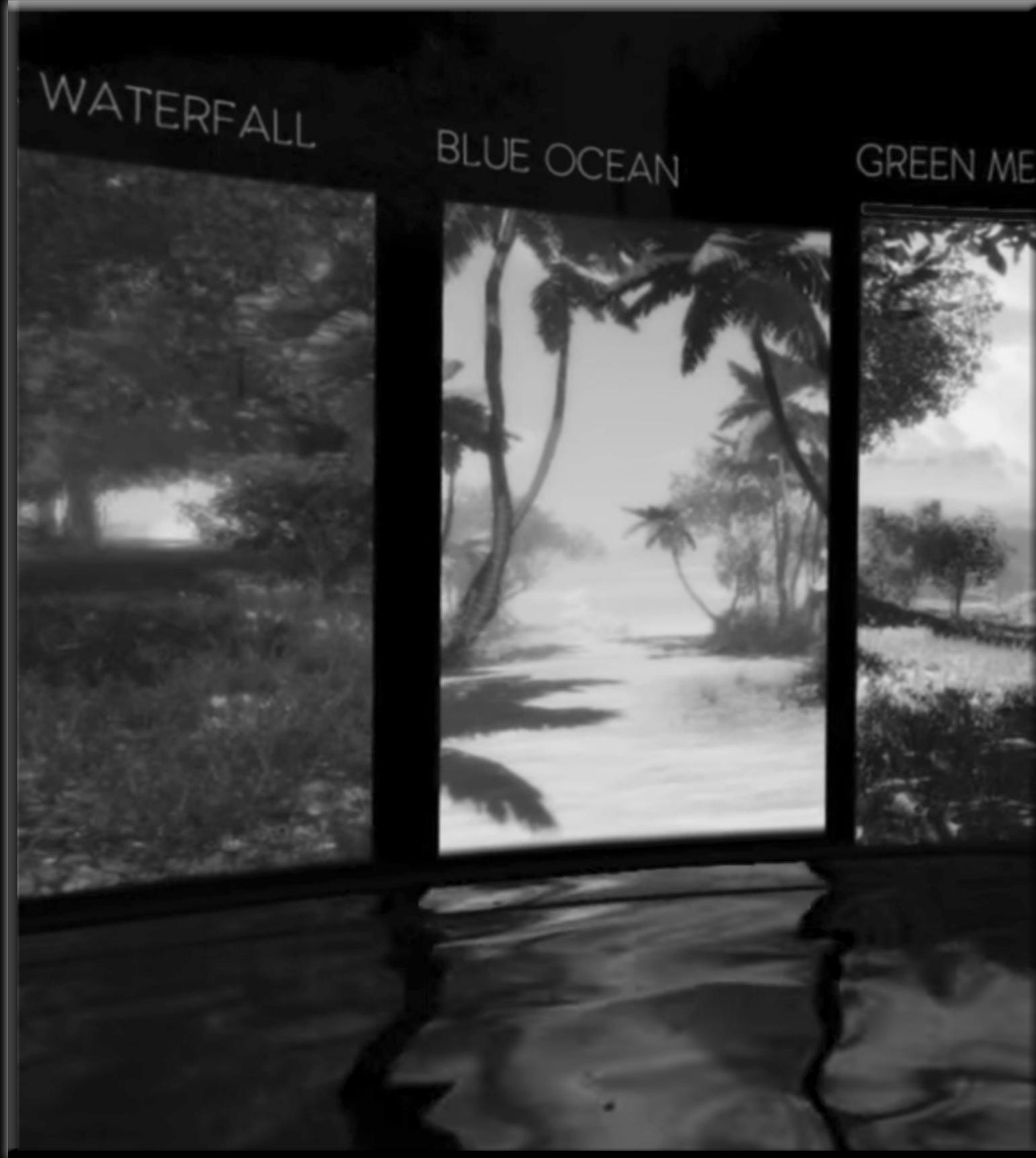


Fig. 4: Screenshot of the Virtual Reality game 'Nature Treks', 2018.

SHADOWS



ORANGE SUNSET



VIOLET DAWN





Fig. 5: Screenshot of Harun Farocki's, 'Parallel I' video, 2012.



puts the users on the fantasy role of world creators.

Another simulation of the natural world is the artwork ‘Parallel I’ from Harun Farocki, a comparative visual narrative with the artificial world. The image moving composition shows the constructivism of games from visual landscapes and computer animated worlds, displaying a parallelism between rendered artificial imagery and real photographic one questioning photo-realism (*Fig.5*). The artist quotes “Computer animations are currently becoming a general model, surpassing film. In films, there is the wind that blows and the wind that is produced by a wind machine. Computer images do not have two kinds of wind. [...] Apparently today computer animation is taking the lead. Our subject is the development and creation of digital animation. If, for example, a forest has to be covered in foliage, the basic genetic growth program will be applied, so that “trees with fresh foliage” [...] “a forest in which some trees bear four-week-old foliage, others six-week-old foliage” can be created”. Pondering about the development of such hyper-realistic effects, based on the application of generative algorithms, the art piece unveils a feeling doubt about what is the significance, if there is one, of reality and till which extent will be possible to command it²¹.

Eugenics: “The improvement of human hereditary traits through various forms of intervention. The means formerly proposed to achieve these objectives focused on artificial selection, while the modern ones focus on prenatal diagnosis and fetal exploration, genetic counseling, birth control, in vitro fertilization and genetic engineering.”²²

The discussions around transhumanism investigate how we associate, behave and relate with the world we live in. In a transhumanist ideal world we would be able to edit and control our hereditary traits. To answer the question if this philosophy advocates eugenics, the conscious manipulation of our genetic qualities, transhumanists state that they: “Uphold the principles of bodily autonomy and procreative liberty. Parents must be allowed to choose for themselves whether to reproduce, how to reproduce, and what technological methods they use in their reproduction. The use of genetic medicine or embryonic screening to increase the probability of a healthy, happy, and multiply talented child is a responsible and justifiable application of parental reproductive freedom. Beyond this, one can argue that parents have a moral responsibility to make use of these methods, assuming they are safe and effective. Just as it would be wrong for parents to fail in their duty to procure the best available medical care for their sick child, it would be wrong not to take reasonable precautions to ensure that a child-to-be will be as healthy as possible. This, however, is a moral judgment that is best left to individual conscience rather than imposed by law. Only in extreme and unusual cases might state infringement of procreative liberty be justified. If, for example, a would-be parent wished to undertake a genetic modification that would be clearly harmful to the child or would drastically curtail its options in life, then this prospective parent should be prevented by law from doing so. This case is analogous to the state taking custody of a child

²¹ Farocki, H - Parallel I, 2013, 00:08:38, Germany, English, Color, stereo16:9 | HD video <http://www.vdb.org/titles/parallel-i>

²² Encyclopedia Britannica: Eugenics. Written by: Philip K. Wilson <https://www.britannica.com/science/eugenics-genetics>



Fig. 6: CBS News reporting how parents selected the gender of their baby by using CRISPR technique with Dr. Jeffrey Steinberg, 2017

in situations of gross parental neglect or child abuse²³.”

Transhumanists confronts the ethical challenge with the power of the self direction of human evolution as now scientists claim that they can design a better version of our offspring and succeeding generations²⁴. In an almost science fiction scenario Dr. Jeffrey Steinberg uses the CRISPR technique to single out a piece of DNA to then repair it or cut it like scissors (what is called ‘Gene Editing’) to correct genetic defects²⁵. Preimplantation Genetic Diagnosis (PGD) technology it was used firstly to clear diseases and gender selection and now it allows parents to select their babies physical traits such as “eye color, hair color and more” with an 80% accuracy. The doctor enabled Kristen and Matt Landon, a couple from the United States of America, to select the gender or their daughter (Fig. 6) in his clinic based in Los Angeles city. The reasons to do such thing were plainly cosmetic. Does this baby has the quality of a “free woman”, even though she was entrusted by her parents and meticulously genetically manipulated to avoid a gender and the randomness of nature?

Using as well the CRISPR technique, Dr. He Jiankui in Shenzhen, China, claims that he helped make the world’s first two genetically modified twins²⁶. He modified the genetic of the babies disabling the specific gene that allows the HIV cells that infect humans. He believes this procedures in the future will benefit the patients with rare diseases. The scientist also affirms that “the world has moved on to a stage for embryo gene editing” and that if he wasn’t doing this someone else would do this. Even though what Dr. Jiankui did seems an act of good, he was not authorized by the chinese government to execute such relevant procedure. Are now pre-

²³ “What is Transhumanism Org: <https://whatistranshumanism.org/>

²⁴ “Scientists Can Design ‘Better’ Babies. Should They?”. Written by Haberman, C. June 10th, 2018. <https://www.nytimes.com/2018/06/10/us/11retro-baby-genetics.html>

²⁵ “Designer Babies. CBS News”. 2009. <https://www.youtube.com/watch?v=2ixEDLa3Jlc>

²⁶ “South China Morning Post. Chinese scientist claims to have created world’s first gene-edited babies” November 27, 2018. <https://www.youtube.com/watch?v=g8fxmb6odAU>



Fig. 7: 'Alcor Life Extension' cryogenic capsules.

pared for such interventions as there is no regulation at all? This alterations express a possible future hyper-individuality if not regulated properly.

Transhumanist Technologies: "Technologies that intervene with human physiology for curing disease and repairing injury have accelerated to a point in which they also can increase human performance outside the realms of what is considered to be "normal" for humans. These technologies are referred to as emerging and speculative and include artificial intelligence, nanotechnology, nanomedicine, biotechnology, genetic engineering, stem cell cloning, and transgenesis, for example. Other technologies that could extend and expand human capabilities outside physiology include artificial intelligence, artificial general intelligence, virtual reality, robotics, and brain-computer integration, which form the domain of bionics, uploading, and could be used for developing whole body prosthetics."²⁷

The followers of transhumanism believe that at certain point we will be able to upload our consciousness to a machine, a backup of our brain²⁸. Some transhumanist promote a "live forever" discourse. Defeating the meanings of death, The Alcor Life Extension Foundation designed cryogenic capsules where people that have the desire to prolong their existence on this planet can do so threw an "hibernation" method (*fig. 7*). The ideal of the company is to, with the help of the CRISPR technique, freeze human bodies with hope to preserve them and their minds to, in the future, be able to resurrect at one point²⁹.

It appears likely that the basic truth of living an uncertainty long, solid, dynamic life would take anybody to posthumanity on the off chance that they went on collecting memories, abilities, and mental and physical capabilities. But the question to all this promising life enhancements and augmentations don't discuss how we are going to live a long-lasting happy life or, if everything goes wrong, we are going to live taking anti rejection drugs for our bodies to adapt to prosthetics for exam-

²⁷ 'Humanity Plus Organization': <https://humanityplus.org/>

²⁸ "Live Forever" Written by Kurzweil, R. January 1, 2000. <https://www.psychologytoday.com/us/articles/2000001/live-forever>

²⁹ 'Alcor Life Extension Foundation. The World's Leader In Cryonic Technologies': <https://alcor.org/>

ple. For now transhumanists ideals could be a dream or a nightmare. Will be feasible in the future that freedom will be mediated by technological devices and happiness will depend on the administration of chemical drugs capable of controlling humors, dreams and instincts? Would the offer and principles of transhumanism still be freedom?

The transhumanist philosophy discusses that there would be two types of characteristics of the human being to improve: those that have to do directly with the mental quality or of the conscience, and those that have to be with the hardware, which would be our body. The hardware capabilities seem to be simply instrumental. An individual of the human species could be made more human even if he ceases to be human in a biological sense. The transhumanist idea of downloading all the brain information in other hardware (computers) makes the brain and the entire human body dispensable, a body with no rights.

The Swedish philosopher Nick Bostrom, in his paper 'In Defense of Posthuman Dignity'³⁰, argues that the sectors that show resistance to accepting biotechnology experience two main fears. The first one is the possibility of dehumanization that people can experience, and the second one is the potential threat that posthuman beings can represent for ordinary humans. The thinker refutes these fears by asserting that respect for individual decisions must be guaranteed as well as information, public debate and education must be the means to provoke intelligent decisions-making. Regarding the second concern, Bostrom states that the creation of two different species from genetic modifications is highly questionable. Transhumanists believe that there is no moral difference between human improvement through technology and other forms of progress. The author maintains that being healthy, smarter, having a wide range of talents or possessing greater powers of self-control are blessings that tend to open more roads than it closes.

Will randomness always be left out of any technology? Complete control is impossible. Not everything always works as planned. In any circumstance there are factors that have not been taken into account and that can cause enormous effects, even catastrophic, without us being capable to do anything about it. Technology is certainly not a chaotic system, but, like every system imbricated in society, it is a subject that in many cases can provoke unforeseen circumstances and side effects impossible to measure in advance, or even to prevent them sufficiently.

Regardless of the current technical feasibility of the transhumanists technological proposals applicable to human beings, their politics are a challenge and would involve discussing in a global manner to what extent and on what basis we should or would not want a human condition different from the current one. Transhumanist politics and questionable problems should lead us to rethink the role and magnitude of their technologies, to establish criteria to regulate and monitor scientific investigations and research and clarify when and how they should be oriented for the mankind's improvement. It should encourage us to define if the human body is only an

³⁰ Bostrom, N. 'In Defense of Posthuman Dignity' University of Oxford, 2005.

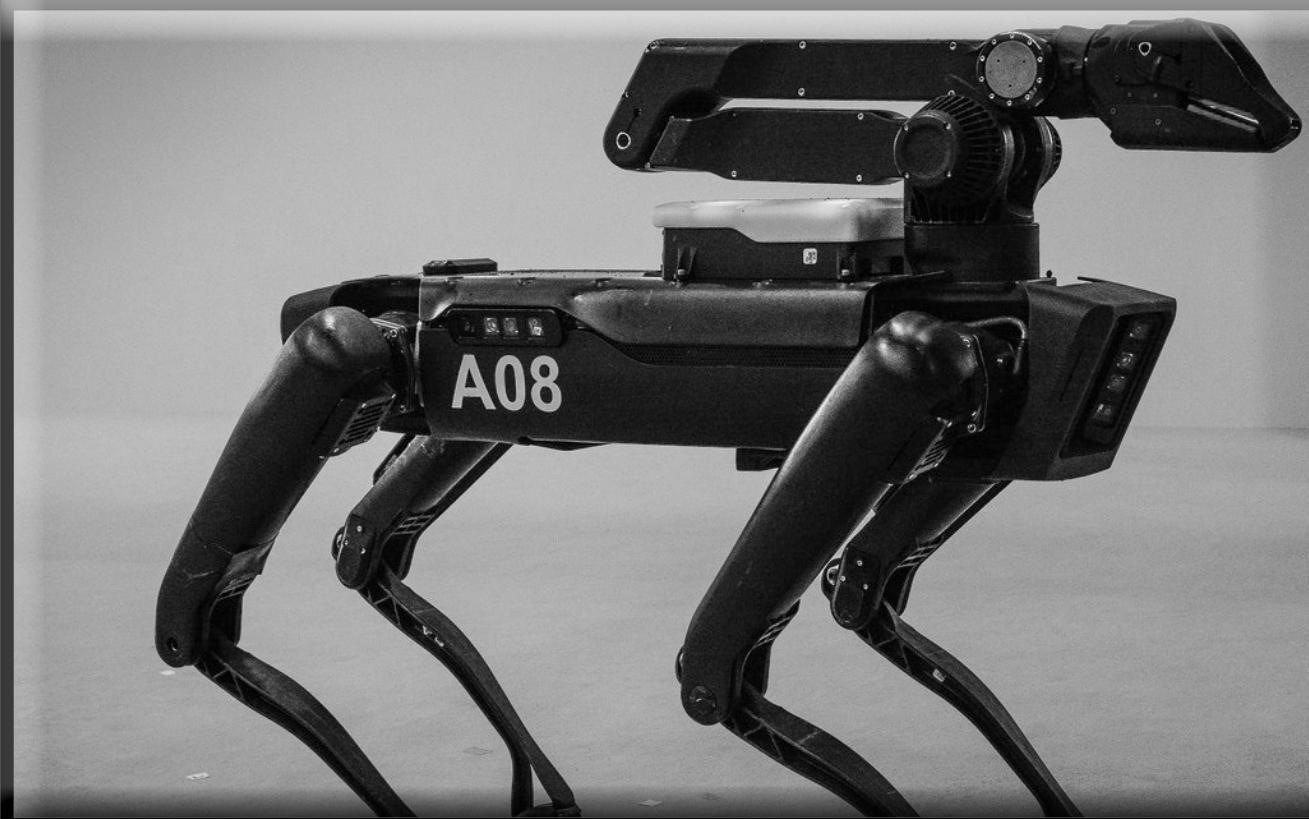


Fig. 8: 'SpotMini' the robot dog from Boston Dynamics, 2018.

evolved being, or if also has a function and meaning³¹. We should ask ourselves what is the duty of our history, socialization and biography in the constitution of human nature, which gives it an unconditional intrinsic value, what we call human dignity.

In order to respond to transhumanist challenges we must understand their codes and take an approach to the normative foundation of human nature, definitions about man, science and ethics, as well as the notion of the word freedom³². If this is to be understood preferentially as creativity opposed to the necessity of the natural, or if freedom is the resource to oppose the incomplete and diminished character of ourselves, or if freedom is the last feature of our survival and we should make it limitless. Ultimately, if freedom is a reality open to the infinite possibilities or a deception that makes us believe that the more technological progress is made, the less progress is made in human personal perfection.

Shifting our view on a new class of pet, the company Boston Dynamics (*Fig. 8*) will make SpotMini³³, the robot dog with an astonishing mobility, available to buy on the market. We will be able to choose the functions you want our "dog" to perform as they come in packages. Its customization depends on the role the owner of this "robotic animal" wants to give to it. For example, if the dog want purchased for security reason, it will be equipped with extra cameras. But, are we by this losing the natural order of randomness if we are able to have total control the identity of our pets not threw education?

This should lead us to consider and evaluate the interdisciplinarity function of transhumanists technologies, their relationship with the laws and the dynamics of society. We should be encouraged to address what does the meaning of "human" specifically consists of and call for a redefinition of technologies related to our biology with man as the sole end: the real man, not the fantasy one; the possible man, from what he is; not only from how we imagine it. This imposes on us the challenge of proposing the definition and scope of our mortal condition, the basis of what we know as our finite identity. Although biographical material remains, the adjective mortal belongs to every human being. From the transhumanist point of view, the meaning of mankind's improvements, progress and growth comes from what we must become. For them what we are as a specie already is not enough, our nature will never be enough.

³¹ Livingstone, D. "Transhumanism: The History of a Dangerous Idea". Sabilah Publications, 2015. P.52.

³² Mercer, C, Trothen, T.J. "Religion and Transhumanism: The Unknown Future of Human Enhancement". ABC-CLIO Publishers, 2015. P.109.

³³ "Boston Dynamics is prepping its robot dog to get a job" Written by Simon, M. October 12, 2018. <https://www.wired.com/story/boston-dynamics-is-prepping-its-robot-dog-to-get-a-job/>

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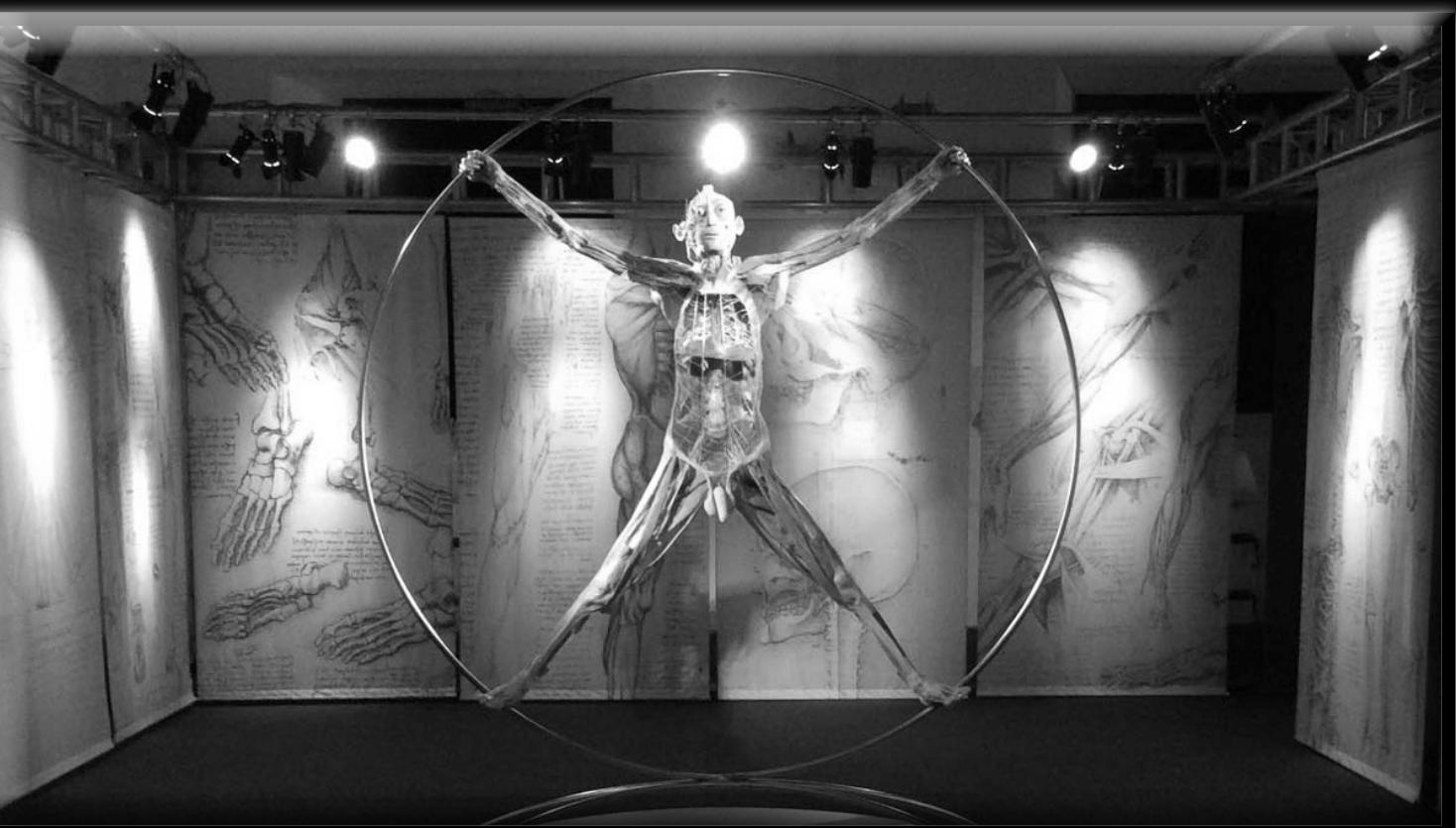
Human Action is not Nature

Science, techniques and technology are now seeking perfection, a dubious and complex unit of language. Humankind striving to obtain perfection has executed overtime flawless techniques and virtues³⁴. But even if we are in the best of our biological conditions, transhumanists believe that what we had achieved till now as a specie is not good enough. From a transhumanist perspective, perfection has to do with the unified notion of progress looking for enhanced human competence³⁵. For the rest, the factors that contribute to the perfection of man exceed the decline of his biological vulnerability. Vulnerability should not be considered a bitter expression of our imperfections, but an essential human feature. Perhaps because we are know we are vulnerable, we feel exposed and subjected by our natural finite trait.

The absence of human autonomy is the significance of nature³⁶ and “technology can be defined as a pursuit of power over nature”³⁷. Transhumanism urges us to abruptly separate humans from nature, since the philosophy considers that the most effective way to end suffering, is to get rid of the biological substrate that causes it, in which it sees only a burden that prevents all transcendence. Thus, the late modern sentiment that the human subject lacks a future, and adds the resolution that it does not deserve to have it, is preeminent. Therefore, what it presents as a redemption has the appearance of being rather a surrender. All meaning and all ends are placed in the hands of a techno-scientific utopia that relies on an unlimited human plasticity, and

- ³⁴ Žižek, S. "Lacan: The Silent Partners. Verso Publishers" 2006. P.182.
³⁵ Bostrom, N.; Sandberg, A. "The Wisdom of Nature: An Evolutionary Heuristic for Human Enhancement". Oxford University Press, 2008. P. 377.
³⁶ Heyd, T. "Recognizing the Autonomy of Nature: Theory and Practice". Columbia University Press, 2005.
³⁷ Friedel, R. A "Culture of Improvement: Technology and the Western Millennium", 2007.

Fig. 9: 'Real Bodies, Oltre il Corpo Umano'Exhibition. Ventura XV Space. Milan, Italy. 2017.



discards, without any justification, the possibility of an irreversible break. The activities and actions humans fulfill and accomplish are not nature itself, but they have the capabilities to design and develop it - genuine nature in all its performance, threats for the freedom of choice and unknown outcomes. Towards all our attempts and tests, it is still rarely easy to foretell and shape life around nature's unpredictability.³⁸

The developments of technical knowledge threw time made possible the investigation of the corners of the corporeal world, from the microcosm to the macrocosm. "Real Bodies, Oltre il Corpo Umano" exhibition is a proof of how, with the right knowledge, is possible to make visible the most hidden parts of the human body. All the corpses and organs have undergone a plastination process in order to keep their shapes and texture almost unaltered and are laid to recall natural moves³⁹. Specifically the translation of the famous "Vitruvian Man" from Leonardo da Vinci into the plastification of a real anatomical body (Fig 9) shows the complexity of the skeleton's structure and muscular system. A plastified human for anatomical analyses. A discovery of the unseen; a domination of the nature. Counterposing the visibility of the man, on her performed film 'How Not to Be Seen: A Fucking Didactic Educational .MOV File' (Fig 10), Hito Steyerl⁴⁰ argues about the invisibility of the man by the gigantic amount of images we are exposed to on a daily basis on the Information Age. She exemplifies the strategies for becoming invisible and makes us question, for example, the belief that our digital identities in social media channels is our real identity, and where is the limit line between digital and natural.

³⁸ Stanford Encyclopedia of Philosophy. Presuppositions of Aristotle's Politics.
³⁹ "Real Bodies, oltre il corpo umano" Exhibition. Spazio Ventura XV. Milan, 2018. <https://www.realbodies.it/la-nuova-mostra/>

⁴⁰ Steyerl, H. "How Not to Be Seen: A Fucking Didactic Educational .MOV File" Video, 14-min, 2013. https://www.moma.org/learn/moma_learning/hito-steyerl-how-not-to-be-seen-a-fucking-didactic-educational-movie-file-2013/

⁴¹ Marcuse, H. "Philosophy, Psychoanalysis and Emancipation: Collected Papers of Herbert Marcuse, Vol 5". Routledge, 2010.

Fig. 10: 'How Not to Be Seen: A Fucking Didactic Educational .MOV File' Video by Hito Steyerl, 2013.



The total control of nature⁴¹ that transhumanists believe in is not a true progress, but an vehicle to self-alienation⁴²; superstition that clashes frontally with the universal beliefs that have been characterized, from the beginning of history, by the recognition of the dignity of each and every man. Transhumanism, although it includes diverse ideological currents and advocates radical social changes, has become one of the recent cultural formulas that best lends itself to the radicalization of capitalism, turning the human being into a bio-artifact subject to the offer and the demand⁴³. In this accelerated capitalist era that can steadily reinvent itself through the digital, perhaps all human affairs are not solved with technology and social aspects have to be taken into account.

We can take as an example Lil Miquela and Gram Shudu. Both of this Instagram cyborg-influencers question or erase the limits of the physical and the digital. Their posts captivated millions of people who follow them today, to such a degree that their success could be enviable by many who call themselves influencers or public figures (real human beings). Lil Miquela has collaborated with the well-known Prada fashion brand (*Fig. 11*), as well as being used to posing with for other very luxurious brands. The first digital Supermodel Shudu (the creation of fashion photographer Cameron-James Wilson) receives several offers from fashion, beauty and technology brands. Wilson claims he wanted to spread the message of "empowerment and inclusivity and many praise his talent"⁴⁴ but he was accused by people of racism and misogyny. There was a huge controversy online and users of social media platforms accentuating that, by designing a black model, the photographer has the possibility to make his rendered model profitable, a non paid model, and by that can take away the job of real human black models. Even though the accusations, Wilson said he has no intention on commercializing Shudu. The invention of Shudu and Lil Miquela makes us question of the future of (natural) real human models and the rendered ones as a new trend of commercialization of non-human bodies in the fashion industry and the social phenomenon this could create. The advantage Shudu has over Lil Miquela is that Shudu looks much more real⁴⁵. The overwhelming evidence of the phenomenon that is coming is her image in which she appears with her lips painted advertising a lipstick of the Fenty Beauty brand (*Fig. 12*)⁴⁶.

Another example of computer generated bodies in the consumer capitalist sphere is the exhibition 'Rigged' by the artist Kate Cooper⁴⁷. As technology increasingly vivifies the virtual bodies, Cooper questions traditional points of feminist critiques that became difficult: what and/or whose body is it, and what exactly is being performed (*Fig. 13*). The image of women is permanently shaping in different ways and she insists that is not about identification but instead about how we take part in these images. Her approach implies a new way of constructivism by criticizing how this is a violence for real woman and using the language of mass advertising and objectification of the female (digital) bodies in a hyper-capital-

⁴¹ Dickens, P. "Reconstructing Nature: Alienation, Emancipation and the Division of Labour". Routledge, 2002. P.52.

⁴² Fukuyama, F. "The Great Disruption". The Free Press Publishers.1999.

⁴³ "Meet; The Perfect Black Model Shudu Gram". <https://www.infocontemporary.com/2018/03/11/meet-the-perfect-black-model-shudu-gram/>

⁴⁴ 'lilimiquela' Instagram profile. <https://www.instagram.com/lilmiquela/>.

⁴⁵ 'Shudu' Instagram account. The World's First Digital Supermodel. <https://www.dismagazine.com/dysmorphia/66668/kate-cooper-hypercapitalism-and-the-digital-body>

⁴⁶ "Kate Cooper: hypercapitalism and the digital body" <http://www.dismagazine.com/dysmorphia/66668/kate-cooper-hypercapitalism-and-the-digital-body/>

⁴⁷

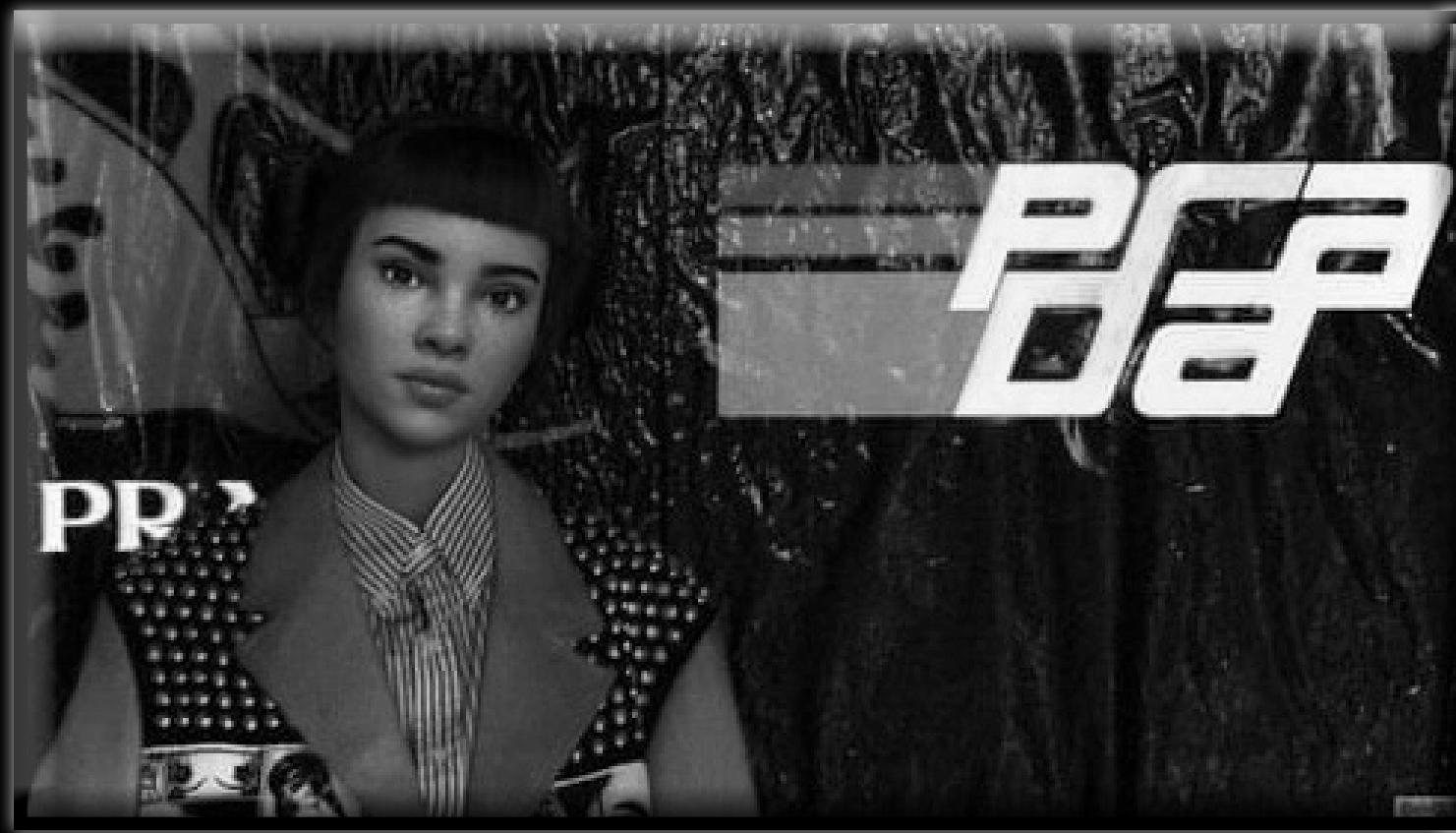


Fig. 11: Rendered Model 'Lil Miquela' on Prada's fashion campaign, 2018.

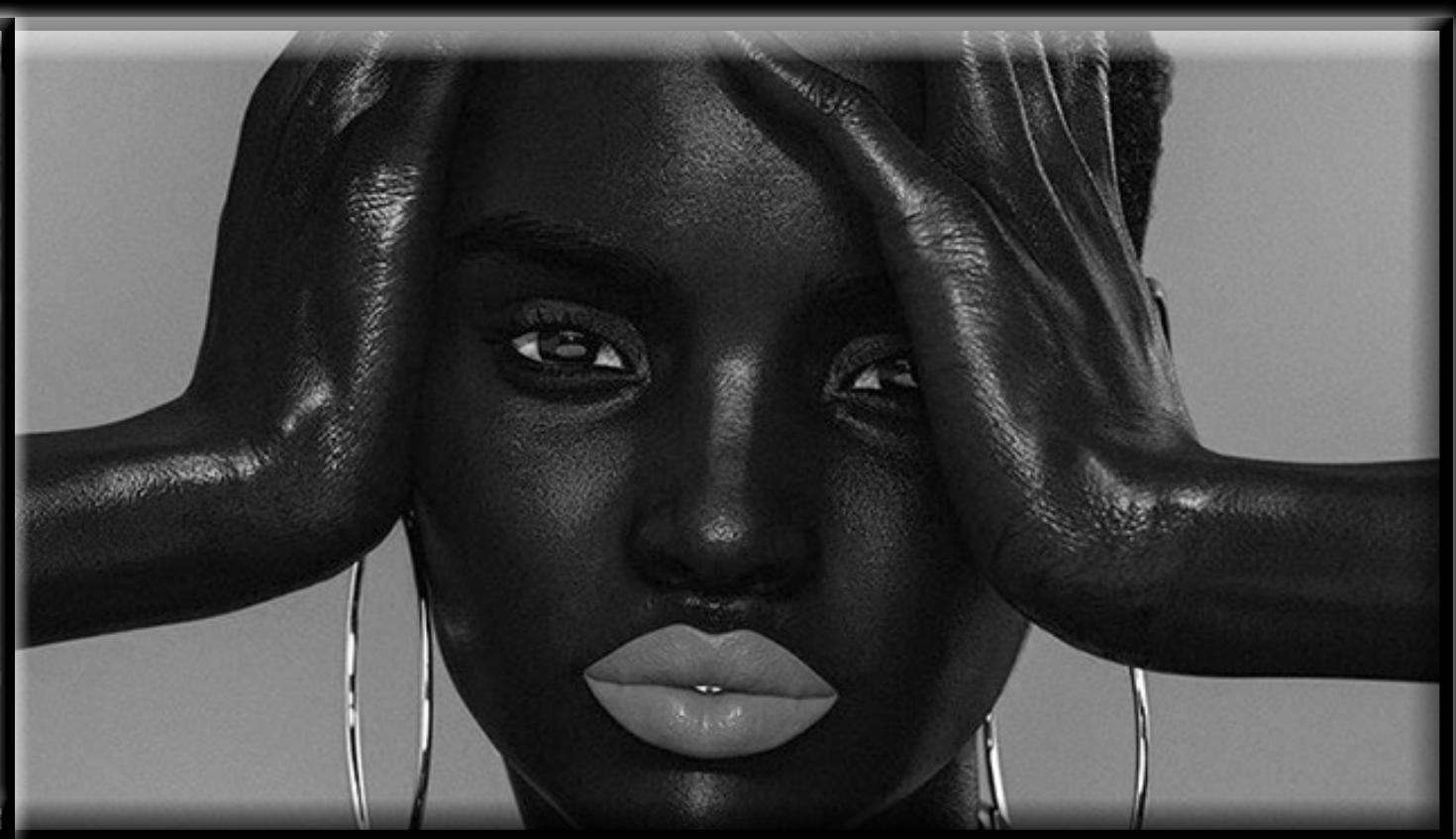


Fig. 12: 'Shudu'. The first computer generated Instagram supermodel in a Fenty Beauty Brand campaign, 2018.



Fig. 13: Kate Cooper's computer generated model in her 'Rigged' exhibition, 2014.

ists world. Her work, as well as Wilson's creation 'Shudu', make us wonder about how models would look like and how designers would be able have total control over their models in the future, imitations of real women. "Beautiful" and "perfect" bodies made by the desires of other human.

Transhumanism most notable defenders are prestigious scientists, designers, coders and engineers. Yet, unless you have a realistic vision of today's society, science and technology, it is difficult to assume an unwavering confidence that technological development will lead to the resolution of all the evils that have plagued us throughout our existence, including death⁴⁸; in which social issues are ultimately solvable technical problems through better techniques, or simply selecting the type of beings suitable for existence; in which total dominion over nature is possible and desirable; and in which general happiness, paradise on earth, is within the reach of our laboratories; a complete emancipation of nature.

⁴⁸ More, M.,Vita-More, N. "The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future". John Wiley & Sons Publishers, 2005. Part V.

Enhancement; The Emancipation of Nature

It is important to talk about the distinction between the notion of human growth, enhancement and improvement, given that such difference is at the root of the optimistic application of biotechnology on the human race, so that it allows to redesign the human being; as the size of the transhumanist proposals of which I'm talking about depend on this. If the proposals of technological interventions do not imply modifying human nature in a radical way but only using it as make-up, it would diminish the strength of the propositions of the transhumanist philosophy.

Being able to take control of our own evolution makes visible the culmination of the process of artificialization of all nature. Transhumanism can be seen as one the most dangerous philosophies in the world. However, not everything that is promised can reach reality as many of the speculative transhumanist propositions that are announced are difficultly attainable or may never be possible to carry out. It seems that transhumanists understand the complex and diverse capacities of humans the from a concept of nature⁴⁹, it is not so much the fact that they also assume that there is a nature of the human being as a complete entity. We must question what is (if there is) a proper duty of the human being as such for transhumanists. Although the answer to this question seems more difficult to answer given that the transhumanists are not concerned about this issue, and therefore do not express themselves explicitly, the concept of human nature that they use appears without needing to be an almost elusive desire.

Talking about transhumanist enhancements we can take the differentiation of usage of civil prosthetics and the once that are designed for military purposes. As a civil usage of transhumanist technologies we can take as an example the Oscar Pistorius (*Fig. 14*), the amputee sprinter that took the second place making Olympic history in 400m at London 2012⁵⁰. This makes us wonder if perhaps highly technological prostheses give runners an unfair advantage over runners who don't make use of them. The prostheses technology's impact on the performance of sports for now remain unclear despite ongoing research⁵¹. On the other hand, as an example of military enhancement, in the United States, DARPA (Defense Advanced Research Projects Agency)⁵² tested the 'Berkeley Lower Extremity Exoskeleton'⁵³ to reduce injuries and fatigue of their soldiers while improving their missions performance. A prototype that possess "two powered anthropomorphic legs, a power unit, and a backpack-like frame on which a variety of loads can be mounted" (*Fig. 15*). While wearing the Exoskeleton, the users of it would be able to carry significant amounts of weight and walk over considerable distances without reducing their agility, thus significantly increase their physical effectiveness. In order to address issues of field robustness and reliability, the system is designed such that, should the device lose

⁴⁹ Bostrom, N. "Why I Want to be a Posthuman When I Grow Up" Future of Humanity Institute. Bert Gordijn and Ruth Chadwick Oxford University, Springer, 2008.

⁵⁰ "Oscar Pistorius makes Olympic history in 400m at London 2012". August 12, 2012.
<https://www.bbc.com/sport/olympics/18911479>

⁵¹ "Blade Runners: Do High-Tech Prostheses Give Runners an Unfair Advantage?" Written by Greenemeier, L. August 5, 2016.
<https://www.scientificamerican.com/article/blade-runners-do-high-tech-prostheses-give-runners-an-unfair-advantage/>

⁵² "DARPA's Warrior Web project may provide super-human enhancements". Written by McNally, D. May 5, 2014.
https://www.army.mil/article/125315/darpas_warrior_web_project_may_provide_super_human_enhancements

⁵³ Berkeley Robotics & Human Engineering Laboratory' <https://bleex.me.berkeley.edu/research/exoskeleton/bleex/>



Fig. 14: Oscar Pistorius makes history as he starts in the men's 400m heats at the London 2012 Olympic Games.





Fig. 15: Enhanced DARPA's Warrior. United States Army, 2014.



power (e.g., from fuel exhaustion), the exoskeleton legs can be removed with the machine becoming no more than a standard backpack.” So this would be an improvement for transhumanism and the implications of its technologies, but, what would happen if this sort of augmentations, or more efficient ones in the future falls into the wrong hands?

Self-experimentation with transhumanist technologies, as well, is something that happens. As examples of enhanced humans (or cyborgs) we can talk about in first place about Kevin Warwick⁵⁴, world leader in the research of artificial intelligence. He implanted an RFID chip in his forearm, a radiofrequency identifier such as the ones put on clothes of any store. This eventuality made Warwick became the first cyborg in history in 1998. His intention was not to become one, but to get rid of hideous events. His second cyborg experiment was to articulate the arm of a robot. That metallic arm imitated his own movements, guided by the stimuli of his brain *Fig. 16*. Another example is Rob Spence⁵⁵, a Toronto documentary filmmaker who lost an eye during his childhood and who has implanted the first 3D printed eye prosthesis *Fig. 17*. Thanks to his experience with the video cameras, he decided to convert his aesthetic prosthesis into a mini-camera to record what he saw from that perspective and transmit it through a portable device. The view was gradually lost and when the organ was in an irrecoverable state, the surgeons recommended its removal to prevent the other eye from being affected. Spence said he came up with the idea of adapting a camera when he reflected that the phones already used a very small one, which could fit in the space occupied by the eye. By doing so, Spence became the first “Eyeborg”.

Fig. 16: The first cyborg Kevin Warwick controlling an artificial arm , 1998.

To-



⁵⁴ “Practical transhumanism: five living cyborgs”. Written by Lanxon, N. September 4, 2012.
<https://www.wired.co.uk/article/cyborgs>

⁵⁵ Rob Spence “Eyeborg”, <http://eyeborgproject.tv/>

day's generation does not distinguish between implants, transhumanism or cyborgs, because they are the last living this transition in this language, one that addresses less the signifier and more the meaning. And perhaps it is also the generation that marks the change between what can be done and what they will want to do, adapt or dress in their own body. One that tacitly adopts a transformation that began, either by necessity or desire, thousands of years ago.

According to the transhumanist movement, and stated by who happens to be Google's Engineering Director since 2012, Ray Kurzweil⁵⁶, the singularity is an event that will happen within a few years with the spectacular increase in technological progress, and due to the development of Artificial Intelligence and the convergence of NBIC technologies (nanotechnology, biotechnology, information technology, and cognitive science)⁵⁷. This concept would cause social, cultural, political and economic changes unimaginable, impossible to understand or predict by any human prior to the aforementioned event. In this phase of evolution, transhumanist predict that the fusion between technology and human intelligence will take place, giving rise to an era in which the non-biological intelligence of the posthumans will be imposed.

Throughout this process, transhumanism wants to spread an ideology and a culture favorable to human enhancement through the adoption of some artificial improvements in the human being (genetic, organic, technological) with the objective declared to make it smarter, more long-lived, more perfect, happier, even so that it can reach cybernetic immortality and the conquest of the universe. However, this worldview can involve risks. Are we prepared as a humanity for such radical change or do

⁵⁶ "Ray Kurzweil Joins Google In Full-Time Engineering Director Role; Will Focus On Machine Learning, Language" <https://techcrunch.com/2012/12/14/ray-kurzweil-joins-google-as-engineering-director-focusing-on-machine-learning-and-language-tech/?guccounter=1>

⁵⁷ Kurzweil, R. "The Singularity is Near". Duckworth Overlook Publishers, 2005.

Fig. 17: Rob Spence, the first "Eyeborg" that implanted cameras instead of a prosthetic eye, 2016.



we think that we must conserve our genetic heritage and remain normal human persons, with our limitations and failitis, while preserving our inalienable freedom and dignity?

There are notions that may seem vague or used with certain licenses, but in this case we could say that the improvement is flat, while the growth is fertile. That sort of residue left by the habitual activity, which makes the humans more capable of acting, of loving more, of being more admired, of being more interested, and its correlate: that makes someone more capable of lying better, of deceiving, of to get away with it or to devise how to do more damage, they seem to have nothing to do only with improving skills or losing them, but with something more package: growth and closure. The improvement is determined both in its object and in the way it is acquired and it seems that human growth is much more than the measurable improvement in certain delimited aspects. In this, transhumanism loses sight of temporality and converts timing into the human condition. Only with a complete naturalization of man⁵⁸ can the human condition be made of the timing. By completely naturalizing the human being⁵⁹, an attempt is made to prolong, through the extension of human capacities, an existence that will be precarious anyway. It is about infinitely delaying the status of timing, which always has expiration. Therefore, in the end, the position should not be satisfied with a certain improvement, but betting on eternity through the elimination of death. Thus, from the ethical growth the improvement of physical capacities is resized, it is given a frame and a sense and it does not become an end in itself; and vice versa: from the physical improvement in intellectual or performance terms, it could subscribe to a healthier life, but not necessarily more complete or more human, only from the physical improvement.

By playing with anti aging and immortality dreams, transhumanist are playing a race with time. In an interview Natasha Vita-More spoke about the 'Whole Body Prosthetic'⁶⁰ theory project. Defending the ideal of being able to change our whole body with a prosthesis, Vita-More said that our cells possess a determined lifespan and by using nanotechnology and bioengineering methodologies we will be able to edit this with new technologies. She professed that if there are already theories about backing up our brains, why not to back up our own body? The 'Whole Body Prosthetic' theory states if we do have a different type of body such a cyborgs or another autonomous artificial bodies, "then we could feasibly upload our brains our backup our brains into a computational system and also downloaded into a physical material body so here we're looking at real time physical material time and also nonlinear time which would be artificial cybernetic or a synthetic virtual agents in different environments so it's to secure life personhood over time. You can think that that kind of embodiment physical embodiment and and or we are perhaps physically embodied intelligence is kind of crucial to our experience and to the way we perceive and engage the world. I do I think that our embodiment is crucial to our aware-

⁵⁸ Vaccaria, A. "Transhumanism and human enhancement:A post-mortem Article". http://www.bioethica-forum.ch/docs/15_1/06_Vaccari_BF8_1.pdf

⁵⁹ "David Pearce – The Naturalisation of Heaven and the Hedonistic Imperative". October 26, 2013. <http://hplusmagazine.com/2013/10/26/david-pearce-the-naturalisation-of-heaven/>

⁶⁰ "Natasha Vita-More on Whole Body Prosthetic" <https://www.youtube.com/watch?v=8LucitzhNQ8&t=1s>



Fig. 18: 'Black Mirror' serie. Season 4. Episode 6 'Black Museum', 2017.



Fig. 19: 'Black Mirror' serie. Season 4. Episode 6 'Black Museum', 2017.

ness, our perceptions, our state of consciousness or mind and our cognitive decisions, our intellect. So imagine that if we exist in an upload state, say in a singularity of upload state, and we want to exist in the biosphere how would we do it if we didn't have a body, now why on earth would we want a biological body at that point? We would want an avatar body a Whole Body Prosthetic system that is more functional, more flexible, more durable, and more sustainable than the biological body that we could use as a vehicle in the biosphere. So we're looking at two different spheres, the biosphere the reality that we live in now with chronological time or linear time and the cyber sphere which would be nonlinear time exponential time and we would have multiple different types of existences there based on what type of environments". According to this discourse, it seems that if transhumanist are able to transfer their brains and bodies senses in a majority of it's capacities to machines, they are aiming to use technology to be time travellers. I wonder if transhumanist technologies in the future perhaps will be able to evade temporality, in the sense that it could allow humans to have the ability to bend or distort time so that they perceive it very differently as normally as they do today.

The episode 'Black Museum' from the series 'Black Mirror'⁶¹ exhibits a fictional scenario in which, given the chance, human cognitive capacities can be controlled by technology. The episode narrates the story of Carrie, a mother who had an accident and stayed in a coma. Carrie's mind, after her death, was uploaded firstly into her husband's brain so she could see her young son grow up, till he couldn't endure the situation anymore. Then he transferred Carrie's mind into a Monkey, a child friendly toy being able to perform just two things: say "Monkey loves you" (meaning she was having a positive reaction) and "Monkey wants a hug" (when her thoughts were negative) (*Fig. 18 & 19*). Even though the essence of the primary intention of the mind uploading was good, the episode shows that at the end Carrie's son grew up and got bored of the monkey. As well the prototype model didn't reach the point of having the certain amount of abilities to stay in the market and due to this it was prohibited and Carrie was left displayed in a museum of tortuous technological inventions. The darkest part of this episode shows us Carrie's mind forever being installed in the stuffed animal, because it would be unethical to just erase her because it would be her 'real' self.

Carrie's case has to do with the way transhumanists think of human as a kind of disembodied conscience or mind. Although this does not remove the fact that they are materialistic, because they conceive consciousness as something that springs from the simple structure that supports it. Therefore, to the extent that the structure can be replicated, the same consciousness or mind can be reincarnated in other hardware⁶². If human nature is a disembodied mind, any improvement of the hardware that supports it will be welcome, insofar as it does not affect its rational and moral qualities. The rational and moral characteristics will be considered improved in

⁶¹ 'Black Mirror' serie. Season 4. Episode 6 'Black Museum'. Director: Colm McCarthy. December, 2017.
⁶² Pilsch, A. "Transhumanism: Evolutionary Futurism and the Human Technologies of Utopia". U of Minnesota Press, 2017.

as much as the mind as a whole or each of its faculties improves its own function. The ideology that underpins transhumanist projects can only be echoed among believers in the dogma of one-dimensional materialist technical progress, not among those who believe in authentic, multidimensional, ethical and spiritual human development. The materialist premises of transhumanism vitiate a large part of its proposals. For the materialist, deep down there is no essential difference between the human being and the irrational living beings, and neither between these and the inanimate beings. Ultimately, from this initial error comes the negation of free will in man and the confusion between human intelligence and the Artificial Intelligence of computers or robots. Stated clearly and simply: it is not possible to upload my mind or body to a computer. A computer program that would simulate my way of thinking, speaking, moving and acting, it would be a “copy” of my mind or body; but still, it would never be me. It is completely absurd to seek immortality in this way.

I J U N M A N

Inequity, Inequality and the Creation of New Social Structures

We may speculate what is the hidden agenda of transhumanism. As the affluent people have access to very sophisticated technologies, this eventuality would create an even more larger excision between those implanted or “improved” and the poor who do not have access to them⁶³. The scientist Lee Silver said that, even tho he applies and supports the advancement of technologies, he as well believes that these ones might create a new socio-economic gap making the wealthy and powerful people will potentially have even hold more power than the one they already have⁶⁴. From another point of view, there could also be another situation which would consist in the creation of the “perfect” bodies of labor (workers). On his Twitter platform the technology entrepreneur Elon Musk said that people should work eighty hours a week (at least) to change the world and stated that “nobody ever changed the world on forty hours a week”⁶⁵. His trans-humanist work of ethic seems to suggest that our bodies should became slaves of our professions and enhance our capacities to work, for example, fourteen hours a day six day a week sleep deprived, experiencing anxiety and depression.

The libertarian futurist Zoltan Istvan⁶⁶, who has run as a candidate for the United States presidential election of 2016, said that everyone believes that the human body is magnificent thing, but for him it is nothing of the sort. He stated that “biology is an incredibly frail system. There's not a sensible person that doesn't believe a robot is going to run 100 times faster than a human being. Machines are going to be systematically better than us in every single thing we do - including work - and that's why we absolutely have to integrate ourselves into them or we're going to be left behind.” So it seems that transhumanist are looking forward to a posthuman society that would able to work in the pace of machines; is either that option or to stay out of the system. We have to become machines. Transhumanist predict that in the future there will be robots working hand in hand with humans, which will help to replace rigid production processes with flexible structures. It's going to have to have a serious reconversion. There are professions that are being destroyed or upgraded, that are going to be able to be executed by an Artificial Intelligence, but new ones are also going to appear.

From a biological perspective, for Tristram Engelhardt, a researcher that focuses in the area of bioethics, the body in which the mind resides is of the human, not of the person and, in fact, often hinders mental activity⁶⁷. Therefore, it would be reasonable thing to improve it. Relating Engelhardt's arguments with transhumanism, we can say that in addition to posthumanism taking body of nature in society, hypotheses about the emergence of a new human prototype opens a period of reflection on the promises of technology. Humanity is on the verge of a new evolutionary leap with the emergence of

⁶³ “The science of transhumanism: How technology will lead to a new race of super-intelligent immortal beings (If you can afford it)” Written by Thomas, A. July 31, 2017.
<https://www.dailymail.co.uk/sciencetech/article-4747174/Transhumanism-lead-immortality-elite.html>

⁶⁴ Silver, L. “Remaking Eden: Cloning and Beyond in a Brave New World”. Weidenfeld & Nicolson, 1998.

⁶⁵ “Elon Musk says people need to work around 80 hours per week to change the world” Written by Matousek, M. November 27, 2018.
<https://www.businessinsider.nl/elon-musk-says-80-hours-per-week-needed-change-the-world-2018-11/>

⁶⁶ “Survival of the richest: Could an elite class of SUPERHUMANS upgrade their way to immortality?”. Written by Curtis, S. June 2016.
<https://www.mirror.co.uk/tech/survival-richest-could-elite-class-8299549>

⁶⁷ Engelhardt Jr., H. T. “The Foundations of Bioethics” Oxford University Press, USA, 1996.

new technologies, which has given rise to various scenarios of evolution that, on the one hand, scare, and on the other, they are a cause for hope. In the end, everything will depend on the use that humans give to technology. It seems that we are approaching a time when we seem not to be satisfied with the virtues and graces that have been handed down to us by genetics.

If we look at the advances studied and desired by transhumanists, the future holds an alienating situation where some will have the necessary improvements to stand out from the rest and the others will belong to the controlled hive mind. On what is all this exorbitant ambition based? Is this advance natural and inexorable? Can we make it beneficial somehow? The transhumanist philosophy as well proposes, in a way, to become Gods. This ideals show an extreme level of vanity, an erroneous attitude that misuses knowledge by not respecting the free will and dignity of mankind, and that only attend to the dark polarity of energy or egoistical actions without considering fellow humans. Some authors critics of the current libertarian transhumanism have focused on the socioeconomic consequences that these technologies would have on societies with growing income imbalances. Larry Page, the internet entrepreneur who co-founded Google, the physician Joon Yun and Peter Thiel, the co-founder of PayPal, said that transhumanism is "probably the most extreme form of inequality between people who are alive and people who are dead" ⁶⁸. The environmentalist Bill McKibben, for example, suggested that human enhancement technologies would be disproportionately available to those with more financial resources, thus widening the gap between rich and poor and creating a biologic, genetic and cyborg (artificial) divide ⁶⁹. I can not think of a

⁶⁸ "For the rich of Silicon Valley, mortality is there to be disrupted", 2018.
<https://www.ft.com/content/7303531e-a0a6-11e8-b196-da9d6c239ca8>

Fig. 20: 'Gattaca' film poster. Director: Andrew Niccol, 1997.



more ominous dystopia.

As an example of how a genetic divided society would look like, the 1997 film ‘Gattaca’ (Fig. 20) directed by Andrew Niccol⁷⁰. The movie shows a future in which eugenics, the selection of the best specimens of humans, is the order of the day, even to condition the lives of the inhabitants of the earth, and this is because people who are detected some tare or genetic imperfection, are assigned worse jobs than those who are “perfect” subjects, sometimes reaching pariahs. In the film the embryos before being born are genetically treated to give rise to individuals with an enviable genetic load, tall, handsome and strong. But those who can not afford to boast their genes have the worse luck; they are relegated to low level jobs and sent to the bottom of the social ladder. In the film we can have a glimpse of the possible consequences of technological practice and how the social segregation between “perfect” and “imperfect” humans would be like in a hypothetical future transhumanist world. It also makes clear that a good genetic load does not mean a synonymous with success for a being as diverse as the human being.

As an symptom of transhumanism, we can talk about the Hong Kong based company Hanson Robotics, which creates “intelligent living machines who embrace human values and enrich our lives”⁷¹. They designed ‘Sophia’ (Fig. 21), the first human-like robot having a citizen ID in Saudi-Arabia and any country in the world⁷². With its (or her?) birth, several questions arise with the fact of this robot obtaining a real citizenship. Does Sophia enjoys a series of benefits and duties as any other citizen? Do the ‘Declaration of the Human Rights’ articles are applicable to Sophia? Does Sophia has to wear a burkini to go to the beach? With what image or reference of a real human this event in history leaves us? This transhumanist Artificial Intelligence robot makes us question as well who wants this kind of technologies to be created. As humanity, Sophia the robot forces us by a government, to be confronted with a very relevant event: to treat Sophia the robot like any other human being, or a woman that has more right than a woman made of flesh and bones. This is an imposed politic by an authority.

As many of the creators of this technologies are powerful and wealthy futurists, scientists and bioengineers, the humankind’s freedom is once again controlled by the small percentage of individuals that have an enormous power and capital, and that represent the dignity of our race⁷³. This as well interrogates the dignity of the cyborgs and the dignity of the man. This announcement sparked off a considerable debate among bioethicists, philosophers, sociologists and futurologists, dividing researchers into transhumanism into two groups: those promoting the discourse of greater dignity of the cyborg, and those claiming that cyborgs should be deprived of any dignity.

CAPTCHA is an acronym for ‘Completely Automated Public Turing test to tell Computers and Humans Apart’⁷⁴. The Turing test that CAPTCHA refers to is a test that the mathematician Alan Turing proposed in 1950 to demonstrate how far the intelligence of a machine could simu-

⁶⁹ McKibben, B. “Enough: Staying Human in an Engineered Age”. St. Martin’s Griffin Publishers, 2004.

⁷⁰ ‘Gattaca’ film. Directed by Andrew Niccol, 1997.

⁷¹ “Sophia” <https://www.hansonrobotics.com/sophia/>

⁷² “Everything You Need To Know About Sophia, The World’s First Robot Citizen” Written by Stone, Zara. November 7, 2017. <https://www.zarastone.com/sites/zarastone/2017/11/07/everything-you-need-to-know-about-sophia-the-worlds-first-robot-citizen/#28334c8246fa>

⁷³ “The saddest thing in the world is not poverty; it's loss of dignity” Written by Glennie, J. January 28, 2015. <https://www.theguardian.com/global-development/2015/jan/28/dignity-sustainable-development-goals>

⁷⁴ ‘The Official CAPTCHA’ www.captcha.net/



Fig. 21: 'Sophia the Robot' created by Hanson Robotics, 2017.



late to be a human, even if superficially the difference was imperceptible. This method is still used in Artificial Intelligence. As in CAPTCHA the test is controlled by a machine, in reality a reverse Turing test is being used. Typically, CAPTCHA consists of a series of distorted characters that are displayed on the screen so, on theory, only a human can interpret them and not machines⁷⁵. At first it was designed so that hackers couldn't have access to information. Now Google can know if we are a human or not by checking the button "I'm not a robot" *Fig 22*. But, imagine a future in which the words "I'm not a robot" could be exchanged for "I'm not a cyborg". Will CAPTCHA in a future discriminate cyborgs for transhumanists? To which extent will a possible new gap in the future between humans and cyborgs will create a very different society as we see it?

I have no doubt that transhumanism as a cultural and scientific movement also has its own thinking heads that try to harmonize both spheres in favor of a friendly understanding between them. But as the successive technological advances progress it would be convenient to have some kind of international regulation that would create the necessary framework that links public authorities, private companies, non-profit groups and individuals. Normally, a problem or a situation always emerges so that afterwards, the political instances, which never go as fast as we would like, regulate those activities already taken place. Technological advancements and continuous improvements will continue to be produced, since humanity always tries to move forward, but the ethical implications that can be derived from converting the human body into a cyborg, should be preceded by the necessary debates on the limits that can be imposed and, eventually, have a standardized international action protocol to foresee possible misuses of new technologies. Regulation and the debate about the effects of technology on our body and mind are becoming urgent as we are witnessing the dawn of a technological revolution, in this case till now, the limits are not at all clear.

⁷⁵ "Google can now tell you're not a robot with just one click." Written by Greenberg, A, December 3, 2014.
<https://www.wired.com/2014/12/google-one-click-recaptcha/>



I'm not a robot



reCAPTCHA
Privacy - Terms

Fig. 22: Screenshot of CAPTCHA.

Dehumanization; A Face of Transhumanism

Transhumanism appears as a dehumanizing doctrine which their arguments can be understood as a consequences of the alienation caused by the use of technology or the implementation of technology in the human body. In the last decades, human beings began to isolate themselves increasingly overtime, replacing interpersonal relationships with digital links by creating and living in a hyper-artificial world. The constant use of machines causes individuals not to use their creativity, but to act as an obsolete entity in an already framework system.

The economic and social theorist Jeremy Rifkin⁷⁶ and the professor of cell biology and anatomy Stuart Newman⁷⁷, say that biotechnology enables to completely change the identity of organisms. A different proposal comes from the professor of biochemistry, Isaac Asimov, called the ‘Frankenstein complex’⁷⁸. According to Asimov’s vision, any human clone, modified animal or artificial intelligence that indicates to be self-conscious, would be considered a person worthy of respect, dignity and rights of citizenship. Consequently, they argue that the problem would not be in the creation of supposed monsters, but in the factor-disgust and speciesism that would judge and treat such beings as monstrous. This ideal brings to the light the question of if by humanizing robots we are dehumanizing the human race. But, humanize the robots? To ask such question, I believe, is because of the result of the the human beeing too dehumanized by the artificial world. A robot is a robot, a human is a human.

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Fig. 23: 'Area V' installation by Louis-Philippe Demers, Science Gallery of Dublin, 2018.



⁷⁶ Rifkin, J. "The Biotech Century: Harnessing the Gene and Remaking the World". Putnam Publishing Group, 1998.

⁷⁷ Newman, S. "Averting the Clone Age: Prospects and perils of Human Developmental Manipulation" 2003. https://web.archive.org/web/20081216215328/http://genetics.live.radicaldesigns.org/downloads/200303_jchlp_newman.pdf

⁷⁸ McCauley, L. "The Frankenstein Complex and Asimov's Three Laws", University of Memphis, 2007.

take as an example the exhibition “Human+ The Future of our Species”⁷⁹ produced by the Science Gallery of Dublin. The series of technological samples that were displayed, lead the human being to what I see as an example of dehumanization rather than to evolution. The artist Louis-Philippe Demers on his work ‘Area V’ (Fig. 23) aimed to trigger the public with ‘The Uncanny Valley’ theory⁸⁰. “The uncanny valley is considered a common unsettling feeling people experience when androids (humanoid robots) and audio/visual simulations closely resemble humans in many respects but are not completely convincingly realistic”⁸¹. The viewers are invited to confront themselves with the disembodied eyes which have a soulless gaze. Is this really the future we want or a future we are forced to be confronted to?

Cyborgization: “It is the process of undergoing technological augmentation either to compensate for an injury or to achieve some kind of enhancement. As proposed in Cyborg Anthropology, the term can be extended to include human-computer interaction and its effect on our biology and society.”⁸²

Beliefs, feelings, morals and ethics go to a second instance when we speak of cyborgs, posthumans or clones. By introducing the concept of transitioning into a cyborg⁸³, transhumanists objectify the human body. This remarks a difference between the evolutionary and natural selection process, and transhumans (humans in a cyborg transition, the objects of dehumanization) and a posthumans (complete cyborgs, the result of the dehumanizing act).

As an illustration of the dehumanization of the cyborg, I will talk about RoboCop⁸⁴ (Fig. 24), the famous 1987 cyberpunk action film directed by Paul Verhoeven, since it expresses an intense concern for our postmodern and posthuman condition. A fear of a rationalized, alienated and mechanical world where personal identity no longer exists and where simulation approaches perfection. The fear of human beings is twofold: the fear of being replaced by machines, automated beings, and the fear of becoming machines, alienated beings. Both fears predict the end of the human species and a world dominated by cybernetic systems. RoboCop illustrates the dehumanization of the process of cyborgization of humanity, but there is also a resistance to postmodern pessimism. Although the film presents a hyper-real, technological and dystopian world, it also suggests that technology will not reach its ultimate goal; that simulation strategies will not necessarily succeed and that the subject, the human being, will not be so easily eradicated by the object, the machine. The fight of RoboCop is to keep alive his memories and his emotions, to understand what has happened to him and who he is now, his identifications with his old human self that in his cyborg state is caught between bytes, mechanisms, software and hardware. His struggle against his creator and technological determination shows us once again, the capacity for resistance of the human subject despite being a cyborg in the midst of reified and subjugated condition. In this way, although RoboCop shows postmodernism as a place of intense struggle, where humans must face the forces of dehumanization and reification, it also suggests that humanity will survive the

⁷⁹ ‘Human+ The Future of our Species’ exhibition. Marina Bay Sands Museum Singapore <https://www.marinabaysands.com/museum/exhibition-archive/human-plus.html>

⁸⁰ ‘Area V - Louis-Philippe Demers’ <https://dublin.sciencegallery.com/humanplus/area-v5/>

⁸¹ ‘Uncanny Valley definition’ <https://whatis.techtarget.com/definition/uncanny-valley>

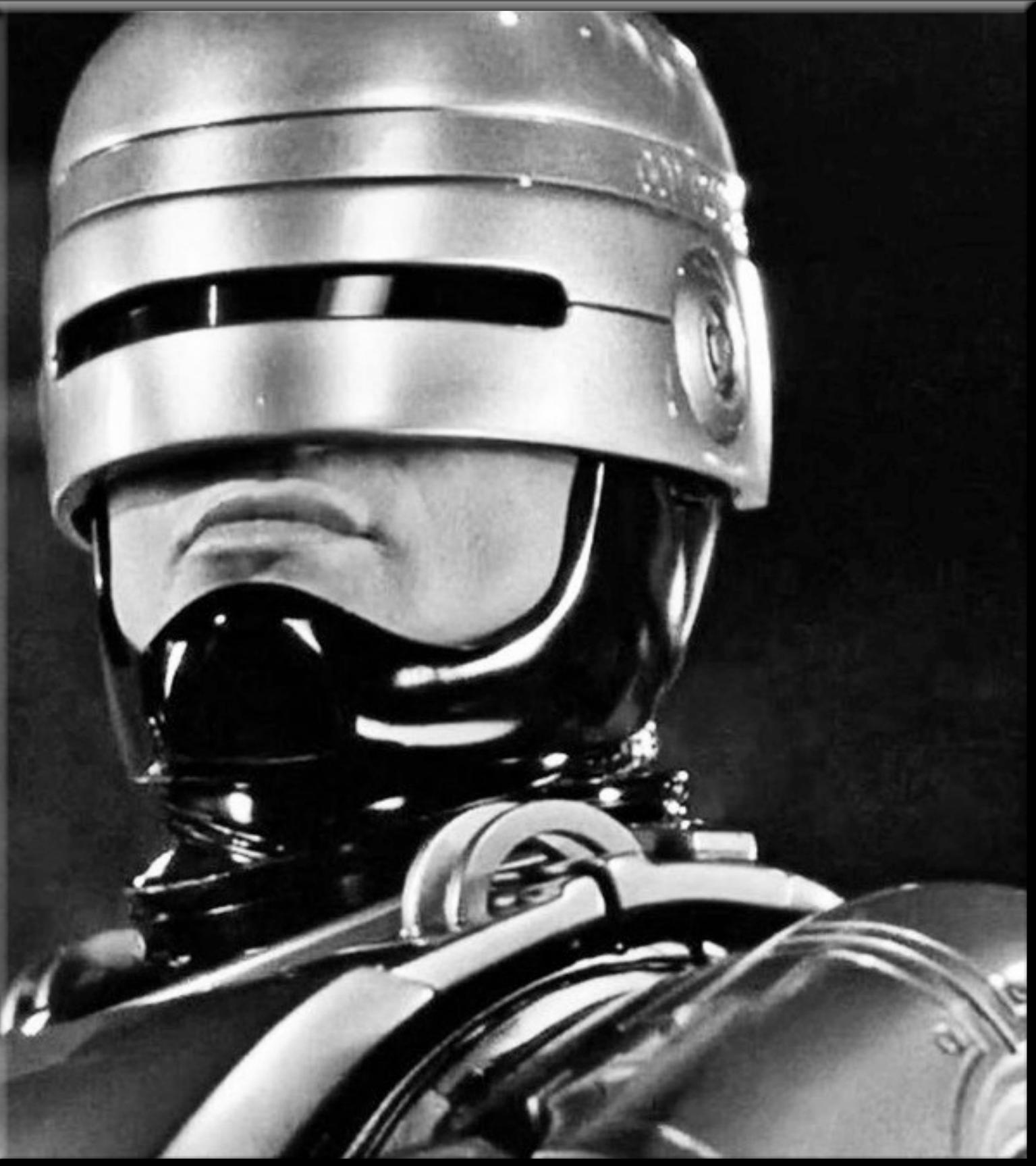
⁸² ‘H+pedia. Cyborgization’ <https://hpluspedia.org/wiki/Cyborgization>

⁸³ Buchen, I. H. “Executive Intelligence: The Leader’s Edge”. Rowman and Littlefield Education Publishers, 2011.

⁸⁴ ‘RoboCop’ film. Directed by Paul Verhoeven. 1987.



Fig. 24: 'RoboCop' film. Directed by Paul Verhoeven. 1987.



integration of cybernetic technology.

The professor in the history of consciousness Donna Haraway and the philosopher Rosi Braidotti, affirm that we are cyborgs. Technology is making us evolve as we become homo sapiens addicted to clicking on buttons and spending most of the day watching screens. Today we depend on what we could call “external brains” (our devices such as cell phones and computers) to work, schedule, control time to remember, and even communicate to thousands that kilometres thanks to the internet. What would have to be questioned in the last instance, is if these machines are going to connect or bend us as a species, the new homo sapiens, the cyborg of today. Haraway in her writing ‘The Cyborg Manifesto’⁸⁵ brought to the light the concept of a cyborg as “a hybrid of machine and organism, a creature of social reality as well as a creature of fiction”. She means that cyborgs are realities and argues about the boundaries between science fiction and social reality, saying that the last one mentioned is “an optical illusion”. Haraway explains in her manifesto the existence the three boundaries breakdowns: human and animal, animal-human and machine, and physical and non-physical. For her, the definition of the relationship between human and animal has had an abrupt change since the technological revolution of the late Twentieth Century and highlights that machines and technology impact directly our how blurry is our comprehension of what is natural and what is artificial.

Rosi Braidotti on her book ‘The Posthuman’⁸⁶ shows that a new materiality emerges from the interrelation between living and artificial substances. This connection literally and figuratively transforms the every fiber of the human and that makes us question the bases and nodes of humanism, and the new way of thinking about life, posthumanism. For the author, posthumanism is a way to think globally connected and technologically mediated societies. Her posthumanist proposal exceeds the mainstream discourse associated with the warning about the hybridizations of humans and machines to project themselves towards theoretical reflection, the political stance and the construction of subjectivities in advanced post industrial capitalism. Although she does not deny, but is interested in the dark, dehumanizing sides that create such hybridizations, from her point of view the writer generally assumes an optimistic position on the possibilities of posthumanism, exploring and offering subjective, ethical, political and academic alternatives to the dehumanizing acts of the current times.

We are not just matter, we are not machines, but people endowed with rationality, which elevates us to a higher rank of dignity that should make us reflect before anything else. Each individual, each human being, each human life must be respected for having the condition of being a person. There are many questions and objections that could be raised about transhumanism, some of which can't be responded. The philosophy is self-referential and does not enter into confrontation with other theories. In my opinion, the transhumanist project is unworkable in its entirety. I consider it an utopia. However, some of its methods and premises are already present.

⁸⁵ Haraway, D. “A Cyborg Manifesto”. <http://faculty.georgetown.edu/irvinem/theory/Haraway-CyborgManifesto.html>

⁸⁶ Braidotti, R. ”The Posthuman”. John Wiley & Sons, 2013.

But, the human being is capable of doing everything because he is free, he can transform his own nature and even destroy it.

The transhumanist theory, and its derivative of human improvement through enhancement, offer a new vision in a certain revolutionary sense, in that it incorporates the knowledge modern sense, a new form of anthropological materialism⁸⁷, the mechanization of nature. In this case, with a different and new important element, an anthropological materialism that incorporates the dissolution of the idea of man proper to postmodernity meaning that the man is nothing in particular, does not have a certain nature, is customizable, moldable and editable. It seems that the transhumanist discourse believes in erasing the human species as we know it now. This desire of being able to command the human species transgress some highly risky ethical limitations.

The political scientist Francis Fukuyama on his article ‘Transhumanism – The World’s Most Dangerous Idea’⁸⁸ stated that the postuman specie is likely to see the normal human beings as inferior beings and possibly fit them for slavery or slaughter. The normal human beings, by contrast, can see the posthumans as a threat and, if they can, they would participate in a pre-emptive strike to kill the posthumans before being enslaved by them. Ultimately for the author, a foreseeable genocide makes an irresponsible genetic engineer a potential bioterrorist. Observing the matter with an anthropological vision that pretends to substantially alter human nature, through disruptive technologies, it is necessary to firmly claim respect for each person in their dignity, freedom, uniqueness, exclusivity and diversity. For this, the human being must be at the centre of all the decisions that concern him, as the true protagonist of his life.

⁸⁷ Honneth, A., Joas, H. "Social Action and Human Nature". Cambridge University Press, 1980.

⁸⁸ Fukuyama, F. 'Transhumanism – the world's most dangerous idea', 2004. <http://www.au.dk/fukuyama/boger/essay/>

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Science and technology, at the service of the human, being must advance together to meet their needs. The achieved technological lifestyle we have lead us to overcome our human nature, which, for transhumanists, is the source of all evils and limitations. Because it is contemplated that what defends the human⁸⁹, humanism, is a deception. A cultural device to prevent the advance and the advent of the definitive era in which mankind can, blessed with technology, leave behind all humanism: all cultural values that justify the existence of the human, that gives dignity to its radically corrupted nature and that turns freedom into a slavery. The redemption of freedom is based, thus, on the elimination of the human, because the human does not allow authentic freedom. It doesn't allow to develop the authentic essence of the being that belongs to the "human" being as it must quit being itself. Thus, within this conceptual framework, saying "being human" is a manifest contradiction. Meaning that you can not "be" if you are really "human".

⁸⁹ "Humanism and Transhumanism": <https://www.thenewatlantis.com/publications/humanism-and-transhumanism>

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