

TRANSHUMANISM AND THE ENHANCEMENT OF NATURE

Thesis by Sophia de Jong

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 mind soars, our bodies seem to be frozen in time, but what if we can build a better body using technology to fix the 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 enhancement as a moral obligation, believe they are the suppliers of the torch that will take us to an enlightened future. Transhumanism wants to dominate and modify the human nature, and take control of its human evolution to turn it into a post-human society, making the course of nature's future a malleable property. In the present moment humankind has the power to modify its environment and its own nature, things that before were just mere wishes or pure imagination. Transhumanists believe in the expression of a better (enhanced) humankind. These new possibilities of intervention have brought to the light the long debate of the relationship between humanity and nature and raise new questions about the consequences of these possible interventions. Throughout this work, I will question the implementation of transhumanist arguments and their philosophical ethics, counterposing them with the questions of what is the notion of nature. The eagerness of humankind to have control of nature. Their ideology is based on new technological developments that have to be discussed and analysed in depth, 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.

KEYWORDS

Transhumanism, world, nature, human, technology, society, artificial, enhancement, posthumanism, dehumanization, bioethics.

INDEX

PROLOGUE Page 3

WORLD Page 4

Living in the Artificial World
Transhumanist Politics & Ideal World

NATURE Page 11

Human action is not Nature
Enhancement; The Emancipation of Human Nature

HUMAN Page 19

Dehumanization; A face of a Transhumanist Ideals
Inequity, inequality and the Creation of new Social Structures

EPILOGUE Page 25

BIBLIOGRAPHY Page 26

PROLOGUE

The topics of research in this paper are focused on the principles of the philosophical movement Transhumanism 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 awareness 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 these words mean in the present moment, and what are the risks of the misuse of technology.

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 technology.¹ 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.

WORLD

Living in the Artificial World

We were born in a world that was already designed. The humans in their aim to improve and enhance their quality of life had been modifying the relationship and their bodies with the environment in which they live. Transforming and reworking the world and their existence in response to their needs, desires and expectations, and creating a more artificial than natural environment. 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 natural"². 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."³ 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 qualities if we separate them from technology⁴.

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 world⁵. This implies that we 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.

This artificial world, which is not a fictitious world, it actually helps mankind to improve the life's obstacles, and it is a substantial part of the cultural and social environments. The artificial world conditions our everyday life; and to avoid problems we should examine, know, understand and control which are the conditions they apply 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 man, 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 mankind's desire to alterate of landscape. The biggest Dutch polder is in the Flevoland province, where the largest artificial island of the world, the 'Flevopolder'(Fig. 1)

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



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 threshold 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.”⁷

is located⁸. 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 the power and usage of technology has grown. From the first technology, a rock, to give the mankind the resources to control all nature.

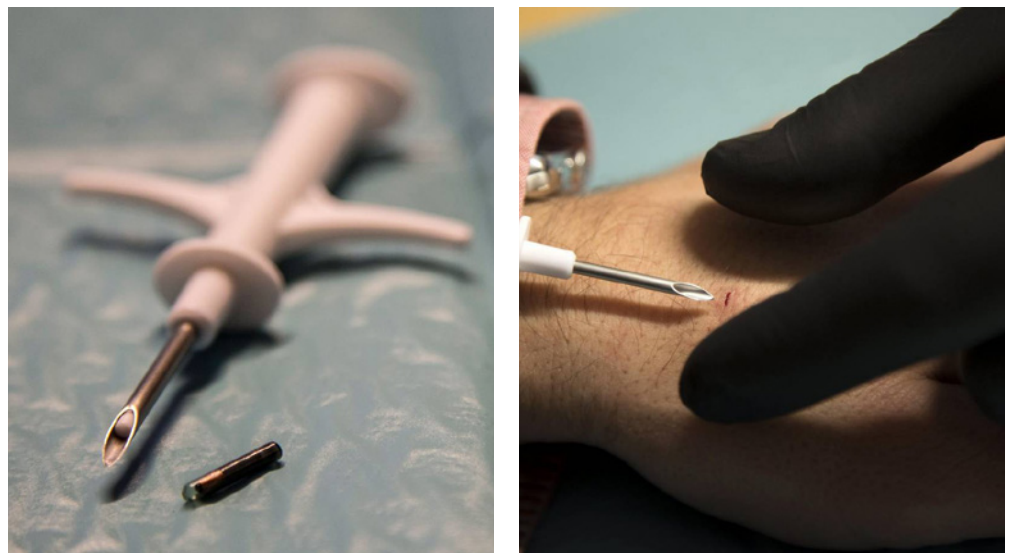
Heyward C. Sander, in his book 'Creator, Creation and Betrayal', said that “the artificial world is a creation that will work on our behalf. It will destroy the way their communities think and make their bodies react real different from the way they are supposed to function. It will also create mood 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”⁹.

Transhumanism emerged as a cultural construct that considers the relations between humanness and social and technological change. Especially by developing technologies to eliminate aging and to greatly enhance human intellectual, physical, and psychological capacities¹⁰. 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 remarkably difficult to specify the variables. A significant part of the ambiguity arises from the notion of what it means to be human.

The transhumanist 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, etc, for example. Other technologies that could extend and expand human capabilities outside physiology include virtual reality, artificial intelligence, artificial general intelligence, robotics, and brain-computer interface, which form the domain of bionics, uploading, and could be used for developing whole body prosthetics. Because these technologies, and their respective sciences and strategic models, such as blockchain, 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 uncertainties about the downside of these technologies and possible problematic and dangerous outcomes for our species¹².

Biohacking without fear of technology, in Sweden 3.000 citizens (Fig. 3 & 4) have implanted an electronic data chip under their skin¹³. This chip's technology allows people to do their daily tasks daily tasks such as having their identification number, open doors and to use to travel with public transport. It is replacing the

Fig. 3 & 4: Chips implanted in the Swedish company Epicenter, 2018.



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.”¹¹

usage of tickets, cards and keys¹⁴. 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 hacked chip infected by a computer virus¹⁵. The researcher introduced an electronic chip in one hand as part of an investigation into the potential risks of implantable devices. However, the small device turned out to be contaminated by a 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 of the artificial world, advanced technological devices or implants or transhumanist prostheses to attacks or cybernetic 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 be possible to be attacked by computer viruses? Will the new doctors be the technologists? Will computer antivirus companies be the new pharmaceuticals?

Transhumanist Politics and Ideal World

In its most radical version, transhumanist wish to take total command of their human capabilities and they propose to, at certain point, develop into a new specie achieved by these means: the 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 or 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, which for the moment seems more likely.

The idea of a speculative posthuman “eden” are 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 aggrupation 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 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 could be materialized by the basis of Accelerationism, however, transhumanists believe in an colossal exponential 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 awarress 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. 5). Players have total control over the weather and give shape to their desired “perfect” world. The images of the game are an almost hyper-realistic simulation of natural spaces. This technology allows us to transcend our physical of mental limitations, it allows us to construct a pretended promising land of peacefulness and dreams²¹. But it also 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. It puts the players on the fantasy role of world creators.

Another simulation of the natural world is the video ‘Paralel I’ from Harun Farocki, a comparative visual narrative with the natural and artificial world. The image moving composition shows the constructivism of games from visual landscapes and computer animated worlds and displays a parallelism between

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.”²⁰



Fig. 5: Screenshot of the Virtual Reality game 'Nature Trecks', 2018.

rendered artificial imagery and real photographical one questioning photo-realism (Fig. 6). 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”²². Pondering about the development of such hyper-realistic effects, based on the application of generative algorithms, the art piece unveils a doubtful feeling about what is the significance, if there is one, of reality and till which extent is it possible to control it.

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

Fig. 6: Screenshot of Harun Farocki's, 'Paralel I' video, 2012.

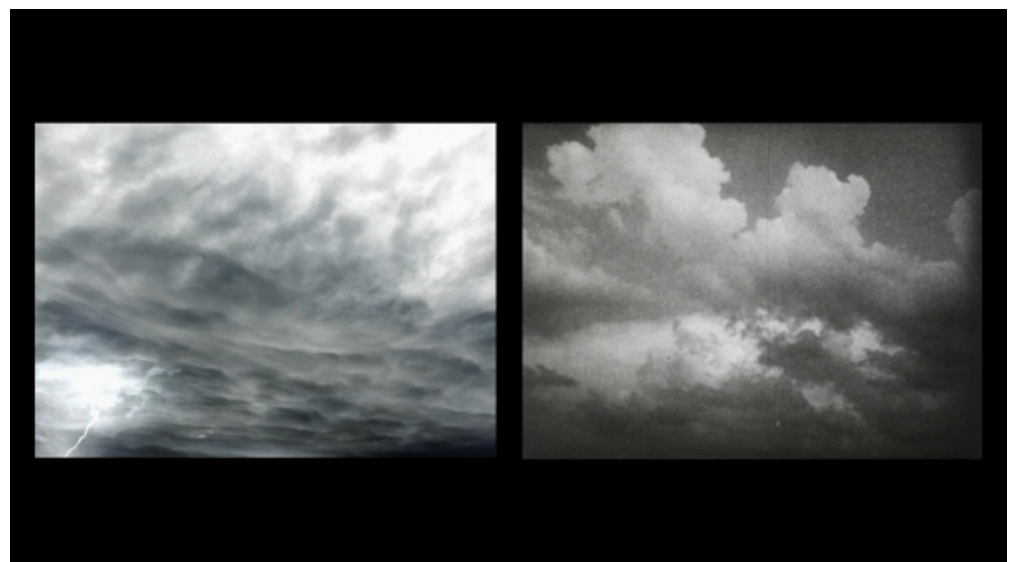




Fig. 7: Screenshot of CBS News reporting how parents selected the gender of their baby by using CRISPR technology with Dr. Jeffrey Steinberg.

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 in situations of gross parental neglect or child abuse.”²³

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. An almost science fiction scenario. Dr. Jeffrey Steinberg uses the CRISPR technique to select a piece of DNA and to then repair it or cut it like scissors, what is called ‘Gene Editing’ to correct genetic defects²⁵. Pre Implantation 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 to select the gender of their daughter (Fig. 7) 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 its parents and meticulously genetically manipulated to avoid a gender 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 with this technique 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 will. Even though what Dr. Jiankui did seems an act of good, he was not authorized by the chinese government to execute such procedure, so does this shows how we are now prepared for such interventions of our bodies as there is no regulation at all? This alteration express a possible future hyper-individuality if not regulated properly.

The followers of transhumanist believe that at certain point we will be able to upload our consciousness to a machine, a backup of our brain²⁸. Some transhumanist inventions desire promote a “live forever” discourse. Defeating the meanings of death, The Alcor Life Extension Foundation (Fig. 8) designed cryogenic capsules where people that have the desire to prolong their existence on this planet can do so threw an “hibernation” method. 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 and be able to, in the future, restore to life 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

“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



Fig. 8: 'Alcor Life Extention' cryogenic capsules.

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 now their 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 see with the hardware, which would be the 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 Post-human Dignity'³⁰, argues that the sectors that show resistance to accepting biotechnology, experience two main fears. The first one, the possibility of dehumanization that people can experience, and the second one, the potential threat that posthuman beings can represent for ordinary humans. The philosopher 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 decision-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 we can do anything about it. Technology is certainly not a chaotic system, but, like every system imbricated in society, it is subject in many cases to unforeseen circumstances and effects impossible to measure in advance, or even to prevent sufficiently.

Regardless of the current technical feasibility of the transhuman 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: a condition in which prevents all psychic diseases through augmentation, and as well, complete immortality. Transhumanist politics and questionable problems

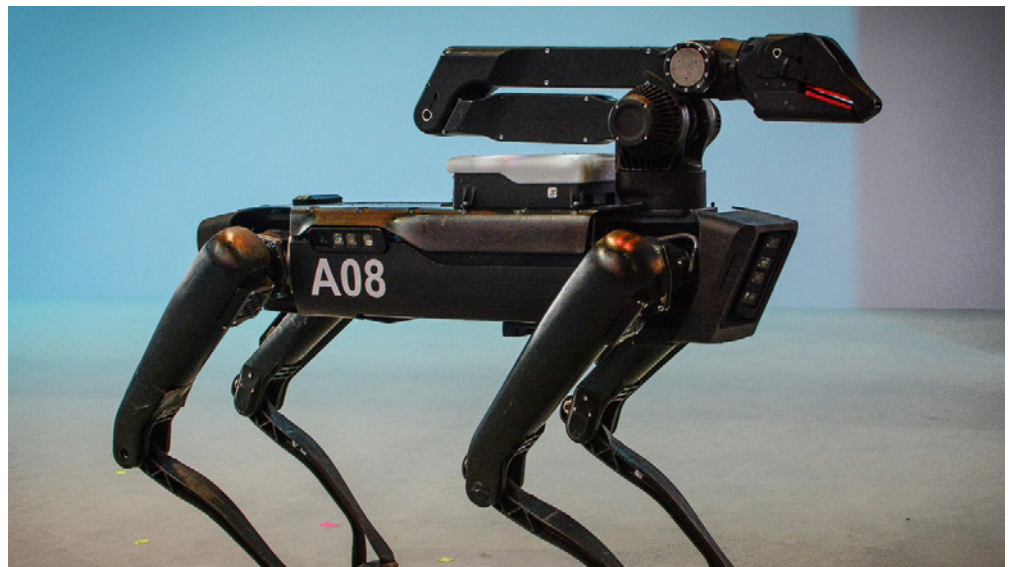


Fig. 9: 'SpotMini' the robot dog from Boston Dynamics, 2018.

should lead us to rethink the role and extent 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 improvement of humankind. It should encourage us to define if the human body is only an evolved being, or if also has a function and meaning³¹. We should ask ourselves what is the role of 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. 9) 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 new transhumanist technologies, their relationship with the laws and the dynamics of society. We should be encouraged to address what the meaning of human specifically consists of, which calls 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 meaning and scope of the mortal condition, the basis of what we know as our finite identity. That it leads to distinguish what is particularly peculiar. Although biographical material remains, the adjective mortal belongs to every human being. From the transhumanist point of view, the meaning 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.

NATURE

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 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 predictable to shape life around nature’s unpredictability³⁸.

“Real Bodies, Oltre il Corpo Umano” exhibition is a proof of how, with the right knowledge, is possible to make visible of 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 unaltered and are laid to recall natural moves³⁹. Specifically the translation of the famous “Vitruvian Man” from Leonardo da Vinci into the usage of a real anatomy shows now the complexity of our skeleton’s structure and muscular system (Fig. 10). 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 .MOVFile’ (Fig. 11), 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 Infor-

Fig. 10: ‘Real Bodies, Oltre il Corpo Umano’ Exhibition.
Ventura XV Space. Milan, Italy. 2017.





Fig. 11: 'How Not to Be Seen: A Fucking Didactic Educational .MOV File'
Video by Hito Steyerl, 2013.

mation 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.

The total control of nature ⁴¹ that transhumanists believe in is not a true progress, but an vehicle to self-alienation ⁴²; 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 demand ⁴³. 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 real 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. 13), 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 on 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 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 real ⁴⁵. 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. 14) ⁴⁶.

Another example of computer generated bodies in the consumer capitalist sphere is the exhibition 'Rigged' by the artist Kate Cooper ⁴⁷. As technology increasingly vivifies the virtual bodies, Cooper questions traditional points of feminist critique become difficult: what and/or whose body is it, and what exactly is being performed (Fig. 15). 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 criti-



Fig. 13: Rendered Model 'Lil Miquela' on Prada's fashion campaign, 2018.

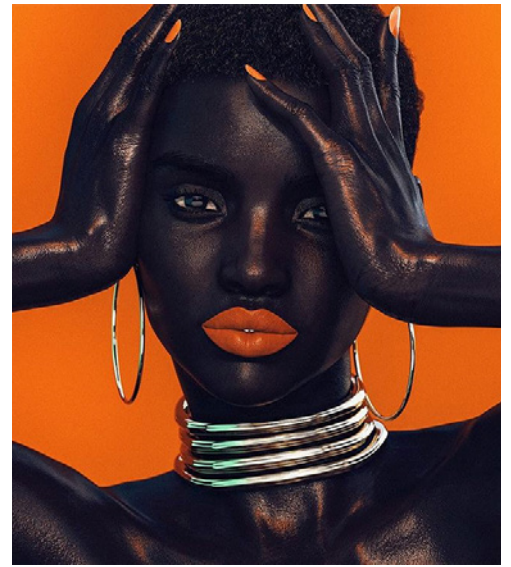


Fig. 14: 'Shudu'. The first computer generated Instagram supermodel in a Fenty Beauty Brand campaign, 2018.

cizing 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-capitalists world. Her work, as well with Wilson's creation 'Shudu', makes us wonder a future of what it would perhaps look like a model in the future, and how designer will have total control over their models, an imitation of real women. A beautiful "perfect" body made by the desires of other human.

Among its most notable defenders are prestigious scientists, designers, coders and engineers, and yet, unless you have a realistic vision of today's society, science and technology, it is difficult to assume your 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.

Enhancement; The Emancipation of Human 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 we know it know; and because the size of the

Fig. 15: Kate Cooper's computer generated model in her 'Rigged' exhibition, 2014.





Fig. 16: Oscar Pistorius makes history as he starts in the men's 400m heats at the London 2012 Olympic Games.

transhumanist proposal of which I'm talking about depends on this. If the proposal of biotechnological intervention does not imply modifying human nature in a radical way but only using it as make-up, it would diminish the strength of the proposals of the transhuman 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 is can reach reality. Although many of the speculative transhumanist propositions for the transformation of the human body that are announced are difficult to achieve and may never be possible to carry out. It seems that transhumanists understand the complex and diverse capacities of humans the from a concept of nature ⁴⁹, 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 function 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 the issue, and therefore do not express themselves explicitly, the concept of human nature that they use appears without needing to be an almost unattainable desire.

Talking about transhumanist enhancements we can take the differentiation of usage of civil prosthetics and the once that are designed with military purposes. As a civil usage of transhumanist technologies we can take as an example the Oscar Pistorius (Fig. 16), the amputee sprinter that took the second place making Olympic history in 400m at London 2012 ⁵⁰ . This makes us wonder

Fig. 17: Enhanced DARPA's Warrior. United States Army, 2014.



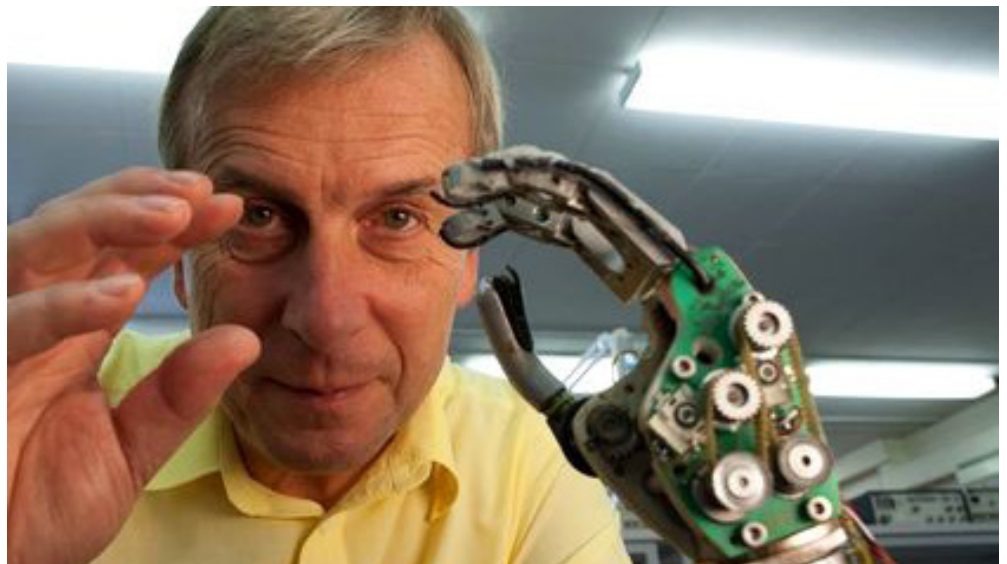


Fig. 18: The first cyborg Kevin Warwick controlling an artificial arm , 1998.

if perhaps highly technological prosthesis give runners an unfair advantage over runners who don't make use of them. The prostheses technologies 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 to reduce injuries and fatigue of the soldiers while improving mission performance, they are testing the 'Berkeley Lower Extremity Exoskeleton'⁵³. 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. 17). While wearing the exoskeleton, the one who is wearing it would be able to carry significant of weight and walk over considerable distances without reducing his or her agility, thus significantly increasing his/her physical effectiveness. In order to address issues of field robustness and reliability, the system is designed such that, should the device lose 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 is this sort of augmentations, or more efficient ones predictably 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, was implanted with an RFID chip in the forearm (that is a radiofrequency identifier such as the one worn by the clothes of any store). This eventuality made Warwick became the first cyborg in history in 1998. His intention was not to become a robot, or a cyborg, 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. 18). Or another example of a transhuman 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. 19). 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. And so he became the first "Eyeborg".

Today'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 transforma-



Fig. 19: Rob Spence, the first “Eyeborg” that implanted cameras instead of a prosthetic eye, 2016.

tion that began, either by necessity or desire, thousands of years ago.

According to the transhumanist movement, and as stated by who happens to be Google’s Engineering Director since 2012, Ray Kurzweil ⁵⁶ the singularity will be 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 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, transhumanism predicts 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 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 man ⁵⁸ can the human condition be made of the timing. By completely naturalizing the human being ⁵⁹, 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, and she stated that we can look at the man's body as a whole body prosthetic. Defending this new ideal, Vita-More says 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 says 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 awareness, our perceptions, our state of consciousness or mind and our cognitive decisions, our intellection. 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". So 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 are aiming to use technology to be time travelers. I wonder if transhumanist technologies in the future perhaps will be able to evade temporality, in the sense that it could allow them to have the ability to bend or distort time so that they perceive it very differently as normally humans do today.

The episode 'Black Museum' from the serie '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 do just two thing: say "Monkey loves you" (meaning she was having a positive reaction) and "Monkey wants a hug" (when her thought were negative) (Fig. 20 & 21). Even though the essence of the primary intention of the mind uploading was good, the episode shows that at the end that Carrie's son grew up and got bored of the monkey and her model prototype didn't reach the point of having the certain amount of abilities to stay in the market. She was prohibited and was left displayed in a museum of tortuous technological inventions. The darkest part of this episode show us Carrie's mind forever being installed in the stuffed animal, because it would be unethical to just errase 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 insofar 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



Fig. 20 & 21: 'Black Mirror' serie. Season 4. Episode 6 'Black Museum', 2017.

technical progress, not among those who believe in authentic, multidimensional, ethical and spiritual human development. On the other hand, the developments of knowledge that have produced the investigation of the corners of the corporeal world, from the microcosm to the macrocosm. 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.

Inequity, Inequality and the Creation of new Social Structures

We may speculate what is the hidden agenda of transhumanism. As the rich will have access to very sophisticated technology, this eventuality would create an even more larger excision between those implanted or “improved” and the poor who do not have access to new technologies ⁶³. 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, as those who already have the power in their hands, will potentially have even more that the one they already have ⁶⁴. On the other hand, there could also be another situation which would consist in the creation of the “perfect” bodies of labor (workers). Elon Musk on his Twitter platform said that people should work 80 hours a week at least to change the world and stated “nobody ever changed the world on 40 hours a week” ⁶⁵. His transhumanist 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 Istvan ⁶⁶, who has runned 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's 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,” said Istvan. “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 enhanced society that is able to work in the pace of a machine; 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. On the one hand 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 activity ⁶⁷. Therefore, it would be reasonable thing would be 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 emergion of new technologies, which has given rise to various scenarios of evolution that, on the one hand, scare, and on the other, they are 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 swarm 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 the others. Some authors critical of the current of 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, told The New Yorker that transhumanism is “probably the most extreme form of inequality is between people who are alive and people who are dead”⁶⁸. 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) divide⁶⁹. I can not think of a more ominous dystopia.

As an example of how would a genetic divided society would look like, the 1997 film ‘Gattaca’ (Fig. 22) directed by Andrew Niccol⁷⁰, shows a future in which the 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” would be like in a possible future transhumanist world. It also makes clear that a good genetic load does not it is synonymous with success for a being as diverse as the human being.

As an symptom of transhumanism in the world, 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. 23), 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 like any fellow 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, represent the dignity of own 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,

Fig. 22: ‘Gattaca’ film poster. Director: Andrew Niccol, 1997.



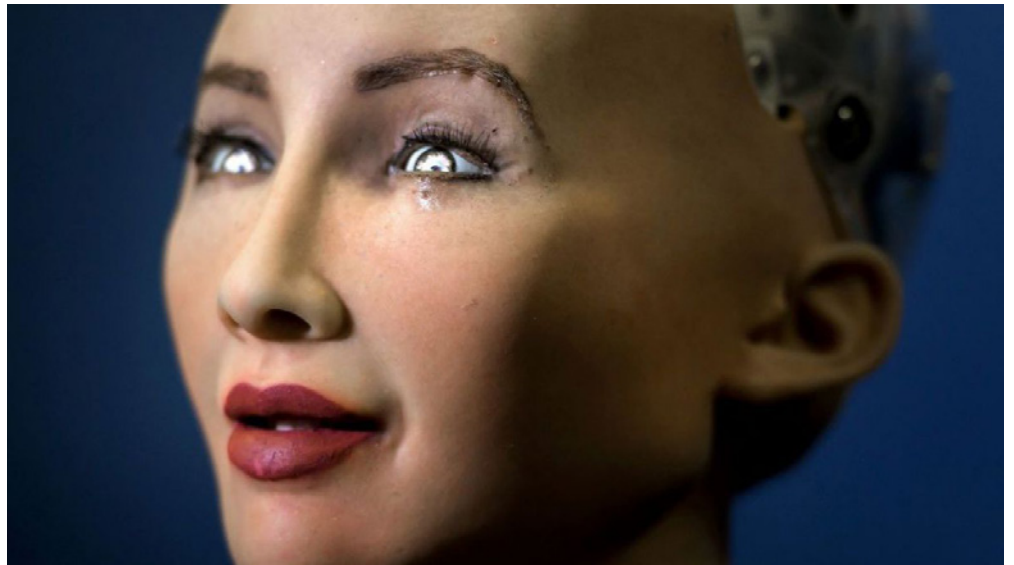


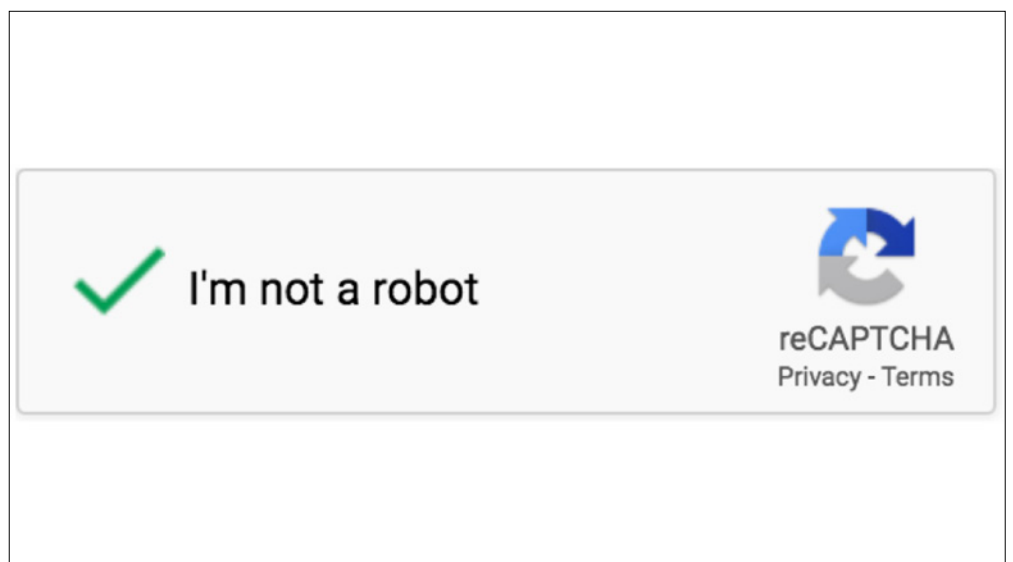
Fig. 23: 'Sophia the Robot' created by Hanson Robotics, 2017.

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 Alan Turing proposed in 1950 to demonstrate how far the intelligence of a machine could simulate 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 machines ⁷⁵. At first it was designed so that hackers couldn't have access to information. As well, now Google can know if we are a human or not by checking the button "I'm not a robot" (Fig. 24). 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, the situation

Fig. 24: Screenshot of CAPTCHA.



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 kind of 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 previous debate about the effects 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.

Dehumanization; A face of Transhumanism

Transhumanism appears as a dehumanizing doctrine which arguments can be understood as a consequences of the alienation caused by the use of technology or the implementation of it 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 frameworked system.

Jeremy Rifkin⁷⁶ and Stuart Newman⁷⁷ say that biotechnology enables to completely change the identity of organisms. A different proposal comes from 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.

We can take as an example the exhibition "Human + The Future of our Species"⁷⁹ produced by the Science Gallery of Dublin. The serie of technological samples that were displayed, lead the human being to a what I see as an example of dehumanization rather than to evolution. The artists Louis-Philippe Demers on his work 'Area V' (Fig. 25) 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"⁸². 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?

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 the famous 1987 cyberpunk action film directed by Paul Verhoeven, RoboCop⁸⁴ (Fig. 25), 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

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."⁸¹



Fig. 25: 'Area V' installation by Louis-Philippe Demers, Science Gallery of Dublin, 2018.

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, 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 integration of cybernetic technology.

Donna Haraway and Rosi Braidotti affirm that we are cyborgs. Technology is making us evolve as we become homo sapiens addicted to clicking on buttons and spend 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 kilometers thanks to the internet. What would have to be questioned in the last instance, these machines are going to connect us 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". As well she claims that "we are cyborgs" and for that she means that cyborgs are realities; she argues about the boundaries between science fiction and social reality, saying this last one mentioned as "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 materiality. This connection literally and figuratively transforms the every fiber of the human and that makes us question the bases and nodes of humanist, 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 hybridisations 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

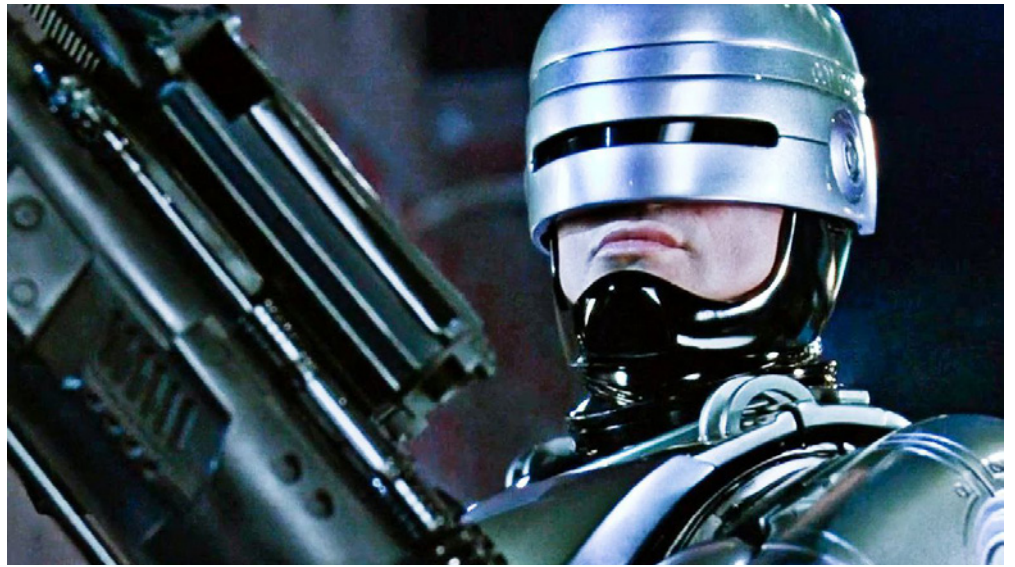


Fig. 26: 'RoboCop' film. Directed by Paul Verhoeven. 1987.

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 alternatives, political and academic 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 are 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. But, the human being is capable of doing everything because he is free, he can transform its own nature and even get to 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, in that we would be before a new form of anthropological materialism⁸⁷, a 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, editable. It seems that the transhumanist discourse believes on 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.

Francis Fukuyama on his article 'Transhumanism – The World's Most Dangerous Idea'⁸⁸ stated that the postman specie is likely to see the normal human beings as inferior beings and possibly fit them for slavery or slaughter. The normals, 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 center of all the decisions that concern him, as the true protagonist of his life.

EPILOGUE

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, can 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".

WORLD

- ¹ Society for Philosophy & Technology (U.S.). "Democracy in a Technological Society Vol. 9". Kluwer Academic Publishers, 1992.
- ² Simon, H. A. "The Sciences of the Artificial". MIT Press, 1996.
- ³ Krug, G. "Communication, Technology and Cultural Change". SAGE Publications, 2005. P. 16.
- ⁴ Schulz, R. "Quality of Life Technology". CRC Press, 2013. P. 111.
- ⁵ Tymieniecka, A. T. "Does the World Exist?: Plurisignificant Ciphering of Reality". Kluwer Academic Publishers, 2004.
- ⁶ Arbesman, S. "Overcomplicated: Technology at the Limits of Comprehension". Current Publishers, 2016. P.3.
- ⁷ Huxley, J. "New Bottles for New Wine", pp 13-17. London: Chatto & Windus, 1957.
- ⁸ Probst, J. "Amazing Places". Penguin Books, 2015. P. 25.
- ⁹ Sander, H. C. "Creator, Creation and Betrayal". Universe, 2010. P.29.
- ¹⁰ Allenby, B. R., Sarewitz, D. "The Techno-Human Condition". The MIT Press. P. 5.
- ¹¹ Synthetic Biology: scope, applications and implications. The Royal Academy of Engineering, 2009.
- ¹² 'Humanity Plus Organization'. <https://humanityplus.org/>
- ¹³ Bjorn Cyborg "Why Swedes are inserting microchips into their bodies" Article. <https://www.economist.com/europe/2018/08/02/why-swedes-are-inserting-microchips-into-their-bodies>
- ¹⁴ Bostrom, N., Sandberg, A. "The Future of Identity". Oxford University Publication. 2011. <https://nickbostrom.com/views/identity.pdf>
- ¹⁵ "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/>
- ¹⁶ Fukuyama F. "Our Posthuman Future: Consequences of the Biotechnology Revolution". Profile Books Publishers. 2002.
- ¹⁷ Mehlman, 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/1241059555937266/> https://www.youtube.com/watch?v=-bIWI_5ZOEK
- ²⁰ Encyclopedia Britannica: Eugenics. Written by: Philip K. Wilson <https://www.britannica.com/science/eugenics-genetics>
- ²¹ 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.
- ²² Farocki, H - Parallel I, 2013., 00:08:38, Germany, English, Color, stereo 16:9 | HD video <http://www.vdb.org/titles/parallel-ii>
- 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>
- ²⁷ 'Humanity Plus Organization'. <https://humanityplus.org/>
- ²⁸ "Live Forever" Written by Kurzweil, R. January 1, 2000. <https://www.psychologytoday.com/us/articles/200001/live-forever>
- ²⁹ 'Alcor Life Extension Foundation. The World's Leader In Cryonic Technologies'. <https://alcor.org/>
- ³⁰ Bostrom, N. 'In Defense of Posthuman Dignity' University of Oxford, 2005.
- ³¹ Livingstone, D. "Transhumanism: The History of a Dangerous Idea". Sabililah 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/>

NATURE

- 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.
- 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-mov-file-2013/
- ⁴¹ Marcuse, H. "Philosophy, Psychoanalysis and Emancipation: Collected Papers of Herbert Marcuse, Vol 5". Routledge, 2010.
- ⁴² Dickens, P. "Reconstructing Nature: Alienation, Emancipation and the Division of Labour". Routledge, 2002. P. 52.
- ⁴³ Fukuyama, F. "The Great Disruption". The Free Press Publishers. 1999.
- ⁴⁴ "Meet; The Perfect Black Model Shudu Gram". <https://www.infocontemporary.com/2018/03/11/meet-the-perfect-black-model-shudu-gram/>
- ⁴⁵ 'lilmiquela' Instagram profile. <https://www.instagram.com/lilmiquela/>.
- ⁴⁶ 'Shudu' Instagram account. The World's First Digital Supermodel. <https://www.instagram.com/p/BeOldl7F-Pu/>
- ⁴⁷ "Kate Cooper: hypercapitalism and the digital body" <http://dismagazine.com/dysmorphia/66668/kate-cooper-hypercapitalism-and-the-digital-body/>
- 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.
- ⁴⁹ Bostrom, N. "Why I Want to be a Posthuman When I Grow U" Future of Humanity Institute [Published in: Medical Enhancement and Posthumanity, eds. Bert Gordijn and Ruth Chadwick Oxford University (Springer, 2008) <https://nickbostrom.com/posthuman.pdf>
- 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 b 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/>
- 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/>
- ⁵⁶ "Ray Kurzweil Joins Google In Full-Time Engineering Director Role; Will Focus On Machine Learning, Language" <http://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.
- 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>
- 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.

HUMAN

- 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.
- ⁶⁸ McKibben, Bill. "Enough: Staying Human in an Engineered Age". St. Martin's Griffin Publishers, 2004.
- ⁶⁹ "For the rich of Silicon Valley, mortality is there to be disrupted", 2018. <https://www.ft.com/content/7303531e-a0a6-11e8-b196-da9d6c239ca8>
- 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.forbes.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/
- 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/>
- 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.
- 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 'H+ pedia. Cyborgization' <https://hpluspedia.org/wiki/Cyborgization>
- ⁸² 'Uncanny Valley definition'. <https://whatis.techtarget.com/definition/uncanny-valley>
- ⁸³ Buchen, I. H. "Executive Intelligence: The Leader's Edge". Rowman and Littlefield Education Publishers, 2011.
- ⁸⁴ 'RoboCop' film. Directed by Paul Verhoeven. 1987.
- ⁸⁵ Haraway, D. "A Cyborg Manifesto". <http://faculty.georgetown.edu/irvinem/theory/Haraway-CyborgManifesto.html>
- ⁸⁶ Braidotti, R. "The Posthuman". John Wiley & Sons, 2013.
- 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/>

EPILOGUE

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