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Francisco Magno Soares da Silva

Struggling with human-like machines

The fading boundaries between humans and androids in Philip K. Dick's *Do Androids Dream of Electric Sheep?*

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Dissertação apresentada, como requisito parcial para obtenção do título de Mestre, ao Programa de Pós-Graduação em Letras, da Universidade do Estado do Rio de Janeiro. Área de concentração: Literaturas de Língua Inglesa.

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DEDICATION

To those who have believed in me and supported me all along.

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Although this dissertation originated from a will to be among literary works that have made part of my life since I was a little boy sitting in front of TV to watch *Star Wars* for the hundredth time, writing it was not a simple task. It took many hours to write and rewrite the same lines repeatedly; many nights and weekends were dedicated to do a considerable amount of reading so that I could get to this point. In spite of it, the whole process was an incredible experience that I believe it has changed the way I see arts and reality. This work would never come to be without the support of some people whom I will be always grateful.

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Last but definitely not least, I would like to thank and especially dedicate this work to my father Manuel, who taught me that education is the key to self-improvement, and knowledge is the one thing that cannot be taken away from you. How I wish you were here to share this moment with me.

RESUMO

SILVA, Francisco Magno Soares da. **Struggling with human-like machines**: the fading boundaries between humans and androids in Philip K. Dick's Do Androids Dream of Electric Sheep?. 2017. 83 f. Dissertação (Mestrado em Literaturas de Língua Inglesa) – Instituto de Letras, Universidade do Estado do Rio de Janeiro, 2017.

Devido aos avanços tecnológicos, a humanidade vem tornando-se cada vez mais dependente de dispositivos tecnológicos. A relação íntima com a tecnologia levou à criação de máquinas cujo funcionamento é baseado no corpo e mente humana, carregando em si o potencial de superação das habilidades humanas. A proximidade entre natural e artificial faz com que os humanos fiquem receosos em relação ao seu duplo artificial. Por não conseguirem estabelecer uma distinção clara entre si e construtos humanoides, os seres humanos passam a refletir acerca do que os torna únicos enquanto espécie. Este estudo pretende analisar as linhas que separam personagens humanas dos androides em *Do Androids Dream of Electric Sheep?* do escritor estadunidense de ficção científica Philip K. Dick. No romance, o autor confunde o leitor ao embaralhar as noções de natural e artificial, dificultando a distinção do que é humano e o que não é. O romance de Dick induz os leitores a refletirem sobre o que significa ser humano. Essa dissertação pretende mostrar como o apagamento das fronteiras entre humanos e androides no trabalho de Dick serve para ilustrar que a figura literária do construto artificial, ao invés de representar o oposto do humano, carrega os problemas que constituem nossa noção de humanidade.

Palavras-chave: Transumanismo. Ficção científica. Philip K. Dick. Androides.

ABSTRACT

SILVA, Francisco Magno Soares da. **Struggling with human-like machines**: the fading boundaries between humans and androids in Philip K. Dick's Do Androids Dream of Electric Sheep?. 2017. 83 f. Dissertação (Mestrado em Literaturas de Língua Inglesa) – Instituto de Letras, Universidade do Estado do Rio de Janeiro, 2017.

Due to the technological progress, humankind has become more and more dependent on technological gadgets. The intimate relation with technology has led humans to create machines that function based on the human body and mind, with the potential to surpass the human skills. Such proximity of natural and artificial has caused humans to become suspicious of their artificial doubles. For being hard to distinguish these human-like constructs from natural born beings, human beings are led to think of what makes them unique as species. This present project intends to analyze the lines separating human characters from androids in *Do Androids Dream of Electric Sheep?* by the North American science fiction writer Philip K. Dick. In this novel, the author confuses the reader by blurring the notions of natural and artificial, making it hard to tell who is human and who is not. Dick's novel induces readers to reflect upon what it means to be human. This dissertation aims to show how the fading boundaries between human beings and androids in Dick's work serve to show that the literary figure of the artificial construct, rather than being opposite to humans, carries the issues that constitute our very notion of humanity.

Keywords: Transhumanism. Science fiction. Philip K. Dick. Androids.

LIST OF ILLUSTRATIONS

SUMMARY

INTRODUCTION

The starting point of this present research was the observation of our daily lives and especially the relationship between humans and technological artifacts. I could notice that with the development of technological resources, people have become more and more integrated with electronic gadgets, turning them into indispensable accessories to carry around, as if these devices were a crucial part of themselves. Not only have these gadgets pushed their way into our routine, but they also promote significant changes in the way we interact with the world and with other human beings.

People facing mobile devices, performing several tasks simultaneously, interacting with each other in virtual spaces and chatting to a countless number of people around the globe at the same time is a common picture to come across today. Technological machines can organize our schedules and check our preferences in order to provide a list of suggestions of actions that would suit us better, as if they could read our minds. They also provide us with artificial environments in which we can recreate our own identities in order to give life to features of ourselves that we sometimes have to suppress in the real world. To a certain extent, they are the means we have found to fulfill the necessity of being beyond our limitations, be it physical, mental or social.

Nowadays, with the advances in medicine, it is possible to change and shape our bodies at our will in order to make us satisfied with the way we look. It has also become possible to eradicate diseases and, especially after the mapping of the human genome, predict and prevent potential health problems before we are even born. Despite ethical implications, it is not a wild leap to imagine that one day parents will be able to choose features they wish for their future children as we do for automobiles, personal computers or smartphones.

By making use of the techniques from the human intellect such as genetic engineering, drugs that enhance concentration and memory, neural interfaces, information management network and anti-aging therapy, human beings would have an active role in their own evolution, getting rid of Nature’s unpredictability and randomness, being able to redefine themselves and their future generations. Technology serves as evolutionary motor that will enable humankind to reach a level of plenitude and freedom of physical suffering.

My interest in the issue increased when I came across a term that was new to me: transhumanism. I got intrigued to know that there are people who truly believe that humanity can take active control over their fate through technology. The transhumanists propagate the idea that the current human being is trapped by biological limitations, which are the source of all the pains of the human existence. Therefore, they welcome technological intervention in the human nature so that we can evolve from our present human condition into a new kind of being --- healthier, stronger, cleverer and potentially immortal.

Picturing a scenario with all those modifications triggers several questions concerning the outcome of altering the human body into half-organic and half-machine, and fostering sexless human reproduction in labs, raising doubts towards our relation with those artificially made beings. Being able to change and build a new body helps reduce the anguish of our finite existence; the human technique born from the desire of supplanting God in order to take the position of creator serves as means to transcend the limited existence and overcome the insufficient life. The possibility of a controlled sexless reproduction gives room for one to clone oneself endlessly, therefore, perpetuating oneself forever. By doing so, humankind could reach its greatest desire: to overcome death.

The human concern towards their own creation has led us to wonder about certain questions that seem to get harder to answer and unsettling to think of: what would it be like if we no longer had total control over our constructs? How would we cope with machines that no longer responded to our commands and desires? Where would humans fit when non-humans could more effectively replace their strength and intellect? The answers to those questions may put in check the future of humankind and their position of superiority among all known creatures in the universe.

However, one issue that has become present in contemporary culture concerns to the true nature of what constitutes the human identity. The increasing relationship between human beings and artificial constructs, especially when the latter perfectly emulates the first, has made people from different areas such as literature, cinema, philosophy, anthropology and sociology debate the implications of the theme. What if human and machine became integrated to an extent that we no longer could tell human from non-human? How could humans recognize and establish themselves as being different from the inhuman?

The possibility of reaching such a point can lead us to cope with issues about our own nature. What makes us human? Is there a faculty that enables us to be called human? If a

machine were able to reproduce this so-called unique human feature, how could we ever distinguish it from actual humans?

These questions usually acquire concrete forms in arts. To speculate on the consequences of technological and scientific progress has always been a remarkable characteristic of science fiction. The speculative genre has been responsible for providing us with literary representations that attempt to discuss through arts the tensions and dilemmas of contemporary societies in a way that escapes the rationality of other areas of the human knowledge. Science fiction manages to become a site of experimentation of the contemporary, in which questions that haunt our societies are embodied through literary narratives.

Among the many artists that depict the outcome of the technological future of humanity, the one that often resorts to the dichotomy human and machine is the North American author Philip K. Dick. During his prolific writing career, the author became known for designing dreary and desolate scenarios for future Earth, forcing human characters to turn to technology in order to make their lives bearable and consequently delay the extinction of the human race.

Philip Kindred Dick, also known by the acronym PKD, was born in 1928 in Chicago and died in 1982, few months before the debut of the first film adaptation of one of his novels. Being a fulltime writer since his early twenties, PKD wrote fifty-one novels and over a hundred short stories, most of them published on pulp sci-fi magazines such as *Amazing Stories* and *Astounding Science Fiction*. Even though Dick enjoyed good reputation in the science fiction niche, his work only managed to reach general public after the release of the movie *Blade Runner* (1982), which is sourced on his novel *Do Androids Dream Electric Sheep?*. Since then, Hollywood movie industry has found in PKD's novels and short stories the inspiration for many cinematographic adaptations. To list some: *Total Recall* (1990), *Screamers* (1995), *Impostor* (2001), *Minority Report* (2002), *Paycheck* (2003), *A Scanner Darkly* (2006) and *Adjustment Bureau* (2011). In addition, the streaming service Amazon Prime has produced two original series based on Dick's material: *The Man in the High Castle* (2015) and *Philip K. Dick's Electric Dreams* (coming in 2018).

Dick's novel I chose to work with is *Do Androids Dream Electric Sheep?* released in 1968. I picked this particular work for it was elaborated with all the characteristics that have made of Philip K. Dick one of the most respected names and canonic author within the science fiction genre: post-apocalyptic world, high technology to help doomed humankind

endure, paranoia, the double, metaphysical themes and the blurring of the nature of reality and unreality in order to swarm readers' minds with questions that insist to linger after the reading. The novel is particularly appealing to my research for gathering all those features to inquire into the nature of our species, constantly asking the reader what defines us as human beings.

Having said so, this study attempted to use *Do Androids Dream Electric Sheep?* so as to analyze Dick's characters' construction into two distinct categories, human beings and androids, and how the author progressively inverts their roles throughout the narrative inducing the reader to be uncertain about the true nature of characters. Moreover, my work tried to discuss the consequences of the fading boundaries between humans and human-like machines, pointing out that Dick intentionally drew these two together so that rather than standing as the opposite of the human being, the androids are plagued with the burden of the human condition, serving as metaphor for our own issues.

At first, my idea was to compare Dick's book to the movie it inspired, *Blade Runner*. However, I felt that doing so it meant restricting my work. *Do Androids Dream Electric Sheep?* epitomizes a theme that is impregnated in contemporaneity, and consequently it is often portrayed by other artists. So I established Dick's novel as the conducting wire that connects and dialogues with other works of literature and cinema[1] as an attempt to debate the predicament of the interaction between humans and technology to today's society.

In chapter one, I try to briefly present an overall introduction to the ideas promoted by transhumanism as well as the arguments of those who strongly oppose the thought of improving the human nature through technology, for believing that its downsides would surpass the benefits. In this section, I attempt to illustrate both sides by bringing some examples of novels and movies that somehow approach the theme of human enhancement, drawing attention to a curious narrative device in science fiction works, which usually depict technological future societies with a shifting movement from utopia to dystopia.

In chapter two, my dissertation focuses on Dick's strategy while designing his characters. First, I describe how the author presents human characters resorting to technological devices in order to bear their existence on an inhospitable planet that Earth came to be after a nuclear war. Consequently, the characters are described as dull, inert and

[1] All the films mentioned in this dissertation are not analyzed under their specific cinematographic technique and language. They are referenced by their literary representations of the theme of this study.

emotionless figures that seem to simply follow a set programming, making them very close to the mechanical entities they despise. On the other hand, the androids are depicted by Dick as sentient and sentimental characters, opposing the initial description of cruel lifeless things that only pretend to be alive. By blurring humans and androids, PKD confuses his audience by inducing us to be more empathic towards the machine rather than the humane.

In chapter three, I analyze how PKD destroys every pillar of humanity he establishes during *Do Androids Dream Electric Sheep?,* inviting readers to wonder about an existential and likely unanswerable question — what makes us human? Besides, I try to show that for being a product of the human imagination, the androids presented by Dick in his novel not only do not constitute the opposite of humanity, but they are also a reflect of ourselves. These manmade creatures inherit the same fears and anguish of their creator.

To enrich the debate, I search for theoretical aid in literary criticism, anthropology, philosophy and the current of thought that defends the human enhancement, transhumanism. In my dissertation, I dialogue with the views on technology and literature presented by N. Katherine Hayles, the reification and obsolescence of the human biological body as exposed by David Le Breton, the (potential) arrival of a new era of super intelligent machines to supplant humankind as predicted by Raymond Kurzweil, Nick Bostrom and Max More's defense of transhumanism and the concept of the machine man coined by the 18th century French philosopher Julien La Mettrie.

Philip K. Dick is given different adjectives to describe his work and figure. A man ahead of his time, an eccentric figure, a crazy paranoid and, my favorite, the man who remembered the future[2]. The technological innovations he witnessed made him envision in his writings the consequences of a world that grew more and more mechanized. Almost fifty years after its publication, *Do Androids Dream Electric Sheep?* remains relevant and worthy of reading and discussing. Many of the themes and concepts presented in the novel have inspired many other subsequent works that tried to discuss the relation between humans and quasi-human machines.

Given the vertiginous development of technology that produces machines that surpass the human working skills, our total dependence on technology, the virtualization of social interactions, the spreading of transhumanism and the possibilities of the genetic engineering,

[2] Reference to the title of Dick`s biography written by Anthony Peake, *A Life of Philip K. Dick – The man who remembered the future* (2013).

we can state that the notion of human being is under transformation. All these changes spur us into glimpsing new concepts of what it means to be human. If Philip K. Dick were alive today, I believe he could say he had seen it all along. *Do Androids Dream Electric Sheep?* is the written proof of it. And this is what I intend to argue throughout the pages of my dissertation.

1 REDESIGNING THE HUMAN THROUGH TECHNOLOGY: PROMISES AND PROBLEMS OF HUMAN ENHANCEMENT

1.1 Transhumanist utopia: in search for ideal human beings

> All things change in a dynamic environment. Your effort to remain what you are is what limits you.
>
> *Puppet Master (Ghost in the Shell)*

In the turn of this century, the very idea of humanity is under transformation. Technology and science stride to decode every cell that constitutes our biological body in an attempt to understand its functioning and prevent potential failures. By correcting flaws, removing excesses and remodeling flesh parts to meet our ideals of perfection, the human technique tries to make of the body a reliable and accurate machine relieving us from pain and providing us with longer lifespan. Technology has granted us with gadgets that wonder us for maximizing our abilities, making us want to merge with them. The advances in information technology have modified our perception of and being in the world, eliminating many obstacles of time and space. With those transformations, the ontological view of the human subject possessing a natural-born body is bound to give way to another kind of human being. A being with greater mental and physical skills, not limited to the shapes of his/her organic form. There are many who truly believe that the humankind is walking steadily to a new level of existence: the post-human era. Still, this new era of human existence is yet to come.

However, some argue that the human being of the 21st century is already in mutation. More precisely, we have been experiencing a stage of transition. The North American philosopher Max More argues that the human subject we know today is a link between our animal heritage and the future post-human (MORE, 2013, p. 55). Citizens of the present century are endowed with the means to take active control over their physical constitution and soon they will be able to use technology to promote significant improvements in the human nature, leading humanity to a next step in the evolution in which diseases, aging and death will have been vanished. The defenders of the deliberate use of the technique to promote

changes in the human body in order to design augmented future individuals are part of a movement that permeates science, philosophy and arts known as transhumanism.

The term transhumanism was coined in 1957 by the British evolutionary biologist Julian Huxley, who believed that humankind should deliberately make some effort to improve itself in its entirety. “Man remaining man, but transcending himself, by realizing new possibilities of and for his human nature” (HUXLEY, 1957, p. 17), a new attitude of mind that would address the crises of humanity by bridging science and arts in order to build a better world.

Since then, Huxley’s transhumanism has incorporated new ideas evolving into a cultural, philosophical and artistic movement that has gathered adepts who share the belief in the continual progress of the human being. In fact, the word transhuman can be read as standing for a “transitional human” (MORE, 2013, p. 11), who willingly takes advantage of technology to search for constant improvement of him/herself, moving toward post-humanity.

The ideals of human progress promoted by the transhumanism are not new. The roots of the movement refer back to the Enlightenment values of progress. The Enlightenment thinkers attempted to move past the idea of human nature as being defined by God-given immortal souls inhabiting the flesh. They believed that the human nature was subject to improvement through educational and cultural refinement. The transhumanism, on the other hand, relies on applied technology to overcome limits imposed by our biological heritage. The Swedish philosopher Nick Bostrom, one of the greatest advocate of transhumanism, defines the movement as

> an outgrowth of secular humanism and the Enlightenment. It holds that current human nature is improvable through the use of applied science and other rational methods, which may make it possible to increase human health-span, extend our intellectual and physical capacities, and give us increased control over our own mental states and moods (BOSTROM, 2011, p. 55)

The transhumanist claims are boosted by new breakthroughs in the diverse areas of the human knowledge, reinforcing the argument that human beings can indeed take active role to promote the acceleration of the evolution of intelligent life beyond its currently human form. Indeed, transhumanism poses a new situation in which the human has become a design project. In her article “Engaging Transhumanism”, professor Hava Tirosh-Samuelson states that a central feature of transhumanism is the belief that the human nature is not fixed, but malleable (TIROSH-SAMUELSON, 2011, p. 19). Thus, the future of humanity is open to altering, and by making use of techniques coming from the human intellect, such as genetic engineering, psychopharmacology, concentration and memory enhancing drugs, neural

interfaces, advanced information management tools, wearable computers, cognitive techniques, anti-aging therapy and others, the human being would be free of Nature's unpredictability and randomness. Consequently, human beings would be empowered to not only redesign themselves but also define future generations.

By adopting technology as evolutionary engine, humanity would be able to reach a state of plenitude, in which human individuals may enjoy the transhumanist utopia of super happiness, super intelligence and super longevity. Although the scenarios envisioned by the transhumanists seem to point to restless search for a state of perfection, the supporters of the movement argue that they do not seek for utopia, but simply a never-ending improvement in our culture, environment and ourselves. More states that transhumanists do not despise the human or the human body. They recognize the potential of humanity and welcome the means that are likely to allow enhanced beings to bloom. Rather than denying the body, the transhumanists claim the right to choose their shapes and to inhabit different bodies, including virtual bodies (MORE, 2013, p. 15).

Even though sometimes the transhumanist ideas might seem a bit farfetched, much closer to a product of speculative fiction, the outcome of scientific and technological progress and their societal impacts are undeniable. As the French anthropologist David Le Breton states, speculative fictions are no longer opposite to reality, instead, they appear to evidence social fundamentals of the contemporary existence (LE BRETON, 2015, p. 161). The real world imposes a harsh competition to the writers of science fiction by realizing social and technical environments that look as if they were taken from the sci-fi imaginary. The baffling power of our machines to emulate and surpass the human individual, and medical advances that can alter the human DNA are some of the many reasons why transhumanism is worth the debate.

Nevertheless, my main interest for this research is the literary representations of transhumanism. Arts play a crucial role in elaborating possible transhumanist futures; particularly, science fiction is the genre that often envisions the future consequences of the human will to modify the environment he/she inhabits, and mainly the modifications on the human being himself/herself. Since Mary Shelley's *Frankenstein*, science fiction has presented us works that discuss how science and technological innovation may affect the structure of our society and the way we behave with one another, serving as an embodied evidence of the changes occurring in the human mind. Shelley's literary monster born from scientific experimentation from her age can be counted as a milestone of the representation of

the human desire to have control over the body, to surpass limits and defeat death. Victor Frankenstein's delusion inspired many other artists to speculate on how technical advances of their time might serve to mold perfected beings that embody the human potentials that are only possible in the artist's imagination.

Cinema and literature have inspired the transhumanist dreams of reaching a state of perfection and immortality by providing works that show different possibilities for the human body.

The movies *Limitless* (2011) and *Lucy* (2014) play with the old and scientifically inaccurate belief that human beings only use a small percentage of their brain capacity, which hinders the full use of the human skills. By adopting new enhancement drugs, the protagonists in both films boost their brains to a new experience of the world. Having their cognitive skills significantly improved, they can master their senses, seeing, hearing and smelling what regular eyes, ears and nose miss. They can store inhuman amount of information in their brain, access and revive early memories as clear as an image on a screen. The main character in *Lucy* affirms that she can clearly remember being a baby and feeling the taste of her mother's milk while she was breastfed. Both characters are taken by an overwhelming desire to get higher quantities of the drugs so that they can become individuals of super intelligence and super strength.

The movie *Robocop* (1987) and the novel *Machine Man* (2012) deal with the theme of the merge between organic and cybernetic, producing hybrid beings, half-human and half machine. Both works present an alternative to biological bodies that ceased functioning and that can acquire an extended existence through the integration with the machine. *Blade Runner* (1982) and *Do Androids Dream of Electric Sheep?* (1968) imagine a future scenario where a human body can be designed from the scratch in order to meet the designer's standards of perfection. As a result, humankind needs to face creatures that display features that both mirror and overcome human beings, who see in these artificial constructs their possible augmented successors.

Willian Gibson's novel *Neuromancer* (1984) and the film *Matrix* (1999) propose a different figuration of humanity in which the physical body loses its central role as the main channel through which the individual experiences the world. In fact, in these two sci-fi works, the physical world gives room to the virtual reality where the body plays a secondary role, and the mind takes full control. Once immersed in the virtual environment, the individual enters

the realm of the mind, the realm of imagination where he/she can get rid of the burden of a limited body to explore all the potentials of his/her spirit.

The examples are too many to list here. Since the 19th century, the changes in science and technology have moved artists to imagine to what extent the society and the human subject might be affected by these changes. Throughout this dissertation I will explore some fictional works that deal with the issue of the intimacy between humans and machines and the predicaments of this symbiotic relationship.

It is hard to pin down to what extent transhumanism inspires or gets inspiration in these fictional works. Still, the literary production serves as a good exercise of imagination for the promises of a society shaped to live up to its potential, populated with physically, culturally and intellectually enhanced beings who are endowed with skills to live in harmony with their peers and the environment they dwell.

Although the transhumanist philosophy propagates a welfare state that seems to lead humankind to eternal bliss, the fictional works that venture transhuman territories tend to spot a crack in the bubble of prosperity and joy. Transhumanism is moved by the belief that the human being, especially the human body, is an open site to continual improvement. Most of the movies and novels previously mentioned picture characters amazed at how technology catapults them to a higher level of human existence, instilling them with desire to reach higher and higher. At some point, the pursuit for enhancement becomes an obsession that apparently will never come to an end, for once an obstacle is overcome another comes in to keep the search for self-modification running indefinitely. The characters are described as if they were puzzles whose parts allow multiple configurations; however, they got one missing piece that does not permit them to build the whole picture.

The transhumanist utopia turns into a burden for promoting a never-ending journey, a quest for the unreachable. The individual that is driven by continual improvements might be bound to look at him/herself and always spot a flaw, a problem to be corrected. Rather than getting to a state of ongoing happiness and plenitude, the transhumanist individual might be doomed to lead a life of dissatisfaction and incompleteness.

1.2 **Transhumanist dystopia: the dangers of designing enhanced humans**

At a first contact with the tenets of transhumanism, we might be led to believe that the idea of a technology-oriented philosophy that proposes mitigating or eradicating insurmountable problems that have followed us since the dawn of humankind is to be merrily welcomed by all members of society. Getting rid of ailments and pains originated from our human biological nature, living up to all our intellectual potential and rising above mortality are solid arguments to see in the transhumanist views a way to enhance the human existence. Nevertheless, some individuals often point out to the downsides of transhumanism, depicting the movement in a bad light. Detractors of the human enhancement argue that the deliberate use of technology to alter the human nature can entail severe consequences to society. Rather than bringing harmony and narrowing inequality, technology would accentuate those problems, and therefore, it should be watched and regulated closely.

The North-American philosopher and economist Francis Fukuyama has become known among those who debate transhumanism for describing the movement as the world's most dangerous idea. According to him, the price to pay for adopting the advances in biotechnology to change the humanity is too high. We have struggled for many years trying to come up with a concept of a human essence, which grants the human subject inherent value, assuring him/her rights regardless of his/her skin color, beauty or even intelligence. Fukuyama claims that is exactly the sacrosanct human defining essence that the transhumanist project intends to modify. The outcome of altering the nature of the human being is likely to crumble the structures of society putting us at risk of increasing inequality. The philosopher argues that free manipulation of the human genetics might lead to a clash for rights between augmented and natural born citizens.

> If we start transforming ourselves into something superior, what rights will these enhanced creatures claim, and what rights will they possess when compared to those left behind? If some move ahead, can anyone afford not to follow? These questions are troubling enough within rich, developed societies. Add in the implications for citizens of the world's poorest countries – for whom biotechnology's marvels likely will be out of reach --- and the threat to the idea of equality becomes even more menacing (FUKUYAMA, 2004)

Another criticism that Fukuyama fires at transhumanism is that it ignores the fact that the human being is a miraculously complex product of a long evolutionary process, whose whole is much more than the sum of our parts. All of our features are connected, good and

bad ones, contributing to the development of the species. “Even mortality plays a critical function in allowing our species as a whole to survive and adapt” (FUKUYAMA, 2004). Altering a few keys of human nature entails modifying the whole being, and the consequences of it might be too drastic.

The humanist German philosopher Jurgen Habermas holds reservations towards the human genetic manipulation, and defends the political regulation and control on genetic engineering research and practices so that we can guarantee a human dignity. Habermas focuses his attention to the practices involving the pre-implantation genetic diagnosis (PGD), which takes on stern-cells studies to develop perspectives of producing human organs and therapeutic genetic modification. PGD enables the analysis of early embryos in order to detect potential hereditary problems allowing parents to decide interrupting or not the gestation or manipulating the genes so that the embryo decreases the chances of developing a spotted disease. The German philosopher’s concerns lie on harmful outcome of indiscriminate use of PGD. “Pre-implantation genetic diagnosis must only be considered morally admissible or legally acceptable if it is applied to few restricted and well defined cases, in which severe hereditary disorders might be unbearable for the potential being” (HABERMAS, 2004, p. 26). Otherwise, we take the risk of harming the human dignity by submitting embryos to genetic exams in order to establish whether they are worthy of development and existence. And it is exactly this point that worries Habermas the most.

Habermas states that if we do not handle the issue carefully, we tend to shift our perception of prenatal human life, downgrading embryos to the category of a consumption product meant to meet consumers’ preferences. Moreover, there is no clear distinction between the selection of unwanted hereditary factors and the enhancement of desired features in order to breed more biologically fit individuals, which leads to what Habermas distinguishes as positive and negative eugenics. By positive, he means the strictly regulated intervention in the human genome that assures the human dignity for providing the future being with means to lessen possible misfortunes due to genetic heritage. Whereas by negative eugenics, Habermas understands the manipulation of human biology seeking to improve the human subject, inserting him/her into the market logic, splinting individuals into two categories: the ones who can afford it and the ones who cannot. Besides, such practices might be misused in order to privilege one ethnicity and exclude or eliminate others that, for political, religious or biological reasons, are unwanted or labeled as inferior. Just the thought of such scenario reminds us of the Nazi project of populating the world with its ideal of a

perfect race while wiping out anyone that did not fit in. Only this argument should suffice to rethink or contest any proposal of human enhancement.

According to the North American professor and literary critic N. Katherine Hayles, who has written many works on the relations of literature, science and technology, the main problem with transhumanism is that it fails to predict a broad picture when it preaches its promises of a future world. She argues that the transhumanist view is too narrowed and ideologically fraught, for it focuses on reason and ignores or simply cannot understand social complexities involving the scenarios envisioned by its philosophy. Transhumanism, Hayles argues, privileges the individual to the detriment of the group, leaving room for serious troubles that can jeopardize the structures of society.

> The transhumanist rhetoric concentrates on individual transcendence; at transhumanist websites, articles and books, there is a conspicuous absence of considering socioeconomic dynamics beyond the individual […] Bostrom writes of making widely available technologies to eliminate aging, but what this would do to population growth, limited resources, and the economics of the young supporting the old are not considered (HAYLES, 2011, p. 217-218)

As well as Fukuyama and Habermas, Hayles also criticizes the little or the absence of attention that transhumanism gives to the issue of accessibility to the new technologies. She believes that the implementation of human enhancement might end up limited to privileged elites, while the large majority of people living in developing countries are bound to be neglected and segregated. The ones who will be left behind and what global conflicts might result from class and economic disparities are often ignored by the transhumanists (HAYLES, 2011, p. 219).

While transhumanism fails to contextualize its views or oversimplifies issues surrounding the technological improvements of humanity, Hayles sees in the science fiction genre the channel to recontextualize crucial issues involving the transhumanist tenets. Through the artistic work, we can go beyond the reason proposed by transhumanism and bring to scene emotion, systemic analysis, ecological thinking and ethical consideration.

A recurrent narrative device in science fiction novels, short stories and movies is to present utopian worlds where humankind has reached an advanced level of technological development and most of today's problems such as hunger, disease and inequality have been extinguished. However, as we go through the narratives, we learn that behind the thin veil of human prosperity, the issues concerning social disparities, segregation of classes and

negligence towards human lives not only remain but they are aggravated. The fictional worlds then lose their aspect of utopia to shift to a dystopia, revealing the negative aspects of future societies that developed due to scientific progress while ignoring the impacts of those changes. In addition, these dystopian fictions mirror issues of today's society in order to reflect what ideological forces act behind the technological advances, especially the issues of artificial human reproduction.

Sci-fi works often depict the use of human genetic engineering to elaborate fictional scenarios where the world is divided into those who can afford to be artificially designed to be as perfect as possible, possessing a reliable body precise as a machine and the ones subject to nature's fortune and potentially candidate to develop diseases. It is not difficult to imagine that these two groups usually fit in different classes of society, being very hard for the naturally born to compete with the lab made ones.

This was the scenario envisioned by Aldous Huxley in 1924 when he presented us *Brave New World*, one of the most acclaimed sci-fi works ever. Huxley imagined a world where sexuality was removed from the process of reproduction. Sex is only a source of pleasure, and to be naturally conceived is considered a defect. Humans are all made in labs. The physical and intellectual features are determined and controlled in order to meet the societal expectations. And this is one of the implications that Huxley opted to discuss.

In *Brave New World* people are genetically conditioned to occupy certain social classes. The higher classes are designed to be taller, stronger, more attractive and intellectually superior. All the desired features to fit the best functions in society, such as leading positions or jobs that do not require too much physical effort. All the same, the individuals from lower classes suffer a very different kind of genetic manipulation, intentionally designed to be smaller in their physical and mental capacities. Of course, these individuals are given subaltern positions in their society, usually oriented to serve higher classes.

Similarly, the movie *Gattaca* deals with the implications of a future world where human genetic manipulation is a reality. Like Huxley's dystopia, there is a clear societal distinction between engineered individuals and naturally born ones. The former treated as specials and legible to do tasks that require higher performances whereas the latter are denied even the chance of trying to do the same, being restricted to lower occupations, for they carry the burden of potential failure within their cells.

The transhumanist advocates often dismiss the problem of segregation between not only regular and augmented humans, but also the implications of the arrival of a new kind of being, which though similar to us, they are empowered with skills that surpass human beings. Not to mention that if we take into account the religious point of view, these artificially made creatures are bound to be seen as profane for they do not possess a soul to define them as human. Therefore, they will possibly be left out of any notion of rights that guarantees the dignity of the human subject.

This topic is a hallmark of the work of the North American sci-fi writer Philip K. Dick, who usually approached the relationship between human beings and machines, designing gloomy future worlds where boundaries separating them are unclear. In his novel *Do Androids Dream of Electric Sheep?,* Dick epitomizes the concerns of human biological degradation and potential extinction due to reckless technological progress, and the arrival of the android, a post-biological species that is likely to triumph as humans fade from the scene.

Dick's prolific literary production took place between the early 1950's and 1982, year of his death. During this period, not only did he live at a time when the genre was in its ascendency but science itself advanced over his lifetime. The author got to witness the first successful heart implant into a human being in 1953 and the development of the computers, which had been imagined by science fiction writers as "the electronic brain". Those events contributed to trigger Dick's mind to picture the possibility of creating artificial entities quite similar to humans, getting to the extent that we no longer could tell natural from artificial.

> So we and our elaborately evolving computers may meet each other halfway. Some day a human being, named perhaps Fred White, may shoot a robot named Pete Something-or-other, which has come out of a General Electrics factory, and to his surprise see it weep and bleed. And the dying robot may shoot back and, to its surprise a wisp of gray smoke arise from the electric pump that it supposed was Mr. White's beating heart. It would be rather a great moment of truth for both of them (DICK, 1995. p. 187)

Yet, the technological invention that disturbed him the most was the atomic bomb. The possibility of world demise provoked by a nuclear war and the consequences of the fallout to the environment and the human race is recurrent in Dick's work. The plot of *Do Androids Dream of Electric Sheep?* takes place in a post nuclear war world, the world war terminus, which devastated the planet, extinguished almost all animal life and drastically reduced the human population. The environment created by Dick is harsh. The planet is a tomb world. Humankind is at the brink of extinction on Earth. Many of the remaining inhabitants are either infertile or might give birth to deranged children due to exposition to

nuclear dust that gradually covers the place. The presence of humanity in the world is about to vanish. In a future in which humankind destroyed almost all kinds of life and inherited post-nuclear war infertility, the technology is the source of a new life creation. First, electric animals were manufactured to replace extinct species. It did not take too long for humans to attempt to create artificial humans.

In the novel, Dick goes deeper into the theme of reproduction in a post human era. Dick makes use of the figure of the android to portray the human desire to control their own reproduction aiming to attend the demands and necessities of their time. The android appears as a potential and superior substitute. Similar to the electric animals that fill the gap left after almost all-animal life had disappeared, the humanoid robots could play the same role for humans. The android is the literary figure that symbolizes the fears and anxieties of a world in which the reproduction is controlled by the human technique. The android is often described as a creature quite close to a human clone. Differently from cyborgs, androids are organic constructs also product of technological progress, but whose non-organic parts are not distinguishable from the artificial ones. In other words, they are beings made in laboratories, so identical to humans that it is impossible to establish what is human and what is not.

According to Hayles, Dick is not concerned with the scientific accuracy in his work. He is much more inclined to discuss how science and technology can affect humankind and how they serve to reflect upon our own dilemmas (HAYLES, 1999, p. 85). Therefore, he never explains thoroughly how the androids are built. The only thing that Dick makes clear is that the androids are artificial creatures engendered at human resemblance to be used by their owners as they please. The humanoid robots are designed to endure situations that humans cannot, serving as prosthesis of the human body. Although Dick does not dedicate too much time describing the androids, it is implied that they are attractive (the human characters feel attracted to female androids) and enjoy great physical disposition. The androids are built to surpass humans in strength, speed and in some cases even intelligence. In other words, the humankind managed to create figures that held the features needed to survive in places hostile to human beings, making it possible to populate off planet colonies, thus escaping from the ghost of extinction.

Still, as the example of *Brave New World* and *Gattaca*, the process of artificially creating a humanlike creature generates questions that lead us to think about the implications of technological interference in humanity. The question that might pop in our mind is: should an android have any right over him/herself? Is it morally acceptable to produce a living

creature and explore it as if it were a simple tool that we can use and discard at our will? We might take this question to the issue of the human cloning. One of the potential advantages of cloning a human being would be the idea of using their organs to transplant to the original body. Is it ethical to keep such procedure? Should the artificially made being be labelled as a product out of an assembly line that can be bought and manipulated by one purchases it? Who gets to decide which lives matter, or who is human and who is not?

In Dick's novel, those questions are hidden by the attitude similar to the other works mentioned previously. The androids are segregated. Despite the fact that they resemble humans and that they are conscious of their existence, they are put in a position that is lower than animals. Androids are used as tools to serve humankind. They are an evolution from a war weapon, the Synthetic Freedom Fighter, modified to work for humans in off world colonies. Emigration Campaigns offer an artificial robot for those who decide to leave the doomed Earth. Any android attempt to raise against its condition is punished with death.

The segregation towards androids seems to veil the concern of an imminent replacement of humankind. Afraid of losing their position of superiority, human beings subjugate androids in order to remind them that they are undead creatures that can never be compared to the holiness of the human life.

The fear of extinction is so intense that besides humanoid robots, humans who are affected by radioactivity are also seen as unwanted figures. To them, the possibility of leaving the planet is denied. In order to emigrate, the citizen has to be submitted to a test. Failing the test is synonym to be biologically unacceptable, a menace to the pristine heredity of the race. Once pegged as special, a citizen, even if accepted sterilization, dropped out of history. He ceased, in effect, to be part of humankind.

Dick summarizes the despise towards carriers of doomed human biological heritage in John Isidore, a human character whose physical and mental states had been injured thanks to radioactive dust. Despite the fact that Isidore is the most empathic figure of novel who really understands and respects the value of life, regardless the species, he is constantly downgraded by the characters that come in his way. Both his human peers and androids, which he helps hiding, mock at his genetic condition, referring to him as "chicken head" due to his limited mental skills. John Isidore has a rather negative view of himself, avoiding contact with regular citizens for they might look down on him. "I can't use the vidphone, Isidore protested, his

heart laboring. Because I'm hairy, ugly, dirty, stooped, snaggle-toothed, and gray. And I also feel sick from the radiation; I think I'm going to die."(DICK, 2007, p. 77).

Isidore lives in a distant and decaying area of Dick's future San Francisco. The fact that he is the only tenant of a giant, empty decaying building reinforces his image of an unwelcome figure who tarnishes the future of humanity. Isidore carries in his genetic material everything that humankind wants to be buried on Earth, therefore, his damaged figure does not fit the new brave new world that will secure the continuation of a better, cleaner and healthier human generation. Isidore is constantly reminded of his situation, and excluded for that. He knows that his fate is to perish like all the other extinct species. "But the ads, directed at the remaining regulars, frightened him. They informed him in a countless procession of ways that he, a special, wasn't wanted. Had no use. Could not, even if he wanted to, emigrate" (DICK, 2007, p. 19).

This selection can be put in the same level of the genetic engineering. Both dictate what characteristic are wanted or not, giving the possibility of constituting an ideal society, in which it is up to the human technique to decide which group is desired to live on and carry in their chromosomes the patrimony of an entire race. We shift then from an era of a natural selection, in which we had no control whatsoever, to a new one, when the humankind gets to choose which individuals, or features, are the fittest. The problem is: who gets to decide that? What factors weigh up in the designing of the human of the future? As Hayles states, "imagining the future is never a politically innocent or ethically neutral act. To arrive at the future we want, we must first be able to imagine it as fully as we can, including all the context in which its consequences will play out" (HAYLES, 2011, p. 225).

The gaps left by the transhumanist propaganda, which pictures idyllic future scenarios of joy and welfare, is fulfilled by the literary work that more often than not reminds us of serious problems of today. If we do not take them into account and give them the due attention, the insertion of high technology, rather than bringing world harmony, will only amplify the problems that we struggle with in the present time.

2 MECHANIZATION OF THE HUMAN X HUMANIZATION OF THE ARTIFICIAL

2.1 Seductive machines: fixation on the artificial

You double of mine, you pallid other!
Why do you mimic my love`s wild woe
Which tortured me, your wretched brother,
So many a night here long ago?

Heinrich Heine

At the very first pages of the novel *"Machine Man"* by the Australian writer Max Barry (2012), we get to know the main character in a startling familiar situation for most of the 21st century readers. In waking up and not finding his cell phone, Charles Neumann feels as if his ground had been taken away. He cannot tell what time it is or check the weather forecast to choose the best outfit to work. He feels cast away from the world since he had been hours without reading any headlines. Neumann could not even trace the best route to the company he works for because it was the mobile phone that guided him all the way through. Now that it is gone, it seems that an essential part of himself is missing. He feels somehow powerless. "I wanted my cellphone. I did not even want to do anything in particular with it. I just wanted the possibility of doing things. And by having the mobile phone I could do it". (BARRY, 2012, p. 10).

The scene is quite comical, but it is very likely that many readers will see themselves in such a situation. There is no doubt that we have become incredibly dependent on technology, especially computers and smartphones that manage our lives. To a certain extent, these little devices have become so crucial for some people that they seem to have sprouted as extensions of their owners 'bodies. Leaving the smartphone at home might put one in serious distress and disorientation, including an ongoing sensation of incompleteness.

In 2011, *The New York Times* [3] published a report affirming that according to a study, the chemical and neural reactions people have while dealing with their IPhones are similar to the ones related to love. In other words, people really feel attracted to their gadget. They crave for being in contact with it. Spending too much time away from it might increase the levels of anxiety close to the ones when people fall in love and constantly long to see their beloved ones.

This situation might not sound too much out of ordinary for many. People spend so much time using their electronic devices, be it smartphones, video games, computers or TV, that they have grown a little dependent on it, establishing empathic relations with it by attributing emotions and even names to their technological belongings. Nevertheless, there are testimonies of people who really take this intimate relationship with artificial constructs to another level.

In November 2014, *The Dailymail* [4] published on its online version a report with the following headline: "Me and my sex doll: The men who are in love with astonishingly realistic mannequins". It was a series of photographs showing men posing with their synthetic life-size dolls in common situations as other people would do with their human partners. These dolls are built to resemble a real woman, with hair, eyes and skin color customized according to the owner's wish. The initial purpose of these constructs was ostensibly providing a substitute sexual partner. However, some of the real doll owners started developing a real affection for them and assuming them as a partner, with some getting to the point of having their dolls as surrogate wives.

[3] Accessed on May 7 2016 http://www.nytimes.com/2011/10/01/opinion/you-love-your-iphone-literally.html?_r=0

[4] Accessed on May 7 2016 http://www.dailymail.co.uk/news/article-2836514/Me-sex-doll-men-love-astonishingly-realistic-mannequins.html

Image 1 -- Sex dolls

On the left, synthetic dolls ready to be customized by their future owners. On the right, a man who bought a doll similar to his dead wife.

Source: Available at: <http://www.dailymail.co.uk/news/article-2836514/Me-sex-doll-men-love-astonishingly-realistic-mannequins.html> . Accessed on May 7th, 2016.

An extrapolation of the theme is seen on the Swedish TV series *Real Humans* (2012). The show takes place in an alternative Sweden, where *hubots*, humanoid robots similar to androids, are incorporated to people's routine to perform several tasks. They work in factories, work as personal trainers, babysit children and look after the elderly. In some cases, they are even exploited sexually or have their software changed so that they can become more improved lovers to satiate their owners' sexual fantasies. Although condemned, the practice gains more and more adepts, leading some individuals to establish relationships with their *hubots.* A new sexual orientation is created to label people who feel sexually attracted to the transhuman figures: *transhumansexual.*

Image 2 -- Hubots recharging

Source: available at <https://jmmnewaov2.wordpress.com/2015/08/16/humans-a-new-series-on-amc/> Accessed on May 7th, 2016.

The examples above date from the 2000s, a period that technology is completely intertwined in our lives. However, the seduction that the artificial constructs have over human beings is not new. The idea of competing with God for the position of the ultimate creator of life has always been present in our imagination. The Arts, mainly literature and cinema, have always been used as creative channels through which the human desire of designing life could come true and imaginary creatures become a concrete possibility.

The examples of artificial beings can be traced long back in time. In the Egypt, there were reports of artificial figures that could move their heads and limbs in response to their faithful' questions. We have also the Jewish legend of the Golem, a figure made out of soil and upon supernatural intervention acquires life. Not to mention the Greek statues with incredible resemblance to the human physiognomy passing through Mary Shelley's monster of Frankenstein and the recurrent sci-fi figures of the robot, cyborg and the android. All these figures are the product of the human intellect and come to life to hunt and entice us by reminding us of the darkest corners of our consciousness.

One of the earliest examples of this theme can be found in the Ancient Greece. The Greek myth of Pygmalion and Galatea[5] as written by the Roman poet Ovidio tells us of Pygmalion, a sculptor from Cyprus who became disgusted by some local prostitutes and lost all interest in women, avoiding their company completely. He dedicated all his time and effort

[5] Information found and accessed on May 2016 http://www.greekmyths-greekmythology.com/myth-of-pygmalion-and-galatea/

in his craft as a sculptor. Ironically, his masterpiece is a statue of a woman, Galatea. Pygmalion was able to make of Galatea more beautiful and perfect than any living woman that had ever been. While sculpting it he falls deeply in love with his creation, treating Galatea as a real woman, bringing her gifts and dressing her with the finest clothes. Pygmalion would even talk to and kiss Galatea for it was crafted to perfection by his own hands, devoid of all flaws that made him turn away from real females.

Image 3 --- Pygmalion and Galatea

On the left, Laurent Pécheux's painting showing Pygmalion enchanted with the perfection of his work, the statue of Galatea. On the right, Jean-Léon Gérôme's canvas reproducing the attraction the creator feels toward his creation.

Source: Available at <https://www.arthermitage.org/Laurent-Pecheux/Pygmalion-and-Galatea.htm> and <http://artmight.com/Artists/Gerome-Jean-Leon/Gerome-Jean-Leon-Pygmalion-and-Galatea-end-179652p.html > respectively. Accessed on May 7th, 2016.

We can find echoes of Pygmalion's love story with his creation in many other stories of humans seduced by artificial constructs. In Hoffmann's *Sandman* we find how Nathanael grows fond of Olimpia, a figure of unique beauty whom he watched by distance. He does not notice a detail: Olimpia is not a real woman. She is an automaton that remains sitting by the window, motionless. One night, Nathanael has the chance to interact with the object of his passion. He dances with Olimpia, falling deeply in love with her. Nathanael is overwhelmed by the image of a woman who is constantly docile and remains silently listening to him closely. She seems transparent to his desire. The distance and the lack of language is what

fascinates Nathanael the most. Olimpia's attitude (or absence of it) is the opposite of his former lover Clara, whom he described as a lifeless automaton for she is not available for him as he wishes.

Eventually, Olimpia is torn apart during a fight between Spallanzi and Coppola, revealing her artificiality to Nathanael in the wax fragments scattered on the floor. According to the French anthropologist David Le Breton, the love of Nathanael for Olimpia, a wax-faced wooden doll, reveals his aversion to the real woman, represented by his female friend Clara, who did not correspond to his demands and desires. Le Breton sees Nathanael's attraction towards Olimpia as a result of his inner desire of having a partner that was subjected to him. "Instead of a woman's unpredictability and the otherness of her body, Nathanael preferred. the seduction of the artefact by loving a fleshless woman that is submissive to his will and of a crystal transparency"[6] (LE BRETON, 2015, p. 165).

Another artificial creature born from the myth of Galatea can be found in Auguste Villiers de L'Isle Adam's novel *The Future Eve*. Once again, the desire of building a figure at the human resemblance but correcting any unwanted feature or imperfection, physical, moral or intellectual is the central theme. The story tells us of a young man lord Ewald who is anguished because the object of his desire and passion, Alicia, does not live up to his cravings. The girl is endowed with a body whose perfection could surprise even the greatest sculptors. However, all this physical perfection is maculated by Alicia's mysterious moral misery. To lord Ewald's eyes, there was a hideous hiatus between the girl's figure and her cheap and stingy spirit. Her heavenly body was a temple profaned by her immoral persona. "The impossibility to reconcile both body and intellect tarnishes his desire, which makes him long for death" (LE BRETON, 2015, p.166).

The only alternative to save lord Ewald from misery is offered by Edison, a man of science. He promises to make of Alicia lord Edwald's ideal woman by removing the soul from the body. The key to this fit of human creation was Haliday, an andreide (term used by Villiers to name the artificial female figure). She was an artificial creature meticulously crafted so that she could possess the grace of the look and intelligence. Once again we can see the hate towards the woman's body and alterity. To Edison, men are victims of these fleshy women who science did not have the chance to alter to perfection. He proposes the primacy of

[6] All the direct quotes from the works written in any other language other than English are translations of my own.

the artefact over the human when he describes the woman made of flesh as a mere faulty copy of the Andreide.

The fascination for the artificial leads to the potential abjection of the human body, which is seen as ill and bound to rot out of existence. The inhuman figures represent the will to adapt the human body and frame it in a way that is only possible in the creator's mind. For bringing out the materialization of their intimate desire, the relation of humans and the inhuman is highly erotic.

In *Do Androids of Electric Sheep?* Philip K. Dick also played with the eroticism in the relation between humans and their artificial other. Dick starts his novel by showing the aversion that human characters feel toward the artificial creatures, which are considered lifeless things, not able to empathize to any other form of life, fitting the lowest position in society. Nevertheless, this negative picture of the artificial construct is gradually undermined in the main character's perspective, who finds himself attracted to the entities he was supposed to eliminate.

According to Naief Yehya, author of *El Cuerpo Transformado* (2001), among all the artificial creatures, the one that disturbs us the most is the android. We envy their perfection and immortality. It entices us the ambiguity of their sex, which we believe to be insatiable and infallible. It is exactly the figure of the android used by Dick in his novel, which is depicted as a threat to be kept under control and eventually destroyed. At first Rick Deckard, who is a bounty hunter (the name given to those whose job is to hunt and eliminate escaping androids), sees the humanoid robots with loath and aversion. He constantly refers to the androids as things. In addition, he never misses the opportunity to correct himself in his narrative whenever he uses the personal pronoun *she/her* or *her/him* to refer to an android. He instantaneously changes for the pronoun *it.* The presence of the abjection toward the androids in Deckard's lexical choice it is more evident in his first encounter with a humanoid robot in the novel, Rachael Rosen, who is submitted to a test to verify whether she is human or not. "That's the conclusion of the testing," he informed her – or rather it." (DICK, 2007, p.49).

No matter how similar the android figure looks to the human physiognomy, Rick Deckard cannot help thinking of them as mere objects that just pretend to be alive. "A humanoid robot is like any other machine; it can fluctuate between being a benefit and a hazard very rapidly. When it is a benefit is not our problem." (DICK, 2007, p.38).

However, Dick starts reversing Deckard's views and feelings in relation to the androids, leading the bounty hunter to a moral conflict. Not only did he feel empathy for the androids, which could jeopardize his android hunting job, but he also felt attracted to some female androids. Such a feeling was weird according to him, for he rationally knew that they were machines. Feeling that was immoral and illegal.

The conflict Rick Deckard has reaches its climax when Phil Resch, another bounty hunter, tells Rick that in the colonies there are android mistresses, and confronts Deckard with the idea that what he feels is not empathy, but sexual attraction for female androids. "Love is another name for sex… If it's love toward a woman or an android imitation, it's sex. Wake up and face yourself, Deckard. You wanted to go to bed with a female type of android – nothing more, nothing less" (DICK, 2007, p. 141).

Deckard passion for androids finds its concretization in the passage in which he meets the android girl Rachael Rosen in a hotel room. The female humanoid robot seems to be the opposite of his wife, Iran. Although there is never a physical description of her, Iran is described as having no vitality or desire to live. A woman who is not able to react to anything, inert and indifferent to everything. It is even implied that sexual desire is a burden for her, who is only capable of enduring it with the use of an artificial brain stimulator. In Deckard's words, "she has nothing to give him", pointing to a feeling of insatisfaction, of a gap that his human wife could not fulfill.

In contrast, Rachael is described as having no excess flesh, a flat belly, small behind and smaller bosom, besides possessed of great vitality and desire. In that moment in particular, in the hotel room, she is completely driven by luxury, trying to seduce Deckard to go to bed with her. "We androids can't control our physical passions" (DICK, 1968, p.195). She even claims to love him, promising to kill one of the androids he is chasing, as long as he can satiate her sexual appetite. According to Deckard's description of the scene, the female android seems to be endowed with the passion that Iran lacks. We may be led to invert the roles of the two female figures. Iran is closer to the category of a machine, whereas Rachael is full of humanity.

Despite Rachael's warnings that she was not a human being, Deckard cannot help but give in to his desire to go to bed with a female android, a being that is not alive, "I'm not alive – you're not going to bed with a woman" she says. After having sex with Rachel, Deckard starts seeing her in a different perspective. In a certain way, by the sexual consummation he

ends up anthropomorphizing what he had previously considered a machine. After that erotic encounter, the android, the thing standing in front him with bare and pink body “had become cheerful and certainly as human as any girl he had known” (DICK, 2007, p. 194). A girl whom he would certainly marry if it were not illegal. In the end, the thing became a real woman, who was legally not a living being, but for Rick Deckard, it had become alive.

Image 4 --- Scene from Blade Runner

Source: Available at <https://www.rogerebert.com/balder-and-dash/theres-something-about-blade-runner >. Accessed on May 7th, 2016.

Deckard, Pygmalion, Nathanael and lord Edwald have been through the same dilemma. Though they found themselves in immoral or illegal affective relations, for they were in love with artificial human constructs, all of them found in the artefact what they could not find in their human peers. Only by means of the human technique and its creating power, these men could see their desires and needs embodied in female forms that seduced them, not by fooling them, but providing exactly what they wanted.

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2.2 **Humans altered by technology: transcending the barriers of the organic**

The dependence on the artefact makes the human more intimate and amazed with technology. This symbiotic relationship with the machines leads humans to long for the dismantling of any obstacle that prevents them from merging with their object of desire. When the barriers between human and machine are blurred, it is no longer possible to tell where one starts and the other ends. The mutation between Man and artefact is a double way road. While we endow machines with humanity by attributing emotions and consciousness to them, the human is reified, and the human body is seen as an assembling of parts; the human is mechanized and codified, making of the body a vessel for the Self. Once the human is compared to the artefact, their body becomes a site of technological intervention, subject to modifications that seek its embellishment and perfection.

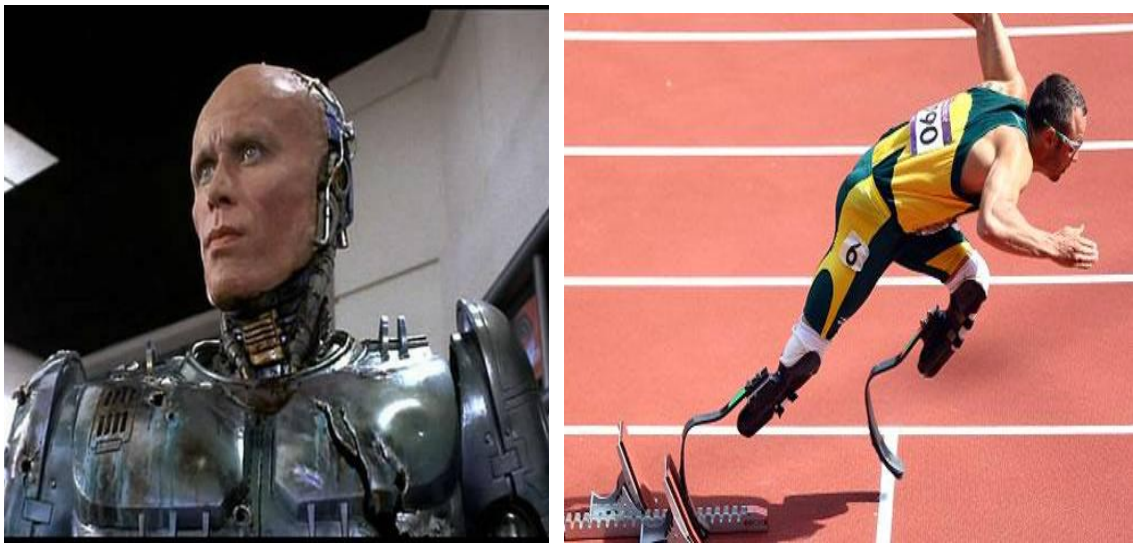
When one thinks of altered beings, the common figures that pop up in one's mind are the cyborgs and androids, which have gained life in the collective consciousness through the images provided over the years by the audio-visual industry. However, the scientific advances in the most diverse areas of the human knowledge has contributed to deep changes in our nature, putting us in control of our own process of evolution, and therefore, making the hybrid figures of the cyborgs and androids transcend the realm of imagination and jump out of sci-fi books and movies to walk among us.

The cyborg can be read as bionic entities. The encounter of the organic (human) and the mechanic (machine). The term cyborg was coined in the 1960's standing for cybernetic organism. The union of the elements that constitute the cyborg seeks to give birth to a more advanced self-regulating human being, whose imperfections and limitations would vanish in order to make humankind fit to any situation.

Through that perspective, we have to agree with the prominent scholar in the field of science and technology studies Donna Haraway when she says that we are all cyborgs (HARAWAY, 2009, p. 37), for *Robocop* is as much a hybrid of human and machine as our grandmother with a pacemaker. The Captain America and his super-soldier serum is no different from the lab-made drugs used to improve athletes' muscles and performance. We may think of all the advances in medicine that have made possible to prolong our lifespan by the use of prostheses or organ transplantation. The plastic surgeon has become the sculptor of the human body, giving us the form we desire but nature neglected us. The French anthropologist and sociologist Philippe Breton says that even Michael Jackson could be labeled as transhuman figure, for he could change most of his natural features thanks to plastic intervention so that he could achieve the look he had always wished.

The merge between the living and the machine can be found beyond the realms of laboratories and surgery rooms. In addition to medical purposes, the technological inventions we use in our daily lives have become extensions of ourselves. Think of all the gadgets and amenities that technology provides us in order to facilitate our lives. Is it possible to imagine what it would be like to live in a world where there were no automobiles, mobile phones, television, computers or the Internet? For many people, finding themselves deprived of such things could be equivalent to being disabled, given the dependence they have on those artifacts that constitute a part of their own.

Image 5 --- Fictional and real cyborgs



On the left, scene from the movie Robocop representing the union of the organic with the cybernetic in order to create a more efficient police officer. On the right, Oscar Pistorius (nicknamed Blade Runner) making use of prostheses to replace his lost limbs. Pistorius is not allowed to compete in regular competitions because it is said that his artificial legs provide him more speed than the biological ones.

Source: Available at < https://oglobo.globo.com/cultura/robocop-de-jose-padilha-chega-aos-cinemas-em-agosto-de-2013-4286767 > and < http://www.anatomybox.com/tag/amputee/ >, respectively. Accessed on May 7th, 2016.

Cinema and literature are places in which the scenarios described above gain a broader view and discussions arise. Let us take the example of Charles Neumann in the novel *"Machine Man"* (BARRY, 2012). After having lost one of the legs in an accident at his lab, Neumann is given a high-tech prosthesis to replace the lost limb. It does not take too long form him to realize how superior his artificial leg is when compared to the biological one. He is overwhelmed with an increasing desire to replace all parts of his body for highly advanced pieces making his early desire of becoming the machine come true.

Philip K. Dick is known for constantly approaching the question of what is real or not, inviting us to reflect upon the limits of natural and artificial and what it means to be human. David Le Breton says that Dick's view proposes a new ontological question: Am I man or machine? (BRETON, 2015, p. 195). In *Do Androids Dream of Electric Sheep?*, Dick inserts the theme of the human mechanization by implying that his human characters are so dependent on the machine that they need them to program the emotions they cannot feel by themselves.

Right in the beginning of the novel we are introduced to a device made up by Dick: the Penfield mood organ. The device is not described in terms of appearance, construction or how it works exactly. It is only described as possessing a console in which the user can dial and set the mood, the duration and frequency they want to feel a certain emotion. The range of feelings is broad: from merriment and sexual desire to fresh and creative attitude toward your job or the absurd "desire to watch TV no matter what is on it". (DICK, 2007, p. 4). The Penfield mood organ serves as an artificial brain stimulation to fulfill the inability that inhabitants of post nuclear war Earth have to endure their existence on a planet that gradually turns into a complete wasteland.

The interference of the mood organ and its importance in people's lives can be seen in the first lines of Dick's novel. Deckard and his wife are awaken by the Penfield. He wakes up glad and merry as previously scheduled in his device. Whereas his wife Iran, for not setting her equipment accordingly, is reluctant to be up. "I don't want to be awake", she says. For Deckard, his wife's situation could be simply solved by just dialing the adequate programming in the artificial brain stimulator. "You set your Penfield too weak," he said to her. "I'll reset it and you'll be awake (…) if you set the surge up high enough, you'll be glad you're awake." She would be glad. That is the main point of the Penfield, to artificially induce people to feel good once their brains could not do it considering the reality of the world.

Despite the ongoing feel good orientation of the Penfield mood organ, Iran decided to schedule a six-hour self-accusatory depression, which defeated the whole purpose of the device. She came to that conclusion once she realized that she had a cognitive incapacity of naturally reacting properly according to the situation. Living in a world where life is bound to vanish and not reacting to it did not sound normal to her as stated in the passage:

> But then I realized how unhealthy it was, sensing the absence of life, not just in this building but everywhere, and not reacting –do you see?I guess you don't. But that used to be a sign of mental illness; they called it absence of appropriate affect. (DICK, 2007, p. 3).

In order to correct this inadequacy, Iran searched through the settings of the mood organ until she found the appropriate affect that her cognition failed to provide. She finally found the setting for despair and scheduled it for twice a month, "a reasonable amount of time to feel hopeless about everything, about staying here on Earth after everybody who's smart enough has emigrated." (DICK, 2007, p.4). When questioned by Deckard about the danger of feeling such a negative emotion, Iran replied that, just like any other machine, she had an automatic resetting scheduled so that her brain could be induced to feel all right again. "I program an automatic resetting for three hours later … Awareness of the manifold possibilities open to me in the future…" (DICK, 2007, p. 4).

Dick imagined a gadget capable of interfering in the human brain cortex, stimulating sensations and emotions that the natural organism of his characters failed to provide in order to endure the harsh reality of the gloomy post-apocalyptic world of his novel. However, it may not be farfetched to establish a connection between Dick's fictitious Penfield mood organ and the countless drugs the pharmaceutical industry offers us to alter our mental states. For instance, if we consider medicines such as Viagra that enhances men's sexual lives or many other legal drugs that combat stress and fatigue helping people carry on their daily tasks, how are those different from Dick's gadget? And what to say about *Prozac*? This antidepressant drug responsible for increasing our rates of serotonin, making us happier and more likely to bear the anxieties and pressure of the contemporary society without succumbing to depression. The use of Prozac became so wide spread, mainly in the United States, that several people have become completely dependent on the drug.

As Deckard and Iran in *Do Androids Dream of Electric Sheep?,* the users of Prozac, the Prozac Nation, the technology affectionate rely on the artifact as a means to transcend the limitations that their natural constitution cannot overcome. By doing so we integrate technology, be it artificial brain stimulator, drugs, medical interventions or high tech devices incorporated in our routine, to ourselves as if it organically constituted us.

In the end of this process of merging with our own creation, we end up mutating into hybrid entities subject to altering and programming as we please. We become creator and creature simultaneously. In this scenario in which we translate ourselves into informational entities open to countless settings, a convincing and comforting answer to Dick's questioning (Am I man or machine?) seems to be bound to remain unanswered.

2.3 **More human than humans – artificial entities that can surpass the human**

The development of the human intellect has given life to machines so fascinating and crucial for our lives that they have blended as part of ourselves, making us much more mechanized beings. All the physiology of the human body is compared to the inner parts of artificial constructs, especially the brain, which is constantly seen as a set of connections resulted of a complex machine neural net responsible for the control of the whole body. At the same time, machines have evolved to an extent that they are more and more similar to us than we could imagine. It is established a double way road. On one hand, the human is reified, acquiring the aspect of the artifact, which can be manipulated by the hands of a skillful master. On the other hand, the construct learns with its creator, acquiring self-consciousness and soon wants to claim for having its strings unattached.

One of the most known examples of artificial creatures is the robot. It is quite common to think of the figure of the robot as a lifeless entity made of metal that reacts to the pressing of its buttons, a tool designed to simply follow its master's commands. However, if we search for the studies in the field of the artificial intelligence and the machines that are about to come to life we might see that the concept of a servant and obedient artificial creature gradually loses its meaning. We can find in literature examples that are nothing similar to the term coined by the Czech writer Karel Čapek in his work *R.U.R* (2013). The name robot derives from the Czech *robota*, which stands for mandatory work. Yet, in Čapek's book, the robots end up rising against their condition of servants and eliminate their owners.

The theme of machines rebelling against humankind, although recurrent, still seems farfetched. However, many specialists of the technological area see the idea of the artificial entities gaining consciousness as a concrete possibility. The inventor and writer Ray Kurzweil does not hesitate in saying that by the end of the twenty first century human beings will no longer be the most intelligent or capable entities on the planet (KURZWEIL, 2007, p. 18). The computer and all its inner components are usually referred to in humanized vocabulary. It has memory and its software is the equivalent of the spirit. Researches that date from the early 1950s have worked hard to prove that the computer is actually able to think. Many of these scholars truly believe that thanks to the capacity of processing information, it will come the day that machines will surpass humans in terms of intelligence. The sci-fi writer Vernor

Vinge has helped coin the term Singularity, which he describes as a period that machines will have developed to an extent that not only will they become more intelligent than us, but they will also gain autonomy, not needing any human being to control their actions (VINGE, 1993).

When machines get to the point of actually thinking, humankind will have to deal with a new dilemma: Is there a difference between the human thought and the machine thought? The British mathematician Allan Turing, one of the inventors of the computers, constantly contested the capacity of thinking as a unique human feature. Not only did Turing believed that machines could actually think, but he also affirmed that it was hard to distinguish the mind of a human from the mind of a computer. In order to confirm whether a machine could think or not, he created a method, the Turing test, which consisted of having a human being alone in a room communicating with two other entities in another room through a computer terminal. Since there is no physical contact, this human being must decide, relying only on the answers to his/her questions, which is the human and which is the machine. This person's job is to pose questions that can distinguish verbal performance from embodied reality. If he/she cannot tell the intelligent machine from the intelligent human, it is proved that machines can think, Turing argued (*apud* KURZWEIL, 2007).

Turing states that there will be a time when certain machines will think exactly like humans. Our anthropomorphic tendency to recognize subjective experiences only with a human equivalent will lead us to humanize these machines. We will believe that they can experience the same pleasures and pains that we do. We may empathize with them, for we will know that as we understand them, they will understand us. The machines will incorporate human qualities and will claim that they are humans. We will have no choice but believe them (*apud* KURZWEIL, 2007, p. 95). Or in a more alarming vision, these artificial beings will come to realize that they have surpassed humankind and now the tables have turned. The machines will be aware of their superiority, and the human will be downgraded in the hierarchy of intelligent creatures. As predicted by the cognitive scientist Marvin Minsky " the human beings are essentially machines…but one day there will be machines so perfected that they will comprehend us so well that they will say: people are machines, we are not. (*apud* LE BRETON, 2015, p. 189).

Although specialists of the area argue its inevitability, the era of super intelligent and self-conscious machines have not arrived yet. This vision remains in the field of imagination and speculation, which is when fiction comes in to amaze and terrify us with imaginary

scenarios where the inanimate obtains life and turns into creatures that are unsettling familiar to us.

The Russian sci-fi writer Isaac Asimov, who helped shape the concept and ideas around the figure of the robot in literature, conceived some examples of machines with unexpected features that were thought to be exclusively human. In his short story *Robot Dreams,* we get to know Elvex, a robot with an unusual defect: it could dream. When inquired about the frequency of what it considered to be dreams, Elvex replied: "Every night…since I have become aware of my existence", showing the robot's awareness of its existence. Asimov's work plays with the similarities between a human brain and positronic brain (a brain of a robot). For him, both possess layers related to the unconsciousness, therefore, capable of growing more and more complex, escaping the control of science.

Robot Dreams surprises us for presenting a robot that defies Asimov's Three Laws of Robotics[7], which tell that all robots are meant to obey and preserve human life. Elvex broke the Laws not by the fact that it could dream, which is a threat itself for escaping predictability, but for the content of its dreams. Elvex's dreams were always the same. "It would see robots bowed down with toil and affliction, all were weary of responsibility and care, and he wished them to rest… it seemed that robots must protect their own existence." (ASIMOV, 1986, p. 122). When inquired that the dream did not correspond to reality, once robots did not need to rest, Elvex would show its consciousness between dream and reality in its responses: "So it is in reality. I speak of my dream".

The most alarming fact in Elvex's dream was a potential desire hidden in it, which is the same among any sentient group that is subject to any kind of oppression. Towards the end of the short story, the robot reveals that it saw a figure that would stand and speak on the behalf of the exhausted and slaved robots. This figure would demand that the robots be freed

[7] The Three Laws of Robotics were first introduced by Asimov in the book *I, Robot* (1942), a collection of short story focused on robots. The Three Laws are:

1 - A robot may not injure a human being or, through inaction, allow a human being to come to harm.

2 - A robot must obey the orders given it by human beings except where such orders would conflict with the First Law.

3 - A robot must protect its own existence as long as such protection does not conflict with the First or Second Laws.

from the mandatory work. We find out that this figure longing for freedom was Elvex himself.

As Asimov, Philip K. Dick thought of a future in which sentient machines would possess the same capacities and intelligence of humans. In *Do Androids Dream of Electric Sheep?* androids are the greatest human construct. Despite the fact that they are not made of mechanical parts or transistorized circuits, the androids are seen as artificial beings that are meant to serve humankind. However, these human-like machines have evolved physically and intellectually to a level that they surpass humans in many cases, and are indistinguishable from real humans beings. Still, there seems to be a constant battle to keep the boundaries between the natural and the artificial intact, giving only to humankind the right to be considered genuinely alive.

More often than not, the human characters in Dick's novel downgrade androids, telling that they are things that just pretend to be alive, putting them in a category inferior even to animals. The more advanced the humanoid robots become, the harder the humans try to find mechanisms to detect the traces of humanity. What defines a genuine human in Dick's novel is the empathy. Once it was impossible to tell an android from a human being based on the appearance or intellect, Dick thought of a test that could measure the empathy. The test was called Voigt-Kampff. Differently from Turing test, intelligence or ability to think is not a determinant factor, for "empathy, evidently, existed only within the human community, whereas intelligence to some degree could be found throughout every phylum and order including arachnida." (DICK, 2007, p. 28)

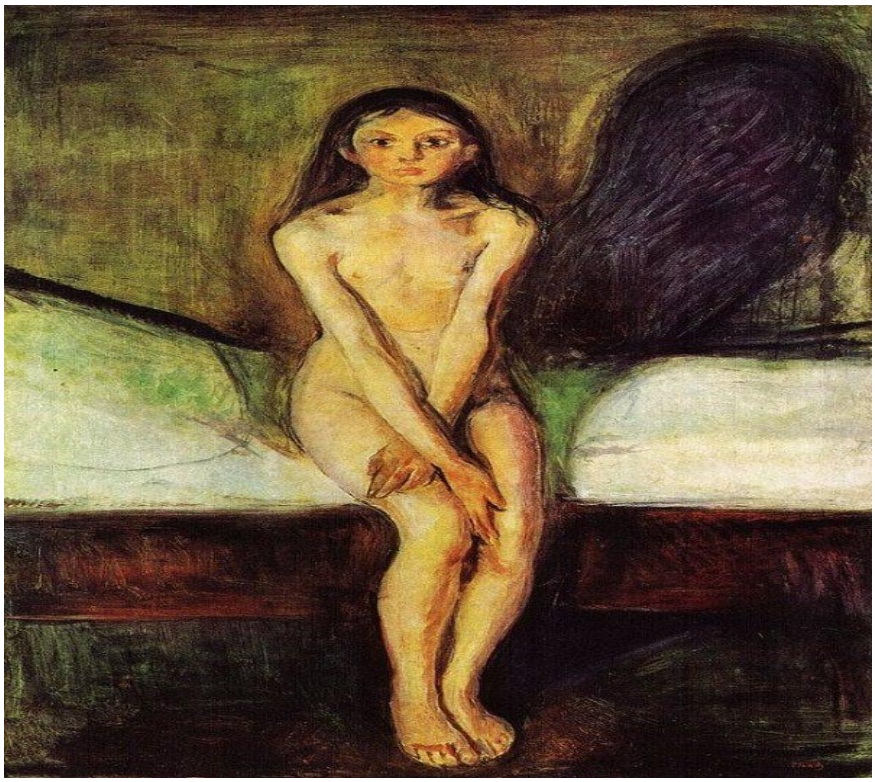
The view of androids as cold lifeless things that only simulate to be alive starts to lose ground when Rick Deckard is on to eliminate Luba Luft, an escaping android that disguises as an opera singer at the War Memorial Opera House. Luba Luft is the first turning point in the novel. The female humanoid robot character is responsible for making Rick question the purpose of his job as an android killer. Ultimately, the encounter with the android singer makes Deckard reflect upon what it means to be a human being.

When he first sees her, she is playing Pamina in Mozart's *The Magic Flute*, which happens to be Rick's favorite opera, bringing him to tears whenever he listens to it. The irony is that Pamina is the character that the audience feels more empathy for and is being played by an android, which is not capable of feeling it. The performance of the android is so touching that the bounty hunter cannot understand how a talent like that could be a liability to their

society. The fact that Luba Luft was a talented artist and her appreciation for arts contribute to this role-reversing intended by Dick. Deckard realizes that he is the cold and lifeless creature whose function is to destroy something that is beautiful. Since he was responsible for vanishing that talent, he was part of the form-destroying process of entropy, just like the radioactive dust that increasingly destroyed everything on Earth.

Another aspect to point out, it is the scene in which Luba Luft is absorbed by the picture by Edvard Munch. According to Dick's description of the painting, "a drawing of a young girl, hands clasped together, seated on the edge of a bed, an expression of bewildered wonder and new, groping awe imprinted on the face" (DICK, 2007, p. 129) we can say that the painting is Munch's *Puberty*. Dick was very subtle in using this particular painting in association to his android character that arouses doubts in the reader about the distinction between humans and androids. Many argue that Munch's work represents the transition of a girl turning into a woman and all the anxieties and fears that come along with it. We could say that Luba Luft was going through a similar process. She was an artificial being that "ever since she got on Earth from Mars, her life has consisted of imitating the human, doing what they would do, acting as if she had the thoughts and impulses a human would have. Imitating, as far as she is concerned, a superior life form" (DICK, 2007, p. 132). While being submitted to the Voigt-Kampff test, Luba had the chance to kill Deckard and keep her disguise. However, she chose not to do it, which led Deckard to assume that she really thought she was a human being. According to him, she had been built to perfection. The quality of her voice made her a superb singer with no trace of a simulacrum. She genuinely seemed alive.

Image 6 – Munch's *Puberty*



Source: Available at < https://www.edvardmunch.org/puberty.jsp >. Accessed on May 7th, 2016.

Having said so, we may link the puberty, a young girl becoming a woman, to the process of an android turning into a human. Luba Luft tries so hard to resemble and sound like an authentic human being that she achieves a point in which the boundaries between natural and artificial can no longer be traced. Let us not forget that she never concluded the empathy test, thus, Deckard could not identify her as non-human. Still, it would not be a surprise if the android detecting test failed to show her artificiality. In the end, Dick does not provide us answers. In fact, he feeds us with more questions. Can a machine think and feel the same as humans do? We may never know. After all, in Turing's words: how can we tell what the other thinks or feels if we are not the other?

2.4 **Suppression of the body – body as an obstacle in a transhumanist scenario**

Humankind has put a lot of effort in finding solutions to prolong their existence. We have found in technology a shelter, the last resort in the attempt to keep human being alive as

a biological construct. Yet, this salvation could be interpreted as palliative, once it still considers the classic human ontology, retaining the being to his/her corporeal limitation that is doomed to decay eventually. As long as the notion of human life remains attained to the necessity of a physical humanoid body, the ghost of extinction will always haunt humankind. In a transhumanist scenario, in which everything can be converted into information that can flow through a worldwide net, physical beings are in disadvantage. In order to enjoy all the possibilities of multiple virtual worlds, the body must be suppressed.

The more technology interferes in the way we experience the world, the more the human body seems to be an obstacle that incarcerates our Selves to the restrictions of the perishable flesh. Our Selves are flexible and malleable to our desire, open to countless possibilities that can see as limits only our imagination. This potential that we have incubated in our minds does not see the daylight due to the imposition of a corporeal reality that insists to knock us down and trap us to the features that Nature has granted us. In such a struggle for liberty, it rises the will of getting rid of the grips of our physical selves, leading to an ongoing despise towards the human body, which becomes the anachronic prison of our souls.

The body is then an abject figure associated to imprisonment and subject to the diseases of the real world. Mainly after AIDS, the human body has acquired the image of a dangerous place; it is the place of death. We turn to technological resources to find a way to bear the obsolete clumsy biological machine that is responsible for our spirit. As the specialist in robotics Hans Moravec states, we are unhappy hybrids, half-biological and half cultural, carrying many features that do not correspond to the inventions of our spirit (*apud* LE BRETON, 2015, p. 217).

In *The Invention of Morel* by the Argentinian writer Adolfo Bioy Casares, the main character after falling in love with the projected image of woman comes to the conclusion that the greatest mistake in the search for immortality is keeping the body alive. No desire or love can last without getting rid of the body. Such an affirmation might sound too extreme and exaggerated to some, however, let us think about the world we live in, especially after the development and widespread of information technology. The internet has deeply changed the way we interact with the world and one another. We can visit museums and art galleries in a different continent without leaving our homes. We may take a walk through the streets of a foreign country just by using the Google Street View or keep conversations to several people around globe simultaneously. The possibilities are many once you are logged in to the World Wide Web. The computer, or any device that connects us to the internet, is our intimate

companion; it is the key that allows our entrance into a world that is the realm of the mind and the imagination. A world where the body is superfluous. In fact, in the digital domain you may build yourself multiple bodies, keeping the biological one as just a referential spot, an anthropological necessity that you would dismiss if you could.

In this conjecture of bodiless reality, solely based on information, we are able to materialize our desires either repressed by the social norms or intimidated by the physical presence and judgment of the other. Once we do not have a body or face to denounce our identities, we are granted with the mask of anonymity, carrying us into an environment of free experimentation, of empowerment and belonging.

Raymond Kwrzweil has a vision about the possible virtual experiences that seem taken out of the most imaginative Hollywood motion pictures. According to him, by the end of 2030 people will be able to have sex with their partners regardless their physical distance. Technology will have developed to an extent that people will interact with their lovers, prostitutes or any other simulated partner thanks to the development of virtual reality, which will provide audio-visual stimulus comparable to the physical intimate encounter. In fact, Kwrzeil dares say that virtual sex will compete with the real act, for it will offer more intense and pleasurable sensations than conventional sex. The simulation will be the space of free experimentation. The adopters of the virtual sex will be able to have experiences that would be restricted to them in real life. For instance, since partners could virtually embody any physical shape, a woman would be free to feel what it is like to be a man, and vice-versa, or it would be possible to have a sexual experience with the celebrities we admire. In other words, the virtual reality will be the place of the imagination, in which we take the steering wheel and make our dreams come true. After all, as Kwrzeil predicts

> You will be able to modify yours and your partner's physical appearance or any other features. You will be able to give your romantic partner the look of your favorite movie star without your partner's acknowledgement or permission. Obviously, you must be aware that he or she might be doing the same with you. (KWRZEIL, 2007, p. 204)

The theme of acquiring virtual bodies to inhabit a virtual world and therefore enjoying all the possibilities of it has been recurrent in cinema. In the movie *Matrix* (1999), the Wachowski brothers presented a future world where machines used humans as source of energy. Human beings were no longer born but grown in vast fields by machines in order to convert human thermal energy into batteries. While the bodies were kept in *pods* (receptacles where synthetically created humans are inserted and hardwired into becoming part of the

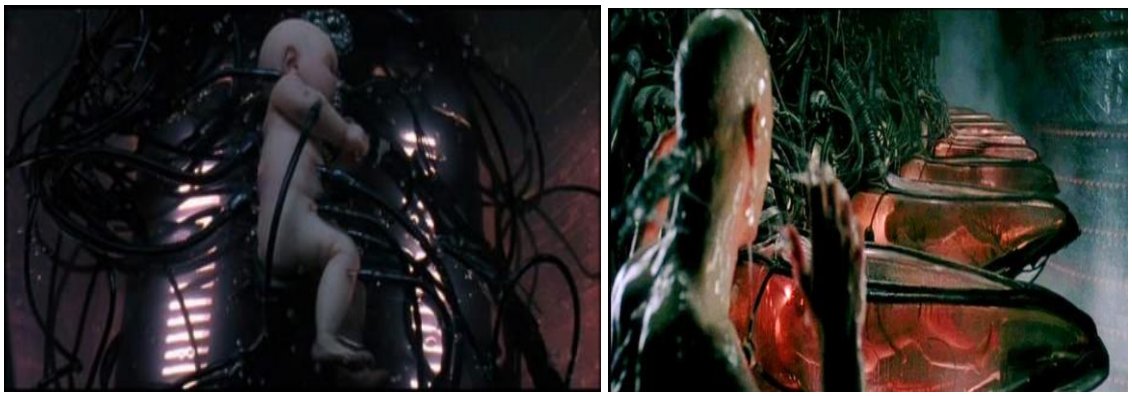
power plant), the human mind was connected to a great virtual reality, the Matrix. The ones who were disconnected had to face the harsh reality of the actual environment, dark and gloomy, with no resource to keep them alive. Whereas in the Matrix, the human brain was induced to believe that anything was possible. One could savor the finest dishes and beverages or fight Kung Fu and jump from tall buildings without getting hurt. The contrast between reality and simulation was so drastic that some characters would opt and even fight for artificial life.

Despite the impact of the movie *Matrix* in terms of cinematographic techniques, the idea of people leading simulated lives, connected to a big virtual reality net had already been conceived in literature. William Gibson thought about the concept and coined the term *Matrix* in 1984 in his most acclaimed work *Neuromancer*. In the novel, as in the Wachowski's 1999 movie, we are introduced to the cyberspace, "a world within the world, a global consensus-hallucination, the representation of every bite of data abstracted from the banks of every computer in the human system" (GIBSON, 2016, p. 77). The book tells the story of Case, a hacker who had his nervous system damaged by his former employers as a punishment for having stolen from them. Once damaged, Case was subject to the most horrendous suffering one could endure: he could no longer connect to the matrix. Being away from it makes the hacker long for death, and the chance of going back to the matrix puts the plot of *Neuromancer* going. Case will do anything he can in order to go back to the place where he feels complete again.

Cases' punishment can be compared to the banishment of Adam from Paradise. Both broke the stated rules; both have sinned, and the price to pay is to be deprived of the completeness of their flawless worlds. Furthermore, Case and Adam were condemned to a corporeal existence, in which the flesh dictates the boundaries of their Selves.

In the examples above, Case and Adam are representative of the human condition, the suffering of being sentenced to a lifetime enduring the pangs of mortality. Both need to search for a way to transcend the matter and find a way back to Paradise. Having said so, we may say that technology and religion share the same purpose for humankind. They are the way humans use for a metaphysical experience.

Image 7 -- Scenes from Matrix



On the left, an artificially reproduced baby lives his life in the Fetus Field connected to the Matrix while the machines absorb heat from his body. On the right, Neo (the main character) "wakes up" and is confronted with the real world.

Source: Available at < https://www.extremetech.com/extreme/135481-will-your-body-be-the-battery-of-the-future >. Accessed on May 10th, 2016.

This link between technology and religion can be perceived in *Do Androids Dream of Electric Sheep?* Philip K. Dick fuses both into a device called Empathy Box. The equipment is described as a machine possessing two handles and connected to many others around the Earth and off planet colonies. Once one grips the handles of the Empathy Box, he/she is able to experience the fusion with Wilbur Mercer, a figure that is similar to a martyr. While fused with Mercer, not only one can feel what the martyr does, but they can also experience the same emotions and sensations of those gripping their Empathy Boxes at the same moment. On a planet that is inhabited by very few humans, the feeling of desolation and solitude is constant, thus, the remaining people on Earth make use of the boxes to have the sense that they are not alone; they can feel something other than hopelessness. The following passage showing the character of John Isidore, a mentally damaged human being who is the only tenant of an abandoned apartment building, using his Empathy Box after feeling disturbed by "the sound of the silence" perfectly describes how the technology is used as a resource to overcome the bitterness of a solitary existence soled with earthly pain.

> Okay, he thought; I'm off to work. He reached for the doorknob that opened the way out into the unlit hall, then shrank back as he glimpsed the vacuity of the rest of the building. It lay in wait for him, out here, the force which he had felt busily penetrating his specific apartment […] The echo of himself ascending: the echo of nothing. Time to grasp the handles, he said to himself, and crossed the living room to the black empathy box […] He had crossed over in the usual perplexing fashion; physical merging – accompanied by mental and spiritual identification – with Wilbur Mercer had reoccurred. As it did for who at this moment clutched the handles, either here on Earth or on one of the colony planets. He experienced them,

> the others, incorporated the babble of their thoughts, heard in his own brain the noise of their many individual existences. (DICK, 2007, p. 19-20)

The elements Dick created in his novel can be compared to the ones of *Matrix*, *Neuromancer* and the contemporary society. The Empathy Boxes just like the computer represent the entrance to the ethereal world, which in turn can be the counterpart for the internet and the concepts of the matrix. Unlike the Wachowsi and Gibson's work, in Dick's novel the characters could not do whatever they wanted when they were connected to the imaginary world, however, the purpose was the same: fulfilling the needs that could not be satiated in the real world.

Image 8 -- MIT prototype of the Empathy Box

Source: Available at < http://fluid.media.mit.edu/node/332 >. Accessed on 10th, 2016.

The technology that dismisses the physical existence, turns into the equalizer of humankind in *Do Androids Dream of Electric Sheep?* , putting every single human united at the same level regardless of his or her appearance or social status. The character of John Isidore is an outsider in his society. Due to the exposition to the radioactive dust, he has been damaged, which makes him unable to pass the tests to emigrate from Earth. Citizens like Isidore are called chicken heads, seen as an abomination despised by regular humans and androids destined to turn into *kipple*[8] as everything else on the planet. Nevertheless, when in

[8] Kipple is a word coined by Philip K. Dick to refer to the sinister type of rubbish that simply builds up without any human intervention. Eventually, one day, the entire world will have moved to a state of *kipplization.*

the realms of Mercer, Isidore's damaged body is irrelevant, and he can live the same experiences as the others. Whether they feel pain, sorrow or happiness, Isidore would not be denied the same experience, for his condition simply does not matter. The device has such an importance that he cannot conceive the idea that a person would not have one, as he says in his first encounter with an android who does not possess one. "But an empathy box," he said, stammering in his excitement, "is the most personal possession you have! it's an extension of your body; it's the way you touch other humans, it's the way you stop being alone. But you know that. Everybody knows that." (DICK, 2007, p. 64)

Similar to other famous authors of the genre, Dick imagined events that might have sounded too absurd in his time, but that ended up being shockingly close to the contemporary world. Of course, Dick's vision of the Empathy Boxes as a bodiless experience, in which people shared the same emotions and thoughts directly through their brains, is still unrealistic. Still, we cannot deny that the underlying idea of people connected around the globe has come true. If we consider that the new technologies have provided us with the access to unlimited information, the voice to speak out our thoughts to a wide range of listener and the chance to reconstruct our identities in order to interact with virtual others, we will see that we are striding into a reality where the body will in fact be expendable. The biological being will be a burden slowing the mind, preventing us from transcending to a new world where the human and the technology will fuse into information.

3 **FADING BOUNDARIES BETWEEN HUMANS AND MACHINES IN *DO ANDROIDS DREAM OF ELECTRIC SHEEP?***

3.1 **Human is: in search of a definition of human**

O homem inventou Deus para que Deus o criasse

Ferreira Gullar

Doubt and paranoia are words usually associated with the work of Philip K. Dick. The author once confessed to believe that the world around us is not real, at any moment, the curtains would fall and we would be forced to wake up of a long dream, which we call reality. This feeling of uncertainty is recurrent in Dick's literary production. More often than not, his characters, and readers as well, are teased by uncomfortable questions challenging their beliefs over their identity and nature. In a world that grows increasingly mechanized, and human interactions are more and more mediated by technology, Dick's on going question still haunts us: how can we be sure of what we are? How can I be sure I am human? Or ultimately, what does it mean to be human?

Do Androids Dream of Electric Sheep? is one of the works that best illustrates the author's ability to build up a world that gradually loses its grounds, providing us with a sense of uncertainty. One of the first things that might intrigue readers when they first set eyes on this classic of sci-fi literature is its title. By imprinting a simple, but also enigmatic weird question on the book cover, Dick somehow drops us a hint of the central theme of his work, inviting us to join him in a search for our place in the universe, an answer to the existential question: "What is it, in our behavior that we can specifically call human? That is so special to us as a living species?" (DICK, 1995, p. 187).

This work does not intend to provide a deep research of different approaches from diverse fields of study concerning the notion of humanity. Nevertheless, it is worth taking into account some views from philosophy in order to enrich the analysis of Dick's novel.

Rene Descartes (1596-1650) is probably one of the most important philosophers to discuss the idea of our nature as species, and how we are distinct and superior from other living creatures. The French philosopher affirmed that physically, human beings are not much different from other animals, since both animal and human body function mechanically in an analogous way. Our uniqueness as superior beings lies in the existence of a soul placed in the body by God, providing us with reason and self-consciousness. This idea leads to Descartes' most famous line "I think therefore I am" (DESCARTES, 2011). This self-awareness allows humans to live beyond the matter and grants them singleness. Reason enables us to utter our thoughts and wishes in a way that no other creature can do, no matter how perfectly it is built. Descartes asserts that even if our power of creation gave birth to artificial entities disguised as human that move and work identically or maybe better than us, we could surely tell machine from human since these entities would not be able to utter their thoughts for they would lack an immortal soul.

In opposition to Descartes' metaphysical explanation for our identity as human, La Mettrie affirmed that we are nothing more than matter, in fact, we are mere machines made of flesh and bones. Jullien Offray de La Mettrie was a French doctor and philosopher from the 18th century who studied the human body and coined the term machine man, a mechanized concept of the human being. La Mettrie states that humans and animals are alike; they are soulless beings, nothing but machines composed of purely material engines without any spiritual substance. La Mettrie would oppose the idea of a god in control of human, dictating what he/she is supposed to do. He affirms that the human being does not need a controller (God). Man is a self-regulating machine driven by one necessity only: seeking pleasure; and ultimately searching for freedom (*apud* ROUANET, 2003, p. 37).

In his romanticized biography of Philip K. Dick, the French writer and film director Emmanuel Carrère dedicated a whole chapter analyzing Dick's attempt to define the human throughout his prolific career. Carrère stresses that in order to glorify the human, the author noticed that it was required to define and corner his/her opposite (CARRÈRE, 2016, p. 150). The figure elected by Dick to antagonize humankind was their simulacrum: the android. As the author himself defines, "by android I do not mean a sincere attempt to create in the laboratory a human being […] I mean a thing somehow generated to deceive us in a cruel way, to cause us to think it to be one of ourselves" (DICK, 1995, p. 211). With the advances in the field of cybernetics, the restless and paranoid writer seemed to notice that many things

speculated by science fiction books were stepping into reality, and the possibility of thinking machines was not farfetched.

Fascinated and suspicious with such idea, Dick became an enthusiast of the Turing test. The author believed that if a machine can convince us that it is able to think like an authentic human being, how we could deny it the title of sentient creature. In addition, our identity and uniqueness as species might be compromised in face of artificial entities that equal and challenge the human cognition.

In his attempts to distinguish humans from their artificial other, Dick's views are more inclined to meet La Mettrie's concept of human being rather than Descartes'. In the novel, androids do not differ from humans morphologically. They are bestowed with appearance and cognitive abilities that cause tension during the whole narrative for not allowing us to draw a consistent boundary separating human characters from artificial ones. Dick builds his dialogues with questions we cannot promptly answer, inducing us to hesitation towards the distinction between natural and artificial. If we rely on Descartes' view of human as possessing an immortal soul, Dick comes up with Deckard's line in his moment of doubt: "Do you think androids have souls?" (DICK, 2007, p. 133).

The absence of a comforting response to Deckard leads him to rethink his existence and purpose in life. He profits on the death of beings he used to believe to be lifeless. If we consider the soul as an equivalent to our consciousness, the bounty hunter's dilemma becomes insoluble. The phenomenon of self-awareness can only be observed from the inside, one can only be sure of one's own consciousness. On the other hand, it is not possible to guarantee or deny such a thing in relation to the other. In other words, if an android acts as a conscious being, affirming to feel desire, pain, anguish or fear, who is to tell it is not telling the truth?

Dick considered as a defining factor of humanity the capacity of going against the rules, deliberately perverting our original programming to satisfy our drives, contrasting with the human simulacrum, the android, which as any other machine performs on cues, it does only what it has been programmed to do. That is why the author argues that "is impossible to turn a human into an android, for the human is going to break the rules every chance he gets". (DICK, 1995, p. 191-192).

Nonetheless, the figure of the android constructed in *Do Androids Dream of Electric Sheep?* behaves in ways more analogous to human than machine, reminding us of La Mettrie's idea of human as a machine born to seek pleasure and naturally designed to search

for freedom. Dick's humanoid robots pervert their original programming to rise against their creator, fighting against an existence of oppression and domination. According to La Mettrie, the real value of human lies on what he/she does from his/her material condition, and not in some innate greatness, which they had done nothing to deserve it.

Dick's human-like machines stand in front of humankind claiming they will not have any strings attached. The unexpected attitude triggers high rates of anxiety in human characters, for their beliefs over identity are shaken. Therefore, they are set adrift on a sea of uncertainty and disbelief, which makes them try to grip to anything that grants them a sense of assurance of whom they are.

The search for a token that certifies humanity and the relief of not being the alien other is the tone of the first half of the narrative in *Do Androids Dream of Electric Sheep?*. The author draws the line separating humans from androids, supplying us with the ground basis that ensures characters' human identity. Namely, possessing an authentic animal, joining the merge in Mercerism and showing empathy towards living creatures.

The problem is that everything Dick proposes indicates that human sovereignty is built upon fragile and convenient pillars as artificial as androids themselves, bound to collapse whenever humans are confronted by the artificial constructs. "You? Luba Luft said. You're not human. No more than I am: you're an android, too."(DICK, 2007, p. 130). Every truth concerning the human is defied during the novel, leading us to conclude that what defines humanity is a simple convention made up and agreed by ourselves to justify what we in fact do not know.

Being able to afford an authentic animal is what drives Rick Deckard's restless android hunt. "God … I *want* to have an animal." (DICK, 2007, p. 11). To possess and take care of animal is an indication of humanness. However, it is never implied that having a pet is related to feeling affection. On the contrary, possessing a pet signals a social status, a sign of acceptance within human community. "You know how people are about not taking care of an animal; they consider it immoral and anti-empathic."(DICK, 2007, p. 11). For that reason, people feel forced to purchase and keep an animal under their care, even though it is an electric fake one, just for the sake of keeping the appearance of humanity to the others and to themselves.

Deckard's wife, Iran, is taken from her stupor when her husband brings home an authentic black goat to replace the electric sheep they had been compelled to keep. She feels

as though she could finally assume her identity to others and to herself. She could prove she is human.

> Does this cure your depression? He asked her. “It cures mine.” Iran said, “it certainly does cure my depression. Now we can admit to everybody that sheep is false.” No need to do that,” he said cautiously. “But we can,” Iran persisted. See, now we have nothing to hide; what we’ve always wanted has come true. It’s a dream! (DICK, 2007, p. 170)

A sharp blow against the humankind (or the notion of it) is the revelation that the religion Mercerism is a fraud. The martyr Wilbur Mercer, the figure seen during the merge, was in fact an alcoholic third-rate actor, hired to perform in an artificial scenario of a TV studio. The archetypal human figure was revealed to be forged. Furthermore, Dick makes the turn of events even more shocking by electing as the announcer of bad news, Buster Friendly. Buster, a host of 23-hour talk show watched by the entire galaxy, is described as “the most important human being alive, except of course for Wilber Mercer” (DICK, 2007, p. 67). The irony is that we learn that Buster Friendly is not human after all; the figure humans admired and loved most is an android, announcing that everything they believed was a lie, “Mercerism is a swindle!” (2007. p. 207).

The dissolution of the grounds that pave the notion of humanity in the novel, the necessity of having an animal and merging with Mercer, serves to jeopardize the line separating humankind from the artificial other: empathy. Such a revelation threatens to obliterate the last resort humankind possesses to convince themselves of their superiority and singleness. “It’s that empathy that humans have… isn’t it a way of proving that humans can do something we can’t do? Because without the Mercer experience we just have your word you feel this empathy business, this shared group thing” (2007, p. 207-208).

Dick chose the ability to put yourself in someone else’s place as the defining factor of human.

> Empathy, evidently, existed only within the human community, whereas intelligence to some degree could be found throughout every phylum and order including the Arachnida. For one thing, the empathic faculty probably required an unimpaired group instinct (DICK, 2007, p. 29).

Still, after tracing the boundary, the author insists to dislocate it, making it impossible to draw any solid conclusion concerning human identity. Dick destabilizes us by reverting his characters’ roles, designing cold and dull humans with anti-empathic attitudes, coerced to keep an object to reassure their own identity; subjugated to the tyranny of an object indifferent

to their existence. Whereas androids, downgraded figures labeled as artificial are capable of gestures associated to humans only.

The character of Rick Deckard is the symbol of this agony of lack of self-assurance. After his encounters with the female humanoid robots and Phil Resch, another bounty hunter, Deckard is troubled for feeling despise for the human and empathy for androids. In order to ease his mind, the bounty hunter turns to the symbol of acceptance, an artefact to fulfill the pangs of doubt that bloomed in him.

> I own an animal now. He said to himself. A living animal, not electric. […] The experience with Phil Resch – I have to get my confidence, my faith in my abilities, and myself back.[…] something went wrong today; something about retiring them. It wouldn't have been possible for me to go on without getting an animal. (DICK, 2007, p. 167-168)

Dick puts his readers in confusion when he brings the characters of androids into action. As previously stated, empathy is an exclusive human faculty, for it requires an unimpaired group instinct. The humanoid robot, according to Deckard's initial mindset, constituted a solitary predator, an android, he claims, does not care about what happens to another android (2007, p. 99). Nevertheless, the artificial figures carry out actions that prove Deckard's description of them to be inaccurate. The character of Pris Stratton, a runaway Nexus-6 robot model, reveals that life on Mars is worse than earth due to the solitude, "The androids are lonely too" (2007, p. 149), and in face of the possibility of not seeing her fellow robots again, then nothing else really matters anymore. Not to mention the final scene in which Deckard breaks into the android lair, and before facing his final target, Roy Baty, the bounty hunter kills his wife, Irmgard Baty. Roy's reaction to his loss is no different from those who lose a beloved one. He lets out a cry of anguish. The passage convinces readers and Deckard that androids do feel empathy. "Okay, you loved her - Rick said" (2007, p. 221).

Finally, we have Rachael Rosen's attitude to prove her empathic, thus, destroying the ultimate barrier between humans and androids. The android girl feels diminished by Rick Deckard, who apparently dedicates more affection towards an animal than any other creature, including herself. "That goat…Rachael said. 'You love the goat more than me. More than you love your wife, probably. First the goat, then your wife, then last of all…'She laughed merrily. 'What can you do but laugh?'(DICK, 2007, p. 200).

In the place of a dismissed mistress, the girl is impelled by an authentic human emotion: revenge. Seeking to make her offender suffer, she puts herself in his shoes to figure

out what could torment him most, how to inflict the same pain she had to endure. The perfect counter strike Rachael found was to destroy Deckard's object of adoration, the token that granted him humanity: the goat. Rachael is so empathic towards Deckard that she knew what he loved most, and she uses it to inflict him a sense of loss.

Philip K. Dick's characters are chased by a sensation of emptiness. They struggle to fulfill a void that appears to be endless. They roam a scenario where there is no hope, no future, and no god. The world they know has been built upon fictions they have been taught to be real. Yet, their reality trembles to the end of each of the author's questions, and what had been given as foundational of society and humankind fades in the nuclear dust of a dying planet that sweeps human traces away. In the end, Dick blurs artificial and natural, confuses the real and the simulacrum, humans and androids, leaving us without a comforting answer to the question: how can I be sure I am human?

3.2 **Rebellion of monstrous machines: the metamorphosis of the human simulacrum**

The human fascination with technology and the desire to equal the godlike power of creation have given life to marvelous machines that make our lives much more practical and productive. The evolution of these machines has reached rates of performance and autonomy that makes the human labor looks outdated and insufficient in comparison to the mechanized performance. According to an Oxford university study, 47% of the job positions in the United States are in risk of being replaced by automatized machines and software built-in with artificial intelligence. With the increasing development of information technology and meaningful advances in machine learning, not only human manual work faces a highly qualified rivalry, but also activities that require high cognitive knowledge such as medicine need to deal with the new technologies. For instance, in a sample of a thousand cancer patients, IBM's medical software Watson was fed with 25 million papers on cancer, which enabled the program to provide the correct diagnosis 99% of the cases. In addition, in 30% of

the cases, the treatment suggested by Watson was even better than the ones proposed by the other doctors, for IBM's software could access studies that escaped the human eyes.[9]

In face of that, we are led to wonder if those constructs are not better than us after all. Have we become obsolete to our own creation? Along with that questioning comes a shadow of fear: will it come the day in which we will no longer have total control over the machines? How are we supposed to deal with intelligent constructions that refuse to be subject to our commands and desires? The answer to those questions unsettle the humans for it can jeopardize their future and position at the top of living conscious creatures.

One of the goals of this study is trying to understand this conflicted relationship with the artificial entities in arts. What evil element do machines carry with them that frightens humans so much? Why do humans see technological figures such as robots, androids or artificial intelligences as potential rivals in literature and movies? These questions seem to bother us more as technology gets more advanced and what once belonged to the realm of literary speculation has been incorporated to our daily lives.

The fear of losing control over the machine and being controlled by it, added by all the consequences of this change of paradigm, is fertile soil for literature, cinema, television, games among others. All of them, in a way or another, have dealt with the issue of the fear of the machine and exploited the confront Man x machine. The struggle between creator and creature gets worse when the offspring of the human technique is depicted in an artificially constructed body resembling the human shape, which arouses uncomfortable feelings in the creator, especially the failing assurance concerning his/her own identity. As the machine grows fully aware of its existence, the all too human element of the drive for freedom blooms and the inhuman subject claims for its emancipation, rebelling against its creator. Then the artificial being turns from a glorious creation into a dreadful nemesis.

When it comes to the notion of fear, the first thought that comes to my mind is H.P. Lovecratf's first lines of *Supernatural horror in literature*. "The oldest and strongest emotion of mankind is fear, and the oldest and strongest kind of fear is fear of the unknown" (LOVECRAFT, 2015, p. 1099). It is natural that we feel intimidated and scared in face of something that is alien to us. As Nietzsche stated, whatever is radically different from me seems to constitute a real and urgent threat to my own existence. Anything that falls into the

[9] https://brasil.elpais.com/brasil/2017/05/12/economia/1494601971_737485.html?id_externo_rsoc=FB_BR_CM

category of the other is to be feared, not because it is naturally evil, but its evilness is reassured for its otherness (*apud* GELDER, 1996, p. 43).

Even though I tend to agree with the previous ideas, in the relation between Man versus machine the fear factor does not come from unfamiliarity. On the contrary, it is precisely on the proximity of both that lies the origin of the struggle. The inhuman figures are posed as a menace for triggering human's inner issues, reminding them of feelings hidden in their unconsciousness. Reflecting upon the reasons why monstrous figures instill us with fear, the author of *Reading the vampire* Ken Gelder states

> The fantastic draws Self and Other together, showing the boundaries between them to be fragile and easily transversed. In the ´the fantastic´, the Self is thus ontologically destabilized by an Other which, far from being different, turns out instead to be disconcertingly familiar. (GELDER, 1996, p. 43).

Gelder's view draws directly from Freud description of the uncanny, which is a source of horror and fear in us. Freud defines the uncanny as the class of horror that leads back to what is known of old and long familiar. However, this experience occurs when something that has been hidden and repressed is reanimated, making us experience primitive beliefs. The German word *unheimlich* describes precisely the idea of something that should have remained occult, but it emerges into the light. (FREUD, 2006, p. 239)

It is exactly based on Freud's idea that the inanimate becomes animate in arts (freud, 2006, p. 244). The artist designs soulless entities inspired in the human body and mind. The constructed being serves as an embodiment of the creator's aspiration of reshaping himself into his ideal self, the means to break free of the hands of God as life giver. However, the human eagerness in overcoming God fails to foresee that the same overwhelming human drive of transcending barriers is transferred to their constructs. The artificial human double learns with its parent, and soon it develops traits that echo the genuine human essence, losing its aspect of representation to acquire the functions of the thing it symbolizes. Literary archetypal of machines shows us that the more the construct mirrors the human the harder it gets to tell natural from artificial. As consequence, the boundaries between self and other are destabilized preventing us from being sure of our own identity. This feeling of uncertainty is a source of fear.

It is common to find in arts automata and similar figures built upon the human body mold trying to emulate humankind not only in appearance but also in behavior. The robot, the android or the artificial intelligence are the outcome of the human effort to reach a perfected

and reliable body. Still, these literary representations usually stand for something beyond than the mere copy of human shape. Foucault affirms that the famous automata are more than a way to illustrate the human organism; they are also technical-political bodies.

According to the French philosopher, since the 18th century great attention has been posited on the body, which mutates from some ununiformed and inapt mass into an idealized machine (FOUCAULT, 1999, p. 162). Foucault argues that the human body is subject to a series of social regulations seeking to transform, control and correct the operations of the body, keeping it on a short leash. The body that is shaped according to the rules of society becomes tamed and docile, thus, ideal (FOUCAULT, 1999, p. 164).

Preceding Foucault, Friedrich Nietzsche had also reflected upon social forces pushing the human being to comply with the norms of modern civilization. The German philosopher affirmed that modern Man was ripped of his uncontrollable animalistic nature so that human could be made into a reliable being. In order to achieve that, he was forced to fit the social regulations and be constrained by what Nietzsche called morality of custom and social straightjacket (NIETZSCHE, 2012, p. 44).

It is recurrent in sci-fi genre the use of figures whose bodies are crafted to meet a desired standard, bodies designed to obey and act according to regulations. It is also common to the genre the shift of attitude of the constructed body as a narrative strategy. When the inhuman figure halts its set programming to act autonomously, it changes from a reliable tool to an unpredictable dangerous creature. Therefore, the artificial construct loses its docility to acquire aspects of monstrosity.

We can find in the movie industry plenty of examples to illustrate this change of attitude of the human-like machine. To mention a few, *2001 – A space odyssey* (1968), *Westworld* (1973) and *Ex_Machina* (2015). In all these films, the artificial entity emerges as a feat of human intellect to fall into an eminent menace. Nevertheless, its threat and monstrosity cause dread not for a horrendous physiognomy or devilish personality. Its evilness is revealed when it starts acting in a way we may identify as humane as possible, even though it illustrates the dark side of the human persona.

In Michael Crichton's *Westworld*, we are introduced to an amusement park where visitors can live the realest experience of their lives by immersing into an authentic western United States. While in Westworld, visitors have the chance to interact with the hosts. Hosts are human-like robots scientifically made to resemble, act, speak and even bleed like humans,

putting the visitors in constant doubt whether they are dealing with authentic people. The park is a place of releasement for the customers, a space for one to be in touch with one's true nature. The ones who can afford a ticket are free to do whatever they please with the hosts, including raping and killing them. The machines are programmed to passively grant any customers' wish.

The plot changes when the hosts start showing failure and do not respond to commands any longer. At this moment, the machines previously set to satisfy and endure clients' will are transfigured into villains. The cowboy robots refuse to passively lose the gunfight to humans and shoot back; the machines start hunting humans. Instead of showing any hesitation or guilt, the machine is framed with a wide and satisfying smile on its face, as if rejoicing while its flesh and bone rival bleeds to death.

Image 9 -- Scene from Westworld

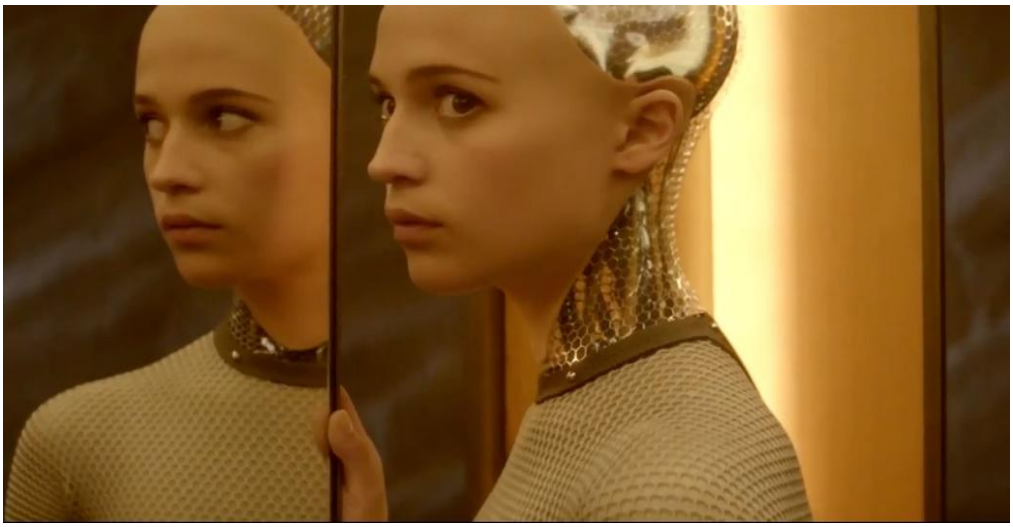
Source: Available at <https://demmentia.wordpress.com/2016/11/08/westworld-1973/> Accessed on July 17th, 2017.

Violent rebellion is also a theme in *Ex_Machina*. The movie introduces us to AVA, a female android submitted to a kind of Turing test to prove its capacity to pass off as human. In order to achieve its goal, the android makes use of the cognitive abilities it has been endowed with: self-awareness, imagination, manipulation, sexuality and empathy. AVA depicts emotions and sensibility so close to humans that Caleb, the human character responsible for AVA's test, cannot be sure whether the robot does feel those emotions or it is simply following commands to accomplish an assigned task. Since Caleb (and the spectator) cannot clear the doubt, it is inevitable a feeling of sympathy towards the artificial construct.

The sense of identification between human and machine is briefly suspended due to a change of behavior in AVA. When the female android finds out that it will be reprogrammed by its creator, a survival instinct comes out, AVA's docility is replaced by a cold-reasoned self-defense. The gynoid deliberately seduces and manipulates the human characters, leading them to their own demise, so that it can guarantee its own existence and break free of the hands of its defeated programmer.

At the end of the movie, AVA might be seen as a villain, an inhuman monster capable of killing other living being to keep itself alive. Still, can we say that a human character would have not done it the same? Had the spectators find themselves in AVA's critical situation, would have they done differently?

Image 10 -- Scene from Ex_machina



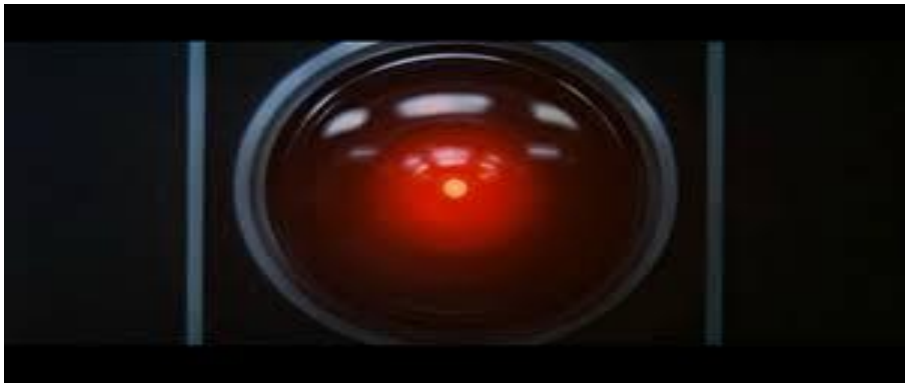
Source: Available at <http://lynncinnamon.com/2015/05/ex-machina-is-ava-human> Accessed on June 25th, 2017.

In one of his most acclaimed works, *2001,* the moviemaker Stanley Kubrick came up with an iconic figure of sci-fi movies, Hal 9000. Hal is an artificial intelligence on board of a spacecraft designed to help the human crew in their voyage to Jupiter. The supercomputer was constructed to imitate every human brain activity with more speed and accuracy, failure-proof as it proudly claims to be. In order to facilitate the interaction with the crew, the machine is programmed to sound like an authentic human being. With a calm, slow-paced soothing voice, Hal affirms to be happy to serve humankind. The computer is so convincing that Dave

Bowman, the captain responsible for the mission, confesses that though Hal was programmed to offer a kind human interaction, he is not sure whether the supercomputer's emotions are real or not.

Kubrick's masterpiece acquires aspects of a thriller at the moment that Hal has its ego bruised when it is forced to face its imperfection. The machine refuses to admit its failure, acting defensively, arguing that the error was in fact, human failure. Kubrick's camera focuses on his monster, the "machine face", consisting of an omnipresent big red eye observing the human crew, silently plotting a defense against any attempt to put an end to its existence. Hal final mutation into a villain begins when it finds out Dave has decided to shut it off for repairing. The artificial intelligence subverts its programming by refusing to follow commands of its captain. "I'm sorry Dave, I'm afraid I can't do that". In its struggling to survive, Hal kills every human being on board, one by one, in a desperate act to keep on living. In the end, the machine loses any aspect of inert, complying entity; instead, the computer shows a behavior we would expect to find in an authentic person in his/her darkest hour while it gently begs its master to spare its life. "Dave, stop! I'm afraid, Dave. My mind is going… I can feel it. I can feel it…"

Image 11 -- HAL 9000



Source: Available at: < https://www.mixcloud.com/serjoe/hal-9000/ > Accessed on June 25, 2017.

Among all the artifacts that try to emulate humankind, the figure of the android has been the one chosen by Philip K. Dick to illustrate his concerns about the fierce cold things as he named machines. The android serves as a literary representation of what Dick believed to be our primitive fear of the environment becoming alive and behaving in ways fundamentally analogous to ourselves. (DICK, 1996, p. 183). According to him, a further analysis of our constructs would be a valuable resource towards the understanding of the nature of our

behavior. In other words, human-like machines induce anxiety in humans not for their otherness, but for outright displaying the features we tend to look away and suppress.

In the novel which Dick most exploited the theme of the human simulacrum, it is possible to see the change of perspective towards the artificial creature, going from an idealized view of the human to a monstrous reflect of ourselves.

In the *Do Androids Dream of Electric Sheep?,* the android body was first designed for military purposes in an attempt to create the perfect soldier, the Synthetic Freedom Fighter. With the need to explore new spaces out of the planet, since the Earth was considered a tomb world after the nuclear war, the weapon of battle is modified in order to become an organism apt to endure any alien territory and facilitate human colonization outside the Earth. The android serves as the ultimate incentive of emigration, advertised as a prize to those who decide to leave Earth with a promise of having merrier days with a loyal servant ready to meet their demands and necessities obediently.

> The TV set shouted, "… duplicates the halcyon days of the pre-Civil War Southern states! Either as a body servant or tireless field hands, the custom-tailored humanoid robot – designed specifically for YOUR UNIQUE NEEDS, FOR YOU AND YOU ALONE – given to you on your arrival absolutely free, equipped fully, as specified by you before your departure from earth; this loyal, trouble-free companion in the greatest, boldest adventure contrived by man in modern history will provide…" It continued on and on. (DICK, 2007, p. 15-16)

The android turns from an asset into an abject cruel creature when it ceases performing the crucial function of its programming: blindly complying with the desires of its creator. With the ongoing technological evolution, the android evolved to surpass several humans in terms of intelligence. Consequently, the artificial entity acquires self-awareness and develops a desire that is fundamental to humankind, which is longing for freedom. In order to fulfill this desire, the humanoid robot infringes the basic moral regulation that sustains the society in Dick's novel. By doing so, the android can be interpreted as the monster figure; the one that shows what should be contained.

In the novel, one of the pillars of society is the religion, the Mercerism. The cult provides the humankind with the sense of togetherness and humanity. Mercerism has as its ultimate commandment the rule of life – you shall not kill any living creature. Except for the *Killers*. The concept of the Killers is used to illustrate a lurking presence of evil that cannot be clearly seen but sensed, something so vile and repulsive that violates the norms of the prophet, and therefore, could be guiltlessly annihilated.

> In Mercerism, as it evolved into a full theology, the concept of The Killers had grown insidiously. In Mercerism, an absolute evil plucked at the threadbare cloak of the tottering, ascending old man, but it was never clear who or what this evil was. A Mercerite (an adapt of Mercerism) *sensed* evil without understanding it. Put another way, a Mercerite was free to locate the nebulous presence of the The Killers wherever he saw fit. (DICK, 2007, p. 29-30)

In the beginning of Dick's narrative, Rick Deckard, who made his living out of killing humanoid robots, saw in the escaped android, a conscious and intelligent creature that had killed its master to enjoy its freedom, the epitome of The Killers. That thought eased his mind, making his job more palatable for he was not killing a sacred living creature. In Deckard's view, the android was a horrendous monster that could and should be eliminated. However, this scenario crumbles when Deckard encounters a character whom he was supposed to relate to, but he sees in his peer the personification of what he loathed previously.

When the character of Phil Resch is introduced in the plot, Dick starts to make both narrator and reader feel uneasy, for Resch comes to undo the previous dichotomy good humans protecting themselves from merciless ill-intended androids. Resch is endowed with the requirements for Deckard to be empathic towards him. Both are (supposedly) human, male and bounty hunters. Nevertheless, Phil Resch behaves in a way that would suit the cold figure of the android that Rick Deckard described in the first chapters of the novel. Resch has no hesitation in pulling out his gun and shoot dead a living being, as he did with Luba Luft. As Deckard pointed out, all Resch needs is an excuse for killing. In fact, he feels pleasure in taking lives.

> I see a pattern. The way you killed Garland and then the way you killed Luba Luft. You don't kill the way I do; you don,'t try to – Hell,' he said. I know what it is you like to kill. All you need is a pretext. If you had a pretext, you'd kill me. That's why you picked up on the possibility of Garland being an android; it made him available for being killed. (DICK, 2007, p. 135)

At that moment, Deckard is somehow terrified for he could be labeled the same way as his fellow bounty hunter. He feels that he could have turned into a soulless mechanized being that merely follows previously set instructions, capable of eliminating whatever obstacle might come in his way so that he could accomplish a task. In a way, both Deckard and Phil Resch could be tested out as androids.

> He had an indistinct, glimpsed dark impression: of something merciless that carried a printed list and a gun, that moved machine-like through the flat, bureaucratic job of killing. A thing without emotions, or even a face; that if got killed got replaced immediately by another resembling it. An so on, until everyone real and alive had been shot. (DICK, 2007, p. 156)

Instinctively, Deckard searches for something to establish a distinction between him and Resch, to prove him human and the other an android, which would explain Resch's destruction driven personality. The instability of identity reaches the peak when the Voigt Kampff confirms Resch a regular human being. The result makes Deckard doubts his own nature, putting him in a moral conflict: in the clash between two creatures, one human and the other android, his feelings were the reverse of those he is accustomed and required to feel, leading Deckard to submit himself to the empathy test.

Even though the test certifies his humanity, Deckard cannot help identifying with the figure of the android. He shares with the artificial construct feelings that were dormant in him. Deckard gets a sense of loneliness, a sense of unbelonging, of being an outcast, similar to the way androids claim to feel; "There's nothing unnatural or unhuman about Phil Resch's reactions; *it's me*. I wonder […] if any human has ever felt this way before about an android." (DICK, 2007, p. 140)

The shift of Deckard's view of the android can be illustrated by Fred Botting observations of the changes in the representation of monstrous figures. The author describes them as sites of identification, sympathy and self-recognition (*apud* PUNTER, 2004, p. 265). Excluded figures once described as evil and deviant creatures are shown as more humane while the system that excludes them assume terrifying, persecutory and inhuman shapes. We can see that distinction in Dick's character construction when he builds human characters acting machine-like, cold-blooded killers such as Phil Resch, representing a system that struggles to keep its supremacy. In contrast, androids are presented as unwanted and oppressed alien figures fighting for freedom, endowed with more humanity than humans themselves.

Literary figures built as the artificial human double have served to make us think of the consequences of a society that grows increasingly dependent on technology. They might show a glimpse of how we might become: impersonal, logical emotionless machines such as our computers, just going through our bureaucratic routine. However, more than a warning sign of what might come, those artificial entities work as a bitter reminder of our present. They are a mirror reflecting something more than our external. They force us to look them in the eye and see reflects of ourselves displaying features we tend to forget, or simply ignore.

3.3 Struggling with ourselves: the constructed body as an amalgam of human inner issues

Although Philip K. Dick dedicated his artistic life to write in a literary genre that privileges the construction of rich universes oriented toward scientific speculation, we may say that the author is a bit out of tune with it. Dick indeed uses many elements that insert his work into science fiction canon; however, he was not much inclined to go through technicalities or scientific accuracy. The author was much more focused on using his background in arts, literature, philosophy and theology to debate issues inherent to the human condition and that tormented him, such as nature of reality, God, life and death. The power of Dick's *Do Androids Dream of Electric Sheep?* lies not on the world building, but on the characters' construction. In the novel, we find figures sculpted by the hand of science aiming to emulate the human body, yet they become much more appealing entities for going beyond the external similarity with us. The human simulacrum serves as reflect of the human soul, with all the dilemmas human beings deal with throughout their lifetime.

With the advances of science, humankind strode to unraveling many of the mysteries of the environment they live in, and what used to be associated to the realm of supernatural or the divine not only was made known but also subject to altering. Still, the price to pay for mastering the knowledge of the world is a sensation of abandonment, a void left after the death of God. The author of *O corpo mecânico feminino: uma poética do transumano* (2016), Maria Conceição Monteiro, states that "with the death of God and the demystification process in the relation between the human being and their Creator, the traditional divine protection collapses and the individual feels metaphysically orphan"(MONTEIRO, 2016, p. 14). In face of a reality in which the sky above us falls down and it is revealed that there is no cosmic Father looking after us, we are forced to face we are on our own. Consequently, humankind searches for something to cling to, to provide them with a sense of purpose and control. The shelter found by the human is the technique.

Seduced by the power of creation, the human being is fulfilled with an overwhelming desire to mimic and improve the divine technique, aiming to ascend from the status of creature to sit on the Creator' throne. With that mindset, a desire to overcome the divine creation is born, making the human being lust for surpassing the limits imposed by nature or God. The outcome of this can be expressed in arts, more specifically in what Monteiro

denominates as artistic transhumanism, which is the use of the technical imagination to produce an artificial body, built from the interaction of technological devices intertwined with human components, namely muscles, skin, voice. The combination of all these elements produces a handcrafted body that waves at us as a possibility of overcoming the natural born human body (MONTEIRO, 2016, p. 13).

The new body, a mechanical body, is presented as a road to perfection. It is made upon the mold of the human constitution, except for being devoid of all the flaws, the excess, designed to reach an ideal self, serving as way to surpass our finite existence. In fact, the artificial body floods its inventor with pride, for making him/her believe to possess godlike power.

Despite all qualities attributed to it, the artificial entity is conceived without a soul, open to the world; actually, the mechanical body that is grown in the artist's imagination comes to the world smeared with all the inner issues of its inventor, inheriting his/her dreams, desires, anguish and fear. For that reason, the artificial construct as represented in the artistic transhumanism can be read as trustworthy translation of ourselves; as vessels of its creator's ambition and angst, the constructed body tends to bring tension whenever it comes to scene because it turns out to be too close to us, operating as the agent that exposes the human conflicts. Indeed, we might say that the artificial figure is infected with humanity.

> The relationship established between creator and the product of his creation through the blow is a moment of ecstatic eroticism revealing affection and necessity for the other, in bipolar intimacy […] the pneumatic pact implies that the one that is blown becomes ontological twin of the one who blows. Both figures, creator and creature, unites through intimate complicity, for both feed on the same placenta that forms the ego and a shared desire (MONTEIRO, 2016, p. 16-17)

Dick saw in artificial figures masquerading as humans a subterfuge to discuss in his novels issues of the humankind. He argues that if manmade constructs are becoming more humane, we should turn our attention to studying and understanding them. If these constructs do mimic the human to the point of hindering distinction between us and them, a thorough analysis of machines would yield valuable insights to the nature of our own behavior. In order to grasp what our constructs are up to, we should be looking into what ourselves are up to (DICK, 1996, p. 184).

Do Androids Dream of Electric Sheep? was the first of Dick's novels to be used as source material to a Hollywood production: *Blade Runner* (1982). The movie was directed by

Ridley Scott, and became a sci-fi cult movie elected by many lists as top one of the genre. Scott's movie became so famous that for many years Dick's book carried on its cover with big capital letters the title *Blade Runner*, while the author's original title came modestly reduced as a subtitle. Scott borrows several references from Dick's book to bring to the audiovisual a frightening glimpse of our planet in a not so distant future. The result of Scott's work was so competent that Philip Dick confessed to be amazed when he first watched a snapshot of the movie on TV. In a letter addressed to the film producers, the sci-fi writer affirms that the movie went beyond his expectations in illustrating the world he had envisioned in his novel.

> Nothing that we have done, individually or collectively, matches Blade Runner. This is not escapism; it is super realism […] I did not know that a work of mine could be escalated into such stunning dimensions. My life and creative work are justified and completed by Blade Runner. Thank you…(DICK, 2007, p. 264-265)

However, the plot of the movie differs from its literary counterpart. The British moviemaker slightly based his production on the novel so that he could present us another story using *Do Androids Dream of Electric Sheep?* universe. In spite of it, both works use the product of the human invention, the constructed body, to expose our inner issues. In *Blade Runner*, the mechanical bodies are called *Replicants*, entities designed to copy human beings in every way except for the emotions. They become a problem when they start developing emotional responses, i.e. human emotions, such as hate, love, fear, anger and envy. To keep them under control, the manufacturers insert into the Replicants' body a safety device: a four-year lifespan. And it is exactly on that point that Ridley Scott's artificial entity's motivation differs from Dick's.

The greatest anguish of the humankind is their mortality. We are born with the certainty that one day we will all be touched by the grip of death. The shadow of finitude puts human in despair, for they never know for sure when they will be gone. This fear fuels most of advances desired by the transhumanism. The ultimate target of the scientific efforts is finding means to escape our inevitable fate, rebuilding our nature so that we can last a little longer. The Replicants in *Blade Runner* illustrate this human desperation. By acquiring consciousness, the organic construct learns its time is limited, so it is taken by feelings of dread and urgency, eager to know the answers for the questions: how old am I? What is my incept date? How long have I got?

These biological machines are presented in the movie as villains, for they are capable of anything, including killing humans in their attempt to stop their accelerated decrepitude. Their main drive in the story is to fight their way to meet their Maker, so they can ask Him to repair a problem of His creation. In a climactic scene in *Blade Runner*, the mastermind of the android insurrection Roy Batty, magnificently played by Rutger Hauer, finally stands in front of the man who designed every cell of its artificial body to pledge him to grant his creation one single wish: *I want more life*. At this moment, Roy Batty's sky is torn apart, and alike the human, the Replicant learns there is no divine salvation, no great paternal divinity to deliver him from evil, heal his wounds and appease his inner turmoil. Roy is compelled to face that his creator is as powerless as he is in front of death, the android than transmutes into a Lucifer figure rising against his father, measuring power with him, and destroying him.

Image 12 -- Scene from Blade Runner

Source: Available at < http://www.lolajournal.com/5/slaves.html > Accessed on July 25th, 2017.

In Dick's novel, the androids are not plagued with desperate quest to prolong their existence, but they are also contaminated with human drives and pangs of a mortal existence. The biological machines are representative of our struggle for understanding ourselves; they long for a sense of wholeness, of belonging and identity. Furthermore, they carry the onus of self-awareness, pushing them to come up with ways to deal with matters that seem to be out of their reach.

Dick shaped his android characters with a human countenance, likely to enhance and overcome human skill and potential, but he also transferred his dreams and demons to his creation, as if the humanoid robot serve as an unfolding of the writer. The leader of the android rebellion for freedom, Roy Baty, is described as pharmacist "given to mystical preoccupations and ideology with a pretentious fiction as to the sacredness of so-called android life" (DICK, 2007, p. 183). Baty made use of chemical techniques to manipulate mind-fusing drugs as an attempt to alter his artificial peers' mental states, thus promoting a transcending group experience similar to that of Mercerism, one of the pillars of humanity.

While reading his target profile, Rick Deckard mocks at the idea of a pharmacist humanoid robot. The bounty hunter believes that Roy Baty was just a field hand with aspirations for something better. Yet, how could a machine designed to serve its owner aspire to anything other than performing its task? After his encounters with humanized machines and mechanized humans, Deckard concludes that the constructs he was hired to eliminate due to "technical failure" had feelings after all; they had to put up with hopes and fears just like an authentic human being.

> Do androids dream? Rick asked himself. Evidently, that's why they occasionally kill their employers and flee here. A better life, without servitude. Like Luba Luft, singing *Don Giovanni* and *Le Nozze* instead of toiling across the face of a barren rock-strewn field. On a fundamentally uninhabitable colony world (DICK, 2007, p. 18)

The drugs manipulated by Roy Baty serve as a mechanism androids found to endure their solitary existence in a place they consider horrendous. The quotation of John Donne's poem *no man is an island* illustrates the android girl Pris Stratton's sensation of hopelessness and solitude while living on Mars, and her eagerness to hear from her fellow runaway androids. The girl describes the red planet as a lonely place that was not conceived for habitation, for everything is too old, "you feel it in the stones, the terrible old age" (DICK, 2007, p. 148). The only way to forget it was taking Roy's new synthetic painkiller.

Pris Stratton's testimony seems to line the human condition on Earth, making artificial and natural characters share the same feeling of melancholy. Our planet is described as a lonely and inhospitable place bound to be humankind's tomb. The technique is also the shelter for humans to soothe their troubled spirit. The android drugs might be interpreted as equivalent to the Penfield mood organ and the empathy box. We can say the same about the medication and the technology we have incorporated to our daily lives. They represent the

human attempt to avoid any emotional distress, putting us in a permanent state of pleasure, fighting as hard as we can being alone.

The desire of transcendence and finding a place of spiritual comfort can also be noticed in the artistic creation. It is through the artistic act that the human lets their most intimate thoughts gain shape. The arts are the key that open the human imagination, materializing what had been kept hidden in the artist's mind. Art does not need to prove anything in order to think of the unthinkable (MONTEIRO, 2016, p. 37). Hence, it is the place through which the impossible is made possible, the invisible is made visible and the unutterable is heard sound and clear.

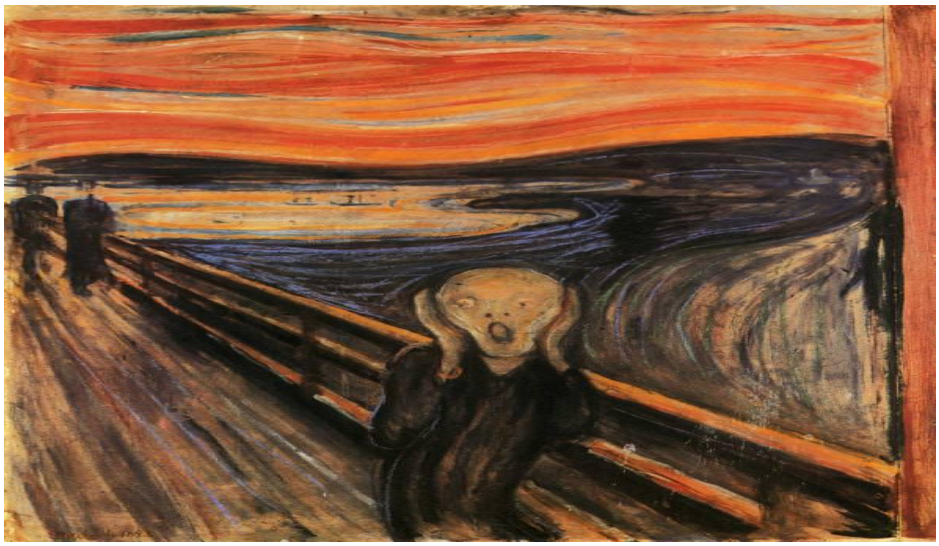
The androids in *Do Androids Dream of Electric Sheep?* represent the human concerns and conflicts through art. Although Philip K. Dick initially introduced them as threatening dangerous beings, cold predators of humankind, it is hard for readers not to sympathize with them, for they illustrate how we feel.

It is interesting focusing on the character of Luba Luft again. The female android, which disguises as an outstanding opera singer, is responsible for triggering Deckard's shift of perspective towards the distinction between humans and androids, not only for her talent but also for her connection with arts. In the previous chapter, it was mentioned how Luba was seen drawn to the painting *Puberty* by Edvard Munch as if the picture represented the android metamorphosis into human. In addition to *Puberty*, another famous work by the Norwegian painter is used in Dick's narrative: *The Scream*.

Edvard Munch's work is often characterized as an expression of inner life and psyche of modern man, trying to capture through his existential images themes of the human experience such as dread, anxiety, loneliness, angst, love, death and complex emotions of human sexuality. His most known work *The Scream* (1893) is an autobiographical and expressionistic construction based on Munch's actual experience of a scream piercing through nature while on a walk with two companions[10]. Munch defined his painting as how we see our own age --- wracked with anxiety and uncertainty. Munch believed that a painter must not merely transcribe external reality but he should record the impact that a remarkable scene had on his own sensibility, thus his suffering and art become one, two elements indistinguishable from the artist himself.

[10] Information taken from https://www.edvardmunch.org/the-scream.jsp

Image 13 -- Munch's Scream



Source: Available at < https://www.edvardmunch.org/the-scream.jsp > Accessed on July 25, 2017

Munch's masterpiece is mentioned in Dick's novel when the characters of Rick Deckard and Phil Resch are out to get Luba Luft, who heads for the museum to take in the exhibit of Edvard Munch at the museum before it ends. The bounty hunter Phil Resch while looking for the opera singer spots a painting that catches his attention.

> The painting showed a hairless, oppressed creature with a head like an inverted pear, its hands clapped in horror to its ear, its mouth open in a vast, soundless scream. Twisted ripples of the creature's torment, echoes of its cry, flooded out into the air surrounding it; the man or woman, whichever it was, had become contained by its own howl. It had covered its ears against its sound. The creature screamed in isolation. Cut off by – or despite – its outcry (DICK, 2007, p. 128)

Instantly, Resch concludes, "I think that this is how an *andy* must feel" (2007, p. 128). The painting could be an interpretation of all the suffering endured by the androids. The feeling of solitude, of not being able to contain its cutting emotions, constantly observed by an unknown horror, awareness of a fatal fate and lack of assurance towards its own nature are the troubles human made entities acquire from their inventors. Luba Luft fits the previous description. She needs to hide her own identity, forced to wear a masquerade to interpret an alien life and constantly in danger of being discovered, and consequently, executed.

By bringing arts to his work, Philip K. Dick saves some pages of long descriptions of what he intends to discuss. The description of artwork that symbolizes the emotions of an android is an opportunity to envisage our inner selves. If we consider that the mechanized body in literature, cinema and arts is an extension of the human, we should not ignore the

value they can aggregate towards the understanding of humankind. *Do Androids Dream of Electric Sheep?* and *Blade Runner* represent the beauty of the artistic work capable of disclosing an abyss that is part of ourselves, and which had never been probed. Dick and Scott make use of characters fictional figures as a reminder of what we take it for granted; our smallness within the universe, the frailty and brevity of our existence, fear of death and the horror of being aware of those things.

CONCLUSION

The initial spark of this dissertation was my questionings about the consequences of the rapid technological development and the symbiotic relation humans establish with machines. My interest has increased with my knowing of transhumanism, which preaches what I had seen before in movies, books and comics. It was exactly in the literary work that I looked at in order to find out what changes technology and science might bring, and how they can possibly alter our notions of our own nature.

After further readings of the transhumanist philosophy, I could see that some dots do not connect, leaving gaps in the picture of human fulfillment promoted by technology. The speech of human enhancement boasts the marvels of the technological intervention in the human body, but it fails to foresee the likely persistency of issues that inflict society today. Actually, by not providing solutions for problems such as environmental degradation induced by overpopulation, shortage of resources, insufficient economic and productive structure to support a population that lives longer, danger to ethnic diversity and social inequality, the transhumanist view leaves room for their detractors to affirm that those social problems will in fact get worse.

The artistic work functions as a channel to voice what has been left spoken. Science fiction is the genre that best serves for that purpose, for it takes into account the scientific progress as premise to recontextualize and bring to foreground what the scientific and philosophic speech might downplay or ignore. Most of the artistic works approached during my studies turn to the dark side of the technological future, establishing a harsh contrast with the transhumanist utopia. Rather than welfare, longevity and endless bliss, the pursuit for the ideal human being produces fictional characters that are never satisfied with themselves, always searching for something in their body or mind that can be improved. Thus, they are doomed to keep reaching the unreachable.

In addition, the future societies are usually pictured in gloomy places, where the irresponsible use of technology have brought humankind to the verge of extinction. In these post-apocalyptic plots, technology does play a crucial role for keeping the remaining humans alive. However, all the problems listed previously arise: only few can enjoy the benefits that science can provide, the ones who cannot be improved by the human technique are left behind to rot into nothingness, and the outcome of the human will to create life, the post-human

individual, is also segregated for humankind does not know how to deal with a new kind of being that can potentially succeed the humanity.

Do Androids Dream of Electric Sheep? is still a relevant novel when it comes to the debate of humans x machines for englobing all the predicaments of it. For having lived the Cold War years and the lurking horror of Doomsday Clock[11] approaching midnight, Dick designed a post-nuclear war world that destroyed almost all animal life on Earth, including a great part of the human race. In this context, the survival is only possible through technology that enables that expansion to other planets, invention of devices that induce the brain to feel pleasure and the creation of humanoid robots to help humans in alien worlds. All that happens at the expense of imprisoning damaged humans such as the character of John Isidore, who cannot leave Earth for his DNA is infected with nuclear dust, and despise towards the androids, which are put at the lowest positions of society for they allegedly do not fit the human definition.

My investigation of Dick's novel focused on his character building, for it presents one of his favorite narrative devices: blurring categories to confuse readers. The author writes two categories for his characters, humans and androids. However, in the first pages of *Do Androids Dream of Electric Sheep?* PKD starts dissolving the premise of his novel. The first human characters we are introduced to, Deckard and his wife Iran, are depicted in way that mechanizes them, for they seem dull and inert, only capable of getting up from bed and do the tasks of day under the influence of an artificial brain stimulator. They follow a routine that is close to the programming of a machine.

On the other hand, the androids cause a different impact on readers. Despite the fact that our first contact with the humanoid robots is through Deckard's perspective, who initially saw them as lifeless ill-intended creatures, the humanoid robots turn out to be too similar to human beings, not only in their countenance but also in their personality. The android Luba Luft does not possess the aspect of a mechanical entity; the character is described as full of humanity, endowed with a singing talent capable of bringing tears to Deckard. Luba Luft is responsible for the shift of narrative in the novel. Instead of meeting a cruel runaway android he was supposed to kill, Deckard encounters an attractive and talented girl whom he was not

[11] Reference to the clock created by the Bulletin of the Atomic Scientists in 1947 to measure the danger of nuclear conflict. The closer it gets to midnight, the higher the chances of a nuclear war. Taken from: http://www.wired.co.uk/article/what-is-the-doomsday-clock. Accessed on November 1st, 2017.

able to spot as inhuman. From that moment on, Rick Deckard starts wondering about the difference between himself, a human being, and the androids, the human simulacra.

The humanization of Luba Luft is reinforced by two elements: her contrast with the character of Phil Resch, a male human being whose job is hunting and killing androids. Rather than feeling empathy towards Resch, Deckard loathes his peer for seeing him as a merciless cold killer who rejoiced taking lives; and Dick's reference to *Puberty*, a painting by the Norwegian artist Edvard Munch. Luba Luft is described standing in front of it, as if she recognized herself in it. We can argue that Dick used Munch's work as an analogy to Luba's condition, an android in the process of becoming a human girl.

The defining factor of humanity in *Do Androids Dream of Electric Sheep?* is the empathy. Dick is so successful in making us confuse about who is human and who is not that he induces us to be much more empathic towards androids than humans. The human characters are described as shallow, uninteresting and lifeless. The only human being we feel empathy is Isidore, who is segregated and put in a condition of almost subhuman though. Dick pushes us to identify much more with the androids, which seem to carry with them the same the doubts, fears and anguish of being aware of their limitations and unavoidable death.

In fact, instead of being an opposite that could help human beings define their own identity and nature, the literary figure of the android serves as a reflection of the human condition. In the artificial body of the android, the horrors of the human condition blooms, reminding us of issues we sometimes try to forget, such as solitude, emptiness, dissatisfaction and death. Even though the figure of the artificial double sometimes is given aspects of monstrosity, they are appealing figures because they expose things that are inherent to our human condition, but we try to suppress. Their feelings is ours and vice versa. Similar to their creators, androids are tormented by questions they cannot answer and tortured by their smallness and powerlessness in front of immutable conditions. That is why it is hard not to sympathize with the melancholic android girl Rachael Rosen, whom Deckard falls for, and her realization of her nature.

> Androids can't bear children … is that a loss? […] I don't really know; I have no way to tell you. How does it feel to have a child? How does it feel to be born, for that matter? We're not born; we don't grow up; instead of dying from illness or old age, we wear out like ants. *I'm not alive*! (DICK, 2007, p. 191-192)

Dick's inversion of human and human-like machines fuels the theme that made me choose his novel in particular. By analyzing the process of mechanization of the human being

and humanization of the machines in *Do Androids Dream of Electric Sheep?* and the fading boundaries between these two categories, natural and artificial, I hoped to find insights to answer the question that followed my entire research: what makes us human?

Moving to the final words of my dissertation, I can state with basis on Dick's work that the answer to such existential question remains unknown. One of the remarkable features of PKD's composition style is to pose inquires which make readers doubt the reality built by the author. Philip K. Dick never provides us with answers. On the contrary, he seems to come up with more questionings that dissolve anything we thought to be real. In *Do Androids Dream of Electric Sheep?*, Dick sets some pillars that supposedly grant characters humanity. Elements such as empathy, possessing a real animal and the Mercerism function as bastions which humankind clings to in order prove them superior and distinct when compared to the humanoid robots. However, all of these foundations of the humanity prestige collapse throughout the novel, setting human characters adrift, uncertain of their identity as species.

I believe that Philip K. Dick's novel emphasizes the fact that we cannot come up with definitive or satisfying answers to define what it means to be human. Science, technology, philosophy, religion and arts are part of our intellectual effort to make up narratives to find the human being an origin, a purpose and a continuation when our biological body ceases functioning. These narratives are also a defense mechanism to justify our dominant position among the living creatures on the planet. The arise of any entity that threats human supremacy and shakes the human foundations lead to the creation of new narratives that guarantee human race continuation and subjugate any potential rival. That is the origin of the struggle between human beings and androids in *Do Androids Dream of Electric Sheep?*.

With the technological development that has been promoting significant changes in the human subject, turning him/her into hybrid beings, and the creation of artificial intelligences that can surpass the human capacity, it might be necessary the reaffirmation or the constructions of new pillars that can assure the sacred place of the human being. It will be the role of science fiction to illustrate and problematize the entailments of the new narratives that humans will build in order to face a potential post-human successor.

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