



**TRANSHUMANISM IN RICHARD K. MORGAN'S
ALTERED CARBON AND DON DELILLO'S *ZERO K***

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THESIS APPROVAL PAGE

I certify that in my opinion the thesis submitted by Tuğba ŞİŞMAN titled “TRANSHUMANISM IN RICHARD K. MORGAN’S *ALTERED CARBON* AND DON DELILLO’S *ZERO K*” is fully adequate in scope and in quality as a thesis for the degree of Master of Arts.

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DECLARATION

I hereby declare that this thesis is the result of my own work and all information included has been obtained and expounded in accordance with the academic rules and ethical policy specified by the institute. Besides, I declare that all the statements, results, materials, not original to this thesis have been cited and referenced literally.

Without being bound by a particular time, I accept all moral and legal consequences of any detection contrary to the aforementioned statement.

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Signature :

FOREWORD

I would like to express my deepest gratitude to Associate Professor Harith Ismael Turki for his mentorship, guidance, and valuable feedback. I am indebted to him for his encouragement and interest despite his heavy workload.

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ABSTRACT

This study analyses transhumanism as it is reflected in two science fiction novels, namely *Altered Carbon* and *Zero K*. In this analysis, both elements of transhumanism are revealed, and the impacts of these elements on human beings, the definition of human, nature, and the human and non-human relationship are scrutinized. The novels contain main transhumanist dreams, such as mind uploading, human cloning, and cryopreservation. All these technologies result in huge enhancements in human life, as transhumanist thinkers claim, but they have some side effects as well. The aim is to demonstrate a life that advocates transhumanism dream to present some issues that bioconservatists discuss in the transhumanism context and uncover the outcomes that transhumanism does not expect.

It can be seen that transhumanist technologies, especially mind uploading and cloning, have eased life in the world of *Altered Carbon*. Similarly, characters in *Zero K* have a better life as they can end their incurable diseases, escape from the calamities of the earth and defeat death. However, it is found out that this transhumanist life causes drawbacks in both novels. Characters lose their human nature and their connection with nature. As a result, a new type of human has occurred. Furthermore, the issues of identity, individualism, religion, equality, and dualisms have appeared. Hence, the novels provide an outline of transhumanism and signal what transhumanism supporters ought to consider, and both sides are reflected in this study.

Keywords: A new definition of human; cloning; cryopreservation; mind uploading; posthumanism; transhumanism.

ÖZ (ABSTRACT IN TURKISH)

Bu tez, *Altered Carbon* ve *Zero K* bilimkurgu romanlarında yansıtıldığı şekliyle transhümanizmi analiz etmektedir. Bu analizde hem transhümanizmin unsurları gösterilmiş hem de bu unsurların insanlar, insan doğası, doğa ve insan-doğa ilişkisine etkisi incelenmiştir. Romanlar zihin aktarımı, insan klonlama ve kriyoprezervasyon gibi temel transhüman ilerlemeleri içermektedir. Transhüman düşünürlerin de iddia ettiği üzere bu teknolojiler insan yaşamında çok büyük gelişmelere sebep olmuştur ancak bu teknolojilerin yan etkileri de mevcuttur. Amaç, transhümanizm savunucularının hayal ettiği hayatı ve biyo-muhafazakarların transhümanizm ile ilgili tartışmalarını sunmak ve de transhümanizmin öngörmediği sonuçları ortaya çıkarmaktır.

Başta zihin aktarımı ve insan klonlama olmak üzere, transhüman teknolojilerin *Altered Carbon* toplumunda hayatı kolaylaştırdığı görülmektedir. Buna benzer olarak, *Zero K* karakterleri de tedavi edilemeyen hastalıklarını sonlandırabildikleri, dünyadaki felaketlerden kaçabildikleri ve ölümü yendikleri için daha iyi bir hayata sahiptir. Fakat transhüman hayatın her iki romanda da dezavantajları olduğu görülmektedir. Karakterler insan doğalarını ve doğayla olan bağlarını kaybetmektedir. Sonuç olarak da yeni bir insan ortaya çıkmıştır. Ayrıca kimlik, bireysellik, din, eşitlik ve ikilik gibi sorunlar doğmuştur. Dolayısıyla romanlar hem transhümanizmin bir çerçevesini çizmekte hem de transhümanizm destekçilerinin düşünmesi gereken konuları işaret etmektedir ve her iki taraf da bu çalışmada sunulmuştur.

Anahtar Kelimeler (Keywords in Turkish): İnsan klonlama; insanın yeni tanımı; kriyoprezervasyon; posthümanizm; transhümanizm; zihin aktarımı.

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ABBREVIATIONS

Etc.: Ve benzeri gibi

ed.: Baskı

p./pp.: Sayfa/Sayfalar

Vol.: Sayı

AI: Yapay zeka

d.h.: Dijitalleşmiş insan

SUBJECT OF THE RESEARCH

This study aims to demonstrate the transhumanist worlds of two science fiction novels, namely *Altered Carbon* and *Zero K*, the changes transhumanism has caused in human nature, nature, the definition of human, and the relationship between humans and non-humans. Both enhancements and issues that transhumanism brings about are analyzed.

PURPOSE AND IMPORTANCE OF THE RESEARCH

The purpose of this study is to compare two science fiction novels, which have a transhumanist atmosphere. Both novels include many of the most significant transhumanist technologies and ideals in their plots, themes, settings, and characters. The dominance of transhumanism has some effects on society in both novels. Technologies have altered people's viewpoint of death and life, and even of what a human is. It is also possible to analyze the impact of transhumanist technologies on nature and human-nature balance. As the focus is on two contemporary novels, *Altered Carbon* and *Zero K* written in 2002 and 2016, respectively, few studies have focused on these works, and this contributes to the originality of the study. The existing studies on both novels are mostly about the ethical and social concerns related to technology. The ones that read these novels in terms of transhumanism or posthumanism underline the negative sides of technology. However, this study has a neutral approach to transhumanism in the selected works. Also, the study differs from the others in that it addresses the impacts of transhumanism on the definition of a human being and on human-nature connectedness. In addition, transhumanism has become a crucial topic in recent years, especially with the occurrence of Covid-19 pandemic, which has revived the need for technological advances for human health. Similarly, environmental concerns have been increasing as human actions cause the deterioration of nature. Therefore, finding out what transhumanism is together with its ecological implications makes the study valuable and contemporary. Though other studies have been conducted on transhumanism in different areas, such as biotechnology and philosophy, the current study is unique as it compares two science fiction novels that have not been studied together earlier. Consequently, it is expected to contribute to the present research area by exploring the meaning and history of transhumanism in detail, presenting different viewpoints of various advocates of transhumanism, bio-

conservatism, and showing the positive and negative impacts of transhumanist technologies.

METHOD OF THE RESEARCH

Transhumanism theory is described by important works and scholars. Related terms and issues are explained, whereby the two novels are analyzed in terms of transhumanism. Besides, the elements of transhumanism and its effects are demonstrated together with the debates it causes.

HYPOTHESIS OF THE RESEARCH / RESEARCH PROBLEM

The worlds of *Altered Carbon* and *Zero K* carry the traces of main transhumanist values. Despite the advancements that transhumanist technologies have brought, they have resulted in alterations in the nature of human beings, spoiled nature and the connection between humans and nature, and legitimized some claims of bio-conservatists.

SCOPE AND LIMITATIONS / DIFFICULTIES

As the novels analyzed in this study are relatively new, limited studies have focused on them; studies on transhumanism are mostly about its ethical implications.

1. INTRODUCTION

1.1. Science Fiction, Transhumanism, and History of Transhumanism

Human beings have always been trying to extend their limits. Archaeological findings have shown that even early humans were affected by death and wanted to expand life. Preservation of life has been targeted by many people, either through magic or technology. Prometheus is one of the most well-known ancient figures aiming at improving the human condition by giving them fire. In Medieval Christianity, it was thought that a panacea could be made by alchemy, but Aquinas and his followers rejected this idea. In this regard, Renaissance humanism praised culturally, scientifically, and morally developed people. In the age of enlightenment, science, empiricism, and reason were used to improve the human condition. Rational humanism of this period could be seen as the root of transhumanism. The 18th and 19th centuries created the idea that even humans themselves can be improved by the use of science. Darwin's *Origin of Species* demonstrated that human beings were not at the endpoint of their evolution. The rise of science supported the idea that technology could be used to enhance the human organism (Bostrom, 2005a, pp. 2-3). Today, science still keeps its important place in human life because it has saved humans from many of their burdens and some diseases. As people get far from nature and do not want the limitations of nature, and science becomes more and more developed, human dependency on science has increased, and resulted in the appearance of transhumanism.

Transhumanist ideas spread in different ways, and science fiction has become one of the most significant channels for the transmission and reproduction of transhumanist ideas, such as synthetic worlds and revolutionary technologies. It reflects possible worlds and creates images in the cultural imagination. According to the cultural theorist Shulamith Firestone, culture moves from imagination to actualization, so science fiction constitutes an area where the radical ideas of transhumanism are introduced and normalized. The fact that transhumanist ideas are reflected in science fiction signifies that these ideas are worth discussion including their entertainment function. If they are shared by enough people, writings about speculative technology makes ideas acceptable. As Hayles points out, future imagining

is not an innocent or a neutral act, so science fiction sources like books, films, music, and video games must be accepted as means for fantasizing potential effects of transhumanism. Bostrom too holds that the first phase for the development of revolutionary technology is creating the probability in people's minds, which is undertaken by science fiction. For instance, in *Altered Carbon*, the words like “stack” and “sleeve” demonstrate the radical nature of uploading technology. Thus, science fiction displays that transhumanism has become widespread not only through conferences, books, and the internet but also through science fiction works that make radical enhancement ideas of transhumanists normal. This normalization, in the end, leads to the actualization of the technologies (Ross, 2020, pp. 55-61).

The leading science fiction works that are effective in the spread of transhumanist thought can be examined by starting with British biochemist J. B. S. Haldane's essay *Daedalus: Science and the Future* published in 1923. In this essay, he expressed the advantages of using science to control human genetics. He estimated a future when people would be richer with more clean energy, would be better through genetics, and the use of fetuses in artificial wombs would be widespread. This was followed by J. D. Bernal's *The World, the Flesh and the Devil*, which mentions space colonization, bionic implants, and mental improvements through science; as well as by Olaf Stapledon's works and Bertrand Russell's “Icarus: The Future of Science”. Authors such as Stapledon and H. G. Wells made people consider the future of human beings. In Aldous Huxley's *Brave New World* written in 1932, it influenced the debates on technological changes in human beings. Another dystopia that had a deep impact was George Orwell's *1984*. Both dystopias implied the possible dangers of high technology. In the post-war era, more people started to believe in science for a better future through space travel, medicine, and computers, so science fiction started to be a fact. In this period, transhumanist themes were analyzed mostly in science fiction literature. Consequently, Arthur C. Clarke, Isaac Asimov, Robert Heinlein, Stanislaw Lem explained that technology could change the human condition (Bostrom, 2005a, pp. 4-6). The word “transhumanism” was first used by the biologist, Julian Huxley, who wrote in *Religion Without Revelation*:

The human species can, if it wishes, transcend itself – not just sporadically, an individual here in one way, an individual there in another way – but in its entirety, as humanity. We need a name for this new belief. Perhaps transhumanism will serve: man remaining man,

but transcending himself, by realizing new possibilities of and for his human nature (as cited in Bostrom, 2005a, p. 6).

Despite the help of science fiction, the internet is the main element that turned transhumanism's abstract idea into being a rising culture. Nevertheless, before the arrival of the internet, people who were into technology, AI, and nanotechnology laid the foundation of transhumanism. It could be reported that the transhumanism process started in 1989 through a journal called *Extropy: The Journal of Transhumanist Thought*. The internet became the most fruitful area for those who are interested in transhumanist ideals, its pioneers, founders, and scholars. In 1991, an e-mail list about technology and the human future was created at Extropy Institute, which was the leading non-profit foundation on transhumanism. This institute held conferences between 1994 and 2004, and the ideas of AI, Super AI, human-computer integration, cryptocurrency, nanotechnology, technological singularity, radical life extension, and posthumans were discussed in these gatherings. Also, some transhumanists who were into politics worked to prepare a guideline for the future from the mid-1990s to 2018 because people must emulate and study how to use smart devices that change lives (Vita-More, 2019, pp. 53, 56).

To mention early transhumanists, it is possible to start with Robert Ettinger. The idea of cryonics was first launched by Robert Ettinger in his book *The Prospect of Immortality* in 1962. He pointed out that the human body could be frozen in liquid nitrogen and is preserved until a cure was found for the disease of the frozen person. However, this idea did not attract much attention. Today, two foundations offer cryopreservation. F. M. Esfandiary was another early transhumanist who created a group of optimistic futurists named UpWingers. According to F. M., a transhuman is a "transitional human" who has a link to the coming posthuman era. He thinks that prostheses, plastic surgery, use of telecommunications, androgyny, destruction of religions, and dismissal of established family valuation are some signs of transhumanism. 1988 saw the first issue of *Extropy Magazine*, published by Max More and Tom Morrow, and in 1992, the same names started the Extropy Institute, which brought separate futuristic groups together. As the first step for the foundation of transhumanism, extropy has similar principles (See Attachment A for the principles of the Extropy Institute). Finally, The World Transhumanist Association was established in 1998 by Nick Bostrom and David Pearce, which provided a base for all

transhumanist groups. *Transhumanist Declaration* and the *Transhumanist FAQ* were accepted as the founding documents of this association (Bostrom, 2005a, pp. 10-12). (See Attachment B for the principles of transhumanism in the Transhumanist Declaration).

Transhumanism as it is used today is thought to originate from Julian Huxley's essay "Transhumanism" in *New Bottles for New Wine* (1957). Another name associated with the origin of transhumanism is Max More because the doctrine of transhumanism came into being in his essay "Transhumanism: Toward a Futurist Philosophy". Transhumanism encourages an integrative way of discerning and assessing the cases for improving human status and structure through technology. It is interested in both existing technologies such as genetic engineering, information technology, etc., and the future ones like molecular nanotechnology and artificial intelligence. The targeted enhancement areas are extending the human life span, eliminating diseases and suffering, making death optional, improving human intellect, physics, and emotion, space colonization, and developing super-intelligent machines (Bostrom, 2005b, p. 1).

1.1.1. Definitions of Transhumanism and Basic Transhumanist Aims

The use of the term "transhuman" is found in various fields, such as literature, philosophy, religion, and evolutionary biology. The "Report on The Meaning of Transhuman" maintains that the use of the term for the first time dates back to Dante Alighieri's *Divine Comedy* in which transhuman meant to "go outside the human condition and perception" to demonstrate the shift in the human body to eternal being in afterlife belief. The term "transhumanized" is seen in T.S. Eliot's *The Cocktail Party* to show the hazard of the human expedition in having a revelation, a process through which humans are transhumanized. *The Reader's Digest Great Encyclopaedia Dictionary* describes the noun "transhuman" as "surpassing, transcending, beyond" in 1966. Later, in 1972, Robert Ettinger brought the term into the field of science fiction by using "transhumanity" in his *Man into Superman*. "Transhuman" as a fate of human transformation was introduced by FM Esfandiary in *Women the Year 2000*. Similarly, *Webster's New Universal Unabridged Dictionary* gives the definition of "transhuman"

as “superhuman”, and “transhumanize” as “to elevate or transform to something beyond what is human” in 1983 (Vita-More, 2019, p. 50).

Based on these definitions, it is possible to mention three strands of transhumanism. The first one, namely individual transhumanism is the ambition to live a better life with the support of enhancements that could provide the individual with health, more mental capacity, refined emotions, a longer lifespan, and even a posthuman identity. Terrestrial transhumanism, on the other hand, includes all humanity affected by technologies such as life extension, cognitive improvement, nanotechnology, AI, brain emulation, and space colonization. Finally, cosmist transhumanism takes place on a larger scale. When it becomes technological, intelligence controls the natural world, colonizes space, and achieves a potential life in the universe (Sandberg, 2014, pp. 2, 6, 12). According to transhumanists, mankind is a thing that keeps going, and thanks to technology and science, humans could become posthumans, who have more capacities than humans. The most important aims of transhumanism include longer and healthier life, better memory and intellectual faculties, and more control over life. Transhumanists trust the possibilities that the future may bring, but they are aware of the risks at the same time. Social inequalities, human relationships, ecological diversity, and loss of intelligent life are some possible threats that transhumanists foresee (Bostrom, 2005b, p. 2). What transhumanists claim is that they work to enlarge and destroy human limitations by taking into consideration these risks.

Treatment of humans to each other and other living beings is an issue that transhumanists are interested in. While human beings constitute 0.01% of living beings, they cause the destruction of 83% of wild mammals and 50% of plants (Lee, 2019, p. 29). Therefore, it is not surprising that in 2015, researchers informed that Earth’s flora and fauna were experiencing a mass extinction for the sixth time. In this regard, Professor Gerardo Ceballos state:

If the currently elevated extinction pace is allowed to continue, humans will soon (in as little as three human lifetimes) be deprived of many biodiversity benefits. ... The loss of biodiversity is one of the most critical current environmental problems, threatening valuable ecosystem services and human well-being” (as cited in Lee, 2019, p. 29).

Besides the extinction problem, the world has been facing natural disasters, and due to humans’ negative effect on nature, these disasters will happen more often in the future. Transhumanism creates new technologies for survival and encourages serious

strategies to protect the Earth and all creatures from the harm of human actions. For example, transhumanists may create cities in the ocean or amphibious humans by genetic engineering if the world gets underwater because of global warming. More specifically, transhumanism aims to hasten the progress of earthly beings including humans to make them capable of survival on the changing planet (Lee, 2019, p. 34).

The lifespan of human beings is one of the most basic limitations; the present human lifespan is not long enough for the development of humans, who could improve themselves more if they live longer. Another limitation to human development is the intellectual capacity of humans. The human brain is not powerful to understand many things, including what a posthuman is. Besides, the body function constitutes a limitation for humans; therefore, uploading the human mind into a computer could eliminate the impediments that the body causes. It is also possible to develop human sensory modalities by improving the brain. This can create abilities to see infrared radiation, perceive radio signals, and even have telepathic senses (Bostrom, 2005b, pp. 3-5). Transhumanist David Pearce advocates the comprehension of transhumanism through the areas of super-longevity, super-intelligence, and super well-being. Super longevity means extreme life extension. It is significant for transhumanists because it pursues the treatment of aging, but it does not accept aging as necessary to human identity. Aubrey de Grey is a defender of super longevity through his works of Strategies for Engineered Negligible Senescence Research Foundation, whereby studies on biochemical engineering and regenerative medicine are carried out. The foundation aims to stop the consequences of aging. Michael R. Rose is another transhumanist working on super longevity. He is against the process followed by Grey, but he agrees with Grey that longevity can be achieved if the body is seen as a repairable object. Besides the biological solutions, there is also nanotechnology as a way of super longevity. In this approach, nanomachines replace the individual chromosomes of cells, thus resulting in a self-sustaining body.

Superintelligence is the second area that transhumanists focus on and plan to use computers to devise an intelligence matching exceeding the boundaries of human beings. It is expected that superintelligence will be possible when artificial intelligence, whole brain emulation, and brain-computer interfaces are achieved. The whole brain emulation or uploading is the scanning and modeling of the human brain and uploading this model to a computer. If the original intellect is not harmed by its

memory and personality, uploading becomes successful. In the brain-computer interface, working biological brains are developed to levels of better-than-human intelligence. Among transhumanists who created ideas on superintelligence is Ray Kurzweil who is famous for his association of superintelligence with technological Singularity. According to Kurzweil, Singularity is the moment that humans will surpass their biological limitations and will live forever. The third prominent area for transhumanists is super well-being. David Pearce holds that transhumanism must remove suffering from the earth; consequently, he advocates the use of drugs and genetic engineering, specifically microelectrodes, neuropharmacology, and gene therapy (Ross, 2020, pp. 38-43).

Concerning the conditions of attaining transhumanist aims, security could be the first one; transhumanists should be cautious of the existential risk. This implies that an adverse effect may destroy intelligent life on earth or decrease its potential completely. Thus, existential risk is crucial for transhumanist projects because if people go extinct or their potential is curtailed, these projects cannot be achieved. Technological progress is another necessity for transhuman dreams. Science needs developed tools and technology to enhance the human condition. However, this requires a good economy as technological progress depends on money. Finally, transhumanist developments must be obtained by everybody rather than by the only wealthy ones. This wide access is good for inequality issues, gaining support for transhumanism, increasing the possibility of becoming posthumans, and lessening human suffering on a large scale (Bostrom, 2005b, pp. 7-8).

1.1.2. Nietzsche and Transhumanism

Some transhumanists accept Nietzsche as the ancestor of transhumanism. For instance, Max More and Stefan Lorenz Sorgner find links between Nietzsche's philosophy and that of transhumanism although another transhumanist figure, called Nick Bostrom, thinks that they are surface-level similarities. A dynamic view of nature and values is the first thing that the advocates of similarities put forward. It is known that transhumanists think that human being is a thing progressing. Nietzsche also holds that all things undergo changes all the time and there exists nothing fixed forever. According to him, the dynamics of power highlight the evolution process, which

creates humans, animals, and plants. Like all species, human beings are not fixed and unchangeable. Besides, they have limited potential and every species is defined by its limits. Nietzsche also asserts that under some conditions, evolution may happen and species can develop. Thus, he agrees with transhumanists in that evolution will happen unless human beings go extinct.

Furthermore, both Nietzsche and transhumanism describe values as mutable (Sorgner, 2009, pp.30-31). In this regard, Bostrom states “Transhumanism is a dynamic philosophy, intended to evolve as new information becomes available or challenges emerge. One transhumanist value is therefore to cultivate a questioning attitude and a willingness to revise one’s beliefs and assumptions” (as cited in Sorgner, 2009, p. 32). Similarly, Nietzsche points out that values alter on different levels, namely social, cultural, and personal levels. Science, enhancement, and education are other topics about which Sorgner and More find some parallels between transhumanism and Nietzsche’s philosophy. They think that both sides support the reevaluation of values. Bostrom asserts, “Transhumanists insist that our received moral precepts and intuitions are not in general sufficient to guide policy” (as cited in Sorgner, 2009, p. 32), so he encourages analytical thoughts, openness, and objective analyses. Nietzsche is also in favor of critical thinking as it is seen in his criticism of morality and religion.

Contrary to transhumanism’s liberalism value that highlights people’s right to choose transhumanist technologies, Habermas thinks that parents’ choice of genetic alterations for their children must be immoral as children feel that they are forced. He adds that there is a difference between such genetic alterations and education. In education, children can behave against what they learn, and education gives qualities that could be changed later. However, genetic alterations cannot be undone. Bostrom, on the other hand, rejects Habermas’s criticisms as “there is no special ethical merit in playing genetic roulette. Letting chance determine the genetic identity of our children may spare us directly from directly confronting some difficult choices” (as cited in Sorgner, 2009, p. 34). He also encourages taking the initiative to do something instead of complaining which demonstrates the courageous characteristics of transhumanists, and courage is stressed by Nietzsche as well. He is a person who understands the importance of science for the future.

Transhumanism stresses individual freedom and choice in technological enhancements, so transhumanists do not dictate their values to other people. Also, they advocate a fully-developed, well-rounded personality, and believe that everybody cannot be a renaissance genius, but they can always try to broaden their horizons. According to Nietzsche, every human being has a different perspective, which is an exclusive notion of power. In his philosophy, one's striving to broaden his horizon is named "overcoming" because higher humans try to overcome themselves constantly and, in the end, the "overhuman" comes into existence. Nietzsche's overhuman is the posthuman in transhumanist thought. In this domain, two leading transhumanists, namely Nick Bostrom and F.M. Esfandiary interpret the posthuman in different ways (Sorgner, 2009, pp. 35-36). For Bostrom, the posthuman ability refers to "a general central capacity greatly exceeding the maximum attainable by any current human being without recourse to new technological means" (as cited in Sorgner, 2009, p. 36). Nevertheless, Bostrom thinks humans can be posthumans through technology, so he implies that both humans and posthumans are included in species of human beings and they can reproduce themselves by sexual production.

For Esfandiary, "a transhuman is a transitional human, someone who by virtue of their technology use, cultural values, and lifestyle constitutes an evolutionary link to the coming era of posthumanity" (as cited in Sorgner, 2009, p. 36), so he highlights that transhumans belong to species of human beings and can reproduce with humans while posthumans cannot. Between these two definitions of posthuman and transhuman, Sorgner likens Esfandiary's transhuman and posthuman to Nietzsche's higher human and overhuman successively, because like transhumans, higher humans are considered a human species and they cannot convey their abilities to their offsprings by sexual production (Sorgner, 2009, pp. 37-38).

1.1.3. AI, Uploading, Singularity, and Posthumanism

Clever self-moving devices or human-like automata found a place in science fiction with the rise of the electronic computer. The term "robot" was invented by Karel Capek in his *R.U.R.*, which is a play where robots destroy their human creators. Because of the question of whether an artificial intelligence machine could pretend to be a human being, Alan Turing created the Turing Test to distinguish a computer from

a human. Later, rapid technological changes resulted in the singularity hypothesis, which points out that developments will cause a type of discontinuity (Bostrom, 2005a, pp. 6-7). In 1965, the singularity hypothesis was first explained by I. J. Good as follows:

Since the design of machines is one of these intellectual activities, an ultraintelligent machine could design even better machines; there would then unquestionably be an 'intelligence explosion,' and the intelligence of man would be left far behind. Thus, the first ultraintelligent machine is the last invention that man need ever make (as cited in Bostrom, 2005a, p. 8).

Transhumanists have various ideas about the singularity hypothesis today. While some of them think it is possible, others do not believe in such a big change as a result of developed artificial intelligence. Uploading is another assumed technology that may have a big effect on human beings. Uploading means the transmission of the human mind to a computer, and this technology has some issues like its applicability and loss of identity of the person. Although artificial intelligence technologies such as AI and uploading could alter the human condition, transhumanism does not totally rely on the practicability of these technologies. There are already existing technologies like virtual reality, genetic engineering, cosmetic surgery, prosthetics, and they can change human life profoundly when they become mature in the future (Bostrom, 2005a, pp. 8-10).

Posthuman has become a term including posthumanism and transhumanism, whereby the concept that human beings is not fixed but changeable is shared by both transhumanism and posthumanism. More specifically, transhumanists think that humans will be transformed into posthumans through technological progress. This notion of posthumanism should not be confused with post-anthropocentric, post-dualistic posthumanism. As transhumanism has its roots in the Enlightenment, its purpose is human enhancement which plans to lead humans to posthumanity by going beyond humanity, so the transhuman being is a being of passage while the posthuman being is something new exceeding humans. Posthumanism requires the acceptance and hybridization of humans with other living beings and machines, and to do this, it proposes the elimination of boundaries and differences (Valera, 2014, pp. 482-483). According to posthumanism, "the human is no longer ... the adoption or the expression of man but rather the result of a hybridization of the man with non-human otherness" (as cited in Valera, 2014, p. 483). For posthumanism, technology is not something to be feared and is not put in a nearly divine position.

Technology enters the posthuman debate through feminism, namely Donna Haraway's cyborg and her demolishing dualisms. That is, posthumanism is against hierarchical social constructs and human-centered ideas. Though it explores science and technology areas, posthumanism does not put them at the center nor does it restrict itself to them (Ferrando, 2013, pp. 26-29). Rather, it is a philosophy that "provides a suitable way of departure to think in relational and multi-layered ways, expanding the focus to the non-human realm in post-dualistic, post-hierarchical modes, thus allowing one to envision post-human futures which will radically stretch the boundaries of human imagination" (Ferrando, 2013, p. 30). On the other hand, transhumanism has a more human-centric point of view as its aim is the augmentation of the human condition. As a result, although posthumanism is the final destination for transhumanism and both have some points in common, posthumanism has a more different wider perspective.

1.1.4. Equalism and Christian Transhumanism

Transhumanism accepts that inequality among people hinders personal development and causes crimes in societies. Therefore, equal distribution of goods and resources is the only way to end humans' greed which results in more inequality. Religious transhumanism thinkers hold that the paradise that has been lost due to greed can be regained through socioeconomic equality and the eradication of exploitation. It is socioeconomic inequality that leads humans to sin, suffering, and wars, so socioeconomic equality is at the center of equalism ideology. It is suggested that science and technology can bring equality back. For a paradise on earth, they advise founding socioeconomic equality, having physical immortality, keeping the environment clean, and creating Christian transhumanist consciousness. Thus, social classes will be eliminated through means of production that are owned by the public, the central economy by IT, and automated labor. Therefore, human work will become a way to express the self, and money will disappear (Lee, 2019, pp. 853-854).

Privately owned means of production are the most important reason for classes and human exploitation, so the means of production must be owned by the state to achieve socio-economic equality. Together with the means of production, transportation, communication, and lands should be managed and owned by the state. A database

system could be created to register people and give them a land for residence or for agriculture. In this regard, Christian transhumanism provides a new type of government called e-democracy that enables citizens to participate in politics through developed information technology. Elections and legislations can be objective in this way. Besides, Thamy Pogrebinschi (2017) expresses the impact of technology on political processes:

Digital tools and widespread access to the internet have been changing the traditional means of participation in politics, making them more effective. Electoral processes have become more transparent and effective in several countries where the paper ballot has been substituted for electronic voting machines. Petition-signing became a widespread and powerful tool as individual citizens no longer needed to be bothered out in the streets to sign a sheet of paper but could instead be simultaneously reached by the millions via e-mail and have their names added to virtual petition lists in seconds. Protests and demonstrations have also been immensely revitalized in the internet era. In the last few years, social networks like Facebook and WhatsApp have proved to be a driving-force behind democratic uprisings, by mobilizing the masses, invoking large gatherings, and raising awareness, as was the case of the Arab Spring (as cited in Lee, 2019, p. 855).

Cyberocracy is another solution that Christian transhumanism suggests for a better government. In this system, governments are replaced with supercomputers. The functions are determined through e-referendum and the data of the referendum is handled by a supercomputer to solve socio-economic problems. In addition to this type of democracy, a centrally planned economy controlled by AI and the elimination of money are necessary for paradise on earth. The statistics about the items bought by people will be used to determine the amount of production, and automated labor will manufacture as many items as necessary. This will balance market relations and put an end to the existence of money in time. While passing from a market economy to a centrally planned economy, a universal basic income system must be used because such a system can stop inequalities before the end of the money era. This idea is already funded by some names, such as Mark Zuckerberg and Elon Musk. Also, in this transition period, banknotes must be replaced with digital currency so that manipulation of banks and economic barriers will come to an end (Lee, 2019, pp. 855-859).

1.1.4.1. Transhumanism and Bioconservatism

In his *Citizen Cyborg*, James Hughes introduced the term “democratic transhumanism”. He thinks that people could arrive at the best posthuman time when the technologies are secure, accessible to everybody, and when they value the rights of

humans about controlling their bodies. What distinguishes democratic transhumanism from extropian transhumanism is that the former gives a role to the government in making the technologies safe, and available to all. Despite this type of transhumanism that embraces everybody, some people are against transhumanism under the roof of bioconservatism, which does not support the use of technology to enhance humans or alter the biological nature of human beings. Leon Kass is a famous bioconservative figure today who is worried that technological mastery of human nature may lead to the dehumanizing of people by changing the meanings of the life cycle, sex, eating, and work. Another bioconservative voice called Francis Fukuyama declared that transhumanism is “the world’s most dangerous idea”. His concern is about the possibility of violence and oppression as a result of enhancing technologies. Further, Bioethicists George Annas, Lori Andrews, and Rosario Isasi advocated the prohibition of genetic modification. Transhumanists think that despite the opposition, there are some points that both bioconservatives and transhumanists share. More specifically, they both point out that technology might be employed to alter human status in this century, but this requires ethical and practical considerations. Further, both sides are worried about the side effects and are against racist eugenics programs (Bostrom, 2005a, pp. 17-20).

The term bioconservative was created by rhetorician Dale Carrico in 2004. Based on the definition of the term, he proposed the following:

Bioconservatism [is] a stance of hesitancy about technological development in general and strong opposition to the genetic, prosthetic, or cognitive modification of human beings in particular... bioconservative positions oppose medical and other technological interventions into what is broadly perceived as current human and cultural limits in the name of a defense of the natural deployed as a moral category (as cited in Ross, 2020, p. 18).

The Transhumanist idea that the human essence can be shaped into the posthuman one is criticized by bioconservatives. For Bostrom, the most important bioconservatives are Francis Fukuyama and Leon Kass. Bioconsevatives share two concerns. The first one is that the existence of posthumans may undermine human dignity, and the second one is the consideration that the posthuman condition can be debasing.

The first concern is expressed by Fukuyama who states “Factor X” is an ambiguous and essential human quality that remains when all human characteristics are eliminated. It signifies some unique human characteristics that explain dignity. In addition, he believes that this Factor X is given by God, so dignity is not made, but it is

received. Therefore, the posthuman concern is not that posthumans can have dignity and moral status; rather, that there could be a posthuman virtue that is inconsistent with the human virtue as one is given while the other is made. As a result, Fukuyama advises that the state should have a precautionary manner toward posthuman technologies. Bill Joy, a computer scientist, defends Fukuyama in that some enhancement technologies should be limited. Although he is not anti-technology, he believes that limiting certain technologies is a good way to refrain from the existential risks they may cause. This idea of restricting technologies is represented in the precautionary principle, which is Fukuyama's solution to the threats of transhumanism. As a counterpoint to this principle, Max More created the proactionary principle, which is essential to transhumanism because it highlights reinterpreting risk as an opportunity. Since it focuses on the perception of risk, the precautionary approach impedes the learning process (Ross, 2020, pp. 19-21).

Leon Kass is a leading bioconservative, who asserts that the posthuman mode of being may be humiliating. He accepts nature as the guide to what is desirable and correct. Repugnance or the "yuck factor" describes the claim that natural functions are a guide. This yuck factor cannot explain why posthuman technologies are bad although they cause the feeling that they are so. Kass thinks that this feeling ought to be taken into consideration (Ross, 2020, pp. 22-23). Further, Kass maintains that technology's predominance over human nature will lead to the posthuman as a disgraced state of being as he mentions "The final technical conquest of his own nature would almost certainly leave mankind utterly enfeebled. This form of mastery would be identical with utter dehumanization" (as cited in Ross, 2020, p. 23).

1.1.4.2. Challenges to Transhumanism

Since transhumanists assert that their promises are scientific, it is necessary to evaluate the truth of this claim. Most of the transhumanist enhancement lists have promises followed by "may", "might" and "could", so these promises do not guarantee a better life and even if they are science-based, these technologies are mostly not proven. The use of drugs such as amphetamines for learning something, Cholinesterase for better recollection, and Ritalin for concentration are supported by many transhumanists. However, they bring temporary solutions, and their long-term effects

are not known yet. Moral perfectibility is one thing that transhumanists are interested in. They assume that the problem is human nature as it does not have moral psychology that is enough to address the problems of today. This innate weakness of human beings has been brought from Christian eschatology as the belief is that human beings need a transformation because they are imperfect. Salvation in transhumanism, however, comes from technology and science, but the technologies for the transformation of human beings to have perfect morality have not yet been confirmed. In addition, the salvation proposed by transhumanists focuses on individuals, and the assessment of technological change is left to the individual. However, the problem is that morality differs depending on the person and community. For example, it is not certain if transhumanist technologies could promote morality based on the economic factors of a person who is concerned with climate change (Koch, 2020, pp. 182-186).

When individuals, who can afford to get the enhancements, adopt what they want, these enhancements will not be available to everybody. This will lead to inequalities among people and the transhumanist ideal of global betterment will not be achieved. Also, transhumanists' use of technology and science to solve every problem can cause missing the real solution to the problem. For instance, it is known that some criminal behavior occurs as a result of socio-economic reality, but if transhumanism tries to tame criminals by neurological intervention, they neglect this reality and bring temporary solutions (Koch, 2020, pp. 187-188). Moreover, transhumanists usually refer to ancient philosophy and mythology to support their ideals. However, Susan B. Levin's evaluation shows transhumanists' misreading of history. First, the transhumanist invocation of Prometheus is wrong for Levin because they omit the existential breach between human and divine, and this omission misinterprets the meaning of Prometheus's favor. In ancient texts, the divinity of Prometheus is highlighted as Prometheus prefers to help humans make them understand their potential as mortal humans. Also, Levin asserts that ideals are regulative instead of attainable antiquity because they are guides and models to humans. Therefore, if a human being were to achieve an Aristotelian ideal, for instance, he would not be a human anymore. On the contrary, the transhuman dream of posthuman means the existence of those who achieve the ideal through technology (Porter, 2017, pp. 243-244).

Another issue is that there is no general agreement on the criteria to be used while deciding what is “enhancement” or “health”. As transhumanists always highlight enhancement, it is necessary to define the components of this enhancement because enhancement is a value that can differ in different contexts such as different cultures (Porter, 2017, p. 249). Even if the content of enhancement is determined, it is known that transhumanists always dream of brain scanning and this may put human emotions in danger. Neural implants might activate or restrict emotions by disturbing the related parts of the brain. Since emotions such as anxiety and uncertainty are parts of becoming a human, and they trigger human culture like art, it will be harmful to both nature and the culture of human beings when they are harmed. Also, if transhumanist enhancement includes the longevity of human life, it is a question of what human beings will be engaged in during their long life. A longer lifespan can result in more consumerist societies, limitless fun threatening morality, more wars, and more destructions of nature (Tirosch-Samuels, 2007, p. 6). One of the most debated dreams of transhumanists is uploading which makes human beings immortal, but it destroys their bodies at the same time. This dream of transhumanists implies that they accept humans as information, so they privilege mind over body. Criticism of such a point of view focuses on the reduction of human beings to information patterns ignoring the individuality and uniqueness of people. It is evident that transhumanism changes the definition of a human being, and the new definition creates mind-body dualism.

2. TRANSHUMANISM in RICHARD K. MORGAN'S *ALTERED CARBON*

Science fiction, as a genre, is believed to affect the development of technology and funding of technological research, it obliquely serves the benefit of transhumanist purposes as well. Even dystopic literary works may influence entrepreneurs to bring out novelties in the technology area, since such works incorporate a great number of objects, technologies, laws, rules, and ideas that could be implemented, especially when it is thought that transhumanists are always in a perpetual progress. Ihde (2019) is of the same idea as he explains that our science fiction dreams are linked with our technological culture, and he implies that these dreams and desires reflected in fiction support financing the development and research (p. 36). Similarly, the Association for the Advancement of Artificial Intelligence depicts science fiction as a “window to the future” (Geraci, 2011, p. 165). Being a science fiction novel, *Altered Carbon* too mirrors the future. It is basically a murder mystery, but it involves so many elements of transhumanist theory that it would not be wrong to say that the novel is like a world that is dreamt of by transhumanists. In this transhumanist paradise, there are also implications for nature.

While Takeshi Kovacs, the protagonist, is trying to solve the murder of Laurens Bancroft, he uncovers the world of *Altered Carbon* at the same time. This world is a heaven for transhumanists in many respects. In the first place, the book introduces the readers to lots of innovations that ease daily life. One can drive his car on the road or use a cruiser in the air, make payment via DNA signing without carrying banknotes, learn the time by using his retinal watch, buy people's memories called mind bites, make money by selling data, or a hotel with a digital receptionist can wake its customers up through giving off the smell of bread and coffee. These are good examples of transhumanist fantasies of betterment or enhancement. They are the simplest indications of the advanced technology in the atmosphere of *Altered Carbon*.

Technology has a big impact on the army and weapons, as well. Takeshi was a soldier once and was altered into a fighter called envoy, and it is learned through his war memories that different armours and strategies are used in the twenty-sixth century, such as body-heat sensors, hallucinogen grenades, tetrameth for advanced speed and agility, and limpet mines are common. The most important effect of

technology on the army is “envoy training” created for UN colonial commando units. This training is unique in that they “took psychospiritual techniques that oriental cultures on Earth had known about for millennia and distilled them into a training system so complete that on most worlds graduates of it were instantly forbidden by law to hold any political or military office” (Morgan, 2002, p. 38). Therefore, an envoy becomes an excellent person to kill thanks to steroids, chemicals, and technology. Envoys are trained to get rid of any emotion to restrict their desire to kill, which is understood clearly in Kovacs’s speech:

Then let me tell you something instead. When they make an Envoy, do you want to know what they do? They burn out every evolved violence limitation instinct in the human psyche. Submission signal recognition, pecking order dynamics, pack loyalties. It all goes, tuned out a neuron at a time; and they replace it with a conscious will to harm (Morgan, 2002, p. 229).

Another martial novelty is the use of viruses. In fact, transhumanist advances have brought the necessity of such a weapon. The world and human beings are so impossible to get harm, thanks to technology that “a special kind of a digitized virus is needed to contaminate a digitized mind, a virus largely used during war time” (Forsek, 2019, p. 8). As people can renew their bodies, they are immortal and the only way to kill them is to damage their minds, and this is achieved through viruses which even the powerful Meths avoid. The impact of viruses is felt when Kovacs remembers how his friend from Corps- Jimmy de Soto has scratched out his own eyes under the effect of the virus in the war.

It is seen that in the atmosphere of *Altered Carbon*, wars, warriors, soldiers, and war equipment are inevitably affected by high technology. Most importantly, digitalized mind technology has decreased the number of wars. In this regard, Kovacs states “It’s been a long time since the weight of numbers counted for much in a war, and most of the military victories of the last half-millennium have been won by small, mobile guerrilla forces” (Morgan, 2002, p. 37). Thus, transhumanist developments have changed military areas in many ways and saved the lives of soldiers and civilians who could die in old-style big wars with a huge number of soldiers.

Law is one field where transhumanist elements of the novel are observed. Stack technology, which enables human beings to transfer their minds to computers or to another body, alters law as well. The police are not desperate in this world when witnesses die because there is enough technology in police stations to examine dead

witnesses virtually as long as their digitalized minds are not damaged severely. Also, should the police conclude that the dead person is innocent, the government provides this person with a new body. Further, the use of a polygraph test is common to detect whether a person is lying or not. Based on the transhumanist point of view, these are good enhancements making fairer judgments possible. Finally, U.N determines some laws to be applied on all planets including the earth. It has some strict laws to ensure security and order. For instance, those who get envoy training cannot be given any governing responsibility, or dual-sleeving is banned for everybody. Also U.N creates envoy training in order to protect colonies in case of wars. Therefore, the transhumanist promise of security for all is achieved by U. N in the novel.

All these novelties in the military area and law are just superficial changes in the lives of the characters of *Altered Carbon*. Therefore, this chapter deals with transhumanist technologies in the novel, a reflection of the most controversial topics about these technologies, and some results that transhumanism advocates cannot foresee. First, the technologies that have transformed human nature and led them to act like gods are scrutinized. Next, as one of the most debated subjects in the transhumanist context, the essence of human beings is discussed. Also, the stack technology that makes human mind uploading possible and has resulted in mind and body dualism is revealed. After that, cloning and death issues are mentioned, and it is demonstrated that cloning reduces and commodifies the human body. Further, the real world and virtual worlds in the novel are compared. Lastly, unexpected outcomes of transhumanism in the novel are given in detail.

2.1. Transhuman Life, Uploading and Changed Human Nature

When transhumanism is the topic, advances in medicine are certain to be mentioned. In the novel, high medicine technology has created a society with stronger bodies. Apart from stack technology that makes people immortal, there are some technologies for the betterment of the body and the mind. For instance, Tetrameth use to have a strong body, neurochemical upgrades in the nervous system to sense the danger and to be faster in reaction, internal microphones to call people secretly, betathanatine intake to have almost death experiences are nothing new in the world of *Altered Carbon*. However, the most important bodily progress is granted by stack

technology. Miriam Bancroft seems older than three hundred years and she is in her eleventh, but Kovacs is attracted to her beauty. “She was beautiful ... Golden hair brushed her shoulders ... There was finely toned muscle in her legs and a substantial bicep stood out when she lifted her arms ... I wondered if the body was hers” (Morgan, 2002, p. 31). After Kovacs depicts her young and healthy body with these sentences, he feels certain upon looking at her eyes that she is old. Furthermore, Laurens Bancroft has sixty-one children as he is three hundred fifty-seven years old. Their regular body change keeps them young and healthy.

Stack technology provides people with new sleeves, and this is another element of transforming human nature in which their body, psychology and the relationship of these two change. These side effects of changing human nature are seen when Kovacs mentions the topics of magazines. “A lot has been said, written ... Trite little magazine-length summings-up of the problems inherent in re-sleeving- How to make your partner love you again, in anybody- trite, interminable psychological tracts- Some observations of secondary trauma in civil re-sleeving” (Morgan, 2022, p. 337). In addition, any digital upgrade to one’s body or mind makes him a “d.h”, thus implying digital human in the novel, and most of the characters are d.h in one way or another. Though she is thirty-four and uses her own body, Ortega is a d.h too because of psychosurgery she has had once. In terms of health and medicine, the book presents a typical transhumanist world because transhumanists trust the effect of technologies, such as genetic engineering on human health as understood by what Zoltan Istvan from the Transhumanist Party maintains,

Critics—many of them fundamentally religious—worry that genetic engineering will create a race of non-human beings who resemble monsters (...) The far greater likelihood is that genetic engineering will create a populace free of diseases and ailments that have plagued humanity for tens of thousands of years. In fact, genetic engineering could change the very nature of healthcare (as cited in Walker, Walker, & Carruthers, 2016, p. 316).

Advances in medicine provide a healthier society in *Altered Carbon*. However, they change the nature of human beings as well. Transhumanists claim that they can destroy anthropocentric worldviews through the creation of AI’s, synthetic beings, cyborgs, androids, etc. but the novel reflects the opposite. The world of the novel is still human-centered, where nature is in the service of human beings.

Apart from being a war won against death, uploading can be seen as a body hacking which implies the alteration of the appearance or function of the body by

choice. As stated by Battle-Fisher (2020), body hacking may include tattoos, piercings, or prosthetic leg, implantation of a magnet to “open a garage door”. Most importantly, it is a good step in the way to becoming a posthuman, which is the ultimate aim of every transhumanist. (p.2). Characters in the novel carry examples of body hacking. When Kovacs realizes Miriam Bancroft’s internal mike, he remembers that in Harlan, most people are still reluctant to have such a tool in their bodies. This is a perfect reflection of the transhumanist theory since it always values individual choices in all enhancements, including body hacking. Another transhumanist point of view regarding uploading is that it is a part of technological evolution. According to transhumanists, biological evolution and natural selection are indispensable, but they are too slow for advancements. Instead, they trust quicker technological advancement as the logic theorist Bart Kosko (1999) stresses “Biology is not destiny. It was never more than tendency. It was just nature’s quick and dirty way to compute with meat. Chips are destiny” (as cited in Cordeiro, 2019, p.70).

The chips are represented by stacks that carry the consciousness. Technological evolution surrounds the novel’s world, and the characters are used to this, so that they cannot imagine a place where only biological evolutions occur. When Nyman, the manager of PychaSec sleeving center, tells how people are keen on new bodies, he asserts “The Bancrofts like to alternate their sleeves ... Many of our clients do, it saves on wear and tear” (Morgan, 2002, p. 83). Stack technology reflects the comparisons between Nietzsche’s “higher humans” and transhumans. This technology makes the characters digitally immortal, but they still have human features like emotions, and they may reproduce with each other. Therefore, they are not posthumans, yet are typical transhumans who can be linked with Nietzschean higher humans. Despite their advanced technologies, these characters still make mistakes such as killing and lying, and most of them prefer to live in an organic body instead of a virtual world. All these indicate their transhuman identities that will be the basis for posthumanism in the future. Also, as mind uploading is common, characters do not perceive death as a threat. As long as their mind is not harmed, they go on living, so they are not mortals anymore. This has made them feel like gods who rule the whole earth, and Ortega clarifies this when she says “You live that long, things start happening to you. You get too impressed with yourself. Ends up, you think you’re God ... And maybe you’ll start snuffing those little people, just like picking daisies, if they get under your feet”

(Morgan, 2002, p. 70). Therefore, nature is one of the elements that these gods possess and get service. As seen, uploading technology cannot stop the human-centredness of the world.

Transhumans are sometimes depicted as cyborgs meaning cybernetic organisms. “Demircan (2016) expresses, the human being of transhumanism who wants to reach the posthuman is no longer homo sapiens or biological being but a techno-biological (cyborg) entity” (as cited in Akyol Oktan & Oktan, 2019, p. 277). Although every transhumanist does not agree on what a cyborg exactly is, it can be said that some of the characters in *Altered Carbon* carry some cyborg characteristics. In this regard, Andy Clark (2003), a cognitive scientist, portrays human beings as “natural-born cyborgs” and considers cyborgs as partial biological and partial machines. She explains that even human beings are cyborgs “in the sense of incorporating our best creations as a way to extend our reach” and says, “It is our special character, as human beings, to be forever driven to create, co-opt, annex, and exploit nonbiological props and scaffoldings” (as cited in Lilley, 2013, p.28). These props and scaffoldings refer to various technologies, and based on this point of view, the characters of the novel are cyborgs with all their body hacking and the mind transfer technology they use to enhance more. Besides, Ihde (2019) asserts that the reason for increasing cyborg aspects is aging and its effects. For example, heart problems resulting from old age may require having stents. As a result, he concludes that cyborg strategies are usually for hindering the effects of aging, and adds:

It is better to have a pacemaker than to have life-threatening arrhythmia; it is better to be able to walk with either a steel-Teflon implant or a prosthesis than not to walk at all; it is better to have digital hearing aids that allow seminar participation and exchange than not to be able to hear speech sufficiently to understand (p. 34).

Ihde is like the voice of transhumanists who wish for more and more enhancements just for betterment. He does not care for the title “cyborg”, since his concern is a healthier body. According to this point of view, it can be stated that Miriam and Laurens Bancroft have cyborg identities. They both use cyborg strategies to win against aging and even death. They have spare clones to use in case of aging, and remote storage of their stacks to avoid real death. As human beings with cyborg characteristics, Bancrofts and Kawahara blur the boundary between humans and machines, and this demonstrates the alteration in human nature. The vague boundary

between machines and human beings is reflected well when Kovacs sees the AI Hotel Hedrix's appearance for the first time:

The screen jumped into life so dramatically that I took a step backwards. From whirling, multi-colored fragments it rapidly assembled a tanned Asian face above a dark collar and tie. The face smiled and changed into a Caucasian female, aged fractionally, and I was facing a blonde thirty-year-old woman in a sober business suit (Morgan, 2002, pp. 57-58).

Even though Kovacs is a person who is familiar with synthetic beings and AI's, the hotel is so identical to a human being that Kovacs gets surprised and calls the hotel a "woman". Hence, it is seen that humans are not a part of nature anymore; rather, they are the creatures for whom the earth has been created. Thus, they do not see any harm in exploiting nature.

Besides all these debates on mind uploading, there are also other aspects affecting the changing nature of transhumans. In the first place, since transhumanism dreams of the "good", it is discussed what this good exactly stands for. Some transhumanists explain the conception of good as the spread of individual choice. Valued among transhumanists very much, this enhanced autonomy must be given to everybody through technological developments. However, some critics are against this idea, which they call imperialising of autonomy, and "[t]hey defend enhancements as *absolute goods* rather than *positional goods*, because 'they are good for people, not because they confer advantages on some but not on others'" (Harris, 2007, as cited in Ranisch, 2014, p. 7). Being the modern American culture's main motifs according to Elshtain, the three c's, choice, consent, and control constitute a concern about the autonomy transhumanists propose (McNamee & Edwards, 2005, p. 515). Catholics in *Altered Carbon* can be an example of this issue. As it is appropriate to autonomy principle, Catholics choose not to be uploaded but stay in storage forever. However, the fact that Resolution 653 passes in the end through the protests of Catholics brings Elshtain's three c's to mind. It might be shown in the novel that things start with choice, then people are made to consent, and then they are controlled through the final decision that some authorities make. Pass of Resolution 653 may seem like for the benefit of Catholics since their murderers can be found after the Resolution, but it can be also interpreted as creating a norm and forcing everybody to comply with it.

Hence, it is seen that even transhumanists themselves may not decide the objective goods they need to choose to install on humans or posthumans. On the other hand, some scholars consider this dangerous in terms of morality because they link

morality to the vulnerability of human nature. For example, people in the novel can change their bodies, thereby signifying that they are not going to be vulnerable anymore, but this has made them cruel as they harm people's bodies easily without considering. Furthermore, the rights or obligations of human beings may not be applied to transhumans, who might be beyond humans in many ways. Thus, disrupting human conception may "deprive humans of 'the naturalness which so far has been a part of the taken-for-granted background of our self-understanding as a species'" and "Getting used to having human life biotechnologically at the disposal of our contingent preferences cannot help but change our normative self-understanding" (Habermas, 2003, as cited in McNamee & Edwards, 2005, p. 515). This idea implies that humans' natural vulnerability to diseases and aging may be examples of their self-understanding. When transhumanist immortality is achieved, human beings will not be vulnerable anymore, and this will change their self-understanding thoroughly. This is applicable to the novel as well. Using immortality and body-changing technologies whenever they want, Bancrofts and Kawahara behave like gods and their self-understanding is explicitly very different from that of standard humans like Ortega. To prevent this change, Habermas (2003) suggests the use of enhancements that are not "intrinsically evil or morally objectionable" (as cited in McNamee & Edwards, 2005, p. 515).

Similar to the idea of self-understanding, it is also thought that transhumanism will dehumanize humans, as noted earlier. Eliminating the "negative" features that actually make people humans, transhumanism may cause the loss of some qualities which are obtained through life experiences. In this domain, Fukuyama explains this issue as follows:

Human nature exists, is a meaningful concept, and has provided a stable continuity to our experience as species.' It is 'with religion, what defines our most basic values.' But in the transhumanist world, 'we no longer struggle, aspire, love, feel pain, make difficult moral choices, have families or do any of the things that we traditionally associate with being human.' Consequently, we 'no longer have the characteristics that give us human dignity (as cited in Elkins, 2011, p. 20).

He finds something even in the things that people would like to get rid of, such as longing and anxiety because, for him, they are necessary for the self-understanding of human beings. As he states, one cannot have bravery if he does not take risks or cannot have mercy unless he experiences pain. Hence, Fukuyama highlights the

importance of human nature which enables people to have a sense of morality (Elkins, 2011, p. 20).

Altered Carbon is full of characters whose human nature is changed through various technologies. Kovacs, for instance, can endure extreme pain in both reality and the virtual world because he has his envoy conditioning, updated high-tech sleeve, neurachem, and sometimes some drugs. However, this does not prevent him from loving, making choices, or struggling which are the features making a person human according to Fukuyama. As a result, it seems that by not choosing aside, the novel contributes to the open-ended debates on change in human nature. It is nearly impossible to draw a line separating human beings and machines in the novel, and the humans with machine powers are far from nature.

As it is seen, lots of dreams of transhumanism are reflected in the novel *Altered Carbon*. Although some of them are still discussed, they have enhanced the life of the characters in the book, and betterment is achieved, just as transhumanists presume. However, Morgan presents some drawbacks that the transhumanist agenda does not predict. It is a far future when the transhumanist lifestyle is common for a long time, but it seems that all advancements in technology cannot hinder some problems. The thing that is immortal in the novel is the mind. As a result, mind uploading has caused ignorance of the soul, which is vital in most religions. In many religions, eternity is related to the afterlife and the soul can be immortal when the body dies. However, people do not have a religion and they do not believe in the existence of the soul in the novel. There is one exceptional group: Catholics, who are against stack technology. As this technology digitalizes people, Catholics think there remains no soul and no resurrection is possible in digitalized human beings. Because of this belief, Catholics do not accept being re-sleeved and they prefer death. Resolution 653 is a legal regulation in law and if it is accepted, Catholics can be re-sleeved when necessary, so Catholics do not support the enactment of this resolution.

Immortality of the soul or the mind paves the way for a related problem. For transhumans, the essence of identity is the mind, but it is the soul in religion. The Christian philosopher Richard Swinburne (1986) explicitly states, "Souls are essential parts of human beings" (as cited in Sherbert, 2010, p. 22). These ideas of both sides are observed in the book. People, except for Catholics, do not have concern for the soul,

whereas Catholics privilege the soul over the mind. They always protest against Resolution 653, but, in the end, it is enacted, which may signal that resistance is futile in such a transhumanist world. Bostrom asserts that no technology must be imposed, but here, Catholics are forced to be uploaded by law. Also, it is common to kill Catholics without any concern because they do not transfer their minds, which means they cannot tell the murderer to the police. Further, Ortega highlights the problem by stating “Catholics getting butchered because their killers know the victims will never come out storage to put them away” (Morgan, 2002, p. 71) Kovacs tries to empathise with Catholics while Ortega is carving Kadmin’s cortical stack and he states:

She reached down into the gore and pulled out the stack between finger and thumb. It didn’t look like much, impact-resistant casing streaked with blood and barely the size of a cigarette butt with the twisted filaments of the microjacks protruding stiffly from one end. I could see how the Catholics might not want to believe this was the receptacle of the human soul (Morgan, 2002, p. 65).

Even Kovacs, who is used to the transhumanist lifestyle, feels the superiority of the soul just by looking at the simple appearance of the stack. Hence, the superiority of the mind over the soul is another angle of the change in human nature due to uploading. Normally, religious people are confident about the existence of the soul as an element of being a human, but the transhumanist world of the novel indicates a society where human existence is reduced to a healthy mind. Contrary to the general belief that religions advocate an anthropocentric worldview because of the idea that the whole world is for the profiteering of human beings, religious people actually respect nature as a part of their religion because they believe that nature and all the earth are creations of the god. However, the characters in the novel are transhumans without a religious perspective and they do not have a natural concern for their actions and in technological enhancements they have had. If, for instance, Bancrofts believed in a religion, they would not bring some special plants from their original habitats to their luxurious house and would not present them as decorations. Instead, they would respect the plants as other creatures like themselves and would avoid treating them like objects. Therefore, uploading technology both alters human nature and their treatment of nature.

In a society where the body is changeable, and the mind is immortal, human beings may feel themselves strong and almighty as mentioned before. This is a situation to which people with a religious point of view can object to. In Christianity,

“while being mortal and being imperfect is described as the most basic element that makes man “human”, the concepts of eternity, perfection are interpreted with reference to the creator (or god)” (Akyol Oktan & Oktan, 2019, p. 280). Therefore, Catholics in the novel do not support the legislation of Resolution 653. They consider that cloning and striving for immortality through cortical stacks mean playing god. When Kovacs asks if living long is a crime, Ortega’s answer reflects the hubris of almighty human beings.

[When] you live that long, things start happening to you. You get too impressed with yourself. Ends up, you think you’re God. Suddenly the little people, thirty maybe forty years old, well they don’t really matter anymore. You’ve seen whole societies rise and fall, and you start to feel you’re standing outside it all, and none of it really matters to you. And maybe you’ll start snuffing those little people, just like picking daisies, if they get under your feet (Morgan, 2002, p. 70).

Ortega has seen the behaviours of Meths, who have all the opportunities that are necessary for immortality, and now she thinks that living long must be a crime. Further, Kovacs describes how human beings have brought heaven and hell to the earth through technology.

One result of feeling like a god is that they do not have a creator to check their actions. As Kovacs posits, heaven and hell are on the earth now and nobody considers god’s punishment when deciding to do something. “their [*Altered Carbon* society] moral compass is left to spiral down toward moral decrepitude. This can be seen in connection to a drug called Reaper ... which was developed while researching near-death experiences” (Forsek, 2019, p. 22). Reaper also enables people to ignore emotions, such as pain, excitement, and sorrow. Even if a monk takes this drug, he can “... torch a village full of women and children and feel nothing but the fascination for the way the flames melted flesh from bone” (Morgan, 2002, p. 130). Characters treating like gods have naturally become selfish people who do not care about other creatures, either human or non-human. Meths, who have economical and biological powers thanks to technology, never worry about the harm they cause to people. To illustrate, Kawahara has no concern for the women who were killed in her brothel. As a Meth who does not respect other humans, it is natural for her to ignore the nature or technological changes she has in her body.

In fact, the characters’ desire of being “gods” is due to their dream of becoming immortal like nature. They do not want to depend on nature anymore, as transhumanism desires, and also they want to get the immortality of nature at the same

time. Laurens Bancroft, for example, dismisses the engineer who plans to cut the tree that is more than seven hundred years old in his garden because he identifies himself with that old tree and would like to live long years as the tree does. When Kovacs asks if Laurens thinks he is the tree himself, he says “Just so ... I am the tree. The police would like to chop me down, just like the engineer. I’m inconvenient to them, and they have no respect” (Morgan, 2002, p. 44). This answer implies that people in the society represented by the engineer and the police do not respect nature and find natural beings “inconvenient”. Therefore, upon looking at what Ortega and Kovacs say, and what drugs may cause, it would not be wrong to conclude that *Altered Carbon* proves the anxiety of some religious teachings about morality and digitally immortal people emulating God.

2.1.1. The Essence of Human Beings and Mind-Body Dualism

Transferring the mind to a computer or another body is the most prominent transhumanist development in the novel. It is significant because all events depend on this technology called “stack technology” in the book or “uploading” among transhumanists, and it is the reason for lots of debates in the transhumanist theory currently. Mind transfer is achieved through chips or stacks, and they are implanted into the spine in the novel, but no other detailed explanation is given about this process which eliminates the probability of aging. According to transhumanists, aging is a disorder leading to diseases and even it is a disease itself, so they aim at reversing this process. A famous transhumanist called Aubrey de Grey (2005) points out “... aging can be defined as the lifelong accumulation of various intrinsic side effects of normal metabolic processes, which ultimately reach an abundance that disrupts metabolism and causes severe dysfunction of tissues and the whole organism” (as cited in Sand and Jongsma, 2016, p. 297). Seen as damage to the body, aging must be ceased and one way to do this is uploading the mind or consciousness, which is substantiated in *Altered Carbon*.

When the mind can be transferred, being alive means an undamaged mind rather than a healthy body. Thus, uploading paves the way for immortality and it is one of the most valuable transhumanist fantasies. In the novel, Jimmy de Soto signifies the difficulty of a real death when he says “Oh, come on, who really dies these days?” (Morgan, 2002, p. 75) and he is right because one cannot die unless his stack is

destroyed. However, they may change their bodies called “sleeves” when they have bodily harm that cannot be fixed. Despite the possibility of digitized immortality, most transhumanists do not neglect the biological mode, but they just add what Rothblatt (2014) calls “vitological” mode referring to cybernetic life study. Further, she thinks that a digital copy of the self will consist of “bemes and BNA”, which are “basic informational unit of consciousness”, so transhumanists plan to ensure “the continuity of the self through coded, digitised information” protected on a computer form (as cited in Huberman, 2017, pp. 4, 5). This idea of Rothblatt’s is plainly reflected in *Altered Carbon* where human beings can keep their stacks in an organic or synthetic body in a virtual system or a tank.

The biggest result of uploading is undoubtedly immortality. As any transhumanist craves, characters can live as long as they protect their stacks. This type of immortality destroys their dependence on a body. For instance, the police can learn the truth from a dead person because it is just the body that is dead or harmed. The body has lost its value so much that it is called a “sleeve”, and criminals are not imprisoned or given the death penalty anymore. Instead, their cortical stacks are kept by the police, or they are wiped out. Limitations of the body are not a concern in this world. Even if it is harmed, they might use another sleeve- be it a clone or another person’s sleeve, or they can continue their existence virtually without a body. Most transhumanists determine if an action is right or wrong according to the goodness of its results which is also called Consequentialist Theory. As a result of this theory, transhumanists ignore the means if the outcome is good. However, bioconservatives analyze other aspects and focus on the desirability of radical human enhancement (Ranisch, 2014, pp. 5-6).

One area that bioconservatives and opponents of transhumanism have questions about is mind-transfer. These debates are echoed in the novel as well. First of all, when the mind is transferred, what will be the difference between human beings and machines? This question also brings forth another one: What is the essence of human beings? Transhumanists think that human beings are machines with transferable information. N. Katherine Hayles explains this by saying “the manner in which organisms and machines process and exchange information mirrors each other, raising the prospect that the line separating the organic from the mechanistic can be removed” (Elkins, 2011, p.18). For Kurzweil, the boundaries between human beings

and machines will blur when mind upload becomes possible. It is seen that transhumanists assume that human beings are essential information. This idea is extended by Rothblatt (2010), who explains that as the smallest units of beings, essential or existence, memes can be replicated, combined, or mutated (p. 117). Thus, he differentiates memes from genes, and asserts:

Our genes are, of course, responsible for the common features of our bodies, but our human essence lies in our minds, not our bodies. Those who have lost their limbs are no less human; those who have lost their minds lose their human rights as well ... in an information age, the meme is mightier than the gene. This means that transmissible units of character or existence are more important than genetic information. For example, most people's love-mate is a person with whom they share no genetic commonality outside of that which is in the general gene pool of their community. However, a lasting interpersonal relationship is only possible if the two partners share a strong appreciation for each other's memes, their characters, their natures, and their ideational units of existence (Rothblatt, 2010, p. 118).

Rothblatt clarifies the reason of why the essence of human beings is information for transhumanists. Depending on this claim, Manzocco (2019) accepts that a person achieves immortality if he is a collection of information and if this information is uploaded. He thinks that this is a "secular immortality" that can save human beings from being slaves of the body (p. 197). Stack technology makes it possible to see these notions about human essence in the novel. Thanks to their cortical stacks, people are not afraid of death of the body if they have a spare sleeve, and secular immortality in Manzocco's terms is achieved. To illustrate, Kawahara holds "if you [Kovacs] kill me here, it will take about eighteen hours for the remote storage system in Europe to notice and then re-sleeve me from my last update cast" (Morgan, 2002, p. 416), so the death of the body is nothing to be concerned about. To underline the death of death, Kovacs says, "Poor death, no match for the mighty altered carbon technologies of data storage and retrieval arrayed against him. Once we lived in terror of his arrival" (Morgan, 2002, p. 306). Information is so valuable in this world that there is a market for "mindbites", which are memories or moments in people's minds. Some people prefer to buy these memories of other people to be used for their own benefits or for blackmailing.

The transhumanist concept of the human being is essentially information that results in some opposing arguments. Non-transhumanists perceive limits and uncertainties as the reality of human beings, so for them, mortality or complexity of consciousness are ontological limits that cannot be solved through technology. In an attempt to clarify human nature, Sato (2011) summarizes the three main types of

human nature as physical, psychological, and cultural environmental accounts. According to the physical account, the human essence exists in the bodily features of human beings. On the contrary, psychological account holds that human nature is in the psychological capacities of people such as will and reason. Finally, the cultural environmental account points out that human nature can be seen in the actions of life forms that are built by civilization and surroundings (p. 40). In this regard, N. Daniels (2009) talks about three human nature types. In the populational type, human nature applies to the whole humankind rather than to individuals. The dispositional type is a human nature that “allows for a range of manifestation. For example, even if being sympathetic is part of human nature, there are very sympathetic people, relatively sympathetic people, and slightly sympathetic people”; and finally, the third type is selective human nature because all traits are not human nature (as cited in Sato, 2011, p.41).

As it is seen, there is no exact definition for human nature. Because of the ambiguity of human nature, it has currently been proposed that human nature ought not to be discussed in the human enhancement context. However, transhumanists can easily determine human nature as information and some scholars interpret this as reducing human nature. In *Altered Carbon*, the vagueness of human nature can be observed in the use of the Reaper drug letting people be free from their emotions. Those who take this drug are still humans, but they can do violence without feeling anything, which is a reason to question their humanity. In addition, Hotel Hendrix is not a human, at least in terms of physical account and populational human type mentioned above. However, she can think, make suggestions, and even make choices, which is appropriate to the psychological account. Thus, it might be said that the novel questions human nature and the difference between human beings and machines, but it does not give an answer that is as much definite as the transhumanists give to the same questions.

Transfer of consciousness elevates the mind and information while dethroning the body. When the death of the body is not real, it is likely to get a new body, and the mind naturally defeats the body. For that reason, opponents of transhumanism put forward that mind uploading results in mind and body dualism. According to Eastern philosophy, life is associated with motion, and motionless means death, for the body that lacks motion is thought to lose its resistance to survive. In this sense, it is the body

rather than the mind, that is responsible for motion, but in uploading technology, one can be active digitally even without a body. Therefore, if the motionless body does not mean that the person is dead, then the role of the body as an element of identity and humanness is taken away. Consequently, the mind creates the identity, and the function of the mind makes one alive (Akyol Oktan & Oktan, 2019, p. 278). Rejecting this privilege of the mind, Craig and Julie Nagoshi (2012) think that such a viewpoint creates a Cartesian duality in which the body is perceived as a “defective machine”. Contrary to mind superiority, they assert:

the experience of being conscious and free is the essence of being human, and that this personality is inseparably connected to the body throughout one’s entire life” so, experience, interpretation of experience and life are not separate things, and thanks to experience, body, and mind are transformed into integral parts of identity (as cited in Akyol Oktan & Oktan, 2019, pp. 278-279).

When *Altered Carbon* is considered, life totally depends on the mind, which highlights the transhumanist identity of the novel. Stack technology has resulted in a Cartesian duality because the body is not crucial to exist. For instance, Laurens says he does not care if his wife cheats him because “It is the flesh, nothing more” (Morgan, 2002, p. 185). It is also this stack technology that has caused the discovery of lethal viruses for cortical stacks because if one wishes to destroy somebody, he needs to attack his mind, not the body. This is explicit in Kadmin’s words while threatening Kovacs, “You do the wrong thing, and the cops are going to be picking bits of your cortical stack out of that wall for weeks. I’m talking about real death, friend. Now, lift your hands away from your body” (Morgan, 2002, pp. 59-60). For the characters, motionlessness, experiences, and explaining experiences are not things to bother because they can do these virtually as well. They may even torture someone in the digital world as Kovacs guesses when he is kidnapped “... they could jack my consciousness into a virtual matrix similar to the ones used in psychosurgery and do the whole thing electronically. Subjectively, there would be no difference but there what might take days in the real world could be done in as many minutes” (Morgan, 2002, p. 143). The body is so separated and worthless that it can easily be provided, so it is possible to put a person into a frail sleeve, torture and kill him, then put him in another sleeve to do the same things repeatedly.

The dualism between body and mind indicates that the transhumanist world in the novel is not eco-centered enough because eco-centrism does not advocate any kind

of dualism including that of mind and body. The necessity of leaving back Cartesian dualisms separating the mind from the body and human from the non-human is one of the issues that eco-centrism requires. It is vital to reject dualisms as this will lead to eco-centric and embodied point of view, as well as the acceptance of the fact that the human self is created and preserved by the whole ecosystem (Garrard, 2014, p. 366). As transhumanist mind uploading technology changes human nature in the novel, it also disembodies human beings because people can exist virtually or in a computer programme thanks to this technology. For instance, Elizabeth Elliot's mind is in storage as a punishment, and she can be communicated virtually, but she cannot have any relationship with nature as she has no body. She could only experience the nature of the virtual world, but this nature is not a real one. Mind and body dualism putting the mind at the top creates a hierarchy between enhanced humans and ordinary humans and between humans and nature. This is clear in the novel as enhanced people such as Meths and envoys are superior to ordinary human beings in many respects, and people who have accepted the superiority of the mind dominate nature.

Another issue that opponents of transhumanism and mind upload argue very often is identity and continuity. The question is whether people can continue their identity when they transfer their minds and wake up in a different body or a computer. Even though most transhumanist scientists are sure that the result will be the same identity, it is still a doubt for those who are against or afraid of transhumanism. Manzocco (2019) explains the case:

the skeptics – and I confess that I am among them – believe that, even if the reproduced mind contained the same memories, the same emotions, and the same psychological traits as the original, it would not identify with the latter, but would remain what it is, i.e., a copy – a fact that would be even more evident if the copying could be done in such a way as to avoid dissecting the original brain, i.e., with the subject still alive. It is also necessary to establish how much of a person's memory must necessarily be preserved so that one can speak of the "same" person; for example, if there is no memory of childhood, does it still count? (p. 197).

Having such doubts, Manzocco also thinks that transhumanists evade these identity questions by asserting that personal identities are "fuzzy" and have "blurred edges". For instance, Brice F. Katz (2008) puts forward that the self "is illusory, and thus one can imagine copying certain psychological characteristics into a new medium and considering the copy to be in perfect continuity with the original" (as cited in Manzocco, 2019, p. 197). Also, Anders Sandberg cannot answer the question; instead, he compares aging and uploading and believes that people can accept the latter if they

accept the former (Manzocco, 2019, p. 197). On the other hand, Greenfield, a British neuroscientist, insists that when uploading is achieved, human beings will not know that they are dehumanized and they will not care about knowing this (Elkins, 2011, p. 20). Upon examining the main personal identity theories, M. A. Cerullo proposes one theory to explain the continuity of identity after uploading. He thinks that standard personal identity theories cannot describe how identity or consciousness continues when one transfers his mind. For instance, psychological identity theory states that the destructively uploaded brain allows continuity as the psychological continuity is maintained, but in the case of nondestructive upload in which the original brain is unharmed, the psychological identity theory cannot state which of the two brains retains continuity. The closest continuer theory, which assumes that consciousness will continue in the most identical entity, has the same limitation as the psychological identity theory, so both have no explanation for nondestructive upload. However, the branching theory is appropriate to clarify the continuity (Cerullo, 2015, pp. 20, 25), whereby this theory

predicts that continuity of consciousness will be preserved in nondestructive instantaneous uploading. In this case, two identical entities would emerge, the brain and the upload, each sharing continuity of consciousness with the original. In cases of destructive uploading, there would be only one branch, and branching identity would reduce to psychological identity and would predict that destructive uploading preserves the continuity of consciousness (Cerullo, 2015, p. 30).

It is noticed that the branching theory explains the possibility of continuity in both destructive and nondestructive uploading scenarios. When *Altered Carbon* is examined in terms of continuity of identity, it is hard to answer so confidently as Cerullo or transhumanists do. Apparently, characters who upload their minds to a body or a computer are very used to this process and they look the same. If there were no Kovacs character in the novel, it would be easily said that a character is the same person after uploading. However, Kovacs sometimes causes the reader to question continuity. After his mind is uploaded to a sleeve and he sees himself in the mirror, he says,

This is always the toughest part. Nearly two decades I've been doing this and it still jars me to look into the glass and see a total stranger staring back (...) For the first couple of moments all you can see is someone else looking at you through a window frame (Morgan, 2002, p. 18).

It seems that Kovacs highlights how much one feels stranger to himself after uploading. Here, the effect of a new sleeve may increase this feeling. When Kovacs

thinks about the relationship between Ortega and Ryker whose sleeve is being used by Kovacs himself at that moment, he asserts:

(...) Years later you meet that person again in the same sleeve and you go through it all over again. What's the attraction? Is this the same person? They probably have the same name, the same approximate physical appearance, but does that make them the same? (...) People change, but how much? (...) What we thought of as personality was no more than the passing shape of one of the waves in front of me. (...) All subjected to erosion and change. The only way to beat that was to go on stack forever. (Morgan, 2002, p. 306).

Kovacs questions the continuity of the personality and accepts that people change. He compares personality with waves, which reminds Brice Katz's idea that personality is illusionary. In the end, Kovacs makes a decision that does not surprise the reader. He chooses the transhumanist way and praises cortical stacks enabling uploading. However, it is still hard to say whether Kovacs is dehumanized after uploading and is not aware of this, as Susan Greenfield assumes, or he has the same identity despite being uploaded many times.

Changes in transhuman characters' bodies and minds and in technology may result in some problems in human relationships and they are echoed in *Altered Carbon*. The concept of love does not disappear, but it seems that it is mostly reduced to sexual intercourse. Kovacs, who loves Sarah, has intercourse with two other women when he is brought to the earth. The fact that he does not show any sign of regret signals that such relationships are common in their society. Ortega too loves Ryker, but she has intercourse with Kovacs when he gets Ryker's sleeve. It is not certain if that means Ortega does this because Kovacs becomes Ryker when he has Ryker's sleeve, or this is not accepted as a cheat when the lover is in the storage. In addition, re-sleeving constitutes a handicap for people's relationships. When he mentions the people waiting for their beloved ones in the download center, Kovacs says:

These people wouldn't recognise their loved ones in their new sleeves; recognition would be left to the home-comers, and for those who awaited them the anticipation of reunion would be tempered with a cool dread at what face and body they might have to learn to love. Or maybe they were a couple of generations down the line, waiting for relatives who were no more to them now than a vague childhood memory or a family legend (Morgan, 2002, p. 21).

After the re-sleeve process, they "have to" learn to love their parents, relatives, friends, etc. They cannot even recognize these people, so their relationship will be certainly different from the one before re-sleeving. There is the risk that they may not love the person with the new sleeve, and this might be the reason why people prefer their own

bodies or clones. Another possibility is that re-sleeved people may not want to show themselves as Kovacs's father does.

My own father had walked right past his waiting family and out of our lives when he was re-sleeved (...) I don't know if he was too ashamed to confront us, or more likely too set up with the luck of drawing a sleeve sounder than his own alcohol-wrecked body had been, and already plotting a new course for other cities and younger women. (Morgan, 2002, p. 264).

Re-sleeving technology affects family relationships because the person with the new sleeve may feel himself a different person who does not need to continue living with people around him previously although transhumanists claim it is the same person. Furthermore, marriages are not the same anymore. Laurens indicates this when he states that "Please don't think of me as a chauvinist, Mr. Kovacs. After nearly two hundred and fifty years of marriage, my relationship with Miriam is more politeness than anything" (Morgan, 2002, p. 36). Long life assured by stack and cloning technology shortens the marriage life. Bancrofts prove this also by cheating each other and tolerating with this fact.

(...) your life experience cannot possibly encompass what it is to love the same person for two hundred and fifty years. In the end, if you endure, if you beat the traps of boredom and complacency, in the end, what you are left with is not love. It is almost veneration. How then to match that respect, that veneration with the sordid desires of whatever flesh you are wearing at the time (Morgan, 2002, p. 284-285).

These words of Laurens demonstrate how technology affects marriage negatively. Long life consumes love and also people cannot resist their new body's desires.

2.1.2. Cloning and Death

Human cloning is one of the enhancements that transhumanist theory advocates. However, it is another source of discussion from a religious point of view. Roman Catholics are against cloning. The Vatican informs as follows: "In human cloning the necessary condition for any society begins to collapse: that of treating man always and everywhere ... as a value, and never as a mere means or simple object" (Walker, Walker, & Carruthers, 2016, p. 318). In the novel, cloning enables people to look young and beautiful, be always strong, and even join a meeting through their transit clones without going there. People are so addicted to clones that this technology, according to Ortega, "[is] getting easier all the time. Technology the way it is now, a state-of-the-art re-sleeving processor fits into a bathroom. Pretty soon it's going to be an elevator" (Morgan, 2002, p. 66). Though the novel focuses on the

advantages of cloning, one may also argue that human beings are worthless, especially after cloning and uploading technologies.

The *value* of a human life ... You're *still* young and stupid. Human life has no value ... Machines cost money to build. Raw materials cost money to extract. But people? ... You can always get some more people. They reproduce like cancer cells, whether you want them or not. They are abundant Takeshi. Why should they be valuable? ... Real human flesh is cheaper than a machine (Morgan, 2002, p. 423).

Kawahara reveals how insignificant human beings are in that transhumanist world, which confirms the Vatican's point of view. Cloning may have advantages, but it results in a loss of value for human beings. When the human body loses its importance, the mind becomes more and more vital, which creates mind and body dualism. The novel reflects this through the struggle between Catholics and other people who support transhumanist technologies including cloning. Accepting the value of the body, Catholics reject both uploading and cloning while all other characters accept cloning as an ordinary technology easing life. Contrary to the first group, the second one trusts cloning as long as they have unharmed cortical stacks, so these two groups mirror the mind and body dualism that cloning generates. Cloning might be perceived as a danger as it induces trivialization of the body, which is a part of nature and being human.

As discussed among those who do not advocate transhumanism, mind transfer technology may cause identity problems because people uploading their minds might question whether they will be able to continue their consciousness or identity. There is a similar discussion regarding identity but in this time, it is about clones. Since cloning technology started, it has been argued whether cloning will result in identical creatures like xerox copies. This argument holds that clones are identical both physically and mentally. However, in fact, clones must differ in terms of anatomy and individuality. In an attempt to answer such debates, it is pointed out "far from being xerox-copies replicated in desired numbers, clones are, like everyone else, creatures with a unique physiology, experiences, and personality. Only their DNA is approximately the same as their DNA-donor's" (Evers, 1999, pp. 67-71, 73). Therefore, it is still a big debate whether clones can be accepted as humans or machines.

In addition, debate exists on the naturalness of clones. In this regard, Gorovitz (1982) mentions three criteria to decide if something is natural. One is conformity to the laws of nature and according to this criterion, cloning cannot be unnatural as

everything done by human beings are natural in this sense. The second criterion is freedom from human intervention, which shows that cloning is unnatural as it is a human activity. The last criterion is conformity to some ethical codes, which may lead to the interpretation of cloning as unnatural. Considering all three criteria together, cloning is either natural or unnatural (Evers, 1999, p. 74). The case in *Altered Carbon*, however, is clear cut on the surface. Clones do not indicate any loss of personality and they are the same as their DNA donor. Further, they are accepted as natural beings because Kovacs mentions some other bodies' unnaturalness rather than about clones. For example, some characters have synthetic bodies that Kovacs refers to in disgust. However, he treats clones like real bodies.

The problem is that characters always prefer their own bodies or identical clones though they may wake up in a new body. Despite the superiority of the mind in their world, people still want to have their own bodies or identical clones. This may show that they are unconsciously aware of the importance of the body. They can exist in anybody, but they can feel themselves only in their identical clones. As a means to connect with the nature, the human body is necessary to people, and they have their identity only when they are in identical clones. Characters in the novel are used to living a transhumanist lifestyle in which the mind is more important, but the human voice inside them insists on clones that are the same as their original bodies. If someone buys their body when they are in the store, they get frustrated. Irene Elliott, for instance, is put in a new body after the store, but she wants her own body, and she gets it in the end.

The shock of waking up inside someone else's body for the first time is nothing compared to the sense of rage and betrayal you feel knowing that someone, somewhere is walking around inside you. It's like the discovery of fidelity, but at the intimacy range rape. And like both those violations, there's nothing you can do about it. You just get used to it (Morgan, 202, p. 329).

These words of Elliott imply that having another person's body that one is not used to and knowing that his body is used by another person are annoying. When Kovacs is re-sleeved on earth, he reacts as follows:

As I dressed in the mirror that night, I suffered the hard-edged conviction that someone else was wearing my sleeve and that I had been reduced to the role of a passenger in the observation car behind the eyes. Psychoentirety rejection, they call it. Or just fragmenting ... For long moments, I was literally terrified to have a detailed thought, in case the man in the mirror noticed my presence (Morgan, 2002, p. 132).

Preferring your own body and self-alienation after re-sleeving into a totally new body may indicate the obscurity of this identity issue. Although identical clones are preferred to foreign sleeves, clones have some drawbacks as well. One of them is that they might hinder the relationship between human beings and the universe because they contribute to the commodification of the human body, which results in mind and body dualism. Also, as it is not certain if clones are human beings or not, it cannot be known whether human beings could have a part of the whole ecology in clones. Further, like uploading, clones make characters feel more powerful than death, so they may act like gods who see nature as a possession to serve them. In addition, clones can decrease the number of people who die and are buried, and this could be a reason for overpopulation and the soil with less quality due to less organic contribution of fewer dead people. The quality of the soil is not reflected in the novel, but overpopulation is implied with crowded streets and traffic jam in the air. Hence, clones are prospective threats to nature even though one day people could solve the problem of identity they cause.

Most transhumanists believe that in the future transhumanism will be inevitable with all developing technologies and innovations. This claim has religious implications that can be analyzed in the clones context. Inevitability hope of transhumanism clashes with God's will belief in religions. No force is greater than God's will in a religious context. Although human beings can choose a transhumanist future through their free will, this means rebellion against God's plan. According to Genesis, human beings are created in God's image to have a relationship with God but changing it with transhumanist technologies such as cloning and uploading could destroy such a relationship. Hook (2004) implies this in his question as follows: "How would the transformation from homo sapiens to techno sapiens affect our identity as bearers of the image of God?" (as cited in Lilley, 2013, p. 67). *Altered Carbon* does not posit a solution to this. As the only group of people concerning God, Catholics are against uploading, but there is no information if they oppose cloning, too. It seems, as they see the soul as the essence of personality, that they try to protect it, but it is not clear whether they care about their body as well. The fact that transhumanist developments are going on in the world of the novel may signify the inevitability of advancements.

From another perspective, clones cause a change in the meaning of death. Apart from stack technology, cloning is another technology that makes the characters of

Altered Carbon forget the traditional meaning of death. For them, people are accepted dead only when their stacks are destroyed and if they do not have a clone. For instance, while he is speaking with Bancroft about clones, Kovacs asserts “[Clones] Guaranteed immortality. I sat there thinking about that for a while ... wondering if I’d like it” (Morgan, 2002, pp. 40-41). This new type of death affects nature in general and human nature in particular. Death is a phenomenon that associates human beings with nature. In this regard, aging and decay are parts of our nature as well because everything in nature gets old and dies in the end. However, cloning is a novelty that deprives the characters in the novel of their nature and their connection with the nature.

2.1.3. Real and Virtual Worlds

Morgan presents two worlds in *Altered Carbon*: real and virtual worlds. Characters living in the real world, either the world or other planets like Harlan, can connect to the virtual world whenever they want. The virtual and real worlds include some elements and themes that could be read in a transhumanist context. Viruses in the real world are products of transhumanist developments. Since it is impossible to kill people thanks to stack and cloning technologies, viruses are created and used instead of guns and other tools. As viruses can harm cortical stacks, they cause death, so they are used, especially to kill big numbers of people. In fact, viral attacks can pose an existential risk as Nick Bostrom says transhumanism should avoid. The risks of these attacks are revealed as such: “Virus! Even Meths were afraid of the invisible corridor, because even they, with their remote storage and their clones on ice, were not immune” (Morgan, 2002, p. 342). Readers learn the power of viruses through Kovacs’s memories of war in Innenin. His friend Jimmy’s stack was affected by the virus in the war, and Kovacs often remembers this terror.

His own left socket is a glutted well of gore, all that was left at Innenin when he dug the eyeball out with his fingers. No one ever found out what he was hallucinating at the time. By the time they got Kimmy and the rest of the Innenin beachhead d. h. d for psychosurgery, the defenders’ virus had scrambled their minds beyond retrieval. The program was so virulent that at the time the clinic didn’t even dare keep what was left on stack for study. The remains of Jimmy de Soto are on a sealed disc with red Data Contaminant decals somewhere in a basement at Envoy Corps HQ. (Morgan, 2002, p. 75).

As it is understood from this memory of Kovacs, the virus affects the human mind so much that the contaminated person can harm himself. The novel clearly shows the effect of viruses on human beings, but there is nothing about nature itself. If these

viruses have the power of damaging human organism, they have the potential to affect nature as well. Although they are digital viruses, they may have an impact on the non-human as they do on the human species. Apart from viruses, other transhumanist enhancements may pose threat to both mankind and nature. Thermonuclear bombs are in this category. Bancroft reminds of their capacity as he says, “If some maniac starts rattling tactical nukes or some other biosphere-threatening toys, what are you going to do?” (Morgan, 2002, p. 37). Therefore, the dangers of such transhumanist tools are not just for human beings but also for the non-human, and Morgan seems to highlight this fact implicitly in the novel.

When the real world of the novel is examined, it can be seen that transhumanism has caused nature and culture dualism because nature and culture are not intertwined in this world. Nature is seen as a source of production, so it is for the exploitation of human beings. For instance, in Newpest where Kovacs comes from, there is a plant named belaweed that is widespread in coastal areas. Since people have found some ways to produce cotton by using this plant as the raw material, Newpest has turned into an industrial zone. Destroying the plant’s habitat has not been a concern for anybody, and despite its premises for a better nature, transhumanism has not created technology as a solution to the commodification and exploitation of nature. Also, the special plant called songspire is brought from Mars to Bancrofts’ house.

On Mars, they grow to be a hundred metres tall, sometimes as wide as this house at the root. You can hear them singing for kilometres. The perfume carries as well. From the erosion patterns, we think that most of them are at least ten thousand years old. This one might only been around since the founding of the Roman Empire. (Morgan, 2002, p. 34).

It is apparent that people can change the habitat of plants no matter how much valuable they are, and this shows that people and nature are divided, and nature is an object. Miriam buys an island for herself and says “Out west ... there’s an island ... I’ve a complex there, with a clone bank and re-sleeving facility ... This place is mine. All of it, the island, the sea around it, everything on it” (Morgan, 2002, p. 120). These words of Miriam signal the commodification and exploitation of nature.

Similarly, some guns, the door of Nyman’s office, and the table in Bancrofts’ house are made of some special trees. “The desk was a heavy mirrorwood item- they must have freighted the gene code from Harlan’s World and cultured the tree here” (Morgan, 2002, p. 39). Transhumanism has made it possible to carry the gene code and grow plants on different planets, but this also means that the nature’s structure is

changed, and it is commodified and possessed at the same time. The idea that nature is for the service of human beings is seen also in the buildings that stand in the air and in air traffic. In this world, some buildings can be seen in the air, and Kawahara's brothel is one of them. Air vehicles are so common that there is a traffic jam in the air. These novelties might seem good enhancements to the transhumanist concept, but at the same time, this is nature exploitation. The sky is not considered when buildings are constructed in the air or cars that can fly are produced. Such technologies take away the beauty of the sky and cause its pollution. Nature is so far from human life that Kovacs would like to escape from his troubles to nature as he says "Out in the middle of a seemingly endless ocean ... it was easy to believe you could hide from the Kawaharas and Bancrofts of this world, but that kind of hiding died centuries ago" (Morgan, 2002, p. 306). Thus, escaping to nature implies that humans are far from nature in their daily life and going back to nature is impossible due to transhumanist technologies.

Nature views in the real world of the novel can be analyzed in terms of transhumanism. There are few good representations of nature in the real world. For instance, Morgan draws dark images of nature or natural phenomena due to the escape efforts of some people. One day, Kovacs sees an advertisement about the peaceful life in the mountains, which signifies the pessimist view of the real world. The streets are usually cold, rainy, dark, and windy. "The paving under my feet was slick with the rain and a grey muck distilled from items of decaying garbage" (Morgan, 2002, p. 108) as stated by Kovacs to show the dirt in the street. The good nature in the real world is mentioned mostly as places where the rich live. Bancrofts' garden, Miriam Bancroft's island, and the terminal that they see in Kawahara's place in Europe are all perfect examples of the beautiful nature. Kovacs explains the terminal in Europe as follows: "We passed, without formality, into the terminal and across a zone of micro-climate where palms and other less recognizable tropicalia made a bid for the massive glass ceiling" (Morgan, 2002, p. 272), so there are still places whose nature is not affected by transhumanist technologies and exploitation of human beings. However, these good nature views existing in a few places in the real world are more common in virtual worlds that the characters connect to. Readers encounter pure, peaceful nature in virtual worlds more often. "[The sand] was still damp from the tide's retreat, and our footprints welled sogily behind us. In either direction, the curve of the beach was

deserted. We were alone apart from the gulls that wheeled in geometric formations high overhead” (Morgan, 2002, p. 237). This is an explanation of one of the virtual connections. The characters see the blue sky, sea, sand, birds, and deserts in virtual worlds. The fact that these virtual worlds have more peaceful places than the real world might highlight how nature is spoiled and neglected.

2.1.4. Unexpected Outcomes of Transhumanism

Human equality is one principle that transhumanism does not make concessions in theory. According to transhumanists, people should be free to determine for themselves how to live “and institutions should be designed in a way to guarantee neutrality between different forms of life” (Ranisch, 2014, p. 6). Looking at the issue of equality from a broader perspective, Braidotti (2014), a proponent of anti-humanism, tries to save developments in technology and science from the sovereignty of human centrality. Both Braidotti and transhumanists are against identities depending on the ideal of the Eurocentric and “normative humanist male person”. They think that transhuman and posthuman ethics must give life to humans and non-humans, too. Also called anthropological migration or hybridization of species, this idea tries to destroy the line between male humans and other species and rescue species from the “master-slave relation that the humanist tradition built through the integration of people with different races, languages, and religions, animals, plants, natural environment, in short, of everything in a cosmos” (as cited in Akyol Oktan & Oktan, 2019, p. 284).

Contrary to anthropocentric humanism, most transhumanists hold that both human and nonhuman beings matter. Nonhuman beings may have rights and personhood status (Ranisch, 2014, p.8). This transhumanist aspect can be seen in *Altered Carbon* where the AI hotel and a mandroid shop assistant are behaved like ordinary persons. However, when one considers deeply, it is seen that the equality between artificial intelligence and human beings is not achieved fully. Although AI’s are behaved like human beings, they are superior to some humans. For instance, Hotel Hendrix has a better place in society than real human beings working in Kawahara’s brothels, but she is inferior when compared to Meths. When looked at from the angle of men and women equality, they are apparently equal in the novel. Both genders get use of technology equally as long as their economic power is equal. Also, women may have a voice in important institutions. For example, the Chief justice of the UN

Supreme Court is a woman named Nalan Ertekin, Ortega is a police officer everybody respects, or Kawahara is a woman who has connections with very powerful people. Hence, it cannot be ignored that women are more effective and capable in this transhumanist world than in the real world now.

There is one thing in common between today's world and that of the novel, which is looking down on women, even unconsciously. This is not something Haraway and Bradotti dream of in a transhumanist world as it is totally against their point of view that is mentioned above. In the novel, what makes some women equal to men is not the humanist or transhumanist atmosphere but their own power, and this signals that equality between men and women is just superficial. Miriam is equal to men thanks to her economic power, Ortega and Nalan have their titles, and Kawahara has her connections so they can behave like men. Even though she is powerful, Miriam is not fully equal to her husband, who gives her economic power. Laurens states "Miriam, could you leave us alone for a while. I'm sure Mr. Kovacs has endless questions, and it's likely to be boring for you" (Morgan, 2002, p. 36) when he is about to explain details about his murder. Though Kovacs wants her to stay because he has questions for Miriam as well, she obeys her husband and goes. For men like Bancroft, women are subjects. To illustrate, Miriam is like the plant brought from Mars. She has no right to decisions. She knows that her husband cheats her, but she cannot do anything. Miriam has sixty-one children, and she has no other functions than giving birth according to her husband. She lives without interfering in her husband's business.

On the other hand, women who do not have power are treated like sleeves and slaves. These women are mostly from the working class and are in need of money to survive. All the girls working in brothels, such as Elizabeth Elliott, Louise, Mary Lou Hinchley, and Marla Rentag are killed by rich dominant males for pleasure. Besides, Irene Elliot, who works in a data market, is not equal to a man, especially a wealthy one. When she is in stores, her body is sold to another person. It can be also seen that the female body is mostly behaved like an object. "If the transhumanist body is seen as expendable, the female transhumanist body is doubly so – it is an item that exists to be used and thrown away" (Forsek, 2019, p. 12). Kovacs, for instance, often comments on Miriam's body rather than her intelligence, or Elizabeth and Louise are killed without a proper reason. As a result, if there is equality among some women and men, it is not for the sake of real equality, humanism, or transhumanism, but for money or title.

The other and the most explicit issue that does not change even in the advanced society of the transhumanist world is the inequality between the rich and the poor. In a typical transhumanist world, it is natural to assume that there is no poverty, and everybody is equal in terms of economy. James Hughes states that a posthuman future is achieved when technologies are safe and available to everyone. Democratic transhumanism “accords a much bigger role for government in ... ensuring that the benefits will be available to all, not just a wealthy or tech-savvy elite” (Bostrom, 2005a, pp. 17-18). However, *Altered Carbon* does not display such an ideal society. Francis Fukuyama (2004) asks “If we start transforming ourselves into something superior, what rights will these enhanced creatures ... possess when compared to those left behind?” (as cited in Brenner, 2013, p. 48). This question of Fukuyama’s signals the prospective conflict between enhanced people and those who are standard. Such a conflict will most probably begin when the wealthy can steadily enhance themselves, but the poor cannot. There is even a prediction that when the rich are more enhanced, they may treat the poor as inferiors who are appropriate for exploitation (Brenner, 2013, p. 48). “Transhumanism is above all committed to the principle of experience-based scientific exploration. The understanding of cutting- edge technology which is thereby achieved is, however, not something that is evenly distributed among humans” so the result may be that men’s power over nature might turn into men’s power “on other men with nature as its instrument” (Alfsvåg, 2015, p. 262). This is the case in the novel. As Fukuyama reminds us, many political fights in the USA’s history occurred because the marginalized people lacked political rights. There is a probability that the advantages which the enhanced characters possess lead them to press for getting more rights or power. In addition, as it is the case in expensive medical care, if the enhancement technologies are obtained only by the rich, the gap between them and the poor will be wider (Tennison, 2012, p. 407). Transhumanists usually support capitalist productivity but in a capitalist economy, those who can pay for what they desire can get them while the ones who cannot afford what they want cannot buy them. As a result, transhumanists propose states to ensure certain important goods and services including enhancing technologies (Lilley, 2013, p. 11). Even though the proposal is well-intentioned, its reflection in the novel is not so effective.

Inequality between the rich and the poor is reflected mostly through the Bancroft family and Kawahara in the novel. Since Bancrofts and Kawahara are both

Meths, they are in the upper class of society. The reader learns about Laurens Bancroft's wealth from his own letter that says, "Suffice it to say that I am a rich and powerful man here on Earth" (Morgan, 2002, p. 28). He is not modest when talking about his economic power as he asserts "When you have leisure and wealth, bringing children into the world is a pure joy" (Morgan, 2002, p. 38). Naturally, his family and Laurens Bancroft have clones and remote storage enabled by his own company named PychaSec, so being digitalized is very simple for them when compared to a common person like Ortega, who states that she has no money for digitalizing. This situation is the same also in Harlan where if the people in the elite class "want you, sooner or later, they'll scoop you up off the globe, like specks of interesting dust of a Martian artefact. Cross the gulf between the stars, and they can come after you ... They are what we once dreamed of as Gods ..." (Morgan, 2002, p. 306). New gods of that world, the elite class, have advantages in terms of obtaining advanced technology too, but they constitute a small part of the society.

In Harlan's world, most people could afford to be re-sleeved at least once, but the point was that unless you were very rich you had to live out your full span each time and old age, even with antisen treatment, was a wearying business. The second time around was worse because you knew what to expect. Not many had the stamina to do it more than twice. Most people went into voluntary storage after that, with occasional temporary re-sleevings for family matters, and of course, even those re-sleevings thinned out as time passed and new generations bustled in without the old ties (Morgan, 2002, p. 70).

The way to immortality technology is money in both worlds of the novel. The evolutionary stack technology and re-sleeving are developed for the whole humanity in theory, but the reality gives the privilege of using these technologies only to the wealthy. That is why one common case that Ortega is interested in is those who do not have remote storage and are about to die after their stacks are destroyed. As stated above, rich people seem to feel themselves superior, which encourages them to think that they can do whatever they want to less powerful people. For instance, Miriam Bancroft attacks Leila Begin, a pregnant prostitute, and causes her baby to die, but she is not punished for this. Kovacs signals this while talking about Kawahara by saying "She's a fucking Meth, Kristin. She'll beat it all without raising her pulse" (Morgan, 2002, p. 305). Also, workers carry their bosses' bar codes printed on their bodies, whereas mindbites, which are moments in the minds of people, are bought by rich people to have more power though it is illegal. Similarly, only the rich can buy the activation codes of the war viruses. Normally, the sale of them is banned and the punishment entails a hundred and two hundred years' storage but "these penalties were

only applicable to private citizens, not military commanders or government executives. The powerful are jealous of their toys” (Morgan, 2002, p. 322). Sending threat messages to Bancrofts, Victor is like the oppressed person in conflict with Laurens Bancroft. “The data market was down. Too many brokers. Saturated. We had a clone and re-sleeving policy to pay on both of us, plus Elizabeth. My tac pension wasn’t going to be enough” (Morgan, 2002, p. 95) as said by Victor when he describes his bad economy. It is seen that even when the working class gets the advantage of technologies, which is a transhumanist dream, it is not certain whether they can go on using these technologies as long as the rich can use them.

Furthermore, Fukuyama’s warning that the wealthy may press for more power and rights seems to come true in the novel. All the rich men going to Kawahara’s brothel to harm or kill girls virtually want to do these in real life too, and they get what they want. On the other hand, it gives hope that Bostrom’s proposal that the state can help the poor to get technology achieved in *Altered Carbon*. However, the service of the government is not as perfect as the powerful people have. For instance, some murder victims cannot get re-sleeving services from the government because their murderers cannot be found. In addition, the quality of the sleeves the government provides is understood by the reader when Kovacs goes to Louise who says “That looks like prime tank flesh to me ... You just come out of the store, how come you’re not paroled in some bonebag junkie’s sleeve?” (Morgan, 2002, p. 104). She implies that when a person gets out of stores and the government gives him a sleeve, this sleeve cannot be high quality, at least as good as the ones the rich have.

As a result, it is apparent as Nancy Campbell says that enhanced or “suspicious technologies” are allocated but not equally, and this results in discrimination and injustice in the society of *Altered Carbon*, which, in this sense, is not very different from today’s societies. Fukuyama’s assertion that developments in biotechnology jeopardize human equality and find new ways to control citizens (Fukuyama, 2003, as cited in Akyol Oktan & Oktan, 2019, p. 282) has come true in the novel’s world. Morgan seems to indicate that however much humanity is enhanced in the future, there will still be those who have and get more and more. Creators and users of transhumanist technologies do not worry about the non-human world, which leads to ecocritical implications.

Moreover, when the social-ecological approach, which relates social issues to environmental ones, is considered, it can be seen that inequality between the rich and the poor leads to the worsening of environmental degradation. According to this approach, inequality increases the ecological irresponsibility of the rich (Laurent, 2015, p.7). This is mirrored in *Altered Carbon* nearly with every rich character. Laurens brings a valuable plant from another planet, whereby his wife buys an island for her pleasure, and Kawahara has brothels built in the sky. As they can afford excessive things, they do not consider the impacts of their actions on plants, island nature, and the sky. Also, the social-ecological approach holds that inequality hinders collective action for the benefit of nature (Laurent, 2015, p. 9). Accordingly, for nature or the environment, there is no attempt from the rich or the poor because while the former enjoy their life, the latter have to work too hard to consider any other things. In addition, both sides do not like each other. The rich belittle the poor, whereas the poor are angry with the rich who use them, so they cannot cooperate for the environment.

Besides the equality issue, there is another unpredictable result of transhumanism reflected in the novel. It is the possibility that human beings may outwit the almighty technology that transhumanism relies on blindly. Transhumanism is sometimes likened to religions because both talk about a better future without any suffering and disease. What distinguishes them is that the former believes that technology will provide such a future while the latter promises this future after life. Thus, transhumanists give technology a very vital role and trust in it. For example, they believe that robots or AI's can do many jobs better than human beings. However, there is a possibility that even technology can be cheated by human beings. For instance, Richard Morgan reveals this in his novel, so he questions the almighty role of technology. When Kovacs tells lies to Rutherford, Ortega believes as well, and Kovacs is proud of himself. He points out "Know what, you could have given me a polygraph test while I was spinning it, and I would have convinced that too. Basic Envoy tricks" (Morgan, 2002, p. 207). The polygraph test is a technological means to detect liars, so it is used by the police. However, Kovacs can pass this test with lies thanks to his envoy training. It means this technology that is trusted so much and is given a role in an important area like the law is actually possible to cheat. This fact makes people reconsider their trust in technology and gives harm to the criminal evaluation process. If good training can beat polygraph technology, there might be security problems, too.

Furthermore, there are some simple tasks that are preferred by human beings, thus highlighting the inevitability of humans and their workforce. While Kovacs is wandering through PsychSec to see Bancrofts' clones, he sees a cleaning lady and is surprised, but Nyman asserts "there are some jobs that robot labor just never gets quite right" (Morgan, 2002, p.80) so, human beings with their bodies are necessary even in an advanced transhumanist world. It is also probable to avoid AI's in humane ways. Kovacs knows that he needs to be primitive to escape from the chase of an AI. Being primitive is preferring non-electronic ways in whatever the task is, so Kovacs walks instead of using a taxi and uses a public callbox. If a person cheats an AI with simple tactics, it may mean that AI's are not intelligent enough to deal with human beings. In short, one negative aspect of transhumanist developments is too much dependent on technology, which can actually be cheated or substituted in some ways, and this fact is well reflected in *Altered Carbon* though it is ignored by transhumanism.

Techno paranoia is one of the negative phenomena that may occur in a transhumanist world. Although it is not taken into consideration by transhumanists very much, Richard Morgan echoes the possibility of techno paranoia in his novel. Information is never fully safe in such an electronic atmosphere, and this is the biggest source of paranoia. Being aware of this fact, Kovacs asks Ortega to write down where to meet instead of saying it because "anybody down there with decent implants could have this conversation focused and amped" (Morgan, 2002, p. 254). Further, Kovacs's fear of viruses is repeated in the novel.

Jimmy de Soto steps out from behind the shattered stub of a tower. I'm not really surprised to see him here, but his ruined face still gives me a jolt. He grins with what's left of his features and puts a hand on my shoulder. I try not to flinch (Morgan, 2002, p. 74).

As he has seen how his friend Jimmy died due to a virus, he often remembers this and experiences the terror again and again. It is natural to feel afraid of technology in a place where there are lots of AI's and your mind can speak for you even when you are dead, so Kovacs knows he must take precautions.

Wealthy Meths have lots of secrets and buy the mind bites of people to use for their own benefit, so they appreciate the value of information, but it seems they have techno paranoia as well. When Kovacs asks Kawahara, a Meth, if that is a "secure line", she says "as close as such a thing can be said to exist, yes" (Morgan, 2002, p. 311), so Kawahara too is not sure whether there is a safe line in their world. Also,

sleeve technology creates fear and doubt because there is a conflict between appearance and reality. For instance, while Kovacs is asking Louise questions about Elizabeth, he says he is Elizabeth's mother in a male sleeve and Louise does not believe him at first. Since appearance and reality are contradictory, suspicion is a part of the characters' life. Hence, in order to create a healthy society, transhumanism ought to pay attention to techno paranoia and scepticism that their revolutionary technologies may cause.

Increased drug use is one of the negative outcomes of transhumanism, as mirrored by Morgan. It is natural that the development in technology affects medicine and drugs. However, it is also normal to anticipate less drug use in a transhumanist world that has no place for diseases and poverty. Therefore, it is necessary to differentiate the drugs with therapeutic purposes from other drugs. Elkins states that therapy aims at restoring one's health, enabling bodies to remain as they are originally created. On the other hand, enhancement implies taking the human condition beyond normal to excellence. Transhumanism pursues more than enhancement as its goal is a posthuman condition that does not allow death (Elkins, 2011, p. 19). In this sense, nootropic drugs can be examined under the roof of enhancement. Transhumanists such as James Hughes advocate these types of drugs to increase concentration and short-term memory. For instance, Medaphenil was promoted to raise short-term memory retention and the ability to focus on a problem. However, Tom Koch (2010) points out that since science has not solved the complexities of cognition, yet nootropics do not advance complex intelligence, more specifically, "the ability to integrate both data and experience in a meaningful way, or insight, the ability to organize and reorganize data in a novel manner" (p. 4). Similarly, Amphetamine and Benzedrine were supported for diminishing fatigue, strengthening memory, and increasing energy, but there is no evidence of their long-term effects (Koch, 2010, p. 5). While enhancing people, their safety must be the most important concern. People who want to advance their minds and bodies by using steroids, Ritalin, or mood brighteners take the risk of long or short-term effects. There is also the issue of using therapeutic drugs for non-therapeutic purposes. To illustrate, the rate of doctors who advised human growth hormone to non-growth hormone deficient children rose from 1% to 74% in spite of the lack of evidence on its impact (McNamee & Edwards, 2006, p. 518).

Looking at the drug issue from the perspective of *Altered Carbon*, it is seen that the book deals more with non-therapeutic drugs used for enhancement. Drug use continues in this transhumanist future as it does in the world currently. The only change has occurred in their purpose of use. Since the body is always healthy thanks to re-sleeving, drugs are for higher performances in various tasks and sometimes are for pleasure. Curtis uses synamorphosterone that is also called a harem drug. When Kovacs asks about this drug, he learns that “it’s a male response enhancer. Boosts aggression, sexual prowess, confidence. On the street in the Middle East and Europe, they call it Stallion, in the south it’s Toro. We don’t get much of it here (...) Which I’m glad about. From what I hear it can be very nasty” (Morgan, 2002, pp. 237-238). The use of synamorphosterone attains its goal of making Curtis self-confident when he fights with Kovacs. As noted earlier, there is also a drug named Reaper or betathanatine used to have near death experiences or not to feel anything. Kovacs describes his Reaper experience as follows:

The last time I used betathanatine had been in street battles on Sharya. A full dose, designed to bring body temperature down to room normal and slow my hearth to a fractional rate. Tricks to beat the antipersonnel detectors on Sharyan spider tanks. With no register on infrared, you could get up close, scale a leg and crack the hatches with termite grenades. Concussed by the shockwave, the crew usually slaughtered as easily as newborn kittens (Morgan, 2002, p. 130).

It is explicit that betathanatine has devastative effects, but its use is common, even among children. One more drug mentioned in the novel is tetrameth, which gives speed and strength. As a result, despite the “perfect” world presented by transhumanist developments, people use more drugs for non-therapeutic needs, and one cannot help but wonder whether this is a part of the perfectness, or these drugs are unexpected effects of transhumanism.

3. TRANSHUMANISM in DON DELILLO'S *ZERO K*

Zero K is a science fiction novel describing mainly the protagonist Jeffrey's journey to a cryopreservation facility where his stepmother is frozen. Readers feel the impact of this exploration both when Jeff is in the facility and when he goes back to the city where he lives. Since the novel includes high technologies and their impacts on characters and their lives, this chapter presents an analysis of the novel from the perspective of transhumanism. As a technology created for the immortality of human beings, the cryopreservation process is examined first. It is a good transhumanist tool to stop aging and then to become immortal, so how cryonics affects death and being dead, changes it brings to the meaning of human being, and its relationship with religion and nature are explained. The place where cryonics is achieved in the novel is a facility called the Convergence, which has some characteristics of transhumanism. First, the link between the Convergence and the notion of the "world" is revealed. Its service for the wealthy and its implicit capitalist purposes are described. Things inside and outside of the Convergence, and their connection with nature follow. Jeffrey's opinions about this facility and a comparison of this place with the city are also mentioned. The last two sections present dualisms and women in the novel. Mind-body and culture-nature dualisms are scrutinized as they are reflected by DeLillo. Finally, implications of gender equality in this transhumanist world are disclosed.

3.1. Cryopreservation, Its Impacts, and New "Human" Definition

Aiming at achieving the immortality of mankind, bringing the deceased back, making the human anatomy suitable for space travel, and ensuring free motion throughout the universe, transhumanism focuses on the enhancement of human physiology and intellect. It accepts aging as a process that is influenced by human beings. In this regard, Benjamin Best asserts:

The proposition that aging is a disease that can be treated and perhaps eventually be reversed (rejuvenation), is based on the general understanding that aging consists of a multitude of specific pathologies on cellular and molecular levels that can be studied, understood, and reversed with foreseeable tools (as cited in Furjanic, 2019, p. 497).

Aging is a process that can be nullified from a transhumanist perspective, and this affects their idea of death. If there is no aging, death is eradicated, and immortality is achieved. Since it deals with transhumanist immortality goal, cryopreservation is a

transhumanist technique (Genovese, 2018, p. 52). Like some other technological innovations, the basic idea behind cryopreservation was first mentioned in science fiction. It was in Robert C.W Ettinger's book *The Prospect of Immortality*, which suggests that people should try freezer programs after their medical death (Genovese, 2018, p. 52). Although it was a product of science fiction, cryonics is now a part of real life as well. As Peer Boxall maintains, the novel form "allows us to imagine and to make new worlds, to fashion new forms of accommodation between art and matter, or even to live, in a condition of worldlessness", and *Zero K* can be said to assume this task (Dini, 2016, p. 1). DeLillo makes readers think about extremist but existent transhumanist technologies and their effects from different aspects.

Zero K is a novel highlighting the achievement of a transhumanist dream: immortality. The ambition is to overcome death by means of a high technological process called cryopreservation or cryosuspension. It is a process in which a recently deceased person is vitrified in liquid nitrogen until the technology is improved enough to cure him and bring him back to life. It is done carefully and slowly without water to preserve the structure of the cells, especially brain cells (Walker, Walker, & Carruthers, 2016, p. 364). Like many other technological novelties, there are some unanswered questions about this process, too. Even Nick Bostrom, a famous transhumanist, has doubts about the process of cryopreservation, and explains his suspicions as such:

The uncertainty about the ultimate technical feasibility of reanimation may very well be dwarfed by the uncertainty in other factors, such as the possibility that you deanimate in the wrong kind of way ... that your cryonics company goes burst, that civilization collapses, or that people in the future won't be interested in reviving you. So, a cryonics contract is far short of a survival guarantee. As a cryonicist saying goes, being cryonically suspended is the second worst thing that can happen to you (as cited in Furjanic, 2019, p. 499).

Besides what Bostrom says, the problem of long-term memory exists. It is thought that vitrifying the person's brain quickly will conserve the brain-related networks stressing memory and personality, but this has not been proven yet. Also, any cerebral damage may cause the erasure of some parts of the memory. Finally, it is not known yet how to extract the memories from the brain (Manzocco, 2019, p. 127). Thus, DeLillo reminds these uncertainties.

Death is a debatable topic in the cryonics context. When the purpose is to eradicate death, an exact definition of death becomes a problem. According to the

advocates of cryonics, the criterion for death will go on changing because the area of biotechnomedicine is advancing, and a person who is cryopreserved after his death in 2018 might not be regarded as dead by a doctor one hundred years later (Genovese, 2018, p. 52). This means defenders of cryonics differentiate a “legally dead” person from “information theoretical death”. While the former refers to a person who has no brain function anymore, the latter is the point when individuality, memoirs, anticipations, and desires of a patient cannot be brought back. Between these two types of death, cryopreservation targets the second one, which could be prevented by cryopreserving the patient without delay according to the defenders of the technique. The Alcor Life Extension Foundation explains the notion of death in cryonics as follows: “Cryonics is not a belief that the dead can be revived. Cryonics is a belief that no one is really dead until the information content of the brain is lost, and that low temperatures can prevent this loss” (as cited in Genovese, 2018, p. 53). This demonstrates that for the advocates of cryonics, death has become a socially constructed process instead of a moment (Genovese, 2018, p. 53).

Such a separation of death into types is an echo of the mind-body dualism that Descartes, Bacon, Hobbes, and many other philosophers discussed. It is clear that cryopreservation accepts brain death as the real death, and this makes the mind superior. Scientific materialism and the overvaluation of science and technology as a result of transhumanism have given biotechnomedicine including cryonics a high status in the technocratic capitalist society (Genovese, 2018, p. 53). Capitalism accepts that people shape their identity by things they own and based on anxiety about material loss. Accordingly, cryonics feeds this feeling by providing a guarantee of preventing one’s loss of life and a way for having more wealth in the future (Genovese, 2018, p. 54). In *Zero K*, Ross is described as a man “shaped by money”. He is famous for his analysis of the profit impact of natural disasters. He also likes talking about money, defining some economical terms, and drawing diagrams for his son, Jeff, so cryonics is a way for Ross to run his business after he is “reborn”. In addition, the cryonics process makes the body a kind of property that can be invested and has a possibility of return. For example, today, the law Uniform Anatomical Gift Act commodifies the body by allowing people to donate their bodies to cryopreservation facilities for scientific research (Genovese, 2018, p. 54).

In the novel, Artis is glad that she will contribute to science through cryopreservation of her body. Stenmark twins state that the dormants' bodies will be colonized with nanobots and "they will be subjects for us to study, toys for us to play with" (DeLillo, 2016, pp. 71-72). Further, individuals, foundations, corporations, and even some governments invest in the facility named the Convergence, and this means they invest in the bodies cryopreserved there. Ross says the benefactors "understand that now is the time. Not just the science and technology but political and even military strategies" (DeLillo, 2016, pp. 33-34). Therefore, it can be said that the human body is seen as a thing to be a part of some "strategies". Also, the commodification of bodies in the novel can be seen in the art of the facility. They exhibit real human bodies as pieces of art around the building. For instance, Jeff and Ross see a human form staying stagnant but breathing and changing chemically. Thus, the distinction between artificial and human is blurred in art structure, which means the transformation of the body into an accessory. It can be concluded that objectification of the human body both alters human nature and undermines the humanist idea that human is the superior species.

Besides immortality, another purpose of the Convergence is finding the meaning of life and self-examination of the patient. This can be understood in Artis's belief "I will be reborn into a deeper and truer reality" (DeLillo, 2016, p. 47) or in the priest, Ben Ezra's statement "people who spend time here find out eventually who they are. Not through consultation with others but through self-examination, self-revelation" (DeLillo, 2016, p. 124). Besides, Ross is confident that this place is more than a bridge to the future as he says, "You understand this is only the preface to something larger, to what is next" (DeLillo, 2016, p. 29). Artis's consciousness in the cryopod displays if this second purpose is achieved. As a guide explains to Jeff and Ross, when a person is put in a pod, "it will not be total darkness and utter silence ... In time you will re-encounter yourself. Memory, identity, self, on another level" (DeLillo, 2016, p. 238). The reader learns Artis's consciousness in a monologue in the first or the third-person narration. As she is separated from her body, she always asks questions such as who she is, if she is just the words, why she cannot know more, if she needs to wait, what it means to be who she is. In the third person, it is said "All the selves an individual possesses. What is left to her but a voice in its barest sheddings" (DeLillo, 2016, p. 162), and in the first-person narration, she maintains,

The only here is where I am. But where is here. And why just here and nowhere else ...
Where is my body. Do I know what this is. I only know the word and I know it out of
nowhere (DeLillo, 2016, pp. 158-159).

Therefore, it is clear that she can neither reach her true self, find the meaning of life, nor she has prevented death as she seems to be in an endless third space of unawareness and agony, an infinite death (Ashman, 2018, pp. 7-8). Also, her experience is not like the one the guide explains. She does not have a memory, is not aware of her identity and self, and hears just her own thoughts in silence.

Findings of McGill University have shown that when the brain is left to itself and when there is no bodily stimulation, the normal function of the mind breaks down. Similarly, Artis is like a broken machine without sensory stimuli and memory (Casteluber & Fernandes, 2021, p. 528). She cannot recognize herself as there is not a second person and cannot recognize time and space because she does not have a body that is “the interpretant of the relation between signifier and signified” (Ng, 2020, p. 13). Hence, she is not an ordinary dead or a healthy alive anymore. It can even be said that she is neither before nor after death, but instead is in the state of death perpetually (Ashman, 2018, p. 2). The cryopreservation process has spoiled her human nature. Hence, Katherine Hayles reveals

If my nightmare is a culture inhabited by posthumans who regard their bodies as fashion accessories rather than the ground of being, my dream is a version of the posthuman that embraces the possibilities of information technologies without being seduced by fantasies of unlimited power and disembodied immortality, that recognizes and celebrates finitude as a condition of human being, and that understands human life is embedded in a material world of great complexity, one on which we depend for our continued survival. (as cited in Casteluber & Fernandes, 2021, p. 529).

However, the process of cryonics has not seen bodies as “the ground of being”, and advocates of it have believed in the power of human beings so much that they have not accepted death as the natural condition or human life as a part of the material world.

As a result, only Jeff, who avoids cryopreservation and does not run away from the sufferings of real life, could protect his humanity and human nature related to the environment (Casteluber & Fernandes, 2021, p. 530). He refuses disembodiment and body as the insignificant notion of the Convergence and shows this by his bodily exercises in his claustrophobic room, speaking with people there, remembering the ordinary moments with his mother, and his interaction with his environment. Barrett (2018) maintains that Jeff has an intimacy with existence. This intimacy for Jeff is filled with “ordinary moments that make life ... No leaps or falls. I inhale the little

drizzly details of the past and know who I am” (as cited in Barrett, 2018, p. 119). While everybody in the facility breaks their connection with nature and with their past, Jeff resists this and does not lose his humanity (Ng, 2020, p. 7). As Ng (2020) holds, the disembodiment problem might be the result of the notion of the modern body. The twenty-first-century Western medical scientists and transhumanists draw the modern body as white, patriarchal, capitalist, and created in a laboratory. This point of view causes the disconnection of the living human body from nature and the underestimation of the body. “What follows is the collapse of the balanced relationship between humans and nature, which results in severe human and environmental tragedies” (p. 17). As bodies of laboratory, bodies in *Zero K* have fallen into the trap of disembodiment.

When modern biotechnoscience advocates the Cartesian compartmentalization of human beings, there could be a problem in the definition of the human. For instance, Donna Haraway thinks that cyborgs are “imploded entities, dense material semiotic things- articulated string figures of ontologically heterogenous, historically situated, materially rich, virally proliferating relating of particular sorts”. Similarly, when the human body parts are vitrified and put into capsules monitoring and altering temperature autonomously, cryonics violates the “biological ontology of what it means to be human” (Genovese, 2018, p. 53). The Stenmark twins indicate explicitly that they desire to expand and surpass “the boundaries of what it means to be human” and Ross explains “we will emerge in cyberhuman form into a universe that will speak to us in a very different way” (DeLillo, 2016, p. 67), and to some extent, this is achieved through cryonics. However, the new type of human is still separate from nature which is absent in twins’ aims and in the design of the Convergence. In addition, it is ironic that cryonics advocates claim to preserve the patients, but they break down their bodies at the same time (Genovese, 2018, p. 54). The guide in the Convergence says they strip the organs of the heralds, and preserve them separately in insulated vessels named pods. Although at first, Ross thinks they seem at peace, one can question whether they are still human beings with their organs falling apart.

Being a way of eliminating death and aging, cryonics has gone beyond a fictional treatment and has become a part of our modern life. Besides the uncertain end of the patients, some social issues related to cryonics have been criticized, especially by bioconservatives. One of these critics, namely Francis Fukuyama mentions some

significant effects of life prolongation on society. However, the natural consequences of cryonics are usually ignored. If everybody could afford cryopreservation as transhumanists dream of, this would result in overpopulation in the future when the patients are “reborn”. In the novel, it is not known what kind of a world is waiting for the patients in the Convergence. There might be overpopulation and more environmental problems if more people are cryopreserved, so Ross and Artis may not wake into the world they fantasize about. Increasing the population is one of the main reasons for natural and environmental problems that take place even when Artis and Ross undergo the process, and cryopreservation can make things worse in the future when they wake up. The Stenmark twins also question this when they talk about immortality. They ask, “Aren’t we easing the way toward uncontrollable levels of population, environmental stress?” (DeLillo, 2016, p. 69), but they reject these questions at the same time. Thus, *Zero K* triggers readers, transhumanists, and bioconservatives to consider the environmental aspects of the cryonics process. He does this not by explicitly writing the future when the patients wake up but by leaving it to the readers’ imagination. However, the fact that the earth has some natural problems due to technology even when Artis and Ross are alive is a hint showing that the future will most probably be worse with developing technologies including cryonics.

3.1.1. Cryonics, Religion, and Nature

When the topic is transhumanist cryopreservation technology, religion comes to mind inevitably. The earliest stories in the history of humankind are about earth’s creation and its transformation by human beings or gods, so these stories outline environmental ethics (Buell, 2005, p. 2). Most religions assume that human beings are mortal as a part of their nature and creation which also include heaven or hell life after death. However, transhumanist technologies like cryopreservation usually contradict the religious views on human mortality. In addition, many religions care about the relationship between human beings and nature while high technology disrupts this relationship. Being one of the most preferred religions, Buddhism accepts, “all outer and inner phenomena, the mind and its surrounding environment, are ... inseparable and interdependent”, and nature is a teacher, a spiritual force, and a way of life in this religion (Palmer & Finlay, 2003, pp. 77-78). In Christianity, it is usually interpreted

that mankind is created superior and everything in nature is for man's use, so it is criticized that religions like Christianity puts human beings above the earth, which results in people consuming the earth's resources recklessly and harming it. However, in his 1990 New Year's speech, the Pope advised Christians to be aware of their responsibility in creation and nature (Palmer & Finlay, 2003, p. 84). Also, accusations toward the first book in Hebrew and Christian scripture for men's conquer of the earth are refuted by some scholars as these chapters imply religious stewardship rather than transformation.

In Mayan mythography, gods are drawn as creating humans after some false starts from corn with the help of animals, and collective survival among humans, plants, and animals is underlined in this way. Similarly, creation is an ongoing process in which humans and everything in the natural world are always emerging in Maori cosmology (Buell, 2005, p. 2). In Daoism, the verse "Humanity follows the earth, the earth follows heaven, heaven follows the Dao, and the Dao follows what is natural" (as cited in Palmer & Finlay, 2003, p. 89) describes the importance of nature to them. Hinduism accepts that god's creation is sacred and human beings cannot harm what they cannot create, and also humans have evolved from lower life forms, so they are connected to the whole creation (Palmer & Finlay, 2003, p. 95). As for Islam, it is prohibited to waste the productions of nature by excess because Allah does not love wasters (Palmer & Finlay, 2003, p. 105). Similarly, the religions of modern hunter gatherers put nature in a special place. For instance, jaguars are respected in some Native American societies. In other words, classic ancient religions are connected to nature as some gods in these religions are linked to natural phenomenon. It is seen that religions actually mention nature and humans as related to each other although it is mostly believed that religions are human-centred.

The problem begins when human beings become immortal through technologies like cryonics; they may see themselves as gods and may not need religions, so they might forget their place in creation and nature. Even before Artis is frozen, Ross interprets cryonics as the "faith-based technology. That's what it is. Another god. Not so different, it turns out, from some of the earlier ones. Except that it's real, it's true, it delivers" (DeLillo, 2016, p. 9), and it is not certain whether Artis or Ross will be a member of a religion and act according to its teachings, like keeping the balance in nature when they wake up. They have already no concern about a

religion's teachings on nature before they undergo the cryonics process, so they will most likely not care about this when they wake up as well. As a result, although religion is not the only force that entails respect for nature, it is still an element influencing the views of human beings, especially the religious ones. The Stenmark twins say "... we're human and we cling. In this case not to religious tradition but to the science of present and future" (DeLillo, 2016, p. 74), and also a woman in a meeting in the facility compares religions and the Convergence and explains, "No warping of the body in remorse, submission, obedience, worship. We do not kiss rings or slippers. There are no prayer rugs" (DeLillo, 2016, p. 64). In the future, these ideas might be accepted by many others. Also, transhumanism's immortality technologies have the potential to take the place of religions if they become successful, and this may lead people to neglect the unity of the whole creatures.

Disposal of the dead is another issue regarding religion, transhuman cryonics technology, and nature. Burial is the most environmentally friendly way of disposal because the decay of the body contributes to the soil's regeneration. Another method of disposal includes helping the survival of animals. Parsis abandon the dead for vultures and the Masai leave the dead for scavenging birds and animals. On the other hand, lack of disposal of the dead might cause pollution. For example, there are half-burnt dead bodies contaminating the water in Banaras (Tanner & Mitchell, 2002, pp. 183-184, 186). Thus, there is a direct relationship between the disposal of the dead and nature. However, if technologies like cryonics stop death, there will be no disposal; instead, the human population will rise. In this regard, Jeff sees lots of pods with preserved people's bodies, but these people cannot contribute to the cycle of nature by escaping death. As Ross says when he sees the bodies in pods, "they are just standing and waiting" (DeLillo, 2016, p. 141). They have no value for nature, and on top of that, they pose danger.

As a part of nature, cemeteries are also important for the environment because they protect the land from commercial use. In today's world, cemeteries can be also seen as the lungs of the world and as a relief from the monotony of housing in cities where green places are hard to find. Some London cemeteries, for instance, are official nature reserves (Tanner & Mitchell, 2002, p. 187). However, in a transhuman world, one can predict that there will be fewer cemeteries as people will be immortal thanks to cryonics. The Convergence could be a hint to facilities that will be more widespread

in the future. Like the Convergence spoiling the desert nature with its huge buildings underground, the future may witness similar facilities instead of green cemeteries. Jeff escapes from the cold atmosphere of the Convergence to the city. Even though cities are usually thought as less green when compared to the countryside, Jeff prefers the city to the Convergence. However, people in the future may have nowhere to escape if such facilities are built everywhere as a result of scientifically proven cryonics technology.

3.2. Convergence, Nature, and Human Nature

In *Zero K*, characters with transhuman ideals of improvement and immortality focus only on the cryopreservation process and on the facility named the Convergence in which this process is done. However, there is a life outside and they are all aware of the dangers of this life. What connects them with the outside earth in danger is their fear of death and their desire to be immortal in a safe environment. Therefore, when the notion of the ‘world’ in *Zero K* is examined, it is the Convergence for its founders and supporters, but it is outside of the Convergence for Jeff. Convergence lovers find places and the environment other than the Convergence valueless because they have built that facility with the transhuman value of progress. They do not want to leave this place where they put a different meaning that Jeff cannot understand. Conversely, Jeff prefers his common city life where he finds the “world”.

In contrast to the idea of human and nature connectedness, the founders of the Convergence have a point of view that shows how “human sovereignty over the rest of life on earth intensifies exponentially because we tell ourselves we are the world, the pinnacle of nature or ‘natura naturans’” (Garrard, 2014, p. 225). They clearly separate human beings from nature and the environment. Because of the transhumanist identity that gives them the power of sovereignty over nature and the environment, their idea of human beings is an anthropocentric one. Connected to this, the staff of Convergence guarantees that people will be able to speak a new language when they wake up in the future. The language they mention will be created only for the patients and other people cannot understand them. “A language isolate, beyond all affiliation with other languages ... It will extend our reality, deepen the reach of our intellect ... remake us ... No similes, metaphors, analogies” (DeLillo, 2016, p. 130). It will be a scientific language that “will enable us to express things we can’t express now, see things we

can't see now, see ourselves and others in ways that unite us, broaden every possibility" (DeLillo, 2016, p. 33). The language that will unite them is like the language before the fall of Babel because people will work to be better with this language like people trying to construct the tower of Babel to reach higher and higher (Dong, 2019, p.142). Even if speaking a language that only a small number of people can speak makes the patients feel exclusive, it is not mentioned how they will have a conversation with normal people in the future. If it is impossible for them to speak with other people of the time, this will make them a different sect in the society, which may result in separations among people. Such a separation will be like the separation of people at the end of the story of the tower of Babel.

The patients also need to continue to be part of nature to feel their humanity. However, a new language may change this notion because language affects the person's ideas and is affected by them. It is not certain whether speaking a new language created for the elite affects their relationship with the nonhuman positively. As members of the elite group speaking a different language, these people may feel themselves distinguished from nature and from the whole natural system. Another uncertainty about the language is whether it will be a kind of language that highlights the interconnectedness of nature and humans. For example, it might be a language with mostly words privileging human needs or one that objectifies nature. When all these are considered, it is seen that the Convergence presents uncertainty not only by the cryonics technology but also by the language that they create specifically for the patients.

One element that makes the Convergence weird for Jeff is the screens in the hallways. In contrast to serenity and peace in the building, these screens show apocalyptic images, such as corpses burning, suicides, and natural disasters. Creating a kind of a simulacra, these screens are so real that Jeff feels the events take place in the hallway. He later realizes that all these images are a part of the brainwashing process. The goal is to make people believe that they have made the right decision by preferring the Convergence to the outside world. The Stenmark twins sell safety from the end of the world which will happen in the not-too-distant future. Readers understand this clearly when Ben-Ezra counts many disasters to justify the building of the facility. He mentions food and weather systems, loss of forests, droughts, death of birds and ocean life, carbon dioxide levels, viruses, and lack of water. Therefore, DeLillo may want to

demonstrate that people have long been upsetting nature, and the founders of the facility use this to make money through their transhumanist ways. Although they do nothing to reverse the harm they have caused to nature, the book may cause environmental awareness in readers. Like Jeff, readers grasp that transhumanist improvements, having lots of money, or escaping from realities, cannot be solutions for both nature and human beings.

Convergence has got some areas that are not linked to the cryopreservation process directly. As the founders and benefactors see it as a “futurist hub”, it is normal for them to have such irrelevant spaces in the facility (Furjanic, 2019, p. 501). English Garden is one of the most striking irrelevant places inside the Convergence. First, it is interesting that such a high technological facility contains a garden that has nothing to do with technology. Also, the fact that this garden is an artificial one with flowers and plants made of fabricated stuff makes one wonder about the purpose of its construction. When Jeff enters this garden, for a while, he feels relieved to be outside of the hallways and his room. The priest in the garden, namely Ben-Ezra explains that this is a kind of survival, post- apocalyptic garden (Ng, 2020, p. 8). The question here might be whether this is the nature that transhumanists plan for the future because this is an unnatural nature. Just as technology has made people outside neglect nature and corrupts it, it also makes nature out of fabricated elements inside. This can be DeLillo’s warning about the link between human beings, technology, and nature. Even a survival garden may not be natural if human beings go on disturbing the balance of nature. The expulsion of the nonhuman from the post-apocalyptic garden or from the future of human life is just the opposite of what Bruno Latour means by saying “humans and nonhumans belong to a collective” (as cited in Ng, 2020, p. 9). Another interpretation might be that as scientists try to manipulate human bodies in cryonics, the same happens to nature because the non-human life forms are made synthetic in the Convergence, and this shows how humans are keen on dominating nature (Ng, 2020, p. 17). Therefore, the garden too highlights how transhumanist actions may break the connection between human beings and nature, putting human beings in a separate place.

The area that the Convergence has been built on is a desert. Besides the building itself, this desert has a meaning. The founders of the facility have chosen this place on purpose because it is suitable for their two goals. First, it is far from the city

and the facility is concealed there easily, so the desert provides security for the customers in pods. Ross explains this as such: “This is what we want, this separation. We have what is needed. Durable energy sources and strong mechanized systems. Blast walls and fortified floors. Structural redundancy. Fire safety. Security patrols, land, and air. Elaborate cyber-defense” (DeLillo, 2016, p. 30). Also, the patients go there to find their true selves through meditation and self-examination. Being a silent and remote place, the desert is proper for this aim as well. The vastness and blankness of the desert make purification and transcendence possible (Barrett, 2018, p. 111). However, even if every patient achieves the spiritual goals of the facility, there is the problem of the separation of human beings from nature.

Patients are physically taken from the environment that human beings are part of. They are also put higher than the nonhuman here because the serenity and wild environment of the desert is spoiled for the sake of human pleasure. The facility transforms the desert from a silent untraded place into a haunt. This desert atmosphere makes the patients focus on and absorb the brainwashing of the Stenmark twins more easily because there they have nothing to do with nature which is far from them. Even Jeff seems to have been influenced by the ideas that the convergence makes people believe. When he returns to the city, he quotes Heidegger by saying “Man alone exists. Rocks are, but they do not exist. Trees are, but they do not exist. Horses are, but they do not exist... God is, but he does not exist’ (as cited in Barrett, 2018, p. 115), so he implies how humans are distinguished from the non-human because of their self-consciousness and their ability to make meaning. Therefore, while the building of the facility affects both the environment and the people in it, the technological process done inside disturbs the human nature.

Outside, the Convergence is also significant in terms of ecocide, whereby Polly Higgins expresses ecocide as the “extensive damage to, destruction of or loss of ecosystem(s) of a given territory, whether by human agency or by other causes, to such an extent that peaceful enjoyment by the inhabitants of that territory has been severely diminished” (as cited in Eichler, 2020, p. 107). He divides ecocide into two: non-ascertainable and ascertainable. While the former does not include a human cause, the latter means perceivable harms to nature by humans (Eichler, 2020, p. 107). It is possible to see both types of ecocides in *Zero K*. Devastation of the desert habitat, events on the Convergence screens, and natural problems outside demonstrate big

ecocide. Founders of the Convergence have built it for the sake of money and of human immortality on the surface, but they have not cared about the desert. Without considering the non-human life in the desert, they have put human necessities above and spoiled the silent nature, and this expresses an example of ascertainable ecocide. As the screens in the facility reflect the calamities outside, they imply ecocide as well. Once, on the screen, Jeff sees heavy rain causing a flood and helpless people everywhere running around. This is not the only image he confronts; he also sees other natural disasters like images of big ocean waves. Here, DeLillo creates awareness for nature by pointing out a future with various natural calamities.

Finally, natural events outside the Convergence signal the danger of ecocide. First of all, the advocates of the Convergence are there because they are afraid of the course of the events on earth. As one of the benefactors says, “The sun is an unknown entity. They spoke of solar storms, flares, and superflares, coronal mass ejections” (DeLillo, 2016, p. 65), so they hope the facility is safe enough. In addition, they plan a better earth for the future because “they spoke about ecosystems of the future planet, theorizing- a renewed environment ...” (DeLillo, 2016, p.75). Such plans show that they are aware that human beings have committed ecocide. Thus, the fact that discourses on the environment are getting more attention day by day is reflected well in the novel. Today, humans understand the higher possibility of an apocalypse by environmental disaster than by a nuclear effect, and this has increased the concerns of human beings about the environment (Buell, 2005, p. 4). Increasing anxiety about an apocalypse is mirrored in the novel by those patients who believe that they will stay safe in the Convergence in case of an apocalypse. The only problem with these transhumanists is that they do nothing to fix the current natural problems.

Apart from the Convergence, there is another setting in the novel. In the second part of the novel, Jeff goes back to the city, Manhattan, where he normally lives. It is a typical city with crowded streets, traffic, and hectic life. Even though no big technological facility built by transhumanists is mentioned here, technology is still dominant in the city life. Jeff is happy that he is “able to return to my devices, data roaming, instant by instant, in the numbing raptures of the Web” (DeLillo, 2016, p. 167). However, Ross seems to have lost his transhuman ideals that he has in the Convergence. He is not interested in technology in the city. “He let his hair grow wild and walked nearly everywhere he cared to go, which was nearly nowhere” (DeLillo,

2016, p. 168), so this technological city is certainly not Ross's but Jeff's place. Ross is a transhuman who is interested in future and more extremist technologies. Unlike Jeff, advocates of the Convergence do not want to continue living where they used to live, and the reason is ironically technology. One of the directors of the facility explains that the outer world is lost to technology and there is no autonomy. Also, the sense of being is virtualized and technology has made people unfleshed. It is ironic because what they are trying to do is to cure the people escaping from a life full of technology through another technology, cryopreservation. They use cryonics technology to escape, but this accelerates what they try to avoid. They are afraid of being disembodied by technology in cities, but they are disembodied in the place they escape to (Casteluber & Fernandes, 2021, pp. 525, 527). Thus, it can be said that there is a criticism of transhumanism by transhumans themselves. They are aware of the dangers of technology in the city, but what they miss is the danger of another technology, cryonics, in the Convergence.

Also, it can be said that when technology dominates human life, it diminishes humans' relationship with nature, and this has resulted in natural problems. People in the Convergence are aware of an imminent apocalypse due to natural issues, but they prefer to be cryopreserved for a better future instead of repairing nature. When the Convergence part and the second part taking place in the city are compared, it can be said:

Zero K offers two versions of the uncanny. The first is the indistinguishability of humans and androids, reality and artifice offered by the Convergence, which washes away individuality along with mortality ... It derives from our fear of death, a dissatisfaction with the limits of humanity, and a fear of the other. The second is uncanny of Manhattanhenge, a natural and manufactured phenomenon, created by the unlikely partnership of skyscrapers and sunsets, and it speaks not to our limits as humans but to the wonder of the ordinary world when we know how to look (Barrett, 2018, pp. 120-121).

Though Barret (2018) calls both the facility and the city as uncanny, the strangeness of the latter is more nature friendly as the city amalgamates the urban elements and natural aspects creating an urban nature. As for the Convergence, even if they could achieve cryopreservation successfully, they destroy the individuality of patients by disembodiment, so these people are not parts of the whole ecology anymore. Just like plastic surgery technologies remove people's individualities at the moment, the Convergence is a source making people the same. When they wake up, patients in this foundation may lose their individual consciousness. Even when she is in her pod, Artis

lost hers and this might signal worse scenarios in the future when everybody wakes up. However, an ordinary life with a combination of natural and urban life helps Jeff stick to his human nature and individuality.

Though Jeffrey can go back to the city in the end, there has been a relationship between him and the Convergence, and this relationship is one of the things that could be analyzed from a transhumanist perspective. Jeffrey arrives at the facility without knowing the places he has passed during the journey. When he comes, he does not recognize the city as well. Only later, his father tells him that they are in a desert in southeast Kazakhstan. Jeff does not know where he is, but he only realizes the remoteness of the place. Sections of the building do not show any particularity; they are painted only grey and pastel, and they have no view of the outside. It is even not possible to say the food they eat is breakfast or lunch. People working there are like robots and do not respond to Jeff's conversation efforts. Rooms are featureless and some of them are empty. Hence, the place arouses an abdication of characteristics and individualities, and Jeff too justifies this by saying:

the movie screens that appeared and vanished, the silent films, the mannequin with no face. I thought of my room, the uncanny plainness of it, the nowhere-ness, conceived and designed as such, and the rooms like it, maybe five hundred or a thousand, and the idea made me feel again that I was dwindling into indistinctness (DeLillo, 2016, p. 74).

This featureless quality of the Convergence is transmitted to the patients as well. The stifling effect of the Convergence makes Jeff feel himself absorbed and trapped. He thinks that the strange design aims to convert the facility into an “introspective box”, thereby contributing to the isolation of the building (Casteluber & Fernandes, 2021, p. 523).

Furthermore, mannequins in the facility act like human beings, so Laura Barret mentions “how mannequins serve as an introduction to the blurring of margins between flesh and plastic, human and artificial ...” (as cited in Casteluber & Fernandes, 2021, p. 523). The Convergence presents a different interpretation depending on the “conflation” of human beings and machines, “living bodies and corpses”. There are the authenticity and humanity of mannequins, and human beings’ lack of real at the same time. Since they are deprived of their organs, patients are like mannequins in their pods, waiting shaved and naked (Barrett, 2018, p. 109). Jeff explains a mannequin as “a molded plastic version of the human body, a jointed model

of a woman” (DeLillo, 2016, p. 24). From the very beginning, Jeffrey has doubts about the Convergence; his scepticism is apparent in his questions to Artis.

What will it be like to come back? The same body, yes, or an enhanced body, but what about the mind? Is consciousness unaltered? Are you the same person? You die as someone with a certain name and with all the history and memory and mystery gathered in that person and that name. But do you wake up with all of that intact? Is it simply a long night’s sleep? (DeLillo, 2016, p. 48).

As transhumanism requires, the boundary between humans and plastic is not clear, but this happens at the cost of changes in human nature. There is no individuality of humans anymore. Cryonics technology reduces human beings and naturally, a new type of human comes into being. In this sense, the Convergence might be seen as the representative of the transhuman future. This is the reason why Jeff wants to leave that foundation. The opposite of Convergence is the city that may serve as the place where transhuman technologies have not altered human nature.

It is not only the dream of escaping from death but also the aim of finding the meaning of life that attracts people to the Convergence, and Jeff thinks about all these. It is said that the isolation in the Convergence “is not a drawback to those who understand that isolation is the point” (DeLillo, 2016, p. 125) and the patients are confident with this. Despite the trust of all others, Jeff has a difficulty in believing what they are confident about the Convergence. This is a place of contradictions with its high technologies and spiritual aim of finding the meaning of life. Besides, this is heaven for the patients but the same cannot be said for Jeff, who does not feel comfortable both inside and outside the facility. For instance, his room in the Convergence is small and featureless with its low ceiling and without a window. It does not have any digital connections, and smartphones do not work there. The contrasting stability of bodies in the pods and the disasters shown on the screens, and the scientific identity of the facility that is at odds with its spiritual aspect become incongruous to Jeff (Ferreira, 2019, p.70). Therefore, he looks forward to going back to the city in which he normally lives. It is understood when he says “... none of it was familiar, not the situation or the physical environment ... I’d be on my way home before I’d be able to absorb any of it” (DeLillo, 2016, p. 8). Thus, Jeff might be the least transhumanist character in the novel. He has doubts of a scientist, but he has no transhumanist ideals. He also realizes how the Convergence interrupts the nature of human life through freezing bodies that normally need to be dead. “His scepticism is

rooted in a belief that death and identity are essential to being human, and that the human essence is monistic- one body, one soul, under God, indivisible ...” (as cited in Herbrechter, 2020, p. 15). So, Jeff’s idea of a human being is not one who is disembodied and is featureless like the facility itself. It seems that the Convergence tries to close the gap that the lack of religion in transhumanism opens. With its spiritual purpose of finding yourself, meditating, and its garden-like paradise, the Convergence plays religion, but it fails to provide spiritualism. This is clearly understood from Artis’s questions in her cryonics pod. It can be said that the religious side of transhumanist technology is useless and meaningless like the plastic garden inside the Convergence.

3.3. Dualisms

As the space that one inhabits, a house for the self, a means of living and performing social roles, the body is a prominent theme in *Zero K*. It is both an element of dualisms and the target of immortality technology. The body in the novel is related to death and life at the same time. It is the thing that determines if the character is dead or alive, the quality of life he has, and his identity. The corruption of the body takes place on different levels in the novel. It happens both in the form of death and body violation. For instance, Jeff’s mother dies, whereas his stepmother has her body violated by transhumanist cryopreservation technology. To preserve the bodies, the scientist must strip them of the organs that make them unique and individual. In the end, a shell without any individuality remains (Stamenkovic, 2018, p. 206). Regarding this issue, Baudrillard considers that cutting up the body starts its analytic decay of it. He goes on as follows:

This is how one puts an end to totality. If all information can be found in each of its parts, the whole loses its meaning. It is also the end of the body, of its singularity called body, whose secret is precisely that it cannot be segmented into additional cells, that it is an indivisible configuration (as cited in Stamenkovic, 2018, p. 207).

So, cryopreservation can be interpreted as death itself. Artis and Ross prefer to abandon their bodies, and this paves the way for death. This is death by operation instead of death by disease. Jeff is aware that cryonics means death since he thinks about Artis as “the one whose mind and failing body would soon begin to drift, on schedule into the void” (DeLillo, 2016, p. 3). The body is manipulated for the purpose

of art as well. Further, real bodies are exhibited in the facility as pieces of art. In both art and overcoming death scenarios, the body is violated like a toy or a machine.

According to Foucault, the body signifies a person's knowledge and experience, so it is a part of his identity. However, characters in the novel sacrifice their bodies for an unknown future by a technology that is not proven yet. Since he does not undergo this technology, Jeff is the only character keeping his identity and individuality. He prefers to celebrate life and enjoy the natural phenomenon of sunset in the end. Transhumanist technology that is expected to enhance human beings sees no harm in destroying the body which they put in an inferior place. However, the body is important for Jeff and the readers because Ross and Artis disappear both physically and from memories after their bodies are cryopreserved (Stamenkovic, 2018, pp. 209-216). As a result, technology becomes the reason for the body's corruption, loss of individuality, and degrading humans into information. Due to cryonics technology, humans spoil their nature and their contact with nature. Even if the process becomes successful and they are "reborn" as information, they have no means to continue their relationship with the nature. Artis or Ross will not be able to enjoy the sunset or daily life as Jeff does. Becoming a part of the whole system in the universe requires both body and mind, and cryopreservation breaks this interrelation by terminating the body.

Convergence is a facility where its believers come to be immortal, so all the founders and supporters of this place are people trusting technology, as true transhumanists. Readers learn from Jeff's observations that the organs of the people undergoing cryopreservation are put separately into pods and they expect to come back to life with a different consciousness. It is seen that the process separates body and mind, and it privileges mind over body. As Barrett (2018) asserts, the Convergence is a space of the "literalization of Descartes's mind-body split" and it demonstrates the estrangement from the body (p. 107). In her research, Katherine Hayles finds similar stories revealing how human consciousness is conceptualized as an informational pattern causing the eradication of embodiment, so information and materiality are separated, and bodies are thought of as accessories (Casteluber & Fernandes, 2021, p. 522). The cryopreservation process privileges the mind by breaking up the body parts. The Stenmark twins assert that they are going to exceed the restrictions of the meaning of human beings as they say, "We want to do whatever we are capable of doing to alter human thought and bend the energies of civilization" (DeLillo, 2016, p. 71).

All these aims can be linked to the transhuman ideal of downloading the human mind and uploading it to a computer because this ideal implies that the core of human beings is information (as cited in Ng, 2020, p. 5). As a result, there is a hierarchy between both human beings and nature and mind and body. People who undergo the cryopreservation process will be superior when compared to normal people and animals. Thus, it is seen that like many other transhuman technological improvements, cryopreservation causes dualism. In this regard, Opperman maintains:

If human and nonhuman bodies are ‘networked with each other and with technologies, practices, and disciplines which may cluster and co-constitute them regardless of species designation’, humans can no longer be defined in a separate ontological zone, but as hybrids of nature and culture (as cited in Zapf, 2016, p. 276).

In contrast, in the novel, dualism caused by technological change in human nature prevents human beings from becoming a part of the whole ecosystem and “hybrids of nature and culture” and makes them superior beings who are closer to the culture.

Besides body and mind dualism, DeLillo presents the dualism between culture and nature in *Zero K*. Readers may recognize the elements that remove human culture from nature, and technology is the pioneer aspect in this separation because it has destroyed humans’ need for nature. The fact that the human body decays and human beings die is one of the things that connect human beings to nature. It seems that even the Stenmark twins are aware of the human death and nature relationship as they say, “Nature wants to kill us off in order to return to its untouched and uncorrupted form” (DeLillo, 2016, p. 70). Since technology has the aim of controlling natural processes like death and deterioration of the human body, it proposes itself as the solution to a society that is troubled by death. Seen as a curable disease by transhumanists, death is something that can be defeated. Characters who are afraid of death depend on excessive transhuman technologies at the cost of distancing themselves from nature. These technologies provide a safe, competent world that has no relationship with nature. Artis and Ross choose cryonics technology due to their fear of death which connects them to nature, but technology has removed them from nature and put them in the safe environment of the Convergence.

Also, culture gives protection from the threats of nature through money, education, and title. Thus, Yi-Fu Tuan points out “high culture offers ... escape from bondage to the earth” (as cited in Bowman, 2003, p. 20), so Ross’s wealth and the Convergence are ways for him to escape from the slavery to the master earth, but the

most important master is the body threatening him to return to nature through death. Ross gives himself a different name and this, together with his money, constructs his identity that is independent of nature. Further, culture tries to create safe living spaces far from nature and this too distances humans from nature. The Stenmark twins have built the Convergence as a place to secure wealthy patients for there are lots of natural threats on earth, but as a facility in the middle of the desert with a building that has no windows, people are far from nature there. Another device distancing culture and nature in the novel is screens in the Convergence halls. These screens underline the safety of the facility by showing calamities outside. It is only Jeff, who watches the screens carefully as he is not so confident with the facility and its technologies while others do not even recognize what is displayed on these screens as they trust the safety of the building. In the end, despite all these distancing effects separating culture and nature, unplanned aspects that technology cannot foresee lead one to face his nature and his death. Although it is ready for all dangers, the Convergence, which is the representation of culture, cannot see that Jeff will approach the technology there with suspicion. Jeff's suspicion and his observations detain him from cryopreservation of his body, so he faces nature outside. He goes back to his environment, where he is not afraid of death and has no need to escape from nature (Bowman, 2003, pp. 19-43).

3.4. Equality

Transhumanism is believed to liberate human beings from the restrictive bias and constructed roles of sexes through technology. Since transhuman technologies constantly modify the human body, gender issues are destined to disappear. Transhumanists see that the traditional Western point of view puts man in a higher position, so they assert that there will not be binary oppositions between sexes in the transhumanist future. As some feminists hold, the traditional superiority of men does not include women, who are not seen as humans due to their emotional nature and ability to reproduce (Pillai, 2019, p. 59). Furthermore, ecofeminists underline how women and nature are put aside as "others" by the patriarchy. They attract attention to the fact that men dominate both nature and women because men accept that women and nature are irrational, chaotic, and in a need of control. Further, both women and nature are associated with commodifiable traits, but men are fit to bring order.

The transhumanist atmosphere of *Zero K* seems to present equality between men and women. Both men and women can choose to be cryopreserved. However, when the two main female characters, Artis and Madeline, are looked at closer, it could be seen that even transhumanist societies are not perfect in gender equality. Jeff's mother, Madeline is an ordinary woman, who devotes her life to her son and husband. She does not react too much when her husband, Ross, leaves them. After they divorce, she starts to work though she has the option of getting money from the rich ex-husband. She does not have any particularity and even Jeff remembers her in ordinary, trivial dialogues and events. For instance, he says "Madeline in our living room with her avatar of personal technology, the mute button on the TV remote. Here she is, a breath, an emanation" (DeLillo, 2016, p. 248). As for Ross, he does not mention her, and when he does, he does not want to utter her name. Once Jeff insists that he should say her name, but Ross says "She was essentially one thing. She was your mother" (DeLillo, 2016, p. 32). It is seen that Madeline has only one function for Ross which is her motherhood. Nevertheless, Ross is aware that Madeline is a benevolent woman as he says "Obliging women. Deferring to the needs of their men. Ever-accommodating, self-sacrificing, loving and supporting. Madeline. That was her name, wasn't it? Your mother?" (DeLillo, 2016, p. 100) but in general, Madeline is like the town that Ross does not cherish. Ross does not care about nature in the town and wishes to leave just as he leaves Madeline alone with Jeff. As a benefactor of the Convergence, Ross does not care about the desert nature, and similarly, he does not care about Madeline and her life after they divorce.

Ross's second wife, Artis, is different from Madeline in that Ross shows his love to Artis. Still, one can see the male-dominancy in this relationship. Artis does not think much before she chooses cryopreservation. On the contrary, Ross gives himself time to consider. First, he makes his decision to follow Artis soon after her freezing process, but later he changes his mind. His fear of death overcomes his love, and he goes back to his town to get old for the freezing. Thus, Artis is drawn as an irrational woman, who sacrifices herself for the sake of an unknown technology, whereas Ross is analytical enough to consider such a big step in his life. Even if his change of mind is not because he is rational but totally because of fear of death, this time, he loves himself more than Artis. Nature outside the facility and Artis are both irrational, hard to predict, but Ross prefers the order and predictability of the Convergence, only when

he is ready. Besides Ross's relationships, male-dominancy is apparent in Convergence. The founders, the Stenmark twins are two men, who spoil the desert nature by building the Convergence. Although there are female benefactors, their names are not mentioned and that is why Jeff sometimes tries to give them names. As a result, it can be said that the transhumanist cryonics technology of the Convergence has nothing to do with gender equality or with breaking the traditional biased women and nature associations. Both main women characters and nature are weak and "others". A woman has to be powerful economically to be accepted by the Convergence as a benefactor or a patient. If a woman is not powerful enough, she is meaningless like the plastic English garden in the Convergence.

As for the inequality between the rich and the poor, the book does not mention the poor very much. Although the focus is on the rich, the gap between the rich and the poor is evident. Stenmark twins built the Convergence to protect wealthy people from natural disasters outside; consequently, powerful people rescue themselves in this way. The existence of such protection as the Convergence also makes the rich indifferent to the natural problems outside, whereas ordinary people are face to face with an apocalypse. When the way the Convergence works is thought thoroughly, one can understand what Frederic Jameson means by saying "It seems to be easier for us today to imagine the thoroughgoing deterioration of the earth and of nature than the breakdown of late capitalism" (as cited in Garrard, 2014, p. 156). As it cannot be used by everybody in the society, the Convergence cannot be said to have been built just for the sake of immortality of humanity. The Stenmark twins imply this when they say "What about those who die? The others. There will always be others. Why should some keep living while others die?" (DeLillo, 2016, p. 70). Jeff also discerns this in time when he gets to know things in this facility. He implies that this is one of the profit-driven facilities designated for the wealthy in the capitalist society, so the main goal is not so divine as it is praised, and the only point they think about the earth is the preparation for the apocalypse that they believe will come in the near future (Casteluber & Fernandes, 2021, p. 518). Stenmark twins have created this place mainly as a result of their transhumanist entrepreneurship together with capitalist purposes. They try to elevate nanotechnologies through the use of real bodies and create a market for wealthy capitalists. To do this, they underline the existing catastrophic reality outside and present human enhancement as the solution.

In fact, democratic transhumanism requires an equal distribution of the enhancements because Nick Bostrom states:

It is not enough that the posthuman realm be explored by someone. The full realization of the core transhumanist value requires that, ideally, everybody should have the opportunity to become posthuman. It would be sub-optimal if the opportunity to become posthuman were restricted to a tiny elite (as cited in Furjanic, 2019, p. 504).

However, the Stenmark twins “have little concern for the non-wealthy groups and also the nonhuman nature based on the fact that only the privileged groups gain benefits, while the working class and the nonhuman nature are used as experimental objects” (Ng, 2020, p. 14). The twins tell the rich people in the Convergence that “here you are, collected, convened. Isn’t this what you’ve been waiting for? A way to claim the myth for yourselves. Life everlasting belongs to those of breathtaking wealth” (DeLillo, 2016, p. 76). Therefore, it is seen that the inequality concern of Fukuyama is reflected in the novel. In addition, profit is more important than environmental concerns since they do not care how they have spoiled the desert nature by building the Convergence, and also, they do not try to alter the deterioration of nature outside but have built the Convergence for the rich who want to escape from the apocalypse caused by human actions.

CONCLUSION

The world has become more and more technological since the Enlightenment period when science and scientific points of view gained momentum. Human beings eased their life thanks to science and technology which develop incessantly. Today, people cannot dream of a life without smartphones, the internet, search engines, online services, and the latest technology gadgets. More specifically, the field of medicine is getting more advanced, and many diseases could be cured at the moment. For instance, Covid 19 has been taken under control to some extent because of some vaccinations created by scientists. This lifestyle depending on technology and development is what transhumanism advocates always and dreams of. Transhumanism focuses on human enhancement which includes both technologies, thus making human life easier and also more revolutionary technologies to reverse aging, prevent death, cure deadly diseases, stop dangers to the environment, and colonize other planets. In this regard, transhumanists hold that human nature is changeable so it can be developed. Natural development through evolution is too slow and it must be supported by science and technology. Thus, transhumanism tries to set humans free from their dependence on nature. The main goal of transhumanism is to reach the posthuman position. According to transhumanists, posthumanism is the level at which artificial intelligence will reproduce itself and human beings will be advanced in terms of lifespan, cognition, and emotion. To this end, they mostly support studies on genetic engineering, artificial intelligence, mind uploading, and cryopreservation, and they believe that technologies must be available to everybody.

The present study analyzed *Altered Carbon* and *Zero K* in terms of their transhumanist features and the effects of these features on human beings, their lifestyle, their essence, and nature. It is suggested that despite its premises concerning human progress, transhumanism damages nature, human nature, and human-nature connectedness as it is reflected in the novels. It also results in a new type of human that is different from today's notion of the human. Change in human nature is a common topic in both novels. More specifically, *Altered Carbon* presents two paramount transhumanist technologies: mind uploading and cloning. Mind uploading or stack technology in the novel creates a different human nature. When one's mind is uploaded to another body or sleeve as it is called in the novel, the identity of that

person does not remain the same. This issue criticized by today's anti-transhumanists is also implied by the protagonist's opinions and observations. Kovacs explains self-alienation whenever he is re-sleeved. He even feels that he watches a different person when he looks at himself in the mirror. This alteration in human nature might be the reason of why people prefer their own sleeves. Irene Elliot always wants her own sleeve though she is given a healthy sleeve. Similarly, Ortega looks after Ryker's sleeve and tries to prevent it from getting damaged as she will get that sleeve when Ryker's punishment finishes. Mind uploading causes a considerable change in human nature and also devalues the human body. As people can buy new bodies when their bodies are harmed, the body has become a worthless "sleeve". It is learned from Kawahara that human bodies are cheaper than synthetics. People are not punished in prisons anymore; instead, their stacks are held in storage.

The body has no value also because people could exist without a body. They could live virtually thanks to mind uploading technology. The only group that does not want new sleeves is Catholics, who believe that this technology hinders the resurrection of the soul. The rightfulness of this belief is implied when Kovacs sees how stacks are small when compared to sublime souls. Therefore, transhumanist uploading technology alters a part of nature by changing human nature, destroys its significance, and takes the place of the soul. The combination of mind and body is what makes human beings natural. Cloning too is an issue discussed in the transhumanism context. It is not certain whether a clone is an identical copy of the person himself, so cloned bodies in the novel represent a different human nature.

In *Zero K*, the change in human nature is reflected through the cryopreservation process. Readers learn the ambiguity of this process many times from Jeff's comments or opinions. It is not known what kind of a person is going to awake in the future. Artis's thoughts in the pod hint that when a person is frozen, he loses his body, motion, and his identity. Also, as the organs are gouged out of the body before the process, people are disembodied. Disembodiment is a crucial barrier in front of human and non-human connectedness. Due to disembodiment, the human body loses its significance here as well. Dualisms are other themes existing in both novels. Readers can realize both mind and body, and culture and nature dualisms in *Altered Carbon*. As stated, the body is not valuable in this world anymore because of uploading and cloning technologies. Therefore, human is reduced to information and the mind. When a

person's cortical stack including his mind is not harmed, this means that a person is an alive human being. Similarly, in *Zero K*, people are disembodied with cryonics, and this privileges mind. However, in nature, human beings exist with their bodies and minds, and they connect with nature as a whole.

The culture and nature dichotomy shows itself through the real and virtual worlds in *Altered Carbon*. Although there are lots of nature images in both the real and the virtual worlds, the real one has mostly dark, rainy, and pessimist nature views. Besides, a good nature in the real world is where the rich live. Kawahara's place in Europe, Bancroft's Suntouch House, and Miriam's island are beautiful nature examples in the real world. However, virtual worlds usually present pure, optimistic nature with the sun, mountains, birds, beaches, sea, and desert. This contrast between the nature of the two worlds might symbolize the spoiled nature by human actions in the real world, and the capacity of technology in creating nature although it is not real. Nature and culture clash is seen in *Zero K* in how the founders spoil the desert nature just to build a cryonics facility for the service of the humans. It is also apparent that human beings have damaged nature because they escape from the natural disasters on the earth to the Convergence. As a result, all these dichotomies contribute to the failing relationship between humans and non-human.

Death is a common theme handled in the novels. Normally, death is one of the things that connects human beings to nature where everything has an end. However, transhumanist technologies in the novels have altered the meaning of death. In *Altered Carbon*, there are two types of death. When a person's cortical stack is not damaged, he could come back to life virtually or in another sleeve and this is not the real death, but a terminated stack, implying the real death. Stacks and clones make death nearly impossible so that people could live up to hundreds of years, but these people are not ordinary human beings anymore because their connection with nature is eliminated. What stacks and clones achieve in *Altered Carbon* are done by cryonics in *Zero K*. Cryonics process is developed to defeat death. If people could wake up healthily in the future, this will mean the end of death. When people are frozen and defy death, they also put an end to their naturalness as organisms that have an end. Overcoming death has another dimension regarding nature. In both novels, technologies cause a world where fewer people die, and this means that the soil will be fed by fewer corpses in the future. Therefore, technologies damage nature, and the nature-human relationship.

Transhumanists claim that technologies must be distributed to everybody to make their life easier. However, this is not seen in the novels where only the rich can afford revolutionary technologies. Technologies in the worlds of *Altered Carbon* are obtained by the rich Meths. This has made them exploit nature as much as they want because they feel themselves superior to the non-humans rather than being a part of the whole ecology. Miriam Bancroft can buy an island and exploit it, Laurens could bring a rare plant from Mars to the earth to use it as a decoration in his house, and Kawahara has her brothel built in the air ignoring the impacts of that building on the sky. Also, powerful characters feel themselves like gods, which is another reason for their impulsive behaviors to nature. A similar case can be seen in *Zero K*, too. The founders and benefactors of the Convergence and the patients coming there are wealthy people, who build a foundation for their own use without considering its effects on the desert habitat. They are also aware of the natural deterioration of the earth but instead of fixing the problem, they prefer to run away and save themselves. In both novels, nature exists to serve human beings, especially the rich ones. It is exploited by human beings who care only about capitalist purposes.

Altered Carbon and *Zero K* reveal another type of inequality as well. According to ecofeminists, women are associated with nature, and both women and nature are oppressed by men. This point of view is observable in the inequality between men and women in the novels. Readers encounter strong women like Ortega and Nalan Ertekin in *Altered Carbon*, so they may think that the transhumanist world of the novel presents equality between genders. However, not all women are equal to men and actually, a few women are equal. This equality comes from their titles, but other women who do not have a title or economic power are exploited by men like nature. Miriam could seem like a powerful woman, but in fact, Laurens deals with her like his plants. She is like an adornment and her only function is to give birth to Lauren's children. She has no voice in their business or the murder case of Laurens. Girls working for Kawahara and Jerry are exploited sexually and are even killed for the pleasure of men. Similarly, the two main women in *Zero K* are not equal to men. Madeline has only one role in Ross's life, her motherhood. Ross ignores her as he ignores nature in danger outside the Convergence. Artis is his second wife, and he seems to love her, but there is an implied association between irrational nature and Artis, who does not think much about undergoing the cryonics process. Thus, it is seen

that even transhumanist societies cannot provide full equality between men and women. Further, men in these societies deal with women and nature in the same way by ignoring, exploiting, and oppressing both.

As a result, *Altered Carbon* and *Zero K* depict a transhumanist life with all the technologies they possess. The novels mirror the enhancements that today's scholars of transhumanism hope to have, and as they foresee, these enhancements have made human beings exceed their limits and prepared them to be posthumans. However, it is also indicated in the novels that transhumanism does not present life without problems. As it has changed the nature of humans and caused identity issues, it has created a new definition for humans. In addition, it has contradictions with religions in terms of the death notion. Affecting nature and the wholeness of humans and nature, transhumanism is mostly human-centred, as opposed to its defenders. Further, privileging the mind, it causes dualisms. Despite the premises of democratic transhumanism, equality is an issue that transhumanist societies in both novels cannot get rid of. Thus, the novels could be taken as true reflections of transhumanism with its profits and drawbacks, and transhumanist technologies can be developed by taking into account all these reflections.

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LIST OF ATTACHMENTS

Attachment A

Principles of Extropy Institute

Perpetual Progress: Extropy means seeking more intelligence, wisdom, and effectiveness, an open-ended lifespan, and the removal of political, cultural, biological, and psychological limits to continuing development. Perpetually overcoming constraints on our progress and possibilities as individuals, as organizations, and as a species. Growing in healthy directions without bound.

Self-Transformation: Extropy means affirming continual ethical, intellectual, and physical self-improvement, through critical and creative thinking, perpetual learning, personal responsibility, proactivity, and experimentation. Using technology – in the widest sense to seek physiological and neurological augmentation along with emotional and psychological refinement.

Practical Optimism: Extropy means fueling action with positive expectations – individuals and organizations being tirelessly proactive. Adopting a rational, action-based optimism or “proaction”, in place of both blind faith and stagnant pessimism.

Intelligent Technology: Extropy means designing and managing Technologies not as ends in themselves but as effective means for improving life. Applying science and technology creatively and courageously to transcend “natural” but harmful, confining qualities derived from our biological heritage, culture, and environment.

Open Society – information and democracy: Extropy means supporting social orders that foster freedom of communication, freedom of action, experimentation, innovation, questioning, and learning. Opposing authoritarian social control and unnecessary hierarchy and favoring the rule of law and decentralization of power and responsibility. Preferring bargaining over battling, exchange over extortion, and communication over compulsion. Openness to improvement rather than a static utopia. Extropia (“ever-receding stretch goals for society”) over utopia (“no place”).

Self-Direction: Extropy means valuing independent thinking, individual freedom, personal responsibility, self-direction, self-respect, and a parallel respect for others.

Rational Thinking: Extropy means favoring reason over blind faith and questioning over dogma. It means understanding, experimenting, learning, challenging, and innovating rather than clinging to beliefs (as cited in Cordeiro, 2019, pp. 70-71).

Attachment B

Principles of transhumanism in *Transhumanist Declaration*

1. Humanity will be radically changed by technology in the future. We foresee the feasibility of redesigning the human condition, including such parameters as the inevitability of aging, limitations on human and artificial intellects, unchosen psychology, suffering, and our confinement to the planet earth.
2. Systematic research should be put into understanding these coming developments and their long-term consequences.
3. Transhumanists think that by being generally open and embracing of new technology we have a better chance of turning it to our advantage than if we try to ban or prohibit it.
4. Transhumanists advocate the moral right for those who so wish to use technology to extend their mental and physical (including reproductive) capacities and to improve their control over their own lives. We seek personal growth beyond our current biological limitations.
5. In planning for the future, it is mandatory to take into account the prospect of dramatic progress in technological capabilities. It would be tragic if the potential benefits failed to materialize because of technophobia and unnecessary prohibitions. On the other hand, it would also be tragic if intelligent life went extinct because of some disaster or war involving advanced technologies.
6. We need to create forums where people can rationally debate what needs to be done, and a social order where responsible decisions can be implemented.
7. Transhumanism advocates the well- being of all sentience (whether in artificial intellects, humans, posthumans, or non- human animals) and encompasses many principles of modern humanism. Transhumanism does not support any particular party, politician or political platform (Bostrom, 2005a, p. 21).

CURRICULUM VITAE

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