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LITERARY DYSTOPIAS JUST A FICTION OR
SOMETHING REAL NOWADAYS

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ABSTRACT

With this project I will analyse aspects of different dystopian literary works in terms of cultural, technological, bio-technological and social-ethics «predictions», and I will explain which of them have been fulfilled in the real world in our days, and which of them have even surpassed the description of the future world.

Keywords: Dystopian literary works, real world, culture, technology, bio-technology, social-ethics.

RESUMEN

Con este proyecto, analizaré aspectos de distintas obras literarias distópicas en el ámbito cultural, tecnológico, bio-tecnológico y social-ético, y veremos cuales de estas «predicciones» hoy en día se han llegado a cumplir o incluso han llegado a superar como los autores se imaginaban como podría ser el mundo futuro.

Palabras clave: Literatura distópica, mundo actual, cultura, tecnología, bio-tecnología, social-ético.

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1. Introduction

In this first section, I will define what is a dystopian literary work, and its main features, as a contextualization of the aim of my project, and I will talk about the «State of art» and why this project is different from other studies, articles, etc. which have been written about dystopias.

a. Contextualization.

To define a dystopian work, it has to be taken into account the following concepts, first of all the relationship between science-fiction and utopian-dystopian works, since the boundaries of one type or another is not very well defined, even they share some characteristics, themes and motifs and secondly to talk about dystopian works, it has to be taken into account what an utopia is, since in general words, dystopia can be considered as a response to an utopia, in the sense that is he opposite to it, it could be said that utopia and dystopia are «the two faces of the same coin».

1. Science-fiction, utopia and dystopia.

As it is stated in the sixth chapter «Utopia, Dystopia and Science Fiction» by Peter Fitting from the book *The Cambridge Companion to Utopian Literature*. Fitting refers to utopian and dystopian works in the following terms «there is little disagreement today about the boundaries and characteristics of the genre.» (Fitting, 2010, 135).

He uses the definition of utopia by Lyman Tower Sargent and Darko Suvin to reinforce his idea that the boundaries and characteristics of utopian-dystopian genre is quite established and accepted worldwide, as the following excerpts shows

«Sargent writes that utopia is ‘a non-existent society described in considerable detail and normally located in time and space’. This definition includes the positive utopia (eutopia) as well as its negative manifestations – the dystopia and the anti-utopia.» (Fitting, 2010, 135).

«Suvin, on the other hand, restricts his definitions to the positive utopia: ‘the verbal construction of a particular quasi human community where sociopolitical institutions, norms, and individual relationships are organized according to a *more perfect principle* than in the author’s community...’» (Fitting, 2010, 135).

On the other hand, Fitting says that is quite difficult to define science-fiction, as it can be seen in the following quote «There is no good reason to expect, the editors of the *Encyclopedia of Science Fiction* tell us, ‘that a workable definition of SF will ever be established’» (Fitting, 2010, 135).

Fitting once again uses the definition of science-fiction by Suvin, to explain that utopian-dystopian works share some features with science-fiction works, for that reason they are quite related, and even they can be considered as a subgenre from science-fiction, as it is seen in the following excerpt

«‘SF is, then, a literary genre whose necessary and sufficient conditions are the presence and interaction of estangement and cognition, and whose main formal device is an imaginative framework alternative to the author’s empirical environment.’» (Fitting, 2010, 136).

As it can be seen utopian-dystopian works and science-fiction share one of the main feature of the utopian-dystopian works which is related to the alternative reality but this is not the only one feature according to Fitting the other main feature that have in common both utopian-dystopian works and science-fiction works is the awareness about the future, and how this awareness is linked to science and technology.

According to Fitting this awareness, about the future and how the future society will be, has already been seen in many literary works, the first one is *Memoirs of the Year Two Thousand Five Hundred*, by Louis-Sébastien Mercier (1771). In Mercier’s novel the narrator falls asleep and wakes up 700 years later in a futuristic and utopian Paris. This kind of utopia opens a new way, instead of describing an alternative society which exists somewhere, it describes a society which has evolved from the author’s own society.

This utopia describing a futuristic society is seen in the dystopia too, as it is the case of H.G. Wells’ *The Time Machine*, in this work the main character travels to the future with a time machine, and he sees how his own society has evolved in the future, and which role has played technology and science in this evolution.

According to Fitting this is the second main feature shared by science-fiction and utopian-dystopian works. For that reason utopia and dystopia can be considered by some critics as a subgenre of science-fiction.

2. Utopia.

Once it has been explained the relationship between science-fiction and utopia-dystopia genre, I will explain what is utopia as genre, and its main features. First of all I will explain the concept of utopia as a word, and then as a literary genre, and its main features.

Utopia as a word.

According to Fatima Vieira, in the first chapter «The concept of Utopia» from the book *The Cambridge Companion to Utopian Literature*, the term utopia was used for the first time in 1516 by Thomas More in his work, he used it to name the island described in his book *Utopia*.

Vieira states that originally the island, described in More's work, was named «Nusquama», this term in Latin means «nowhere», «in no place», «on no occasion», if the book had been titled Nusquama, More would have denied the possibility of existence of this perfect place. But More tried to transmit the positive feeling which was emerging with the new humanistic currents of thought appearing in Europa. This new current of thought, which emerged during the Renaissance, defended the idea that the human being had to use the reason and science to build the future, instead of just accepting his or her fate. More coined the term utopia from two Greek words *ouk* which means «no» *topos* which means «place» and adding finally the derivational suffix *ia* to indicate the place.

Once the origin of the word and concept of utopia is explained, I will explain the main features of utopia as a literary genre.

Utopia as a literary genre.

Although utopian literature genre started before 18th Century, it had its «Golden Age» during this Century. The 18th Century was the century of the Enlightenment, in this current people trusted in mankind, and their own capacities, for that reason Utopia blossomed in this period, because an Utopia gives us a kind of optimistic feeling.

According to Vieira the main characteristics of utopia are the following

1. A person from a real place who travels to an unknown place.
2. The traveller makes a guided tour of the society and receives an explanation of its social, political, economic and religious organization.

3. The traveller goes back to his home, realizing that there are alternative and better ways of society than his own one.
4. Utopian works are human-centred, they do not depend on the intervention of external, divine forces in order to organize themselves.

Vieira also states that utopist authors analyze their society, and think about an alternative in which the problems they have as society are solved, this is the basis of utopian genre, she thinks that utopian genre is kind of didactic, because it shows us a different way of society, who does not necessarily has to be perfect but who has solved the problems of the real society, so it could be said its better, and we could learn something about them.

Once utopia, which could be considered as the «optimistic side», is analysed it is the time to focus on dystopia, which in general words could be summed up as the «pesimistic view» of an utopia.

3. Dystopia.

In the 18th Century appeared a trend which defended the idea of what could happen if this alternative, instead of being a better society, it were a worse society, this was the anti-utopia. If utopia focuses on hope and a better society, which solves the problems of the real world, this anti-utopia focuses on despair, and a worse society than the real one. This anti-utopia is the basis of the dystopia which will appear in the 20th Century.

Originally this anti-utopia had a didactic and moralistic aim, utopists through these works tried to advised the readers that everything could go right –utopia– but it could also go wrong, and the society could be worse depending on the moral and ethic values of the society, so these works were kind of a warning of what could be happen, and what the society of their time should avoid not to reach that «anti-utopic or dystopic society».

In the 20th Century a new pesimistic current of thought appeared, ontrary to the optimistic current of thought of 18th Century, which trusted in mankind and the science and technology, at the beginning of 20th Century we find that this scientific and technological evolution ended in destruction in the I World War, so now in this period people do not trust anymore in themselves and they have lost this optimistic thought of themselves, this led to the birth of what we know as dystopia.

Another feature which defines dystopia is not only this mistrust in mankind, and the scientific and technological evolution, the other defining characteristic is the future, these literary works are set in the future, and tells us which could be our fate.

They two main recurrent elements appearing in dystopian works are

1. Totalitarianism. normally in dystopian works we find that the place where it happens is governed by a totalitarian regime after a war.
2. Technological and scientific development thanks to this development this totalitarian regime is established and uses it to control the society.

b. State of art.

After giving a brief contextualization about Utopias and Dystopias, I will analyse the state of the art.

The question of this work is «Which “predictions” or elements appearing in dystopias have been fulfilled nowadays in our real world».

There are many works and essays written about Utopias or Dystopias, normally they are focused just on one literary or audiovisual work «film or TV Series», and most of them are analysed by a literary theory, for example *Feminist utopias and questions of liberty: Margaret Atwood's The Handmaid's Tale as critique of second wave feminism*, or for example *Screen Savior: How Black Mirror Reflects the Present More than the Future*, this paper deals about the famous TV series Black Mirror and how the «near future» it portrays is nearer to our present day than to the future, or they are analysed through a philosophical trend, and some articles that explain why dystopias in general –mostly TV Series and films– are today more and more popular, as for example the following article *Rise of dystopia in television connects to real world problems*.

What is innovative in my approaching is that I am focusing on just purely English literary works, although they could have a film or TV-series version, and I will analyse which elements or features, which at the time they were written, seemed «science-fictional or fantasy», but nowadays they are real, and they will be grouped in three main groups or categories, social customs, technological devices, and bio-technology practices.

2. Methodology

The works I have decided to analyse are:

1. *Time Machine* by H.G. Wells.
2. *Brave New World* by Aldous Huxley.
3. *1984* by George Orwell.
4. *Fahrenheit 451* by Ray Bradbury.
5. *Do androids dream of electric sheep?* by Philip K. Dick.

I have chosen these works, because these works have described quite accurately our present real world, I will analyse those elements that appear in the works which have been fulfilled by our time in our real world, but in author's time belonged to the world of the imagination of the author, these elements will be grouped in three main categories

1. Technology.

Within the category of technology I will analyse all the technological devices which appear in the works and by the author's time did not exist, but nowadays can be found, or are under development process.

2. Bio-technology.

In this category I will analyse those practices and developments which belong to the bio-technology field, which nowadays have been fulfilled.

3. Society.

Within this group I will analyse elements related to society, culture, ways of behaving and political elements related to thought control of the society, portrayed in dystopian literary works, can be seen by our days.

The analysis of these literary is ordered by the year of publication of the literary work.

3. *The Time Machine*

1. Analysis.

The main dystopian theme in this work which has already been seen in our real world is the class struggle.

In this work the future society depicted by H.G. Wells is divided into two groups of creatures Eloi and Morlock, these two groups of creatures are the result of «evolution» or better said the «de-evolution» of 19th Century society.

a. Society.

1. Elois.

The Eloi are the humanoid creatures who live above the ground, they are physically described by the time traveller in their first meeting at the end of Chapter 4 «Time Travelling», as it follows:

«He was a slight creature –perhaps four feet high– clad in a purple tunic, girdled at the waist with a leather belt. Sandals or buskins –I could not clearly distinguish which– were on his feet; his legs were bare to the knees, and his head was bare.

(...)

He struck me as being a very beautiful and graceful creature, but indescribably frail. His flushed face reminded me of the more beautiful kind of consumptive –that hectic beauty of which we used to hear so much.» (H.G. Wells, 2004, 45).

The time traveller describes them according to their intellect ability as frail creatures, who had the intellect of a child, as it can be seen in the following description extracted from Chapter 6 «The Sunset of Mankind»:

«A queer thing I soon discovered about my little hosts, and that was their lack of interest. They would come to me with eager cries of astonishment, like children, but, like children they would soon stop examining me, and wander away after some other toy.» (H.G. Wells, 2004, 56).

These creatures as the time traveller describes them were always playing, wandering around, but he did not see they had any technical and working skill, so for him it was strange they wore those beautiful clothes, and their banquets were always full of food to eat, someone had to produce their clothes, and provide the food they eat.

2. Morlocks.

The time traveller describes the Morlocks as follows, in Chapter 8 «Explanation»:

«(...) saw a queer little ape-like figure, its head held down in a peculiar manner, running across the sunlit space behind me. It blundered against a block of granite, staggered aside, and in a moment was hidden in a black shadow beneath another pile of ruined masonry.

My impression of it is, of course, imperfect; but I know it was a dull white, and had strange large greyish-red eyes; also that there was flaxen hair on its head and down its back.» (H.G. Wells, 2004, 95).

These creatures live underground and they have suffered changes in order to adapt to their environment, as the time traveller describes them, they are pale creatures similar to those who live underground, and their greyish-red eyes reflecting the light are similar to those deep-sea creatures, which reflect the light in order to see.

The time traveller discovers that those who have stolen his time machine and those who have the technical and working skills are the Morlocks, and they are who provide Elois with everything she needs to live.

Once it has briefly described the two social groups, it emerges two questions, on the one hand the time traveller answers the question how this has happened, and the second question which is related to this project if this prediction of this futuristic society has happened or will happen in our real world.

The time traveller to answer the question of how this has happened, he says he starts from the problems of his own time, as it is said in the Chapter 8 «Explanation»:

«At first, proceeding from the problems of our own age, it seemed clear as daylight to me that the gradual widening of the present merely temporary and social difference between the Capitalist and the Labourer was the key to the whole position.» (H.G. Wells, 2004, 101).

The time traveller says that in the 19th Century there is a tendency to use underground spaces for less decorative purposes, the subway goes underground, there are many workshops, restaurants, electric railways.

He assumes that industry through ages will be located underground, and the workers would finally leave in the same environment where they work, it means they would live underground too.

The time traveller states that in his 19th Century it already existed a social gap which divided society into two groups, those who belongs to the upper class, and those who belongs to the lower and working class, as it can be seen in the following quotation of the same Chapter 8

«And this same widening gulf—which is due to the length and expense of the higher educational process and the increased facilities for and temptations towards refined habits on the part of the rich— will make that exchange between class and class, that promotion by intermarriage which at present retards the splitting of our species along lines of social stratification, less and less frequent.» (H.G. Wells, 2004, 102).

The time traveller states that then the upper class remained above the ground, and the working class remained underground, and he states that the working class would have adapted to their new environment.

And as the time traveller says this is not an utopian work, so he as the main character, and we as readers do not have any guidance to know whether this conclusion is true or false, it is just one conclusion which can be true or false, but it seems the more plausible conclusion, as the following quote from Chapter 8 says:

«I had no convenient cicerone in the pattern of the Utopian books. My explanation may be absolutely wrong. I still think it is the most plausible one.» (H.G. Wells, 2004, 104).

3. Class struggle in time machine.

The theory beneath this situation depicted in this work is the class struggle. Class struggle according to Oxford Dictionary definition is «opposition between the different social classes in society, especially that described in Marxist theory»

According to Noviyandini in her article «Class Struggle as represented by the character Eloi and Morlock in Herbert George Wells' *The Time Machine*.» There are three kinds of struggle made by Morlocks, those are economical, ideological and political.

They worked with unfair condition, where they had to do anything that was commanded by the rich and got the little payment. Besides they also got bad treatments (Noviyandini, 2016, 70). This idea from Noviyandini is supported by the time traveller's opinion, as it is stated in the following quote from Chapter 8:

«Once they were there, they would no doubt have to pay rent, and not a little of it, for the ventilation of their caverns; and if they refused, they would starve or be suffocated for arrears.» (H.G. Wells, 2004, 103).

As nothing changed through this economical struggle, they had to pass to the second stage which is the ideological struggle, according to Noviyandini the lower class continued working for the upper class to make them weak, and fool, since the upper class did not want to work, just have an easy life, in which they do not have to worry about anything. Once the upper class became fool, lazy and weak through the ages, it was the perfect time to pass to the third stage.

The third stage of this class struggle is the political struggle, according to Noviyandini with this final stage the Morlocks obtained the power, they were accustomed to live underground and since there was no food underground, they became cannibals, and the Eloi who live above the ground who were fruit-eater, Morlocks took advantage of the new situation in which Eloi were weak, and Morlocks continued providing them everything they need since Morlocks saw them as cattle to be eaten.

This opinion is supported by the time traveller too as it can be seen in the following quote extracted from Chapter 10 When night came:

«These Eloi were mere fatted cattle, which the ant-like Morlocks preserved and preyed upon –probably saw to the breeding of» (H.G. Wells, 2004, 130).

Eloi were afraid of night and dark places because Morlocks were nocturnal creatures who haunted them at that time, to take them to the underground, where Eloi would be slaughtered and eaten.

After all this stages of the class struggle Morlocks finally achieved their aim of getting the power over the Eloi, then it can be said that at the end the lower class turned the table and the oppressed became oppressors and oppressors became oppressed.

With this work H.G. Wells was warning that the society of his time should change, in order to avoid this kind of class struggle, and as it can be seen just a few decades after H.G. Wells wrote *The Time Machine*, started the Russian Revolution.

In this revolution the rebels tried to establish a new regime, eliminating the Tzar and establishing a proletarian dictatorship, according to Marx ideas the proletarian dictatorship would be a regime in which the majority would rule, since the working class is the biggest class of the society, but at the end it was not a regime of the majority but a regime in which ruled a party who supposedly represented the majority.

4. *Brave New World*

1. Analysis.

Brave New World was written by Aldous Huxley in 1932, in this work Huxley depicts a dystopian society, in which people are born thanks to assistive reproduction technology in a kind of factory in a chain of production as if people were products, As the following quote from the first chapter shows:

«Ninety-six identical twins working ninety-six identical machines!»

...

He quoted the planetary motto. ‘Community, Identity, Stability.’ Grand words. ‘If we could bokanovskify indefinitely the whole problem would be solved.’

Solved by standard Gammas, unvarying Deltas, uniform Epsilons. Millions of identical twins. The principle of mass production at last applied to biology.» (Huxley, 2019, 16).

But this mass production is used only with lower social classes, since the depicted society in this work is divided into five groups, Alfa, Beta, Delta, Gamma and Epsilon. Alfa and Beta are the elite classes, and Delta, Gamma and Epsilon are the working and lower classes.

In the first chapter of the book, the Director of the Central London Hatchery and Conditioning Centre, where the embryos are produced, and then children are «educated», describes a group of students how the Hatchery and Conditioning Centre works, and how people are «created», depending on the social class they belong.

As the Director says in this first chapter thanks to Bokanovsky process until 96 human beings can be produced from one embryo, as the following quote states:

«One egg, one embryo, one adult—normality. But a bokanovskified egg will bud, will proliferate, will divide. From eight to ninety-six buds, and every bud will grow into a perfectly formed embryo, and every embryo into a full-sized adult.» (Huxley, 2019, 13).

In this society people are conditioned since they were children thanks to hypnopedia to follow the custom of the society, during the night they are conditioned to love being part of the social class they were predestinated to belong to, because this is the way to maintain the social stability they want to maintain, as the following quote from fourth chapter shows:

«I'm glad I'm not an Epsilon,' said Lenina, with conviction.

'And if you were an Epsilon,' said Henry, 'your conditioning would have made you no less thankful that you weren't a Beta or an Alpha.'» (Huxley, 2019, 109).

And they are conditioned to consumerism too as the following quote from the third chapter shows:

«In the nurseries, the Elementary Class Consciousness lesson was over, the voices were adapting future demand to future industrial supply. 'I do love flying,' they whispered, 'I do love flying, I do love having new clothes, I do love ...'» (Huxley, 2019, 73).

Once the depicted society of *Brave New World* has been contextualized, I will analyse the two main elements that were predicted by Huxley, and nowadays they are pretty real, and they are presented in our world.

The first topic deals with biotechnology and concretely I will talk about Genetic Engineering and Gene Therapy, Cloning, and In Vitro Fertilization, as a way of assisted reproduction, and secondly I will talk about the social customs and specifically the consumerism.

a. Biotechnology.

According to Joanne Woiak in her article «Designing a Brave New World: Eugenics, Politics, and Fiction», published in *The Public Historian* Volume 29, Issue 3 (2007), *Brave New World* predicts accurately scientific and technological developments which have been fulfilled by our time, and they were pure fantasy in Huxley's time.

For instance Huxley predicted the use of genetic engineering (IVF and cloning via Bokanovsky's Process) to produce «test tube babies» which thanks to eugenic selection they are «predestined» to belong to a determined social class and fulfill their duty on society.

1. Genetic Engineering and Gene Therapy.

One of the main predictions in *Brave New World*, which nowadays is already fulfilled, is Genetic Engineering.

As it is described in the first chapter, depending on which social class is produced, the conditions to maintain the embryo differs, because depending on the social class the resulted person must have different characteristics, and this is shown in the following excerpt from the first chapter:

«Reducing the number of revolutions per minute,’ Mr. Foster explained. ‘The surrogate goes round slower; therefore passes through the lung at longer intervals; therefore gives the embryo less oxygen. Nothing like oxygen-shortage for keeping an embryo below par.’

...

‘Ass!’ said the Director, breaking a long silence. ‘Hasn’t it occurred to you that an Epsilon embryo must have an Epsilon environment as well as an Epsilon heredity?’

...

‘The lower the caste,’ said Mr. Foster, ‘the shorter the oxygen.’ The first organ affected was the brain. After that the skeleton. At seventy per cent. of normal oxygen you got dwarfs...

...

‘But in Epsilons,’ said Mr. Foster very justly, ‘we don’t need human intelligence.’» (Huxley, 2019, 27).

But genetic engineering is not only applied to conditionate the people to have some specific physical or mental characteristics, but to prevent them from suffering diseases, as it can be seen in the following quote from the thirteenth chapter:

«‘have I given this one its sleeping-sickness injection, or haven’t I?’ She simply couldn’t remember. In the end, she decided not to run the risk of letting it have a second dose, and moved down the line to the next bottle.

Twenty-two years eight months and four days from that moment, a promising young Alpha-Minus administrator at Mwanza-Mwanza was to die of trypanosomiasis—the first case for over half a century.» (Huxley, 2019, 284).

Nowadays Genetic Engineering has many applications in different fields, for example pharmaceutical, medicine, agriculture, which are presented in our daily life.

For instance in the following article «Genetically Modified (GM) Crops: Techniques and Applications» published by Colorado State University states that one of the applications of this genetic engineering in crops is to make them insect-resistant, the crops that are manipulated produce a protein which is toxic to some insects, in order to avoid insects to eat the crop, another application of genetic altered crops is to make them resistant to herbicides.

Genetic engineering in the field of medicine and pharmaceutical according to the article «Gene Therapy and Genetic Engineering» which talks about the Ethics of Gene Therapy and Genetic Engineering published by the School of Medicine of the University of Missouri, Gene Therapy and Genetic Engineering are used nowadays for instance to alter genes in order to cure diseases and disorders, or preventing genetic diseases in those genes which are predisposed to them.

This article also states that there are people in favor of using genetic engineering for other purposes which might be morally objectionable, it states that some people are in favor of using genetic engineering to improve people's characteristics, they defend that if people do exercise, diet or even plastic surgery, or study to improve their capabilities. Why should not be this improvement achieved through genetics?

This article states that genetic engineering is defended by people as a basic reproductive freedom, since parents would be able to pick the best genes they can provide to their offspring, and use it, instead of letting natural selection.

2. Cloning.

As it is described by the director, when people, who belong to Delta, Gamma and Epsilon, are clonated as he says in the following quote from the first chapter when he describes how the Hatchery and Conditioning Centre works:

«'Ninety-six identical twins working ninety-six identical machines!'"»
(Huxley, 2019, 16).

Nowadays cloning is a very controversial topic because of the ethical debate behind it, up to now cloning has been only used in mammals, in 1996 in the Roslin Institute of the University of Edinburgh the sheep Dolly was cloned, in the official website of the Roslin Institute dedicated to the Dolly project, it is stated that Dolly was created when they were investigating a better method to produce genetically modified livestock. And they were experimenting how skin and brain cells could be used to create a whole animal.

But Dolly was not the only cloned mammal, in the following article «Scientists in China have created 5 monkey clones that all have the same genetically edited DNA» published by Business Insider, it states that in 2018 China achieved to clone five macaques following the same technique used in Dolly, the scientists in charge of this project defend that this experiment has benefits for medical testings, since scientists have altered genetically the macaques to suffer some mental disorders, such as anxiety, depression and schizophrenia-like behaviour.

Some scientist defend that this experiment is quite controversial since animal models could not be translated into human biology as it might be expected.

It is true that cloning humans has not been achieved yet, but the technology and scientific researches already exist, and it is possible that in a future, perhaps not so distant, it can be achieved, perhaps cloning a whole human as it has been done with Dolly and the five macaques already mentioned will not be done. But cloned cells could be used as a gene therapy to treat some genetic disorders or diseases.

3. In Vitro Fertilization.

The last scientific prediction by Huxley in *Brave New World* is the In Vitro Fertilization, as it is seen in this work, people are created artificially in the Hatchery and Conditioning Centre as the director describes in the first chapter the process of fertilization.

First the director describes the conditions to keep the ovaries and male gametes as the following excerpt from the first chapter shows:

«‘The week’s supply of ova. Kept,’ he explained, ‘at blood heat; whereas the male gametes,’ and here he opened another door, ‘they have to be kept at thirty-five instead of thirty-seven. Full blood heat sterilizes.’ Rams wrapped in thermogene beget no lambs.» (Huxley, 2019, 11).

Then he explains how the ovaries are fertilized by spermatozoa as the following quotations show:

«how the eggs which it contained were inspected for abnormalities, counted and transferred to a porous receptacle;

...

this receptacle was immersed in a warm bouillon containing free-swimming spermatozoa—at a minimum concentration of one hundred thousand per cubic centimetre,

...

if any of the eggs remained unfertilized, it was again immersed, and, if necessary, yet again; how the fertilized ova went back to the incubators; where the Alphas and Betas remained until definitely bottled;» (Huxley, 2019, 12-13).

According to the article «In Vitro Fertilization: A 40-Year Perspective» published in *The Journal of Lancaster General Hospital* Issue Summer 2015, John Burdon Sanderson Haldane a british geneticist described in 1928 the ectogenesis process where individuals could be created outside the human body.

This article also states that in 1959 the first mammal was born by In Vitro Fertilization (IVF), it was a rabbit and the scientist in charge of this project was Min Chue Chang a Chinese-American reproductive biologist.

And finally in 1978 the first baby via (IVF) was born, according to the article «World's first “test tube”» baby born published by History Channel, Louise Joy Brown was the first baby born via IVF at Oldham and District General Hospital in Manchester.

The mother of the baby Lesley suffered from infertility because her fallopian tubes were obstructed, so a mature egg was removed from one of her ovaries and in a laboratory it was fertilized with her husband's sperm forming an embryo, then the fertilized embryo was implanted in the mother's uterus.

According to the article «In Vitro Fertilization: A-40 Year Perspective», which was published in 2015, there were more than 2 000 specialized clinics in IVF in the world, and the biggest one is located in Tokyo, and it treats more than 15 000 couples a year. And over 5 million babies worldwide have been born via IVF.

b. Society.

1. Consumerism.

One of the main topics about social customs in *Brave New World* is the consumerism, the depicted society in this work is clearly consumerist, and this is seen in many instances through the work, for example the following quote from the second chapter:

«‘We condition the masses to hate the country,’ concluded the Director. ‘But simultaneously we condition them to love all country sports. At the same time, we see to it that all country sports shall entail the use of elaborate apparatus. So that they consume manufactured articles as well as transport. Hence those electric shocks.’» (Huxley, 2019, 40).

Or this quote repeated by Lenina in the third chapter, this idea was implanted in people’s mind through hypnopedia, for that reason it is quite recurrent since it is learnt by heart encouraging people to buy new products, instead of repairing those who are broken, or malfunctioning:

«‘The more stitches the less riches; the more stitches the less ...’» (Huxley, 2019, 77).

Even the figure of Henry Ford the creator of Ford cars is seen as a deity, the years in this work are counted A.F. (After Ford) instead of A.C. (After Christ), and as it is said in the third chapter the christian crosses were transformed into «T» after the Model T designed by Ford:

«‘All crosses had their tops cut and became T’s....’» (Huxley, 2019, 78).

In the following excerpt from the third chapter it is seen that they have not only created a consumerist society, but a monopoly to increase consumerism:

«‘...Nowadays the Controllers won’t approve of any new game unless it can be shown that it requires at least as much apparatus as the most complicated of existing games.’ He interrupted himself» (Huxley, 2019, 50).

This kind of consumerist monopoly has been fulfilled with the nicknamed «Wintel» monopoly, during decades Microsoft and Intel have ruled the monopoly of personal computing, in its different products desktop, notebook and laptops.

Intel produced the processors to run the operative system, and Microsoft provided the operative system. As it has been seen that when Microsoft produced a new operative system with higher requirements, Intel was always behind providing a capable processor to run them.

5. *1984*

1. Analysis.

1984 depicts a society governed by a totalitarian regime, and I will analyse which technological elements, and political techniques described in this work were considered fantasy by Orwell's time, but they are present in the real world nowadays.

a. Technology.

1. Telescreen.

The telescreen is a technological device with a telecamera a speaker and microphones and a screen, the telecamera, speaker and microphones are used by the Party to spy and control everything, but they are also used to broadcast the propaganda and the news they Party wants to spread, and they can be never turned off, this quote in the first chapter of part I, describes the spying function of the telescreen.

«The telescreen received and transmitted simultaneously. Any sound that Winston made, above the level of a very low whisper, would be picked up by it, moreover, so long as he remained within the field of vision which the metal plaque commanded, he could be seen as well as heard» (Orwell, 2012, 8).

This technological device which at the time the novel was written could be pure fantasy, nowadays it is pretty real, since the smartphones, laptops, computers, and current televisions fulfill the same functions the telescreen has.

As the article published on the Fox News website «You're not paranoid. Your phone really is listening in» states our smartphones are constantly listening to us, and everything we say or search on the website browser of the smartphone is spied by the smartphone in order to create a consumer profile, showing us pop-up adverts related to what we have said, or we have searched.

But not only the smartphones are spying, also the computers via the website explorers thanks to the cookies, which makes it easy the navigation on Internet, but at the same time it sends information to the owner of the webiste, or any apps that are used in the smartphone, can create this consumer profiles sending the information they are mining to the creators of the apps, in order to create a market study.

Another use in our real world of this telescreen is the video-surveillance, that is quite present in our days and society, this video-surveillance can be found in shopping centers, supermarkets, banks, airports, train station, in the subway, in petrol-stations, in the highways, etc. It is true that this technology is not used to spy, but as a security system, in case there is an emergency to know what have happened and where it has happened to provide the necessary help as soon as possible, or in case a crime has been committed to let know the police what and how has happened and in some cases to identify the author.

According to the article «Surveillance camera statistics: which cities have the most CCTV cameras?» London is the third city having the most CCTV Cameras, there are over 600 000 CCTV cameras for a population over 9 300 000 people it means about 90 CCTV Cameras per 1 000 people.

So nowadays in the 21st Century the idea of the Big Brother listening and watching everything is not just a fantasy but something very real that lives with us everyday.

2. Speakwrite.

This technological device which is similar to a typewriter to which someone dictates and it transcripts or register what has been dictated.

This device has not been created but its functioning has been already developed as feature of other devices or software, for example the help assistant Siri from iOS, or Google assistant, or Cortana from Windows, can be dictated and they can transcript what you say in an e-mail or SMS, or if WhatsApp is used, there are two features, one is the audionote, that is recorded and send as a audiomessage, but Siri, Google or Cortana can be asked to write and send a message in WhatsApp, and what is dictated, it is also transcribed and sent. But this assistant can be also asked to search on the net, and it automatically shows us the results of our search. So once again another futuristic device in 1949, is nowadays something real and commonly used by people.

3. Novel-writing machines.

The novel-writing machines are technological devices used in the Fiction department of the Ministry of Truth to write fictional novels for the lowest class of the society depicted in *1984*, which was also out of the regime, the Big Brother was not interested enough in them, so he let them be out of the law.

80 years after what Orwell imagined, nowadays we have within us an Artificial Intelligence –A.I.– that can collect a lot of information limited by the parameters established by the researcher and the A.I. collect and analyze the data to produce a report.

As the article published by CNN «Could a robot have written this story? The rise of the Robo-journalist» says that the L.A. Times uses an A.I. called Quakebot, and it collects information from the U.S. Geological Service to write reports about earthquakes and they are uploaded on-line just a few minutes after the tremor has been registered.

The same article talks about Narrative Science a company that commercialises Quill an A.I. developed by the Northwestern University, this A.I. is used by finance agencies to write reports about investment funds.

b. Society and politics.

Once the technological and futuristic elements have been analysed I will focus on the political aspects depicted in this work.

The Big Brother and the INGSOC after the revolution established a totalitarian regime, by which they control the society, even applying thought control over the population, because they want population to believe true what they need to be true, according to their interest.

1. Two minutes hate.

The Party broadcast a program in the Telescreens called Two minutes hate, where images of Goldstein the worst enemy of Oceania appears, and during this two minutes population start screaming and shouting at him showing their hate and fear to him.

These kind of propaganda programs have already existed and exist in the real world, used by totalitarian regimes one example of this kind of propagandist program is «Con el mazo dando», it comes from Venezuela is conducted by Diosdado Cabello a military and politician from Venezuela, this program is produced to diffuse the achievements of the Bolivarian regime, and discredit those who are against the regime, it does not matter if this opposing forces are Venezuelan as for example Guaidó, or are international opposers as Trump is considered by him.

2. Vaporization and manipulation of history.

As it can be seen in *1984* the INGSOC manipulates history rewriting newspapers, books, audio, videos, every kind of way of register of the history in order to make it consequent with the official truth which they want society to believe.

But they go even further, because when they eliminate an opposer of the regime, he is completely erased, any photograph or written text, where the name of the opposer appears, is erased as if that person would have never existed. As it can be seen in the following excerpt

«Syme had vanished. A morning came, and he was missing from work; a few thoughtless people commented on his absence. On the next day nobody mentioned him. On the third day Winston went into the vestibule of the Records Department to look at the notice board. One of the notices carried a printed list of the members of the Chess Committee, of whom Syme had been one. It looked almost exactly as it had looked before –nothing had been crossed out– but it was one name shorter. It was enough. Syme had ceased to exist; he had never existed.» (Orwell, 2012, 282).

This practice of manipulation was already used by totalitarian regimes which were contemporary of Orwell. For instance the USSR already used this practice when a photograph was taken, but then if someone, who appeared there, was considered an opposer to the leader or enemy of the regime, and was executed, prosecuted or exiled the picture was retouched to eliminate him from the caption.

One of the most well known photogrpahs of retouching during the Stalin's Purge is the following picture taken during Lenin's speech in Sverdlov Square, Lenin was giving a speech to his troops during the Polish-Soviet war, in the original picture right to Lenin, in front of the stairs appear Trotsky and Kamenev behind him. But after the death of Lenin, the downfall of Trotsky and the rise of Stalin, Stalin ordered to retouch the original image erasing both men.



Original caption with Trotsky and Kamenev.



Retouched caption without Trotsky and Kamenev.

This practice is quite similar to that used by the Party in *1984* to manipulate history and vaporize people.

3. Ministeries.

It is curious to see that the literary meaning of the ministeries' names are opposed to what they really do. But in this work it has sense this relationship, because everything in this regime has a double meaning.

For example the Ministry of Love, this ministry is kind of a jail or prison where criminals, and opposers to the regime are punished and brainwashed, but as O'Brien tells Winston that he is going to be cured and he will learn to love the Big Brother, so the final aim of the Ministry of Love from the point of view of the regime is indeed the love, and as it is said at the end of the book Winston himself says that he loves the Big Brother.

This can be seen in the following quote from second chapter of Part III, where O'Brien explains Winston how he tortured Jones, Aaronson and Rutherford, three men who once were members of the Inner Party and then they were considered traitors, and O'Brien tortured them in the Ministry of Love:

«I saw them gradually worn down, whimpering, grovelling, weeping—and in the end it was not with pain or fear, only with penitence.

By the time we had finished with them they were only the shells of men. There was nothing left in them except sorrow for what they had done, and love of Big Brother.» (Orwell, 2012, 487).

But this is not only applied to the Ministry of Love, this double relationship is applied to all of them, the Ministry of Peace is in charge of the war and the army, but this ministry is in charge of maintaining the peace, according to regime's slogan War is Peace, which is more or less similar to the Vegecio's motto «si vis pacem para bellum», although the original Vegecio's quote in his work *De Re Militari* is «igitur qui desiderat pacem, praeparet bellum» which could be translated as «those who desire peace, must be ready for the war».

The Ministry of Truth is that ministry in charge of rewriting history, and create a new truth, although this new truth is false, since it has never been so, as it can be seen in the following extract from the fourth chapter of Part I where Winston explains what is his duty on the Ministry of Truth:

«The messages he had received referred to articles or news items which for one reason or another it was thought necessary to alter, or, as the official phrase had it, to rectify.» (Orwell, 2012, 75).

But this ministry is not only in charge of rewriting history it is in charge of controlling society's beliefs, since there is a department in charge of rewriting any literary text translating it into the new-language and they also write new literary works aimed to entertain the proles, as it is seen since Julia works in the Fiction Department.

This thought control and censorship has been present in our real world in any totalitarian regime, even nowadays this practice of censorship and thought control via mass media is realized by the totalitarian regimes of China and Cuba for example.

According to the article «The Internet and State Control in Authoritarian Regimes: China, Cuba and the Counterrevolution» by Shanthi Calatil and Taylor C. Boas China and Cuba practise control over the mass media and the ICTs using them for the interests of the regime and impose the ideological hegemony.

This article states that already in Mao Zedong's era it was established a control of the mass media because they used it to spread the official ideology. With the appearance of Internet, the Chinese Government allowed the people to have access to it, but the Government was aware that allowing people to have access to internet could be a threaten to the regime, since people could have access to politically sensitive material against, and dissident groups as the China Democracy Party could organize movements against the regime, for that reason Chinese Government has established a strategy of filtering and censorship. Those websites which are sensitive politically, foreign news websites and those which are created by human rights organizations are completely blocked. And the second strategy are the censors or «Big Mamas», these censors scan websites searching for publications and posts against the regime, and they must delete them.

This article also describes the Cuban political practise controlling internet, as China Cuba is aware of controlling the mass media and Internet. But the strategy followed by Cuba is completely different to the Chinese strategy, meanwhile in China internet access is allowed to anyone, and the Chinese Government practise a big effort in monitorizing the internet content and blocking and banning those contents against their interests. Cuba has decided a most restrictive politic allowing less internet access, and those allowed internet access are allowed to people or organizations who sympathize with the regime, and do not show a great threaten to them.

4. Junior spies.

As it is seen in the work *1984* there is a youth organization of the INGSOC, called Junior spies. In this youth organization it is the first time the Party applies brainwashing teaching them the ideology of the Party, in some cases this practice is very successful as it is the case of Parsons a character who is an adult but he follows blindly the doctrine of the Party and he shows to be proud of the Junior spies, he shows many instances of pride when his son and his daughter denounce people of being enemies of the Party, and in some cases causing the execution of the person.

One example of this pride of the Junior spies showed by Parsons is the case when Parsons tells Winston that his daughter denounced to the Thought Police a person who wore shoes that she had never seen before, and that was the clue to consider him an enemy spy, and the Thought Police caught him. This example is related by Parsons in the fifth chapter of Part I:

«My kid made sure he was some kind of enemy agent—might have been dropped by parachute, for instance. But here's the point, old boy. What do you think put her on to him in the first place? She spotted he was wearing a funny kind of shoes—said she'd never seen anyone wearing shoes like that before. So the chances were he was a foreigner. Pretty smart for a nipper of seven, eh?» (Orwell, 2012, 111).

In the first chapter of Part III Parsons shows his pride of his son and daughter when his daughter denounced him to the Thought Police when he shouted down with the Big Brother while he was sleeping. This is seen in the following quotes:

«'Down with Big Brother!' Yes, I said that!

(...)

'Who denounced you?' said Winston.

'It was my little daughter,' said Parsons with a sort of doleful pride. 'She listened at the keyhole. Heard what I was saying, and nipped off to the patrols the very next day. Pretty smart for a nipper of seven, eh? I don't bear her any grudge for it. In fact I'm proud of her. It shows I brought her up in the right spirit, anyway.'» (Orwell, 2012, 445).

Once again, these youth organizations cannot be said that they were something new, or innovative in 1984, they already existed by that time and once again was a common practice in any totalitarian regime, and they were used to teach the ideology of the party.

For example in the Cuban regime, when Che Guevara in 1959 founded Asociación de Jóvenes Rebeldes, this association through the pass of time would be converted into Unión de Jóvenes Comunistas, from its official website they state its aim, which as they say, is forming the future generations of cuban communists, sustaining in patriotism, fidelity to the Communist Party of Cuba, and defending the human values of their spirit contrary to imperialism and internationalism.

6. *Fahrenheit 451*

1. Analysis.

In this work Bradbury depicts a society in which books are forbidden and must be burnt by firefighters because they make people think, and in this society people is not allowed to think, they have to be «happy» just being superficial, watching television.

Bradbury's predictions are grouped in two categories, the first one is the technological devices that he predicted in his world, and nowadays they exist, and the second one comprehend those predictions related to social aspects.

Some of the technological predictions in *Fahrenheit 451* are technological devices which are quite common in daily life. And those related to social aspects are quite common too.

a. Technology.

According to the article «State's Abuse of Technology and Its Cataclysmic Repercussions in Society: A Critical Scrutiny of Ray Bradbury's *Fahrenheit 451*» by Dr. Ali Mohammadi published in the *International Journal of Science and Research (IJSR)* Volume 9 Issue 9, September 2020, the Government in *Fahrenheit 451* takes control over society thanks to technology, as it is stated in this article the use or better said the abuse of technology changes drastically the society, even changing the idea of family people have as it is seen in the work Mildred believes that her family is on the TV instead of her real husband Montag the main character as it is seen in the following excerpt from the book, from the first part of the book

«'Will you turn the parlour off?' he asked.

'That's my family.'» (Bradbury, 1953, 72).

This shows how technology has changed the society, but this is not the only change technology has caused, since the Government do not want people to think, he wants people just to be alienated and kind of silly society they offer a lot of ways of entertaining, thanks to technology, and for that reason books are forbidden, and must be burnt. This is

depicted in the first part of the book in a conversation between Montag and Clarisse, a teenager who thinks freely, and do not follow the new social ways of living as it is seen in the following excerpt:

«‘You think too many things,’ said Montag, uneasily.

‘I rarely watch the ‘parlour walls’ or go to races or Fun Parks. So I’ve lots of time for crazy thoughts, I guess.(...)» (Bradbury, 1953, 10).

1. Parlor walls.

One of the technological predictions by Bradbury in *Fahrenheit 451* are the parlour walls, which are big flat television, as they are described in the first part of the book, *It was a Pleasure to Burn*, in the following excerpt:

«Well, this is a play comes on the wall-to-wall circuit in ten minutes. They mailed me my part this morning. I sent in some box-tops. They write the script with one part missing. It’s a new idea. The home-maker, that’s me, is the missing part. When it comes time for the missing lines, they all look at me out of the three walls and I say the lines

(...)

It’ll be even more fun when we can afford to have the fourth wall installed. How long you figure before we save up and get the fourth wall torn out and a fourth wall-TV put in? It’s only two thousand dollars.» (Bradbury, 1953, 26-27).

These parlour walls are quite similar to our flat-screen TV, by Bradbury’s time the only available television were cathode-ray tube TV.

2. Mechanic hound.

The firefighters use a robot called mechanic hound which its memory is programmed with the target’s chemical balances it must follow, once it catches the target, it extends a needle from its mouth injecting poison to kill it, as it is seen in the following excerpt from the first part of the book.

«‘It doesn’t like me,’ said Montag.

‘What, the Hound?’ The Captain studied his cards.

(...)

Montag swallowed. ‘Its calculators can be set to any combination, so many amino acids, so much sulphur, so much butterfat and alkaline. Right?’

‘We all know that.’

‘All of those chemical balances and percentages on all of us here in the house are recorded in the master file downstairs. It would be easy for someone to set up a partial combination on the Hound’s ‘memory,’ a touch of amino acids, perhaps. That would account for what the animal did just now. Reacted toward me.’»
(Bradbury, 1953, 37).

And in the third and last part of the book, *Burning Bright*, there is a description how the mechanic hound attacks when it is following Montag the main character as it is described in the following quote:

«It made a single last leap into the air, coming down at Montag from a good three feet over his head, its spidered legs reaching, the procaine needle snapping out its single angry tooth. Montag caught it with a bloom of fire, a single wondrous blossom that curled in petals of yellow and blue and orange about the metal dog, clad it in a new covering as it slammed into Montag and threw him ten feet back against the bole of a tree, taking the flame-gun with him. He felt it scabble and seize his leg and stab the needle in for a moment before the fire snapped the Hound up in the air, burst its metal bones at the joints, and blew out its interior in the single flushing of red colour like a skyrocket fastened to the street....»
(Bradbury, 1953, 179).

In our real world there is already a robot that can track odors as it is stated in the article «Robot bloodhound tracks odors on the ground» from June 2018, published by American Chemical Society.

According to this article a robot, which can detect not only airborne odors but odors on the ground, has been developed by a group of researchers from the Kyushu University in Japan.

3. Seashells.

In *Fahrenheit 451* people use wireless headphones to listen to music and radio, as the following quote from the first part of the book states:

«And in her ears the little Seashells, the thimble radios tamped tight, and an electronic ocean of sound, of music and talk and music and talk coming in, coming in on the shore of her unsleeping mind.» (Bradbury, 1953, 14).

These Seashells are quite similar to our nowadays wireless bluetooth headphones, as the Earbuds from Apple, or Samsung Galaxy Buds from Samsung.

4. Air-propelled trains.

In *Fahrenheit 451* one of the public transport system is the air-propelled train, as it is seen in the following quote from the second part of the book, *The Sieve and the Sand*:

«He walked out of the fire station and along the midnight street toward the subway where the silent, air-propelled train slid soundlessly down its lubricated flue in the earth and let him out with a great puff of warm air an to the cream-tiled escalator rising to the suburb.» (Bradbury, 1953, 3).

This kind of train instead of running through a traditional railway it uses air pressure to move the train. Nowadays two different types of this air-propelled train can be found in the real world:

One of them is still under experimentation which is the «Hyperloop» by Virgin, and the second one it already works as the «Atmospheric Train System» by the brazilian company Aeromovel, they have produced an automated train, which runs through a close circuit, and it is already used in convention centers, airports and amusement parks, some examples of this air-propelled train by Aeromovel are the train at Taman Mini Indonesia Indah, and the train at Porto Alegre's Salgado Filho International Airport.

b. Society.

1. Social Media.

As it is seen in this novel the purpose of mass media is not only informative –or as it will be seen in the following point, Fake news, disinformation– or entertainment, they

are a social phenomenon, as it can be seen in the first part of the book, people receive the script of some programs allowing people to take part of them, creating an immersive effect, as it is seen in the following excerpt from the first part:

«Well, this is a play comes on the wall-to-wall circuit in ten minutes. They mailed me my part this morning. I sent in some box-tops. They write the script with one part missing. It's a new idea. The home-maker, that's me, is the missing part. When it comes time for the missing lines, they all look at me out of the three walls and I say the lines: Here, for instance, the man says, 'What do you think of this whole idea, Helen?' And he looks at me sitting here centre stage, see? And I say, I say –She paused and ran her finger under a line in the script.– 'I think that's fine!' And then they go on with the play until he says, 'Do you agree to that, Helen!' and I say, 'I sure do!' Isn't that fun, Guy?» (Bradbury, 1953, 26).

People even meet each other to watch their favourite programs as it can be seen at the end of the second part of the book:

«Mrs. Phelps and Mrs. Bowles came through the front door and vanished into the volcano's mouth with martinis in their hands: ...

(...)

'Isn't this show wonderful?' cried Mildred. 'Wonderful!'

On one wall a woman smiled and drank orange juice simultaneously. How does she do both at once, thought Montag, insanely...» (Bradbury, 1953, 139-140).

This kind of social phenomenon is a prediction of our current social media as facebook, instagram, twitter, etc. where people post videos, photos, and messages about themselves, and the viewers interact with the person who has posted them.

2. Fake news.

Other prediction done by Bradbury in his work are the fake news which nowadays are quite common, and offer a distorted version of reality, and instead of being informative they are dissinformative.

Bradbury describes it in the following excerpt from the third part of the book, when Montag meets a group of rebels in the forest when he is trying to scape from the police and firefighters, and Granger one of the rebels show Montag in a television the whole chase

«Granger nodded. ‘They’re faking. You threw them off at the river. They can’t admit it.

They know they can hold their audience only so long. The show’s got to have a snap ending, quick! If they started searching the whole damn river it might take all night. So they’re sniffing for a scape-goat to end things with a bang. Watch. They’ll catch Montag in the next five minutes!’

(...)

‘See that?’ whispered Granger. ‘It’ll be you; right up at the end of that street is our victim. See how our camera is coming in? Building the scene. Suspense. Long shot.

(...)’

A voice cried, ‘There’s Montag ! The search is done!’

The innocent man stood bewildered, a cigarette burning in his hand. He stared at the Hound, not knowing what it was. He probably never knew. He glanced up at the sky and the wailing sirens. The cameras rushed down. The Hound leapt up into the air with a rhythm and a sense of timing that was incredibly beautiful. Its needle shot out.

(...)

And then, after a time of the men sitting around the fire, their faces expressionless, an announcer on the dark screen said, ‘The search is over, Montag is dead; a crime against society has been avenged.’

(...)

Granger turned it off.

‘They didn’t show the man’s face in focus. Did you notice?’

Even your best friends couldn't tell if it was you. They scrambled it just enough to let the imagination take over. Hell,'» (Bradbury, 1953, 226-228).

As it can be seen the police and firefighters needed people to believe that Montag was caught, although it was not the real Montag who they have caught.

This is quite similar to all the fake news, that we can find in our real world nowadays, as it is stated in the article «YouTube deletes 30,000 vaccine misinfo videos» by the BBC, YouTube has erased more than 30.000 videos which were contradictory to Covid-19 vaccination information from World Health Organization –WHO– and health authorities as the National Health Service in England –NHS–. These videos claimed false information saying that the vaccine kills people, or causes infertility, or that a microchip inside it was implemented into people to control them.

7. Do androids dream of electric sheeps?

1. Analysis.

This work by Philip K. Dick depicts a futuristic world where a nuclear war devastated the world, and the polluted environment has caused people to leave the Earth and look for new planets to live.

Human beings are encouraged to emigrate to these colonies where they receive an android who serves them. Those human beings who remain on the Earth are exposed to pollution which can alter their genes and in some cases even their mental capacity.

Due to the pollution after the war, almost all the animals have been extinct. Since real animals are quite strange and expensive, owning a real one gives a privileged social status to the owner. As it can be seen in the following quote:

«‘Sir, if you have a down payment of three thou, I can make you owner of something a lot better than a pair of rabbits. What about a goat?’

(...)

‘I thought as much, sir, when you mentioned rabbits. The thing about rabbits, sir, is that everybody has one. I’d like to see you step up to the goat-class where I feel you belong. Frankly you look more like a goat man to me.’» (Dick, P. K., 1999, 262).

The androids which live in the colonies under oppressive conditions try to escape to go to the Earth looking for a free life, they are physically identical to human beings, but they are not allowed to live on the Earth, so «bounty hunters» hired by the police to eliminate them, and they are paid an extra salary each time they hunt an android.

These androids can be only detected using a test which measures the flattening of affect, and as it is claimed in the work, if the bounty hunters apply the test not only to androids, but to schizoid or schizophrenic people, they could be considered as androids, and the bounty hunter would kill them, as it is seen in the following excerpt:

«(...)They want the latest and most accurate personality profile analytical tools used in determining the presence of an android –in other words, the Voigt-Kampff scale– applied to a carefully selected group of schizoid and schizophrenic human patients. Those, specifically, which reveal what’s called a ‘flattening of affect.’ You’ve heard of that.’

Rick said, 'That's specifically what the scale measures.'

'Then you understand what they're worried about.'

(...)

Bryant broke in brusquely, 'think that a small class of human beings could not pass the Voigt-Kampff scale. If you tested them in line with police work, you'd assess them as humanoid robots. You'd be wrong, but by then they'd be dead.' He was silent, now, waiting for Rick's answer.

'But these individuals,' Rick said, 'would all be—'

'They'd be in institutions,' Bryant agreed.(...)» (Dick, P. K., 1999, 72-73).

This work although being a science-fiction and dystopian novel is quite philosophical, since Philip K. Dick asks the reader what means to be human? and the second one, could androids be human?

These questions are answered by Catrin Misselhorn in her article «Empathy and Dyspathy with Androids: Philosophical, Fictional and (Neuro-)Psychological Perspectives» published in *Konturen*, Vol 2 (2009). According to Misselhorn everybody feels empathy towards an android, she intends android as a human-like automata, but when this android seems so real, that looks like a human, people have an eeriness feeling towards them and reject them, this feeling is what Misselhorn calls dyspathy.

In the novel P. K. Dick, tells us that the Rosen Corporation has created a new kind of androids the Nexus-6, which are almost impossible to be detected as androids, indeed they can be considered schizoid human beings, as it is seen in the following excerpt

«Eldon Rosen said huskily. "The issue is that your empathy delineation test failed in response to my niece. I can explain why she scored as an android might. Rachael grew up aboard Salander 3. She was born on it; she spent fourteen of her eighteen years living off its tape library and what the nine other crew members, all adults, knew about Earth. Then, as you know, the ship turned back a sixth of the way to Proxima. Otherwise Rachael would never have seen Earth —anyhow not until her later life.» (Dick, P. K., 1999, 94).

But finally, Rick Deckard was able to prove that Rachael Rosen, «Eldon Rosen's niece» was indeed an android, as the following excerpt shows

«'The scale has been adequate in your case,' he answered.

(...)

he said, 'Does she know?' Sometimes they didn't; false memories had been tried various times, generally in the mistaken idea that through them, reactions to testing would be altered.

Eldon Rosen said, 'No. We programmed her completely. But I think toward the end she suspected.' To the girl he said, 'You guessed when he asked for one more try.'» (Dick, P. K., 1999, 105).

As it is seen, in the work empathetic androids are not able to be produced, but the question is if finally an empathetic android has been created in our real world by our time, and the answer is yes, so the technological prediction by P. K. Dick about empathetic androids has been fulfilled.

a. Technology.

1. PEPPER.

As it is said in the article «Pepper, the Emotional Robot, Learns How to Feel Like an American» published in 2016 by *Wired*, Pepper is a human-like robot created by Softbank. This robot uses facial and voice recognition to detect feelings, as the vice-president of Softbank Robotics America stated to *Wired* «Its height, shape, the fact that it has arms that can gesticulate – are all designed to show empathy.»

On the article «A Mass-Produced Sociable Humanoid Robot: Pepper: The First Machine of Its Kind» published in 2018 in *IEEE Robotics & Automation Magazine* it is stated that «This is also a way for the robot to demonstrate that it is in the present and ready to help or interact. It also gives the impression of having its own personality.» (*IEEE Robotics & Automation Magazine*, Vol. 25, Issue 3, Sept. 2018, 45). It is also stated that this robot can be used in elder care centres and in child education field.

8. Conclusion

To conclude this project, I will summarize in which grade those predictions grouped in the different categories are present in our real world nowadays.

1. Technology.

As it has been seen regarding to the group of technological development it could be said that most of the technological devices predicted by these works have been fulfilled in the real world nowadays.

For example those technological devices depicted by Orwell in 1984, as the telescreen, the speakwrite, and the novel-writing machine, can be found in our real world nowadays, and used daily by people.

The same can be said by those technological devices depicted by Bradbury in *Fahrenheit 451*, as the parlor walls, the seashells, and the air-propelled trains, even PEPPER the empathetic robot has become true nowadays not just a fantasy depicted by P. K. Dick in his work *Do androids dream of electric sheeps?*

The only technological device which nowadays it is not mass produced since it is under development is the mechanic hound from Bradbury's work, which in our real world it is not a mechanic hound, but a robot which can track odours.

Of course some of these devices are not used with the original purpose the author planned them to be used, for example the mechanic hound, which was thought to pursue and kill people, or the telescreen which was thought to spy people, although the real world elements that spy us are not planned by a totalitarian regime which tries to control the society, but they are present in some way in our real world, for that reason it can be concluded that in terms of technological development the predictions are quite accurate.

2. Bio-technology.

As it has been seen those practices which belong to the bio-technology field, depicted by Aldous Huxley in his work *Brave New World*, as cloning, gene therapy and genetic engineering, and in vitro fertilization, are quite common nowadays in our real world, it is true that cloning it is not as common as the other practices, and there is an ethical debate about the use of gene therapy and genetic engineering in human beings, although as it has been described, genetic engineering is used in different fields, as the agricultural industry.

For that reason it can be considered that those practices analysed in this project which belong to the bio-technology field, nowadays are quite common and what the author imagined how could be used is quite accurate to our real world.

3. Society.

The social aspects analysed in this project will be divided in two subgroups, those which are related to social customs, or social movements, and those related to politics.

a. Social.

As it has been seen the social predictions done by these works have been fulfilled, starting from the class struggle movement, depicted by H. G. Wells, which in our real world it resulted to be the Russian Revolution, to the consumerism society depicted by Huxley in *Brave New World*, which in terms of consumerism it is not so different as our society, and those social customs which Bradbury described in his work *Fahrenheit 451*, the social media and the fake news, which do not differ so much from what we live nowadays.

b. Politics.

On the other hand it can be seen that those political ways portrayed in *1984* have been seen in our real world by totalitarian regimes during the 20th and 21st Century to control the society.

It can be concluded that those social aspects described in these works have predicted quite accurately how the society would be in the real world.

After this analysis it could be said that of course we are not living a dystopia, but many aspects from our own reality are shared or were predicted by these dystopian works.

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