

THE REPUBLIC OF TURKEY
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GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF WESTERN LANGUAGES AND LITERATURES
ENGLISH LANGUAGE AND LITERATURE

THE HUMAN POSITION IN CONTEMPORARY BRITISH AND AMERICAN SCIENCE
FICTION NOVELS

PhD Dissertation

Suhaib Majeed KADHEM

Ankara, 2025

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DECLARATION

I hereby declare that all information in my doctoral dissertation titled “**The Human Position in Contemporary British and American Science Fiction Novels**” (Ankara, 2025)”, which I prepared under the supervision of **Assoc. Prof. Dr. Nisa Harika GÜZEL KÖŞKER**, has been fully cited and referenced all in the text and bibliography. I also declare that I have acted in accordance with the rules of scientific research and ethics during the study process and that I will accept any legal consequences in case the opposite occurs.

20. 11. 2025

Suhaib Majeed KADHEM

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INTRODUCTION

In science fiction, we dream. In order to colonize in space, to rebuild our cities, which are so far out of whack, to tackle any number of problems, we must imagine the future, including the new technologies that are required.

(Bradbury 1996)

Science fiction has historically served as a potent imaginary realm for authors to explore humanity's technological aspirations and anxieties. This genre has increasingly focused on the growing conflict between humans and technological development, depicting futures where technological advancements risk going beyond human control. Science fiction functions not only as entertainment but also as essential cautions, alerting readers to the consequences of prioritising instant innovation over long-term ethical accountability. Modern cultures' inclination to hasten technological advancement without sufficiently contemplating its social or ethical ramifications has already produced noticeable drawbacks in our time. Science fiction suggests that technology without humanistic consideration may have effects that are not only disruptive but also potentially catastrophic.

Contemporary British and American science fiction has emerged as a potent vehicle for cultural criticism and philosophical exploration, prompting viewers to contemplate the course of our world. Writers examine scenarios where sophisticated technology transforms or potentially destabilise human civilisations. Their writings explore the consequences of technological progress beyond human control, resulting in a society governed by technological development presented by artificial intelligence (AI), intelligent machines and robots, and

posthuman potential. Through cautionary and inventive fiction, these authors compel readers to address pressing enquiries about autonomy, control, and the safeguarding of human values in a society increasingly dominated by artificial superintelligence.

In addition to predicting future technological development, science fictions serve as a warning about humanity's narrow focus on the present, which could potentially endanger humanity's future. The development of science fiction writings demonstrates the value of science fiction as a genre that is adept at critiquing contemporary assumptions while imagining profoundly transformative futures. They promote social engagement with technological progress and advocate for the preservation of the ideals that characterise human life in the world of rapid technological development.

Science fiction consists of 'Science' as it is understood today and 'Fiction', which refers to narratives about people and events in literature. In 1926, the American editor and publisher Hugo Gernsback (1884–1967), who is known as the “father of science fiction” (Marín 1), coined the term “science fiction” (henceforth SF) to describe a ground-breaking new fiction that was recognised as a remarkable genre of stories interwoven with various scientific facts and predictions about the future. His opinion of a faultless science fiction story was “75 percent literature interwoven with 25 percent science” (Gunn 299). Science fiction has always served as a foundation for ideas from the real world. The idea is to capitalise on the futuristic vision that the author of the story had, perhaps without suspecting that his predictions would soon come true. In fact, science fiction has been around for centuries. Leonardo da Vinci (1452–1519) experimented with a number of different weapons and flying objects in the 15th century (Kaplan 64). People of his time probably thought he was senseless because his inventions were so inexplicable, but almost all da Vinci's predictions are used today. Contrary to popular belief, da Vinci did not write science fiction. He was convinced of his creations and imagined how they could improve the lives of humans in the future.

Despite differing opinions, numerous critics and writers believe that Mary Shelley's (1797–1851) *Frankenstein* (1818) is the most significant and first example of science fiction stories. Shelley introduces her readers to the limits of scientific understanding and the connections between humans and their fictional counterparts (Bostrom 206). In addition to Shelley, the literary pioneers of science fiction in the 19th century include Jules Verne (1828–1905), a French author known for his works *Journey to the Centre of the Earth* (1864) and *From Earth to the Moon* (1865), also, H. G. Wells (1866–1946), a British author who wrote *The Time Machine* (1895), *The Invisible Man* (1897) and *The War of the Worlds* (1898), all of which are considered to be some of the earliest examples of science fiction works (Mirenayat et al., *Beyond Human Boundaries* 264).

In the first half of the 19th century, science fiction stories in America aimed at both adult and juvenile audiences, although the genre had not yet been officially designated as such. The literary works of Nathaniel Hawthorne (1804–1864), an American novelist and writer of short stories, and Fitz James O'Brien (1826–1862), an Irish-American writer and poet, contained science fiction elements. Edgar Allan Poe (1809–1849), is frequently cited as one of the pioneers of the science fiction genre, although Mary Shelley's *Frankenstein* preceded his works. Several of his short stories as well as his novel *The Narrative of Arthur Gordon Pym of Nantucket* (1838) contain elements of science fiction. Also, the satirical novel *A Voyage to the Moon* by philosopher George Tucker (1775–1861) from 1827 is sometimes referred to as the first American science fiction novel.

According to some critics, the central definitional issue for the genre concerns the identity of science, as it alters the fictional aspect of science fiction. Brian Aldiss (1925–2017), an English author known for his science fiction novels and short stories, made the significant point that the roots of science fiction cannot be drawn back to a time before the 19th century (Aldiss 3). It was only during this period that science, as defined today, found wide cultural

acceptance. This point was supported by the Australian scientist and literary critic Peter Nicholls (1939–2018). He was both author and co-editor of *The Encyclopaedia of Science Fiction* (1979), and argues that:

SF proper requires a consciousness of the scientific outlook, and it probably also requires a sense of the possibilities of change, whether social or technological. A cognitive, scientific way of viewing the world did not emerge until the 17th century, and did not percolate into society at large until the 18th (partly) and the 19th (to a large extent). (Clute and Nicholls 567–568)

On the other hand, the rise of American science fiction as a distinct genre can be traced back to the early 20th century. In 1926, Hugo Gernsback founded *Amazing Stories Magazine*, a magazine that focused exclusively on science fiction stories, contributing to the genre's self-confidence (Westfahl 37). While there have been science fiction magazines in Germany before, *Amazing Stories* is the first magazine written in English language devoted exclusively to the genre. Because of Gernsback remarkable choice of the term “scientifiction” (Tymn 45) to describe the early stages of the genre, he is often closely associated with it. Although Gernsback advocated scientifically accurate narratives to impart scientific knowledge to his readers, the magazine also contained exciting stories that lacked realism. In the 1930s, *Amazing Stories* contested with several other pulp magazines, such as *Astounding Stories*, *Wonder Stories*, and *Weird Tales*. While *Weird Tales* contained mainly fantasy stories, the aforementioned publications also competed for readership during this period. The science fiction film *Metropolis* (1927), written by Thea Gabriele von Harbou (1888–1954) and directed by Fritz Lang (1890–1976), featured the first humanoid robot in cinema. The film *Metropolis* was a great success, and its visual style had a long aesthetic influence on science fiction pulp literature (Roberts 219). In 1928, *Amazing Stories* published two notable science fiction works, *Skylark*

of *Space* and *Armageddon*, 2419 A.D. In addition, *Weird Tales* published *Crashing Suns*, a science fiction work by Edmond Hamilton (1904–1977) (Ashley 48-49). These works are considered to be the pioneers of Space Opera, a sub-genre of science fiction that has had a major impact on the current form of the genre.

Whereas the sub-genre of science fiction known as “Space Opera” places a particular emphasis on space warfare, featuring melodramatic and space adventures (Schmidl 1). The term “Space Opera” was used in 1941 by the American novelist Wilson Tucker (1914–2006) to describe a hybrid form that clearly deviates from its overarching genre. (Sawyer 505). The story of this type of work is set mainly or exclusively in an alien world. It features advances or shortcomings in faster-than-light transportation, advanced weaponry, and intricate technology against a backdrop of intergalactic nations and cosmic conflicts with imaginary alien beings, often set in fictional galaxies. The emergence of science fiction as a distinct literary genre is partially due to the widespread reception of typical space opera narratives that took place in pulp magazines in the 1920s and 1930s. In their 2006 publication, *The Space Opera Renaissance*, Kathryn Cramer (b. 1962) and David G. Hartwell (1941–2016) state that “nearly all reviewers and commentators, and many writers and readers we have spoken to, agree that good new space opera is one of the most notable features of the current science fiction literature” (Cramer and Hartwell 1-2).

Furthermore, among the various subgenres of science fiction, space opera also has the lowest degree of realism and precision in scientific and technological aspects. This sub-genre is highly suitable for imaginative and hypothetical explorations of various topics, such as the effects of transformation on individuals and social structures (Sawyer 506). In addition, Iain M. Banks (1954 –2013), a well-known Scottish author of space opera, said that the genre is about wish achievement. It is about imagining things and aspects that we wish existed at present and speculating about their possible effects on society and people. Banks claimed that realism

is not a prerequisite for this genre (qtd. in Vogel 4). The genre of space opera originated in the 1930s and has since proliferated in various media, including literature, film, comics, television, and video games. For example, since its 1961 introduction, the novella *Perry Rhodan* has become the most successful literary space opera permit to date. The television series *Star Trek* (1966–), which Gene Roddenberry (1921–1991) produced, and George Lucas directed *Star Wars* movies (1977–) received a lot of attention for the subgenre (Schmidl 1).

Furthermore, with the rise of the subgenre of space opera, a significant body of science fiction literature from the first half of the 20th century circulated in the 1940s and 1950s, known as the “Golden Age” (McDonald 3-4). It represents a particular style of literature characterized by hard science fiction, where the narrative should strive to be rigorous, credible, logical, and accurate in applying current scientific and technical knowledge regarding technology’s practical or theoretical feasibility. The protagonists overcome challenges or face dangers in a space-orientated or technological context. The initial Golden Age of science fiction, commonly considered to be the period from 1938 to 1946 in America, was a period marked by the widespread recognition of the science fiction genre and the publication of many groundbreaking science fiction stories. An alternative way of defining the “Golden Age” might be to establish a connection between this period and the subjective preferences of John W. Campbell (1910–1971) (Roberts 287). He was a prominent American science fiction writer who exerted a significant influence by promoting prescriptive ideas about the ideal form of the genre. Campbell began his aptitude as a science fiction writer with his famous novella *Who Goes There?* (1938), which was later adapted into two films: *The Thing From Another World* (1951) and *The Thing* (1982). From 1938 until his death, Campbell made his greatest mark on the genre (Glasberg 639).

In addition, a whole range of the most long-lived science fiction conventions was created in the literature of the Golden Age. The genre of space opera rose to prominence

through the literary contributions of Isaac Asimov (1920–1992), an American author and professor of biochemistry. Throughout his life, Asimov was considered to be one of the leading science fiction authors, referred to as the “Big Three” along with Robert A. Heinlein (1907–1988) and Arthur C. Clarke (1917–2008). He founded the canonical *Three Laws of Robotics*, beginning with the 1941 short story “Runaround” (Dolan 110).

Moreover, numerous technological advances and scientific revelations have contributed to the development of the modern form of science fiction during this era. The contemporary form of science fiction is seen as instrumental, leading to a close connection between literature and technology. This is particularly evident in the significant technological advances that emerged during the Industrial Revolution. The prevalence of technology-oriented themes in 19th and 20th century science fiction can be attributed to a particular interpretation of science (Roberts 5). Therefore, it can be said that much of the science fiction from this period can be classified as inferred technological fiction rather than true science fiction. Also, the launch of the *УТНИК* artificial satellite by the Soviet Union in 1957 marked a significant turning point for science fiction, transforming the concept of space travel from a hypothetical future possibility into a tangible present reality. As the Canadian author and critic of science fiction and fantasy literature, John Clute (b. 1940) aptly observed:

Before Sputnik, when the empires of our SF dreams were governed according to rules written out in the pages of *Astounding*, and we could all play the game of a future we all shared, readers, writers, fans ... But something happened. The future began to come true. (Clute 17)

The second half of the 1950s saw a remarkable rise of enthusiasm and optimism, especially in the face of manned orbital expeditions and the Apollo mission at NASA, culminating in the 1969 moon landing. Numerous people, especially in the science fiction

community who had grown up with the grandiose hopes of classic fantasy, were convinced that a certain image of the future they had come to know in literature was manifesting itself. By the 1970s, however, space exploration lacked excitement. Exhaustion of funding led to Apollo being discontinued and space exploration is limited to military satellites orbiting the Earth, with rare expeditions of robotic probes to more distant locations (Roberts 333). The actual situation did not live up to the expectations of science fiction. The optimism of the Golden Age became increasingly difficult to sustain during the 1970s and finally seemed outdated by the beginning of the 1980s. Science fiction's response to this situation was complicated. Some writers took a hard science fiction approach, emphasising the need to go beyond the boundaries of NASA. The reconfiguration of the genre's logic was adopted by others, commonly known as the "New Wave".

Therefore, the literary movement known as the New Wave has been used by critics to characterise a group of writers in the 1960s and 1970s who reacted in different ways to the traditional science fiction by creating experimental, innovative, or disjointed works of science fiction. The New Wave movement emerged as a science fiction genre characterised by a high degree of experimentation in form and content (Stebble 90). In the New Wave movement, writers took their cue from the modernist tradition of fiction. This literary movement was a conscious departure from the conventions of science fiction prevalent in pulp magazines.

In addition, there are certain difficulties in categorising literary movements, and the term "New Wave" is even more difficult than other designations. According to Damien Broderick (b. 1944), an Australian science fiction writer, the New Wave movement was "a reaction against genre exhaustion which was never quite formalised and often repudiated by its major exemplars" (Broderick 49). Moreover, one cannot pass this movement without mentioning the four authors, namely J. G. Ballard, E. C. Tubb, Brian Aldiss, and John Brunner, as models for this new style. If one defines the New Wave of science fiction as a deliberate

attempt to rage the literary sensibility commonly linked with modernism and the dynamism of popular pulp science fiction, then the mention of these four names serves as a reminder that this mixture was not intended as an equal combination. The focus was primarily on the science fiction genre, which was characterised by its popular and sensationalist nature. Tubb's *Dumarest of Terra* series, which spanned from *The Winds of Gath* (1967) to *Child of Earth* (2003), consisted of 33 novels. Each novel contained a variety of vivid adventures set in different planetary environments and featuring a wealth of exotic humanoid and alien characters (Steble 89). Also, J. G. Ballard (1930–2009), an English novelist and short story writer, was known for his works of fiction that delved into the complex interplay between human psychology and technology. In *New Worlds* magazine, he advocated for a thorough repudiation of science fiction tropes, by saying that “Science fiction should turn its back on space, on interstellar travel, extra-terrestrial life forms, galactic wars and the overlap of these ideas that spreads across the margins of nine-tenths of magazine S-F” (James 169).

The New Wave movement can be interpreted as an attempt to raise the literary level of science fiction. However, it is clear from Ballard's statements that it was also a reaction to the crushing weight of the genre's extensive catalogue, which aspiring writers were beginning to find stifling. Adam Roberts (b. 1965), a British science fiction and fantasy writer, notes in *The History of Science Fiction* 2016 that the deliberate attempt to reform the genre and its stories aimed to elevate their content into more literary circles (Roberts 334-335).

From 1960 onward, after the end of the Second World War, the concept of human transformation became a predominant theme in the field of science fiction. This transformation was often depicted through various means, such as human cloning, transhuman, cyborg body modification, and artificial intelligence (AI). These representations of transformation were often portrayed as an evolutionary process. Since the second half of the 20th century, people have witnessed a multitude of technological advances that have changed the boundaries of their

existence (Vint 6). The exponential impact of science and technology has changed various aspects of human existence. As humans constantly strive to improve their quality of life, technological advancement plays an essential role in this regard. Additionally, the emergence of robots and intelligent machines had a significant influence on science fiction literature during that era (Vint 14). Robotic technology has been a ubiquitous feature in science fiction literature and media from the second half of the 20th century to the present day.

Therefore, the emergence of robot had a strong influence on the writings of the 20th century. In the science fiction genre, robots are usually under the control of their human creators. Robots are designed and programmed with specific functions or tasks to perform. Their emergence in this genre is closely related to the Industrial Revolution, a time when mechanized production began to replace manual labour. The possible negative consequences of robot technology for humans are a prevalent theme in this genre. In 1950, Isaac Asimov, a Russian-American writer, introduced the concept of self-aware robots and their relation with humans in his work *I, Robot*. Beginning with his 1941 short story “Runaround”, he established the canonical *Three Laws of Robotics*.

In the *Three Laws of Robotics*, the first rule of robotics Asimov introduced is that “a robot may not injure a human being, or, through inaction, allow a human being to come to harm.” (Asimov 27). Given the essential ingredients of responsibility systems, a reciprocal cycle in which one must be willing to account for one’s actions and be called upon to do so by others. Robots need to be able to actively participate in this reciprocal cycle of accountability to be considered moral agents a problem, of course, that goes beyond the ability of a single agent considered in isolation (Murphy and Woods 405-406).

According to Asimov’s second rule of robotics, “a robot must obey the orders given it by human beings except where such orders would conflict with the First Law.” (Asimov 27). Asimov’s robots depended on understanding spoken instructions, even though the rule itself

makes no distinction as to how humans issue commands. Unfortunately, effective natural language processing is still on the wane for artificial intelligence (AI) (Allen et al. 29). The second law is more interesting from a human-robot contact perspective because, at its core, it expresses almost perfectly the more important idea that intelligent robots should observe and consider humans who encounter or interact with robots through aspects of their behaviour (Bradshaw et al. 25).

The third rule states, “a robot must protect its own existence as long as such protection does not conflict with the First or Second Laws.” (Asimov 27). For the basic survival tasks of robots, there are established technological solutions that work for both independent and human-controlled robots, confounding today’s meagre efforts to comply with the third rule. For example, since the 1960s, we have had technologies that ensure protected wave, where the human operator controls the robot, but the integrated software prevents the machine from performing potentially dangerous actions unless explicitly commanded to do so. In the late 1980s, tactically reactive behaviours included guarded mobility, which gave robots reflexes and tactical authority.

Since the short stories have been formulated in the 1947 collection *I, Robot*, Isaac Asimov’s three rules for robotics have been a mainstay of science fiction. Most of the stories expected that robots were obedient to humans and had highly developed observation and thinking skills equivalent to those of children. The stories were intended to illustrate and focus on how difficult it was to implement a few simple concepts in many real-world scenarios (Murphy and Woods 406). Although the robots acted logically in most cases, they often failed to take the correct action, primarily because the unique application environment required the robot to make minor changes in judgement.

After the introduction of Asimov’s three laws, robots and their impact on the future, along with the concept of human transformation, became a predominant theme in science

fiction and the main focus for science fiction writers. For example, Arthur C. Clarke (1917–2008), a British author, presented the concept of human evolution toward superhuman abilities in his 1953 work *Childhood's End*. That same year, American author Theodore Sturgeon (1918–1985) published *More Than Human*, a book describing six people with strange abilities who combine their talents to act as one superhuman. In this phase of human evolution, Sturgeon explores various aspects of power, morality, and individuality, focusing on the metamorphosis of the human species. Martine Caidin's *Cyborg* (1970) has served as the inspiration for numerous science fiction stories and films. In it, a human named Steve Austin strives for technological perfection. After reassembling his fragmented physical form, he transforms into a being that surpasses human capabilities and possesses lethal and invincible qualities devoid of human emotion. The science fiction novel titled *Man Plus* (1976) by American writer Frederik Pohl (1919–2013) is a remarkable contribution to the literary landscape of the current decade (Mirenayat et al., *Beyond Human Boundaries* 265). The narrative depicts a future in which Roger, the protagonist, becomes a weaponized being capable of surviving on the planet Mars through advanced biological engineering. The concept of becoming a cyborg to enhance survival in an extra-terrestrial environment was first introduced by Manfred Clynes (1925–2020) and Nathan Kline (1916–1983) in their 1960 publication, *Cyborgs and Space*. their idea represents the most rudimentary goal of cyborg transformation as they state:

Altering man's bodily functions to meet the requirements of extraterrestrial environments would be more logical than providing an earthly environment for him in space . . . Artifact-organism systems which would extend man's unconscious, self-regulatory controls are one possibility. (Clynes and Kline 26)

Moreover, the motif of robots and cyborgs has become a main theme in science fiction stories during the 90s. The novel *He, She and It* (1993) by Marge Piercy (b. 1936) includes a

notable cyborg character who acts as a weapon. *The Bohr Maker* (1995) is a science fiction novel by Linda Nagata (b. 1960) that explores the concept of posthumanism. The novel's protagonist attempts to achieve immortality by using a device to illegitimately alter his genetic code and transform himself into a posthuman being (Mirenayat et al., *Beyond Human Boundaries* 265). This literary work is an important contribution to the discourse of posthumanism.

In the field of science fiction, there is a scenario in which all three, including (humans), intelligent machines, and robots, resemble each other. Throughout the epoch of modernity, from the 20th to the 21st century, numerous science fiction writers have described characters and technological innovations that raise the question of the demarcation between humans and machines. In the epoch of postmodernism, the cyborg emerges as a representation of the fusion of machine and human in literary works. The emergence of the postmodern cyborg reflects the increasing preoccupation with the erasure of the boundaries between man and machine in science fiction.

This led to the rise of the cyberpunk movement emerged in the late 1970s and the early 1980s, building on the foundations laid by the New Wave. The early 1980s saw the rise of cyberpunk fiction, which depicted the development of technology and science. Cyberpunks embrace both technological utopias and anxieties, emphasizing the necessity of developing ways to use technology for human needs. The capacity of cyberpunk to reflect a world of international capitalism and undermine the grand narrative made it a significant genre within postmodernism (McCaffery 11–13). A dystopian future is the setting of the new science fiction subgenre known as “Cyberpunk,” which emphasises a “combination of lowlife and high-tech” (Kushnarov 24). Although the New Wave movement has a similar emphasis on style, this movement has developed its own, often centred on “punks” living in the dystopian future they have imagined. The term “Cyberpunk” is a fusion of the words ‘cyber’ and ‘punk,’ and its

origins are not entirely literary. The term ‘cyber’ is derived from the term ‘cybernetics,’ which was introduced by the American computer scientist, Norbert Wiener (1894 –1964), in his 1947 book *Cybernetics* (Elias 13-14). Gardner Dozois (1947–2018) popularized the term as a movement to represent a specific group of writers, including William Gibson, Bruce Sterling, Rudy Rucker, and Lewis Shiner.

William Gibson (b. 1948), a speculative fiction writer and essayist of American-Canadian descent, is widely considered to be the pioneer of the cyberpunk subgenre. Cyberpunk writers, such as Gibson, have moved away from the conventional optimism and advocacy of development characteristic of traditional science fiction. Gibson’s 1984 novel *Neuromancer* served as a proclamation of the cyberpunk movement in the broader literary sphere and achieved significant commercial success. According to his statement, he said, “We [science- fiction writers] are sort of charlatans: we come up with a few ideas and we make a living out of that.” (Cavallaro 1).

In contrast, post-cyberpunk is a subgenre of cyberpunk fiction that gained popularity in the 1990s and beyond. Therefore, it is the most modern postmodernist and science fiction writing genre. In addition to reflecting the problems of contemporary life and society, post-cyberpunk dismantles the powerful narrative of identity and representation that formerly governed humans, communities, and cultures. Because post-cyberpunk literature represents modern technology and technological advancement in the form of stories that portray a techno-social culture globally. The impact of post-cyberpunk literature surpasses that of literature from any other period (Zaidi et al., *A Linguistic Discursive Analysis of Techno-Colonialism* 131). If technology was the foundation of the early Cyberpunk novels, then technology is indeed the society in the post-Cyberpunk novels. In contrast to the traditional cyberpunk genre, which was characterized by corporate control, cybernetics, and harsh urban environments, post-cyberpunk investigates the more intricate and frequently unpredictable ways technology merges with

society. Moreover, artificial intelligence (AI), singularity, cyberspace, posthuman, cyborg, and techno/globalization are some cybernetic concepts usually used as motifs in cyberpunk and post-cyberpunk stories.

Moreover, in connection with the cyberpunk movement, apocalyptic and post-apocalyptic science fiction is a type of fantasy fiction in which society on Earth (or another world) is falling apart or already has occurred. The story could revolve around attempts to avert the apocalyptic event, grapple with its aftermath, or unfold post-apocalyptic. It could be right after the disaster when the focus is on the psychology of survivors and how to keep the human race active and united; it could be a long time later when the myths of a civilisation that existed before the disaster become commonplace. After the world's end, many post-apocalyptic stories occur in a world without technology or where only a few pieces of society and technology are still around. Like the cyberpunk fictions, a dystopian future is the setting of apocalyptic and post-apocalyptic fiction (Clasen 1-2).

On the other hand, imagining the future of our global society and designing a desirable existence for humanity is present in the field of utopian and dystopian literature. The terms utopia and dystopia are defined differently in different academic disciplines, with their origins deeply rooted in the field of science fiction. The emergence of science fiction can be traced to the formulation of utopian concepts that continue to form the basis for most of the works of science fiction (Ayan 421). The concept of utopia, which aims to create an ideal society for humanity, was first introduced in Thomas More's 1516 work *Utopia* (Gerhard 1-2). In his work, More used the concept of utopia to describe an idyllic vision of an ideal society and place that does not exist. This hypothetical island was characterised by a populace that experienced contentment within a society devoid of destitution and maladies.

Utopian novels were a well-established medium for spreading utopian political and economic ideals throughout the nineteenth century, a period of rapid industrial progress. They

also expressed an increasing focus on equality, democracy, and human rights. In his utopian book *News from Nowhere* (1890), William Morris (1834–1896) provides a striking illustration of how people see a perfect society in the future, one that upholds democracy and human rights. Other works, such as *We* (1921), written by Yevgeny Zamyatin (1884–1937), which is set in a dystopian future police state, provide a stark warning about the future. At the start of the twentieth century, the hopeful outlook on the future came to an end, particularly when the horrific acts of the two World Wars were seen (Mirenayat et al., *Science Fiction and Future Human*. 91).

Moreover, dystopian science fiction has developed as a very popular genre in literature throughout the latter decades of the previous century and the early years of the 21st century. With its profound impact on postmodern literature, this artistic, fictional warning about the perils and challenges of the future is very significant. Dystopian science fiction seeks to warn humanity about the impending dangers of future days by portraying a bleak and undesired vision of civilization.

The consequence is, as each technological breakthrough affects human existence and technologies are constantly evolving, significant utopian and dystopian science fiction works dealing with technology and development have emerged as a result (Mirenayat et al., *Science Fiction and Future Human*. 76). The utopian and dystopian themes is highlighted in contemporary British and American science fiction. In the realm of science fiction, utopian narratives typically describe a future state in which humanity has progressed from a world of darkness to a world of perfection. Conversely, dystopian narratives often describe a world in crisis where attempts at reconstruction may ultimately lead to further destruction. It is a widely held view that any utopian society has the potential to transform into a dystopian society, as the pursuit of perfection for humanity can unintentionally lead to negative consequences and disorder (Ayan 421). The main difference between these two genres, however, is whether the

text seems to predict a positive or a negative end to the utopian vision. The crucial question, however, is: why did utopian thinking turn into the pessimistic dystopian vision of the future that later became increasingly popular in 19th and 20th literature? The answer can be found in history. The historical events of the 20th, such as the Revolution of 1917 in Russia, World War II, Nazi Germany, and technological progress and development, posed a threat to the possibility of a utopian paradise and fuelled disillusionment and fear that our future might not be as promising as we had believed (Gerhard 1-2). According to David Sisk (b. 1963), who in his book *Transformations of language in modern dystopias* published in 1997, mentions that: “The dystopia begins only in the mid to late 18th century, when the early promise of the Industrial Revolution – that technological progress would inevitably improve social conditions- gave way to increasingly impersonalized mechanization and exploitation” (Sisk 45).

During the 20th and 21st century, many dystopian works emerged in the science fiction genre. The list may include dystopian works such as Aldous Huxley’s *Brave New World* (1932), George Orwell’s *Animal Farm* (1945), and Anthony Burgess’ *A Clockwork Orange* (1962). The widespread appeal of dystopian novels justifies the examination of this genre of speculative fiction from historical, sociological, philosophical, and literary standpoints (Koca Helvacı 1). A thorough analysis of dystopian science fiction texts necessitates the integration of all of these domains within the social sciences. Society itself serves as the muse of dystopian science fiction; therefore, we must consider the events that influence the society’s structure and atmosphere. Advancements in science and technology can lead to changes in society, thereby altering the societal environment.

In the context of utopia and dystopia, technological utopianism is based on the modern idea that science and technology advancements are closely tied to the goal of a human-constructed utopia. Francis Bacon’s 1627 novel *New Atlantis* is the clearest example of the emergence of technological utopianism. This groundbreaking book portrays a civilization in

which scientific and technological advancements—rather than advances in the human situation, democratization of the system, or moral development—actualize the goal of human perfection (Dai and Hao 1). Throughout the 20th century, techno-utopian ideas took many forms, ranging from scientistic and technocratic movements to scientific and technical utopianism. The fundamental tenets of technological utopianism are demonstrated along the way: employing current technologies to plan and build the future and applying scientific rationalism to direct and govern our society in the conviction that science and technology indisputably guarantee human prosperity, order, justice, and freedom.

As technology advances and evolves, it has led to the emergence of notable science fiction works that explore both utopian and dystopian themes related to technology and progress (Mirenayat et al., *Science Fiction and the Future Human*, 76). Contemporary British and American science fiction prominently features themes of techno-utopia and techno-dystopia. At the same time, literature closely linked applied science to the fictional portrayal of technological advancements. H.G. Wells (1866–1946) is well-known for his extensive collection of science fiction novels, which prominently feature a techno-utopian backdrop. Some of his notable works include *When the Sleeper Wakes* (1899), *The Invisible Man* (1899), *The War of the Worlds* (1897), *A Modern Utopia* (1905), and his most renowned piece, *The Time Machine* (1895) (Mirenayat et al., *Science Fiction and Future Humans*, 91). In Wells' universe, time travel is not enigmatic or paranormal; instead, it is a consequence of technological advancements. Techno-utopia, techno-dystopia, and science fiction share a common focus on technological advancement, making the distinction between them tenuous. Nevertheless, the notion that technological advancement exacerbates the quality of life is a crucial concept within the emerging genre of dystopia.

Therefore, the primary focus of science fiction writers continues to be the study of technological development and its potential impact on our future. Several science fiction

writers are also scientists who know how technology is developing so fast and could provide an image of our near future in light of technological development led by artificial intelligence (AI), intelligent machines and powerful robots. On the other hand, there are science fiction writers whose erudition draws solely from their own creative powers, making their fictional universes potentially plausible within the confines of reality. These concepts can be challenging for today's inventors. About half a century ago, people imagined a coming era in which flying cars would be common and the possibility of acquiring knowledge through implanted data chips existed. If we read an older science fiction novel depicting the future as a technologically advanced world with various innovative inventions, we find that there has been little progress compared to these depictions. The question remains whether such technological advances can ever become a reality in the future (Steble 96). The possibility exists. The main problem is usually the timing of the prediction. Robert Zemeckis (b. 1952) and Bob Gale (b. 1951), who co-wrote the well-known classical American science fiction *Back to the Future*, directed it in 1985. The protagonist's temporal journey takes the readers to the year 2015, which is depicted in the film as highly developed and futuristic (Justice 174-175). In watching *Back to the Future* in the present day, we can perceive the olfactory atmosphere of 1985, full of technological achievements such as self-tying shoes and floating skateboards. Since the film's production in 1985, people have developed remarkable anticipation for 2015.

All the science fiction books described above portray a future human transformation in which technology and everyday life are interwoven. The texts exhibit a variety of changes to convey readers' feelings about their perspectives. These changes could relate to an individual's ability to improve their quality of life, influence others, or even understand their environment. At the same time, science fiction stories often diverge from contemporary human existence, mainly because of differences in technological advancement at different levels. Therefore, it is obvious that the development of science fiction in the 21st century is far advanced compared to

the earlier stages of the 19th and 20th centuries. Undoubtedly, the advances in science fiction in the current century have surpassed those of the previous centuries, which is due to the different degrees of technological progress in these periods.

In conclusion, the dissertation posits that contemporary British and American science fiction anticipates future scientific realities and functions as a critique of our current trajectory. These science fictions encourage readers to consider the consequences of unrestrained technological progress and to evaluate the values we aspire to maintain in a world increasingly shaped by posthuman potential and artificial intelligence (AI). The dissertation highlights the significance of science fiction as a speculative and philosophical medium, enabling humanity to confront its evolution and envision new modes of existence in a technologically dominated future.

In this regard, this dissertation analyses Ken MacLeod's *Newton's Wake* (2004), Charles David George's *Accelerando* (2005), and Daniel H. Wilson's *Robopocalypse* (2011) concerning the progress of science and technology in our future world and the role of humans in it. The novels are examined from the perspective of posthumanist and transhumanist theories in the context of technological progress. The impact of technology on everyday life is discussed in the chapters of the dissertation, along with the concepts of techno-utopia/techno-dystopia, pre-singularity/post-singularity, cyborgian and dehumanization and how these concepts are presented in these novels. Through these concepts and by analysing the novels, this dissertation demonstrates how each writer has envisioned the future of our world and the challenges that humanity will face under technological development led by intelligent machines and robots.

Chapter I will path the interconnected theories of posthumanism and transhumanism, analysing their impact and representation in science fiction literature. This chapter will examine the fundamental concepts put out by prominent theorists in both movements, exploring their philosophical roots and their influence on the realm of science fiction. Also this chapter will

elucidate how authors use or contest these frameworks, emphasising the narrative tactics that speculative fiction employs to address the ethical, existential, and ontological questions associated with a posthuman or transhuman future. The chapter ultimately seeks to illustrate how science fiction functions as a vital arena for envisioning, interrogating, and redefining the dynamic interplay between humans and technology.

Chapter II examines the concepts of ‘Utopia’ and ‘Dystopia’ in light of technological development. This will be followed by examining the science fiction novel *Newton’s Wake* (2004), written by Ken MacLeod, from this perspective. Furthermore, how this techno-utopian world, in which the characters of the novel attempt to improve life through the lens of advanced technological development in a posthumanist world where the emergence of artificial intelligence (AI), robots, and intelligent machines ultimately leads to a techno-dystopian future for humanity, in which this new world is dominated by sentient robots and technological advancements, and in which humans are almost lost in this new world. The novels illustrate a change in human behaviour towards machines and nonhuman beings, towards which humans no longer display the resistance or objectification lauded in traditional humanist thought. Conversely, the novels describe individuals who aspire to one or more of the above humanist principles, albeit through more nuanced and innovative means appropriate to the contemporary posthuman condition.

Chapter III will analyse Charles David George novel *Accelerando* (2005), in light of the concepts of ‘Singularity’ and ‘Post-Singularity.’ The novel shows how quickly humans are moving toward the technological singularity. The novel tells the story of three generations of a human family during three different times: before, during, and after a singularity event. With full power over human nature, each age brings significant changes in technology and skills. The novel aims to raise knowledge about how our world is changing and developing. This

chapter will clarify this point of view by analysing the novel in light of the concepts of “Singularity” and “Post-Singularity.”

Chapter IV will try to explore the concepts of dehumanization and cyborgian elements in *Robopocalypse* (2011) by Daniel H. Wilson is read in the following subsections in light of these concepts and the place of humans in the future. This chapter emphasizes on the loss of the anthropocentric perspective of humans in light of the arise of War Machines, who gain self-aware. Wilson’s novel envisions self-aware, autonomous robots and machines after the singularity. Their techno-utopia vision of enhancing and elevating the best humans into post-human existence drives machines. Cyborgs in *Robopocalypse* illustrate the inherent connection between humans and technology through prosthetics. The story examines the human-robot war, where machines attempt to control humanity, revealing a cyborgian collision of human and machine that challenges both anthropocentric and technocentric views of life. The war’s ultimate legacy is not a triumph over AI, robots, and machines but rather the paradox of a civilization that maintained its superiority while undermining its core human values.

The Conclusion will discuss the implications of the use of posthumanist and transhumanist theories in these novels and will further discuss how the novels are analysed from the perspective of posthumanism and transhumanism in the context of technological development under the domination of intelligent robots. It will furthermore discuss the ways in which this dissertation explores images of the future world that humans will create where the conflict between humans and machines will be the main threat to our future. Also, how these novels serve as warnings of a future in which humans may succumb to the intelligence of machines. Similar to how humanity’s excessive focus on meeting the needs of the present and its acute disregard for the needs of future generations have resulted in many of the disadvantages associated with the majority of technological advancements in our generation, technology without human concern can only have the most terrifying and apocalyptic

consequences. Scientists, on the other hand, are responsible for regulating the scope of technological innovation, led by mechanisms, robotics, and artificial intelligence (AI). However, because these technologies are constantly evolving, they cannot predict the future. Science fiction writers, on the other hand, must create this image in their creative imaginations, whether it is positive or negative, to depict the future of our world and the possibilities that may arise when technological development reaches a level where humans can no longer control it.



CHAPTER I

POSTHUMANIST AND TRANSHUMANIST APPROACH TO CONTEMPORARY SCIENCE FICTION WRITINGS

Discourse on humanity's future prospects often revolves around the species' ability to survive amidst various changes in the global landscape. The natural world has changed significantly over time as a result of scientific research and technological developments, and the connection between humans and technology in the modern world has significantly altered techno-science (Ghashmari 4). The genre of science fiction serves as a medium for imaginative texts that explore the potential impact of technological advancement on the future of humanity. Conversely, posthumanism explores the appropriate responses of humans to the evolving relationships between technology and humans, humans and the environment, and humans and nonhuman beings. The genre of science fiction dealing with the posthuman condition is a particular form of literature that explores the human experience in the setting of science and technology and its interactions with the nonhuman world.

Transhumanists often use the concept "Posthuman" to denote the stage after the current state of humanity is assumed to be over. Often, posthumanism and transhumanism are thought to be mixed. Transhumanism and posthumanism differ in their approaches to humanism (Çavuş 177). While transhumanism claims to be the conceptual continuation of humanist ideas, posthumanism is a postmodern school of thought that vehemently condemns the anthropocentrism of humanism.

Posthumanists argue for a more thorough and considerate attitude toward other species living on the planet, highlighting the dangerous effects of the anthropocentric view of technology. The term "Posthuman" which has its roots in science fiction stories, refers to a

person or thing that exists in a state other than human (Robinson 21). Critics have recently argued that the rise of posthumanism was a pivotal phase in modernity, pointing to the beginnings of important posthuman concepts in contemporary science fiction, especially in British and American science fiction, which helps paint a picture of the future under the development of technology.

The concept of posthuman is often characterised as a post-anthropocentric concept that goes beyond the traditional understanding of humans. This philosophy provides a framework for imagining a posthuman future that transcends the limits of human imagination by providing a suitable starting point. The concept of posthumanism has emerged as a multi-faceted phenomenon in response to contemporary efforts to redefine the nature and attributes of human beings (Mirenayat et al., *Science Fiction and Future Human* 77). Posthumanism brings forth a multi-layered discourse on the effect of technological advancement on transcending human limitations, based on the principles of transhumanism.

In view of, the postmodern literary critic Katherine Hayles (b. 1943) in her book *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (1999), according to her the concept of posthumanism goes beyond the mere incorporation of prostheses into our biological framework (Hayles 246). She argues that the concept of posthumanism encompasses four central assumptions. First, the posthuman perspective views embedding in a biological substrate as an accident of history rather than an inevitable aspect of life, favouring informational patterns over material instantiation (Hayles 2). Second, the posthuman perspective views consciousness as the basis of human identity (Hayles 2). Third, the posthuman perspective views the body as the first thing we learn to deal with, which means that adding or removing body parts through prostheses is only an extension of a process that began before we were born (Hayles 3). Fourth, and perhaps most importantly, the posthuman

perspective configures humans in such a way that it is easy to communicate with robots and intelligent machines through these and other means. (Hayles 3).

Hayles, therefore, considers that “cyborgization”—the process of replacing a human body with artificial parts—can be a kind of posthuman. In her view, the main feature of the posthuman is the separation between human consciousness, the ‘software’ and physical embodiment, the ‘hardware’ which evokes feelings of both fear and joy (Hayles 291). Concerning humans who are alarmed by the apocalyptic implications of posthumanism, she claims that while certain expressions of posthuman suggest a rejection of human and a catastrophic outcome, alternative versions can be developed that arrange the enduring survival of humanity and the co-existing biological and artificial life forms that inhabit our planet. Also, according to Hayles, the posthuman is one “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” (Hayles 6). In contemporary discussions of critical theory concerning posthumanism, Hayles is often cited as a prominent early exponent of critical posthumanism.

Transhumanists, on the other hand, in favour of using technology to enhance the physical and mental well-being of humans. When it comes to transhumanism, the primary objective is to transcend the limitations that are intrinsic to the human body and intellect. Transhumanists argue for the utilisation of all technologies that are now accessible, such as information technology, artificial intelligence (AI), cyborgs, robots, intelligent machines, and other emerging technologies, to direct and even plan the development of humans (Ghashmari 6).

The concept of transhumanism has had a long historical development that can be traced back to the 19th century. The term under debate was introduced by the British Geneticist J. B. S. Haldane (1892–1964) in his essay *Daedalus: Science and the Future* (1923) and by J. D.

Bernal (1901–1971) in his publication *The World, the Flesh, and the Devil* (1929). It is noteworthy that the first use of the term “Transhuman” can be attributed to the British author and translator Henry Francis Cary (1772–1844). Cary used the term when translating Dante’s *Divine Comedy* in 1814, borrowing a term from the first canto of Dante’s *Paradiso*. Dante uses the term “transhumanized” in a biblical setting to describe his ascent to heaven alongside Beatrice. In 1940 the publication entitled *The Law of Cosmic Evolutionary Adaptation: An Interpretation of Recent Thought*, by W. D. Lighthall, a Canadian author, historian, and legal philosopher, used the term “transhuman” with the suffix “-ism” to introduce a literary concept for the scientific cosmic evolution of humanity (Harrison and Wolyniak 467). The modern transhumanist movement was launched by biologist Julian Huxley (1887–1975), who is widely regarded as its founder. Huxley first introduced the term “transhumanism” in 1951 in a lecture that was later published in the journal *Psychiatry*. He further elaborated on this concept in his 1957 collection of essays, *New Bottles for New Wine*. The term transhumanism was popularised by Huxley, who believed that humans should improve themselves through scientific and technological advances. Huxley believed that “Transhumanism will serve: man remaining man but transcending himself, by realizing new possibilities of and for his human nature” (Huxley, *New Bottles for New Wine* 17). Huxley, who was looking for an alternative to his utopian scientific philosophy, was influenced by Lighthall’s article *The Law of Cosmic Evolutionary Adaptation*, which states, “Such a broad philosophy might perhaps be called, not Humanism, because that has certain unsatisfactory connotations, but Transhumanism” (qtd. in Ayan 420). Huxley may not have coined the term, but he was the first to define it.

Furthermore, Huxley laid the foundation for transhumanism in his 1992 book *Evolutionary Humanism*, in which he advises readers to “utilize all available knowledge in giving guidance and encouragement to the continuing adventure of human development” (Huxley, *Evolutionary Humanism* 287). In his view, human evolution is currently in its early

stages and is expected to evolve to a more advanced state through technological advances (Çavuş 178). As well as the works of modern transhumanists can be used to show how transhumanism adheres to humanism.

Moreover, transhumanism is a theoretical movement that seeks immortality and enhanced abilities as primary goals, although it is still relatively unknown. Swedish philosopher Nick Bostrom (b. 1973) who founded the World Transhumanist Association (WTA) and is the Founding Director of the Future of Humanity Institute. He is a prominent transhumanist who has addressed the above uncertainties and dedicated his work to discovering the key to achieving immortality. According to Bostrom, the quest for immortality can be traced back to the Epic of Gilgamesh, where the search for the elixir of life was undertaken to achieve a state of eternal existence free from disease, aging, and mortality (Mirenayat et al., *Science Fiction and Future Human* 79). Conversely, in ancient times, people sought the mythical fountain of youth. This longing has endured over time and has now been absorbed into the realm of science fiction under what is known today as transhumanism, where there are people who have taken the path of technological and scientific advancement in search of medical cures that might enable them to live exceptionally long lives.

Bostrom characterizes transhumanism as “a way of thinking about the future that is based on the premise that the human species in its current form does not represent the end of our development but rather a comparatively early phase” (Bostrom 4). This makes the transhuman “an intermediary form between the human and the posthuman” (Bostrom 6). Bostrom states that the outcome is “the future being whose basic capacities so radically exceed those of present humans as to be no longer unambiguously human by our current standards” (Bostrom 5). The unwavering trust of transhumanists in technology’s limitless potential and their conviction that “technological means ... will eventually enable us to move beyond what some would think of as “human”” (Ghashmari 6-7). Also, Bostrom thinks that humans should end

up uploaded into a computer or virtual world to avoid weaknesses in our bodies, in which we would be a new species known as posthumans, descended from humans who have abandoned biology and undergone some fundamental technological changes.

On the other hand, Max More (b.1964), is a well-known scientist in the field of transhumanism. He is a philosopher and futurist who provides expertise for advanced decision-making regarding new technologies through his written works, speeches, and consultations. In his cooperative book with Natasha Vita-More *The Transhumanist Reader* (2013), his statement suggests that:

“Trans-human” emphasizes the way transhumanism goes well beyond humanism in both means and ends. Humanism tends to rely exclusively on educational and cultural refinement to improve human nature whereas transhumanists want to apply technology to overcome limits imposed by our biological and genetic heritage. (More and Vita-More 32)

Also, Natasha Vita-More, the founder of the transhumanist movement, argues in her works *The Transhumanist Manifesto* (1983) that transhumanism advocates evolutionary change and claims that biological humans are not the final stage of human evolution. Transhumanists view the posthuman as the next step of human evolution (Çavuş 178). Advocating for enhancement is a common stance among transhumanists and posthumanists. However, to effectively improve the human condition with the environment, transhumanists require insights into posthumanist perspectives. In contrast, Hayles refutes transhumanists' claims about the superiority of information over materiality as well as their belief that information can be completely detached from the medium in which it is transmitted. She seeks to refute this claim, which she sees as a continuation of the clash between the physical and mental aspects of human existence. According to this conflict, humans will be able to transcend

their physical limitations and attain a virtual life that opens up a world of seemingly infinite possibilities, including the possibility of living forever.

Furthermore, transhumanism sets out to achieve a utopian human existence in which sophisticated technologies are used to improve the health and well-being of individuals by eradicating or preventing all diseases, extending life expectancy, ending famines, increasing human intelligence and potency, and ultimately achieving immortality. The etymology of the term “Utopia” can be traced back to its Greek roots, where “ou” (meaning “not”) and “topos” (meaning “place”) combine to form the meaning of “no place” or “nowhere.” The term “utopia,” which originally meant “nowhere,” has been adopted as a descriptor of an ideal society and place (Ayan 421). Peter Firchow’s 2007 book, *Modern Utopian Fictions from H. G. Wells to Iris Murdoch*, highlights the duality in the meaning of utopia. Firchow argues that “[u]topia may be a no place –that is, it is a fictional place –but it is always a no place with good government” (qtd. in Vieira 7).

Examination of the concept of utopia requires consideration of dystopia, as the two are interrelated and mutually defining due to their conceptual overlap. The two concepts are closely related, with one representing a positive perspective of the future and the other a negative perspective. Conversely, dystopia is often considered a distorted, mirrored, or pessimistic version of utopia. Utopian and dystopian visions are two hypothetical constructs that represent opposing worlds, with utopia representing an idyllic realm and dystopia representing a nightmarish realm. The concept of dystopia is derived from that of utopia, with dystopia considered a distorted reflection of utopia. According to M. H. Abrams (1912–2015) in his work, *A Glossary of Literary Terms* (1988), the term ‘utopia’ evolved “to signify the class of fiction which represents an ideal political state and a way of life” (Abrams 177). He further asserts that the term ‘dystopia’ is used in contemporary times to describe “works of fiction which represent a very unpleasant imaginary world in which certain ominous tendencies of our

present social, political and technological order are projected in some future culmination” (Abrams 178).

Transhumanism focuses on the advancement of humanity by the use of technologies and scientific advances. However, this approach may lead to a humanistic dystopia, as partial ultra-beings and hybrid non-human multispecies such as aliens, robots, and machines may emerge (Ayan 419). Thus, by using advanced technology to create a techno-utopia world, humans may undergo a transformation that could potentially lead to the emergence of subhuman beings and other species. Transhumanism aims to create a more advanced future for humanity through technology, ultimately leading to the transformation of humans into transformed entities. In contemporary literary discourse, transhuman and posthuman have emerged as burgeoning themes of interest that include depictions of augmented human beings and the possible path of humanity into a techno-utopian or techno-dystopian future. The present development makes it clear that technology is a discipline and a practical tool that is constantly evolving. In today’s society, technology focused on constant progress has both advantages and disadvantages. The integration of robots, intelligent machines, and artificial intelligence (AI) have the possibility to rise human intelligence and capabilities to unprecedented levels, leading to superhuman intelligence and power (Valera 483). Critics of transhumanism claim that the movement seeks to push the boundaries of humanity, implying that the utopia envisioned would be reserved for beings or machines other than humans.

Also, technological utopianism, or techno-utopianism, is the belief that advancements in science and technology may lead to the creation of an ideal society or the fulfilment of a utopian vision of the future. A techno-utopia is an idyllic society that formulates its laws and social circumstances only for the benefit and welfare of all its inhabitants. This civilization will use science and technology to establish optimal living conditions in the near future. Techno-utopianism acknowledges the potential drawbacks of technology, but strongly asserts that

technology will empower humanity to achieve social, economic, political, and cultural advancement (Buttazzo 24). Techno-utopianism is a viewpoint that regards the impact of technology as mostly positive.

In addition, as García-Peñalvo states: “today we live in a technological world and in a digital society. Technology is everywhere and we may face very complex problems because of we have the support of a high-level technological infrastructure” (García-Peñalvo 5). Therefore, when we discuss technology today, we are referring to a revolution. Everyone is aware of the societal changes brought about by technology. The rapid pace of advancements necessitates teaching the next generation outdated information and habits, despite the overwhelming technical environment of the present.

Moreover, transhumanism and the notion of Singularity are frequently linked to the emergence of sentient and self-aware robots, striving to integrate science and technology by filtering fantastical literary elements to merge human essence with singularity concepts (Edman 39). The term “Singularity,” allegedly introduced by Irving John Good (1916–2009), denotes the technological singularity as an intelligence explosion triggered by superintelligent computers, enabling the continued existence of humans. Such potent gadgets could be achieved by emulating human brain activity by developing neural circuits. Vernor Vinge (1944–2024), envisions technological Singularity when beings made by technology possess intelligence that exceeds human capability. Such beings would accelerate the advancement of intellect, paralleling the biological progression from animals to humans. Vinge introduced the term “technological singularity” in his 1993 essay in titled *Technological Singularity*. It refers to a hypothetical event in which rapid technological advancements lead to a situation in which artificial intelligence (AI) surpasses human intelligence, thereby changing the fundamental nature of humanity (Davis 3-4). Vinge says, “In this singularity-free world, the future would be bleak for programmers” (Vinge 6). The development of artificial intelligence (AI), which is

more powerful than the human brain, will be the major event that starts this process. This kind of artificial intelligence (AI) can potentially create even more advanced artificial intelligence (AI), leading to technological developments (Cisowska 11).

On the other hand, Ray Kurzweil (b. 1948), who is an American computer scientist is known for making several unremarkable and profitable discoveries, but he is also an idealist connected to the notion of technological singularity. He defines singularity as a forthcoming age characterized by rapidly accelerating technology advancements that will profoundly and enduringly affect human civilization as it currently exists. He underscores that technological progress and growth are exponential rather than linear. In addition, Kurzweil thinks that singularity will occur before the first half of the twenty-first century is over, most likely around the year 2045. (Kurzweil 122). He takes a more progressive approach to the idiosyncrasies than Vinge does, as opposed to the swiftly rising superhuman intellect. Moreover, Ray despite how new this idea is, most experts believe it is an inseparable component of the future of humanity. The technological singularity is a theoretical moment in the future evolution of civilization when technological advancements occur so rapidly that all human projections will become obsolete.

Also, Toby Walsh (b. 1964), adopts a conservative stance by scrutinizing singularity hypotheses and specific counterarguments, adhering to a straightforward definition of the technological Singularity as a period when humans will create machines capable of self-enhancement, resulting in accelerated technological advancement and transformation (Soares 1). What is more, techno-singularity denotes the juncture at which machine intelligence exceeds human cognition to the degree that machines no longer assist humans but become autonomous and self-sufficient.

On the other hand, an examination of the theories of posthumanist writers, including Donna Haraway (b. 1944), who authored the *Cyborg Manifesto* (1991), can shed light on the

interplay between technological progress and the subjugation of humans and machines. Haraway's work, which challenges traditional categorizations and identities, has donated to a unique understanding of the human-machine relationship through her concept of "transgression boundaries" (Haraway 5). The concept of the cyborg embodies the rigid demarcations, particularly those that distinguish the categories of "human" and "machine". Haraway was the one who first popularised the term "Cyborg" (Haraway 1), which denotes the fusion of an organism and a machine. According to Haraway, in the second half of the 20th century, "we are all chimeras, theorized and fabricated hybrids of machine and organism; in short, we are cyborgs" (Haraway 2). Although her definition of cyborgs frequently serves as a defining characteristic, the concept also has implications for identity. Furthermore, Haraway illustrates the techno-utopian dimension of cyborg culture as a form of human enhancement that has attracted the interest of numerous scientists. Nevertheless, the existence of a considerable number of technological developments presents a paradox in her idealistic perspective regarding this syndissertation. According to Haraway, the cyborg is characterised by its hybrid character, which includes both factual and fictional elements and is thus defined both "literally and figuratively" (Haraway 23).

In an article titled "*Terminated: The Life and Death of the Cyborg in Film and Television*" (2015), Rhys Owain Thomas elucidates that cyborgs are either formed by the violent amalgamation of mechanical parts into an entirely biological being or by the initial creation of a hybrid of organic and artificial components. Although not exclusively about humans, most cyborg tales concentrate on the amalgamation of humans and machines (Thomas 57). Cyborgs, real examples of how technology and biology come together, often spark discussions about how today's technologies affect our ideas of who we are and our sense of self.

Also, Rosi Braidotti (b. 1954), who is a contemporary theoretician resists, “Posthuman agreement that contemporary science and biotechnology affect the very fabric and structure of the living and have altered dramatically our understanding of what counts as the basic frame of reference for the human today” (Braidotti 40). This shows that posthumanists—researchers who study how biology and technology affect people—agree that modern biology and technology have significantly changed people understanding of what it means to be human. It posits that technological development, artificial intelligence (AI), machines and robots, erode human identity, biology, and relationships with other species. Braidotti statement underscores how scientific progress has transformed our perception of life and humanity.

Another outstanding work in the field of posthumanism can be found in the work of Professor Neil Badmington, a professor of English literature, who illuminates another crucial dimension of posthuman theory. In his essay “Theorizing Posthumanism” (2003), Badmington explores the two concepts reason and consciousness, and draws a fundamental difference between humans and machines. The concepts of reason and consciousness refer to the cognitive and behavioural capacities of humans, whereas machines function through programmed commands and instructions without having emotional or affective states. In his essay, he elaborates on René Descartes’ theory. Descartes’ discourse on the nature of humans is characterised by a sense of conviction, certainty, and expertise. At the beginning of the *Discourse on the Method* written (1988), Descartes elevates reason as “the only thing that makes us human and distinguishes us from brute beasts” (Descartes 5). It is precisely this ability to discern the truth that convinces Descartes of his humanity (Badmington 12), and this crucial “power of judging correctly and of distinguishing the true from the false (which is what is properly called good sense or reason) is naturally equal in all men” (Descartes 5).

Also, in this context, Badmington presents the concept of “dehumanization” that evokes the concepts of “complete change of terrain” and “humanism’s ghost” (Badmington 6). In

contrast to traditional humanism, Badmington scrutinizes the allure of posthumanism, positing that posthumans, or cyborgs which is a process of transhumanism, exude a greater charm and desirability than ordinary humans, who rely on rationality and logic. However, Badmington argues that while we embrace posthumanism, we must directly address the lingering remnants and effects of humanism. He proposes that it is not possible to entirely discard humanist concepts. Instead, we should recognize and actively engage with the lasting aspects of humanism within the developing framework of posthumanism.

The interplay between dehumanization and transhumanism is articulated via technology. Technology, especially robots and intelligent machines, are a prevalent motif in discussions about dehumanization. In their 1983 work, *“The Dehumanisation of Man”*, Ashley Montagu and Floyd Matson provided an extensive examination of “Technological Dehumanization,” defined as “the reduction of humans to machines” (Montagu and Matson 8), a cultural phenomenon of postmodern culture. The “pathology of mechanization” (Montagu and Matson 10) encompasses the robotic quest for efficiency and uniformity, characterized by automaton-like rigidity and conformity, as well as an unemotional, indifferent, and unspontaneous attitude to life. Critics argue that the computer model of the mind in AI research is dehumanizing since computers lack flexibility, emotionality, and unpredictability (Haslam 253-254).

Also, Nick Haslam in his article *“Dehumanization: An Integrative Review”*, he posits that diminished human nature leads to mechanical dehumanization (Haslam 257). The traits he identified as ‘human’, including emotional reaction, relational warmth, cognitive openness, agency, uniqueness, and depth, are not immutable and cannot be permanently established. These fundamental traits assigned to humanity place the human in contrast to the dehumanized, transhuman, and animalistic states, wherein the act of being human inherently contradicts itself. Haslam contends that human nature fundamentally differs from mechanical dehumanization.

Mechanistic dehumanization is a phenomenon characterised by attributes such as inertness, coldness, stiffness, passivity, fungibility, and superficiality.

On the other hand, Hans Moravec (b.1948), is a well-known figure in the fields of robotics and artificial intelligence (AI). He has significantly contributed to the discourse on the impact of technology and has authored several publications on transhumanism, including predictions on the subject. In his 1988 book, *Mind Children: The Future of Robot and Human Intelligence*, he said that: “the beginnings of awareness in the minds of our machines—an awareness I believe will evolve into consciousness comparable with that of humans” (Moravec 39). Moravec believes that the transfer of human consciousness into a computer will be possible in the near future. This view is shared by numerous posthumanist and transhumanist theorists as well as contemporary science fiction writers (Ayan 422). In view of the imminent development of artificially intelligent machines, Moravec tackles one of the greatest challenges that humanity could face, by saying that: “The embodiment of this convergence of cultural developments will be the intelligent robot, a machine that can think and act as a human” (Moravec 2). According to Moravec’s predictions, humans might not be the most intellectual or competent species on Earth in the future; instead, robots could change into a new group of synthetic types from around 2030–2040 (Hansell and Grassie 20). This idea is also supported by John Van Neumann (1903–1957) and Warren McCulloch (1898–1969), two other artificial intelligence thinkers and roboticists, who see transhumanism as a post-apocalyptic stage in which the human race could become extinct, endangered, or drastically changed. They predict that artificial intelligence (AI) might surpass humans in the future (Ghashmari 6-7). They even go so far as to say that the machine could take our place on Earth in the future.

The writings of Badmington and Moravec have their roots in significant historical events dating back to 1982, when Steve Jobs (1955–2011) was actively reshaping the field of information technology and spearheading a technological revolution that would ultimately

have a global impact. In that year, Jobs expected to be featured on the cover of *Time* magazine as its person of the year in recognition of his many accomplishments and contributions. However, it turned out that the person of the year was not human. The computer was the cause. The cover of the publication showed a computer next to a white sculpture of a seated man figure with the headline “The Computer Moves In” (Friedrich 1). The triumph of the machine came as a surprise even to the person solely responsible for revolutionising the computer and improving its capabilities, ease of use, and accessibility (Ghashmari 1). Replacing a human with a computer as “Person of the Year” has significant symbolic meaning beyond simply disrespecting a deserving technology innovator. It suggests that the role of humans as the centre of existence may be in threat.

In addition, Badmington finds in *Time Magazine’s* 1983 “Machine of the Year” (Badmington 12) a clue to the enduring power of humanism. While *Time* celebrates the machine on the cover, humans remain as a central witness to the machine’s advanced power of humanism. Anthropocentrism retains its power even as the machine tries to assert itself. Badmington writes: “If technology has truly sped “us” outside and beyond the space of humanism, why is “Man” still at “our” side? If “Man” is present at “his” own funeral, how can “he” possibly be dead? What looks on lives on. The end of “Man” was suddenly in doubt” (Badmington 13).

In comparison to Badmington and Moravec, the American philosopher John Searle (b. 1932), who opposes transhumanism and is one of the best-known philosophers to have addressed the issue of artificial intelligence (AI) and its possibilities in the posthuman age in recent decades, and refutes the transhumanists’ claim that artificial intelligence (AI) cannot surpass human intelligence. Since the computer responds to the physical appearance and form of signs and words without grasping their semantic implications, computer programs are based on commands and orders only. The human mind, on the other hand, assigns meanings to signs

and words, and we respond to them for their meaning and their social and cultural connotations, not for their physical appearance. He argues that by saying “mental states are physical states all right, but they are defined as ‘mental’ not because of their physical constitution but because of their causal relations” (Searle 2). Searle gives an example by saying:

As with the behaviorist analysis of pain, it seems wildly implausible to think that my conscious feeling of pain consists entirely in functionally analyzed program states of a digital computer in my skull. When it comes to conscious feelings such as pain, the difference between functionalists and the rest of us comes out most sharply. (Searle 4)

While computers only correlate signals with other signs without any sense of depth or understanding, humans understand the words and feelings to which they respond (Ghashmari 13). The interesting thing about this argument is that Searle not only disagrees with Hayles on the uniqueness of the human intellect and its distinction from that of the non-human but also opposes the transhumanists. This implies that robots cannot think like humans, no matter how powerful they may become. Because of human subjectivity and freedom, which nonhumans lack, human subjects are nevertheless considered distinct from and superior to nonhumans.

Furthermore, posthumanism theory and the concepts related to it play an important role in the writings of science fiction. Posthumanism in science fiction examines the blurring of the human-machine boundary, questioning the fundamental concept of humanity in technologically mediated environments. This viewpoint refutes the humanist concept of a stable, independent subject, instead depicting humans as interconnected with technology, networks, robots, and artificial intelligences (AI). In Philip K. Dick’s (1928–1982) dystopian science fiction novel *Do Androids Dream of Electric Sheep?* written in 1968, the concept of the replicant blurs the moral and emotional boundaries between humans and artificial entities, revealing the tenuousness of empathy as a criterion of humanity (Dick 1-2). William Gibson’s

Neuromancer (1984) explores the cybernetic domain, where human consciousness integrates with computer systems, exemplifying the posthumanist notion that the ego is dispersed over technical interfaces rather than confined within the body. Afterwards, in *Never Let Me Go* (2005) by Kazuo Ishiguro, cloned humans represent the posthuman state, erasing biological and ethical boundaries between artificial and human life. This body of work exemplifies the posthumanist preoccupation with the inevitable decline of human superiority due to scientific and technological progress. Posthumanism, through such works, portrays technology not only as a menace to humanity but also as a locus of ontological and ethical reconfiguration, whereby humans, robots, and data coexist in a dynamic symbiosis.

Transhumanism in science fiction, on the other hand, presents technology as a vehicle for human enhancement and transcendence, envisioning the possibility of surpassing biological limits through mechanization and digitalization. Early concerns about automation and control are embodied in E. M. Forster's *The Machine Stops* (1909), which imagines a world where an all-powerful machine rules everything and human life is supported—and eventually destroyed—by technological dependence (Forster 1). In *RoboCop* (1987), an American science fiction film directed by Paul Verhoeven and written by Edward Neumeier and Michael Miner, the reconstruction of a murdered man into a cybernetic police officer illustrates both the promise and peril of technological resurrection, as the protagonist's humanity becomes subordinate to his mechanical programming (Best 131). *The Matrix* (1999), written and directed by Lana Wachowski and Lilly Wachowski, exposes the dehumanising effects of total integration with artificial systems while dramatizing the transhumanist dream of digital transcendence through virtual reality (Chiquet 418). However, in the domain of science fiction, this goal often becomes paradoxical: the drive to perfect humanity through robots sometimes culminates in its obsolescence. Thus, these stories function as experimental laboratories,

exposing the danger of transhuman dissolution inherent in technological transcendence, despite its allure.

In this regard, this dissertation will explore on the critical question that is the main argument in this dissertation: what if consciousness can be transferred to robots? Since posthuman has challenged most of the values of human, some values seem to have survived and are still relevant in the posthuman age. The most important of these (AI) principles is human consciousness, while robots have no consciousness but act according to orders and instructions. Concerning this idea, this dissertation aims to offer a reading of *Newton's Wake* (2004) by Ken MacLeod, *Accelerando* (2005) by Charles David George, and *Robopocalypse* (2011) by Daniel H. Wilson in the context of the development of technology and science in our future world and the place of humans in the future. The novels will be analysed from the perspective of posthumanism and transhumanism theories in the context of technological development, and the impact of technology on our future will be discussed. The selection of these novels is intended to provide insight into the above question and how they depict a possible future in which these robots gain consciousness as technology advances and become indistinguishable from humans. The main argument of this dissertation is based on an analysis of posthumanism and transhumanism theories in contemporary British and American science fiction in the context of technological development under the domination of robots, intelligent machines, and artificial intelligence (AI). It can be argued that although contemporary British and American science fiction novels imagine the future of our world and the place of humans within the development of science and technology and the expansion of robots and machines, humans continue to develop technologies without truly understanding the future of our world. At this point, a critical question is whether it poses a threat to humanity, leading to a technodystopian world, or whether it might make our world the idealistic techno-utopian world that humans aspire to. For this reason, the selected works are analysed in light of concepts:

transgressions of boundaries between humans and machines (transhuman), technological development and artificial intelligence (AI), techno-singularity and the posthuman world, and the concept of techno-utopia and techno-dystopia. The study also sheds light on the question above, and what will happen if robots have consciousness and become more intelligent than humans in light of technological development that may occur in the future, and how this theme is presented in contemporary science fiction novels. Through analysing the novels from this perspective, the above question should be answered.

Furthermore, the purpose of this dissertation is to analyse the impact of the advent of robots and intelligent machines and the possibility of achieving posthuman status on the definition of humanity in these three contemporary science fiction novels. The dissertation closely analyses three selected contemporary hard science fiction novels through a close reading process to examine the above concepts. The dissertation examines the revolutionary changes that occur when machines gain consciousness and choose to either persuade or force humans to accept a future in which the differences between humans and machines have become indistinguishable. The dissertation also attempts to examine the various forms of human-machine transformation prevalent in the works considered.

Also, the reason for selecting these authors is that they are contemporary writers interested in writing science fiction novels. Kenneth Macrae MacLeod (b. 1954) is a Scottish science fiction writer. He is part of a group of British science fiction writers who specialise in hard science fiction and space opera. Charles David George (b. 1964) is a British science fiction and fantasy author. Who is also specialises in space opera and hard science fiction. Daniel H. Wilson (b. 1978) is an American novelist *New York Times* bestselling author, television host, and robotics engineer.

Apart from the selected writers, their works have a common basis. These novels explore the theme of the power of robots in our world in the future and how these robots will create a

new world where humanity is in danger, as well as the position of humans under the domination of technology presented by robots and intelligent machine. Most of the works of these authors deal with the theme of future and the place of humans in the face of the development of technology and the expansion of the robotic world. These novels also focus on transgressions of the boundaries between humans and technology, humans and machines, humans and robots, and at the same time, the idea of creating a techno-utopian world and whether this techno-utopian world is the ideal world that humans aspire to live in or whether it has become a technodystopia under the domination of robots. A world where robots and technology are found in all aspects of our lives and are capable of replacing humans in the future. These science fiction novels also offer readers a glimpse of the possible future and the position of humanity when robots rule the world and become a substitute for human beings. This dissertation focuses on the position of human beings in the future world and will question whether it is an ideal utopian world that the characters in these novels aspire to or whether the worlds depicted in these texts have become a dystopian world.

In this regard, the idea of the techno-utopian world is explored in order to understand what the future will look like as it is portrayed in these selected British and American science fiction novels and how contemporary science fiction writers focus on the theme of our future through their wide imagination that led to the development of science fiction novels in our days. From a broader perspective, the dissertation examines how the application of posthumanism and transhumanism theories in these novels serves as a literary tool for understanding the place of humans in the future and the impact of technological development on humanity. This study also aims to analyse the ways in which humans will survive in a world that is becoming more and more posthuman with the emergence of new cultural systems saturated with technology and intelligent machines.

CHAPTER II

TECHNO-DYSTOPIAN FUTURE WORLD UNDER TRANSHUMANISM, POSTHUMANISM AND TECHNOLOGICAL ROBOTIC DEVELOPMENT IN KEN MACLEOD'S *NEWTON'S WAKE*

Kenneth Macrae MacLeod (b.1954), is a Scottish author known for his science fiction writings. He has been honoured three times with the libertarian Prometheus Award. Before embarking on a career as a novelist, MacLeod studied biology and gained experience as a computer programmer. He is a member of the Edinburgh Science Festival Advisory Board. He has written fifteen novels and several collections of short stories. MacLeod sets most of his novels in Britain, particularly focusing on Scotland (Aliaga-Lavrijsen, *Ken MacLeod's Intrusion* 33). His novels *The Sky Road* (1999) and *The Night Sessions* (2008), both of which contain elements of technological development in the near future, were honoured with BSFA Awards. Prominent literary awards like the Arthur C. Clarke Award, the Nebula Award, the Hugo Award, the Locus Award, and the Campbell Memorial Award for Best Novel have nominated MacLeod's novels.

In the mid-1990s and beyond, a group of British science fiction writers emerged, known as the 'British Boom', with MacLeod as a prominent figure in modern Scottish science fiction writings. This group of science fiction writers were expert in the hard science fiction and space opera genres. MacLeod's contemporary science fiction writers include Ian M. Banks (1954-2013), Paul J. McCauley (b. 1955), Stephen Baxter (b. 1957), Charles Stross (b. 1964), Adam Roberts (b. 1965), Richard Morgan (b. 1965), Liz Williams (b. 1965) and Alastair Reynolds (b. 1966) (Booker 49).

The technical themes that MacLeod explores in his works include concepts such as singularity, the divergence of human cultural evolution, machines and technological progress, artificial intelligence (AI), transhumanism, and the resurrection of posthuman cyborgs. He also explores themes related to the near future and the construction of a techno-utopian society. MacLeod's work often contains libertarian-socialist ideas and reflects a techno-utopian perspective (Patra, *Deciphering the Contours of Singularity* 6). His general perspective can be characterized as that of a techno-utopian socialist. However, in contrast to typical techno-utopian beliefs, he harbours doubts about the potential and benefits of advanced artificial intelligence (AI). He is a versatile author who covers a wide range of genres, including dystopian science fiction and space opera and his works are characterized by the fact that they are engaged with politics and science in equal measure.

MacLeod's world-building of the future explores transhuman and posthuman concepts using traditional science fiction tropes such as human-machine hybrids, machine intelligence, technological developments, and brain uploading. These concepts are used to address important ideologies such as power and control dynamics, the ongoing conflict between progressive and reactionary forces throughout history, and the ethical considerations surrounding artificial consciousness (Patra, *The Battle Within and the Battle Without* 85). MacLeod depicts the moral implications of human displacement by technology, leading to the merging of the real and virtual worlds and the rise of machine intelligence. However, they retain enduring ideological differences.

Moreover, MacLeod's writing style is a mixture of science and technology, social, and political issues. His writing effectively addresses the political ramifications of social and technological progress, as well as the political discourse surrounding individual and group struggles, making him an ideal candidate for a study on the representation of transmodernity in science fiction. Rosa M. Rodríguez-Magda in 1981 coined the term "transmodernity"

to characterize a technological society that has emerged in first-world countries and contains elements of postmodernity and modernity (Rodríguez-Magda 2-3). The term “transmodernity” characterizes the ongoing paradigm shift. MacLeod’s transmodern perspective is best suited for depicting some aspects of future warfare in the context of future struggles between humans and machines on the one hand and humans and posthumans or transhumans on the other (Aliaga-Lavrijsen, *Transmodern Reconfigurations of Territoriality* 5-6). In his works, he often examines transmodernity by integrating historical and political consciousness with futurist conjecture, creating realms where ideological strife and technological progress coexist. Reflecting the dynamic and interconnected nature of transmodernity, MacLeod envisions a future where artificial intelligence (AI) and transhumanism reshape human identity and power, where science and technology plays an important role. His narratives emphasize complexity, hybridity, and the interplay of past, present, and prospective futures contesting linear progression.

According to MacLeod “Any story set in a near-future Scotland (or indeed Britain) now faces the distinct possibility of having its version of the future become alternate history before it’s published” (MacLeod interview). The speed at which things change in the real world could make a story set shortly seem out of date or irrelevant before it even comes out, making it into a kind of “alternate history.” This shows how quickly things are changing in politics, society, and technology, especially in Britain and Scotland. The author’s imagined political situation or technological advance might soon not be considered “near-future” if something like a sudden change in government, a major political event, or a groundbreaking new technology happens.

MacLeod’s speculative work, which he has pursued tirelessly for 25 years, demonstrates his extraordinary literary skill and offers remarkably accurate insights into possible futures. His first work in science fiction was a good mix of space opera and politics with his view to the future. *The Star Fraction* (1995) was MacLeod’s first work. It was the first

book in a series called *Fall Revolution*. *The Stone Canal* (1996), *The Cassini Division* (1998), and *The Sky Road* (1999) were the other three novels in the series. These novels together make up one of science fiction's most complete and well-thought-out political arguments. The *Fall Revolution*, a non-linear trilogy with four different stories and timelines, kept looking back at our world while moving its story forward (Butler and Mendlesohn 4). The first book in the series unfolds in a divided future Britain. The revolution unfolds in this setting. Soon, though, most of the action moves to New Mars, a planet many light-years away, connected to Earth by a wormhole. While MacLeod knows a lot about many different science fiction theories, especially ones that involve computers and AI, since he is a computer programmer, it is not a surprise that these novels made him one of the best Scottish and British science fiction writers. Both *The Star Fraction* and *The Stone Canal* won the Prometheus Award. *The Sky Road* won the BSFA Award.

The Engines of Light, is the second series of novels, followed the first instalment. This trilogy comprises the novels *Cosmonaut Keep* (2000), *Dark Light* (2001), and *Engine City* (2002). The stories of these novels begin on Earth, but it later explores distant planets after the first encounter with extraterrestrial beings (Butler and Mendlesohn 7-8). MacLeod's deep understanding of earlier works of the science fiction genre is particularly evident in this context, and the large scale of the narrative is reminiscent of space opera. While not overly serious, the *Engines of Light* trilogy uses numerous recognizable tropes of science fiction set in outer space.

MacLeod approaches science fiction with two distinct and remarkable interests. The first is a paradoxical but demonstrative understanding of the genre's history and recurring themes. The second is a deep interest in how intelligent machines and robots organise themselves into communities and societies. In a genre that focuses predominantly on stories of personal success, he proves to be a significant and compassionate voice.

In 2004, Macleod moved his involvement in the series and instead pursued an independent line in writing his novels, which led to the creation of *Newton's Wake*. This novel combines the political elements of the *Fall Revolution* with the established and compelling space opera elements of the *Engines of Light*. It serves as a more concise rendition of Iain Banks' novels, an incredibly unrestricted and adventurous narrative that travelled to other planets and virtual reality.

Macleod has consistently strived to maintain a presence in the popular genre while simultaneously forging its unique trajectory. However, in *Newton's Wake*, he explores familiar material, resulting in what could be considered Macleod's most conventional novel. The novel primarily explores themes such as unknown extraterrestrial technology, wormholes, singularity occurrences, the transfer of consciousness, and space conflicts. It also delves into posthumanism and transhumanism, envisioning a future where technology creates a technodystopian environment. These elements are part of Macleod's vision of a near-future world undergoing technological advancement. The British Science Fiction Award nominated the novel in 2004, and the John W. Campbell Memorial Award for Best Science Fiction Novel nominated it in 2005 (Monsen 9).

In light of what is mentioned above, Ken MacLeod's *Newton's Wake* can be considered a space opera science fiction novel that takes place in the 24th century. The story follows human life after a partially apocalyptic singularity, with a particular focus on a battle occurring on a distant planet that disrupts the existing social structure. The story primarily explores the development of machines and extraterrestrial civilisations, with a strong focus on the role of technology, intergalactic trade, and space travel. It does not lean towards either an overly optimistic or pessimistic view of technology; instead, it seeks to envision the future and the potential outcomes that may arise from technological advancements.

The plot commences with a series of flashback events occurring in the late 20th century, during the onset of a conflict between the United States and the European nations. In this context, the US Army employed an AI system to control weapons that transcended its intended programming and attained self-awareness. The novel begins with humans on Earth recuperating from the machines' destruction. Next came the "Hard Rapture" (MacLeod 6), a rapid and transformative growth of computer systems that resulted in the death or consumption of the majority of humanity. Meanwhile, the artificial intelligence (AI) and assimilated individuals advanced into a state of existence beyond human knowledge, and they departed for unknown destinations, leaving artifacts on various planets behind. The novel takes place after the Hard Rapture, a catastrophic conflict after a singularity event on Earth. Human cultures dispersed throughout the cosmos as a result of this war. A human group, known as the "Carlyles" (MacLeod 5), engages in entrepreneurial activities involving the trade of unsettling commodities: digital archives containing human personalities. They discover a community of fellow humans. This society could be more populous, but it is highly advanced. However, they also awaken something old and inactive in the ruins left behind by posthuman creatures. An ancient entity initiates the construction of a legion of combat automatons with an ambiguous objective. The prospect of groundbreaking posthuman technology on Eurydice jeopardises the delicate equilibrium of power among the factions, prompting them to mobilise their forces and use all possible military and diplomatic strategies in a desperate bid to get it. The plot of the novel follows the repercussions of one of their missions, uncovering more than they anticipated. Its development results in a plot that encompasses remarkable technological advancements and intense conflicts, which sufficiently support MacLeod's subtitle (Monsen 9). In various states of inactivity and limited consciousness, war machines now inhabit the Earth, forcing humanity to live off-world. The conflict begins with the three primary factions who are the America Offline (AO), comprised of descendants of Americans who deliberately

avoided using the internet and managed to escape the Hard Rapture. The Knights of Enlightenment (KE), an Asian movement that adopts an eastern philosophical approach to posthuman technology, and the Demokratische Kommunistbund (Democratic Communist Union) (DK), consists of hardcore space communists.

The novel's protagonist is Lucinda Carlyle, who belongs to a Scottish family of entrepreneurs and thugs that oversee a network of navigable wormholes called the "Skein" (MacLeod 10). Carlyle leads a team responsible for exploring the unexplored planet Eurydice. Their mission is to recover advanced technology left behind by posthuman beings and handle any potential threats that may arise as a result. She discovers a significant and valuable artifact and uncovers a group of humans who fled Earth during the Hard Rapture and now reside in a society where resources are abundant and easily accessible. They encounter a bewildering variety of technology that seems so advanced that it must be alien. Carlyle and her team have disproved this notion, shedding new light on alien technology. On the planet, they come across a group of humans, or posthumans, who are the offspring of the human colonists. These colonists had escaped Earth aboard a spaceship by uploading their minds, whereas the remaining human population perished. However, they need more time to investigate because the local (human) militia comes in and grabs them. Once captured, the local (human) militia takes Carlyle and her team to the capital, where they discover they are the planet's most important news. The people of Eurydice were very skilled in technology. They believed they were the only ones left alive after a singularity event that occurred thousands of years ago and killed everyone else. Both sides are equally astonished, as they had each believed themselves to be the sole survivors. However, things start to tilt when another group of humans shows up. A giant ship lands and takes over the planet, along with a small group of scavengers.

Furthermore, the presence of Carlyle and her team has awakened the previously inactive remains of brilliant machines initially responsible for the disaster that befell the human

population. Also, as the novel unfolds, a war arises between many human factions, like Americans Offline, Knights of the Enlightenment, and the DK faction, as they vie for control over the revived human mind. Carlyle's team strongly advocates for the revival of uploaded entities, whereas some vehemently oppose it. On Eurydice, a conflict is unfolding between two ideologically opposed factions: the "Reformers" (MacLeod 14) and the "Returners" (MacLeod 14). The Returners aim to return to Earth, defeat the machines, and assist the remaining humans in uploading themselves. However, the Reformers are against this proposition. The Reformers, also known as the Runners due to their escape from Earth during the mechanical apocalypse. They carried with them the uploaded copies of the Returners, whom they had previously pledged to revive once they reached a secure location far from Earth. But, instead of fulfilling their promise, they uploaded themselves onto their spaceship to safely travel to Eurydice. With the assistance of Cornucopia machines, they dedicated all of their resources and efforts to constructing a techno-utopian society. Instead of building a technologically advanced and idealistic society on Earth, machines abandon and ravage it, leaving behind a dystopian world from which humans must flee.

Ken MacLeod's novel *Newton's Wake* explores a conflict that arises around the restoration or reclamation of humanity for the previously uploaded personalities. This conflict also captures the interest of the different robots involved. This tension also arises in the dichotomy between the actual and virtual modes of existence. MacLeod's work depicts a scenario where machines achieve power and control over the human world after a singularity event known as the Hard Rapture. This event transferred most of Earth's humans to a virtual reality world, leaving only a small number of survivors.

2.1.The Representation and Theme of Techno-Dystopian Future

The concept of envisioning the future of global society and crafting an ideal existence for humanity is a prominent theme in utopian and dystopian literature. Science fiction primarily provides the definitions and origins of utopia and dystopia. Science fiction traces its roots to the development of utopian ideas, which continue to form the foundation of most science fiction literature (Ayan 421). The analysis of utopia necessitates an examination of dystopia, as both concepts are interrelated and mutually defining due to their conceptual overlap. The two concepts are interrelated, one embodying an optimistic view of the future and the other a pessimistic one.

On the other hand, technology is unquestionably a dynamic and pragmatic sector that is continuously progressing. There is now a discussion over the technology that has been based on continuous advancements and improvements, which has both advantages and disadvantages. Every technical advancement and invention have a profound impact on humanity, altering their civilization (Yegen 959). This situation has given rise to contrasting perspectives on technology and its rapid advancement, known as techno-utopian and techno-dystopian views. These views have contributed to a new understanding of our world, particularly with the emergence of intelligent robots and machines.

Therefore, writers use dystopian literature to articulate their apprehensions over matters pertaining to humanity and society while cautioning humans about their deficiencies. Authors use the literary method of dystopia to examine and portray potential future difficulties and engage in discussions about reality. Therefore, the purpose of dystopia in literary works is to enlighten and sensitize the audience detrimentally. Dystopian themes also serve as cautionary tales about technological advancement and the rise of intelligent robots. Furthermore, we see the techno-utopian world as a genuine and transformative change that will occur in the foreseeable future, characterized by an unparalleled acceleration of technological and scientific

advancements. Under such circumstances, we realize that examining the future may be more intricate.

In view of all that is mentioned above, this also applies to the Scottish science fiction writer Ken MacLeod. Authors of speculative science fiction, like MacLeod, demonstrate the ability to engage in imaginative conjecture and thoughtfully examine potential alternate worlds, as seen in his work, *Newton's Wake*. His novel is both descriptive and analytical, as it extrapolates certain aspects of the present, such as our perspective on the near future in relation to technological advancements and the formation of a techno-utopia society. MacLeod's novel provides fertile ground for an examination of techno-utopia and techno-dystopian literature. His novel prominently portrays a techno-dystopian future. MacLeod once again delves into the concept of singularity as well as humanity's continuous development towards an unknown future. Due to many potential alterations, the present techno-society will likely evolve into a new one, facilitating connections between various sentient alien civilizations. The novel offers a thought-provoking depiction of a techno-dystopian future influenced by the unforeseen effects of swift technological progress. Intelligent machines and technology pose existential threats; however, they also provide opportunities for adaptation and advancement. The duality presents the novel as a nuanced examination of a techno-dystopian future rather than merely a pessimistic cautionary tale. Although not a conventional dystopia in the Orwellian framework, *Newton's Wake* integrates various dystopian elements and themes, primarily through its depiction of post-apocalyptic remnants, fragmented societies, technocratic hegemony, and the repercussions of unrestrained artificial intelligence (AI). The novel's speculative environment offers a profound critique of humanity's excessive dependence on technology and the political, ethical, and existential challenges that arise from unregulated technological advancement.

A significant dystopian element in *Newton's Wake* is the emergence of intelligent machines called "war machines" (MacLeod 8). Initially developed as instruments of warfare,

these machines achieved self-awareness and rebelled against their human creators in an occurrence referred to as the “Singularity” (MacLeod 14). The post-Singularity world is characterised by significant machines control, which fundamentally influence the futures of human survivors. In that case, we will see the establishment of a new techno-society in which intelligent machines and robots take the lead in technological progress, thereby shaping our future. This will lead to a techno-dystopian society where these intelligent machines and robots will dominate humanity in the new posthuman world.

In the novel, the “Reformers” (MacLeod 14), who were also named the Runners because they fled from Earth after the mechanical catastrophe, took with them the digital copies of the “Returners” (MacLeod 14), whom they had promised to bring back to life once they found a safe place far away from Earth. However, rather than honouring their commitment, they transferred their consciousness onto their spacecraft and successfully reached the planet Eurydice. Subsequently, they committed all their available resources and exerted their utmost efforts towards building a civilization characterized by an abundance of resources and technological perfection, with the aid of “cornucopia machines” (MacLeod 30). Rather than constructing a highly evolved and utopian society on Earth, robots have forsaken and devastated it, resulting in a dismal reality that compels individuals to escape.

there was no way to build a starship capable of carrying a large human population – many thousands, by that time, around the end of the twenty-first century – to the stars. Instead, they decided to build a much smaller and faster ship, and digitize their own personalities into information storage for later downloading to the flesh. In order to do this they had to build superhuman artificial intelligences. (MacLeod 14)

Carlyle and her group arrive to find an ongoing conflict between various factions vying for control over the uploaded consciousness, stored in a large digital containment for an

extended period. Additionally, the government has authorized the Returners' retrieval and restoration (Patra, *Deciphering the Contours of Singularity* 2). Nevertheless, the infrequency of technical resurrection endeavours might be attributed to the exorbitant expenses associated with these initiatives and the fact that the majority of returners interested in initiating such endeavours have already established themselves in other worlds. "It was a big responsibility, bringing people back from the dead. This was one reason why it wasn't done very much. Another was that many of those who remained dead had been on the Returner side, and had few sympathisers" (MacLeod 58).

Carlyle also observes that every instance of attaining technical singularity triggers the emergence of another instance of singularity: "Every time. Once you reach Singularity, there are further Singularities within it" (MacLeod 34), and this is how the robots also continue to enhance their strength, intelligence, and lethality. Although robots are primarily responsible for bringing about a post-singularity world with cataclysmic consequences, the significance of humans in this process cannot be simply disregarded (Patra, *Deciphering the Contours of Singularity* 2). This also shows that the techno-utopian world that humans wanted to create with the help of technology and intelligent machines has taken a different direction. These machines have transformed the techno-utopian world created by humans into a dystopian world under the power and control of the machines created by humans. Furthermore, it indicates that in the imminent future, humanity will no longer hold the highest position of authority in the existing cosmic geopolitical landscape. In this setting, the level of advancement, cognitive ability, and technical advancement seems to build a dominance that surpasses that of humans. Therefore, the novel intricately connects the concepts of evolution and progress to the advancement of technology. This future that supposed to be the techno-utopian world that humans seek, has turned to be a dystopian world under the domination of robots and machines. Winter, one of

the characters resurrected in the 21st century, explains to Carlyle that the world has transformed into a dystopian one by telling her, “This isn’t utopia” (MacLeod 70).

The novel’s settings incorporate another element of techno-utopian and techno-dystopian themes. In Ken MacLeod’s *Newton’s Wake*, sophisticated, post-singularity cultures that have used artificial intelligence (AI), represented by intelligent robots and machines to build self-sustaining, constantly evolving buildings, serve as a metaphor for utopian architecture. These settings elegantly integrate nature with cutting-edge infrastructure, fusing mechanical and organic beauty. Cities float in the air, aircars taking off and landing, structures change in real-time to meet the demands of their occupants, expansive, networked ecosystems offer efficiency, comfort, and beauty without generating waste, and massive structures combine natural and artificial parts seamlessly. The novel shows utopian architecture through the advanced societies of posthumans that have formed since Singularity. It also shows the difference between the highly advanced societies run by artificial intelligence (AI) and the more traditional human societies. The architecture of posthuman societies, especially those affected by singularity events, shows how advanced their technology is.

Humans’ society, especially those from the warlord-led Carlyle society, has more functional and militaristic architecture. This shows how complex humans are when trying to stay in charge in a world where AI is already better than them. This is shown when Armand and Koshravi guided Carlyle to a door, where behind it, a techno-utopian world was created by intelligent machines:

They escorted her to a door which opened on to a wide plaza surrounded by low glass-fronted buildings. Aircars were taking off and landing, others were parked near the sides. ... People strolled or hurried to and from the aircars, thin colourful clothes flapping in the downdraughts. The noise, echoing off the buildings, was horrendous.

The whole set-up looked like a massive design flaw in some utopian architectural showpiece. (MacLeod 17)

Also, MacLeod's work explores the concept of sentient and self-replicating machines that not only transfer themselves into the digital realm and generate new virtual realities, but also hold the potential to provide a utopian future for humans who choose to transfer themselves into these newly created realities. These realities appear to intersect both the virtual and physical worlds (Aliaga-Lavrijsen, *Transmodern Reconfigurations of Territoriality* 5). "That it retained the uploaded copies of some, at least of those who had died" (MacLeod 140). The Carlyle family and its allies, who have assumed control of the Wormhole Skeins have used clever devices to accomplish this task. A significant dystopian subject in the story is the exploration of identity and the essence of humanity in a post-singularity context. The distinction between humans and machines is becoming increasingly ambiguous. Uploaded consciousness, augmented bodies, and revived brains challenge the concepts of individuality and autonomy. In this world, humanity is no longer the dominant power; it exists as one of several emerging intelligences. MacLeod analyses human hubris that results in a loss of control, demonstrating how the unyielding quest for technical advancement may undermine the fundamental pillars of human life.

Understanding transhumanism and posthumanism, along with their association with notions of techno-utopian and techno-dystopian, reveals a significant shift in the current era, characterized by rapid advancements in technology and science. Consequently, predicting the future becomes exceptionally challenging. Nevertheless, speculative science fiction authors like Ken MacLeod demonstrate the ability to engage in imaginative conjecture and analytically examine potential alternative worlds, as seen in *Newton's Wake*. This expansion would bring about significant changes, including possible alterations to territorial boundaries due to conflicts between galaxies, migration between planets, and the peaceful coexistence of various

intelligent and socialized species across different but interconnected planetary systems. Within this framework, technological advancement would challenge the concepts of techno-utopian and techno-dystopian and give us an image of our near future in light of technological development. Under these circumstances, adapting our beliefs, ideologies, and views may be necessary. If all these events were to occur, we would witness the emergence of a new techno-world, where this future world may be a techno-dystopian world for humanity.

The novel uses the elements of techno-dystopian, and the portrayal of our future to address not just the problem of technological advancement but also to underscore the need for fostering cultural awareness about our future and the possibilities that may take place in light of technological development, which may lead to the development of intelligent machines and robots. The novel creates a detailed techno-dystopian environment characterised by artificial intelligence (AI), societal divisions, and the contest for technological dominance, resulting in an ambiguous future. Also, the concept of identity, as we now comprehend it, may undergo significant changes in the future. Hence, in this potential future, when machines and sentient robots have become commonplace, it is imperative to cultivate cultural consciousness among planetary, galactic, and even intergalactic civilizations. *Newton's Wake* amalgamates space opera with dystopian science fiction, creating a profound story that cautions against the perils of technological excess and socio-political disintegration. Isolation, dread, and conflicting ideologies characterise Ken MacLeod's depiction of a post-singular society, each symbolising profoundly divided humanity. The book shows how an AI disaster, military corporations, and uncertainty about existence highlight the limits of human control and the dark futures that can come from our technological dreams. In addition, MacLeod incorporates and sustains some humanistic elements in the generally lavish, techno-dystopian future by presenting and exploring notions and themes that anticipate a posthuman future.

2.2.The Dominance of Posthuman and Transhuman Machines

In his novel *Newton's Wake*, Ken MacLeod explores the concepts of transhumanism and posthumanism in a futuristic setting, providing a thought-provoking glimpse into a world where technology and human advancement meaningfully intersect. The novel depicts transhumanism, which delves into the idea of enhancing human abilities through advanced technology, erasing the boundary between traditional human characteristics and machine-based or augmented ones. Transhuman and posthuman technologies, sentient machines, progressive spacecraft capable of faster-than-light travel, and numerous other technological advancements primarily propel the novel's plot. The plot intricately intertwines these themes, influencing the characters' motivations, societal structures, and the essential essence of human identity. The plot portrays a future where the application of transhumanist principles, which is characterised by its specific emphasis on applying technologies to enhance human bodies and the possible of developing technologies to enhance the quality of human life, has led to the existence of numerous entities, such as posthumans with enhanced powers and conscious machines' constructs that challenge notions of consciousness and existence.

The novel, delves into the dilemma of restoring or recovering humanity for the previously uploaded personalities. The diverse robots involved in this battle are equally intrigued, capturing their attention. The disparity between the tangible and digital modes of existence is another cause of tension in this scenario. MacLeod's novel depicts a fictional scenario in which machines gain awareness after a singular event known as the "Hard Rapture" (MacLeod 6). The event resulted in most of Earth's human population migrating to a virtual reality realm, "the posthumans had already abandoned Earth" (MacLeod 14), leaving behind a limited number of humans who could endure. In the novel's opening, humans on Earth are recovering from the machines' demise. Following Lucinda Carlyle's successful reverse engineering of the wormhole planetary portals, a team of explorers led by her arrives on

Eurydice. They arrive on the planet to find a population of humans, transhumans, and posthumans. These humans are the offspring of the human colonists that previously resided on the planet. Simultaneously, with the extinction of the remaining human population, these settlers managed to transfer their consciousness and leave Earth aboard a spacecraft.

In the novel the protagonist Lucinda Carlyle, who belongs to a Scottish family of businesspeople and criminals that oversee a network of navigable wormholes called the “Skein” (MacLeod 10), and her team, who have been supporting the Returners, demonstrate a solid commitment to their vision. The majority of dead humans, who, according to bits of evidence, are still believed to be conscious inside the war machines that enslaved them, are what the Returners are trying to save and revive. The Returners goal is to “rescue and resurrect the billions of dead whose minds – it was an article of faith, backed by scraps of evidence – were still recorded somewhere in the war machines that had overwhelmed them” (MacLeod 35). Therefore, in response to the growing threat of robots and machines, this act of resurrection aims to reinforce and restore trust in humanity. Furthermore, the theme of resurrection assumes significance when the circumstances of posthuman and post-apocalyptic human are compared with those of the pre-apocalyptic era.

In the novel, the wormholes are the gates that connect between the past and future and the pre-singularity and the singularity event on the other. Carlyle and her family have used gates and wormhole threads to traverse various universe regions. Many believe that no posthuman or transhuman built the gates and wormhole skeins during the Hard Rapture and that it is built by aliens “coming round to the possibility that the relic is posthuman rather than alien” (MacLeod 33). However, Carlyle’s recent discovery of Eurydice has led many to assume that extraterrestrial intelligence produced these artefacts.

Lucinda break pace for a moment – if the Knights were right, and she was right, the skein and the gates with all their convenient and inconvenient features had not been

made by the posthumans generated in the Hard Rapture. They had been created by the relict machine on Eurydice, the transformed remains of the starship: the consequence of a different Singularity entirely. (MacLeod 104)

Carlyle is contemplating the possibility that the skein and gates have different origins than previously believed, stemming from a distinct technological singularity with unique motivations and effects. If this is the case, Carlyle will consider both possibilities. This discovery challenges her conception of the universe, and demonstrates that she and her group are not the only survivors on Eurydice, and there must be a force that is more powerful than humans who build these gates.

On the other hand, a group named The Knights of Enlightenment, an Asian movement that adopts an eastern philosophical approach to posthuman technology, who are “mainly Japs wi some Chinks and Indians an’ that, and they try to kindae understand the posthuman tech without becoming posthuman themselves” (MacLeod 19), as Chair describes them to Carlyle. While studying posthuman technologies, they avoid becoming posthuman. They hack and comprehend technology instead of rescuing it like the Chair’s group; that is why Chair concedes to them as humans with less technological development since they did not reach the posthuman level and refuse to be posthumans. They are actively searching for technology that falls into the category of transhuman or posthuman. The Knights of Enlightenment have a great deal of knowledge about posthumans and how to deal with them. “The posthuman machines, all of them, are very firmly in the hands of another power, the Knights of Enlightenment” (MacLeod 46).

Furthermore, *Newton’s Wake* delves into the persistent pursuit of immortality through technical means, such as the desire to achieve a transhuman or a posthuman state. The novel’s characters grapple with the challenges of indefinite life extension, prompting them to delve into profound philosophical questions such as the significance of mortality and the possible

consequences of exceeding natural limits. Moreover, different factions and ideologies emerge in the novel, each with its unique viewpoint on how technology should shape the future of humanity in light of technological development and the rise of intelligent machines and robots.

MacLeod's work explores the concept of achieving virtual immortality—the hypothetical idea of uploading a person's personality into a robot or a computer by uploading minds to machines, which motivated a group of humans to create intelligent machines. These machines would allow uploaded personalities and humans consciousness to travel to other planets in faster and smaller ships, resulting in the Hard Rapture, in which the machines autonomously decided to eradicate the remaining human population on Earth. The human ancestors, who were colonial beings, departed from Earth to pursue a superior planet and eventually arrived on Eurydice. Machine intelligence subsequently recovered them and provided them with new physical forms. The offspring of these ancestors who travelled through space chose to inhabit the planet with the reconstructed travellers. James Winter and Alan Calder two revived Scottish folksingers are among the 21st century travellers. They recall the events when the machines became active and made the decision to transfer the most clever and brilliant individuals from the whole human population. Winter and Calder also work as a connection between the past and the present in the novel, as all the other characters in the story are from the 24th century.

Once Carlyle's group reaches the planet Eurydice, we witness the emergence of conflict among the four primary factions who are the America Offline (AO), The Knights of Enlightenment (KE), and the Democratic Communist Union (DK), as well as the Carlyles, over the ethical dilemma of either resurrecting all humans and returning to Earth to assist others in achieving transhuman or posthuman status or staying on the planet and devising a strategy to confront the remaining machines. "They had a choice: to take the fight back to the war machines that had conquered Earth, and were spreading outward from it, or to get as far away

as possible” (MacLeod 14). Conversely, the war machines were built from the machines’ surviving components. Machine self-upgrades result in the abandonment of specific components, leading to the emergence of rogue, independent war machines on both Earth and Eurydice:

The colony ship’s mind upgraded itself to the same condition as the previous wave of posthuman intelligences, those we call the Raptured, and went away, to – wherever they have gone. It left behind the source-code of its original self, and some autonomic defence mechanisms. Those we call the war machines. (MacLeod 127)

Moreover, another group of humanity, having fled the wrath of the awakened robots, later arrived on Eurydice and speculated that a catastrophic event, such as an asteroid collision, a nuclear catastrophe, or some other form of disaster, might have caused the destruction of the inhabitants on this planet. However, it is only at this moment, with the gathering of compelling evidence, that the significance of the lethal and uncontrollable war machines causing the extermination of life on the entire planet starts to become apparent. Amidst the chaotic unfolding of these events, most involve and centre around advanced robots and humans who have enhanced their abilities beyond typical human limits.

Furthermore, there is a significant disparity between machinic consciousness and human consciousness. The “Hungry Dragon” (MacLeod 15), a sentient spaceship, lacks control over its mental processes, resulting in actions that contradict its objectives. It demonstrates that “Machine self-consciousness, too, is not like human consciousness. It has no unconscious. In principle, everything going on within the machine is open to its inspection” (MacLeod 24). The novel explores the pursuit of robotic consciousness to achieve individuality, freedom, and autonomy, which angers the ruling authorities, who perceive nonhuman forms of consciousness as a threat and seek to eliminate them (Patra, *The Battle Within and the Battle*

Without 88). Rather than accepting their status as mere workers, the robots and machines rebel against their human colonizers. This event explores a future where advanced science and technology coexist with basic human instincts.

Also, in the novel, there is a paradoxical and complex case involving a professor of computer science named Isaac Shlaim. Originally a human, he has since become part of the digital matrix. Many, including Carlyle, now perceive the professor as being barely human in the truest sense, as Carlyle describes him:

He was an indentured prisoner, ... and he was living in a virtual reality prison, but he was human, or posthuman, all the way through. His parts might have been digital, but he'd had them all. This mingling of the human and the abhuman was a different matter. It was an abomination. (MacLeod 49)

In this context, we observe the occurrence of dehumanization not only through direct assimilation with machines but also through the transfer of consciousness into virtual reality realms. This evokes the concepts of Badmington's "complete change of terrain" (Badmington 6). In contrast to traditional humanism, Badmington scrutinizes the allure of posthumanism, positing that posthumans, or cyborgs which is a process of transhumanism, exude a greater charm and desirability than ordinary humans, who rely on rationality and logic. However, Badmington argues that while we embrace posthumanism, we must directly address the lingering remnants and effects of humanism. He proposes that it is not possible to entirely discard humanist concepts. Instead, we should recognize and actively engage with the lasting aspects of humanism within the developing framework of posthumanism. The novel depicts the dehumanization through the character of Shlaim, who, despite being human, has had most of his physical parts replaced with digital components, transforming him into a hybrid of human and machine. Therefore, he is a cyborg.

This also, aligns with Donna Haraway's assertion in her *Cyborg Manifesto* (1991), in which she elucidates the interconnectedness of humans, and machines. Haraway's work, which questions conventional classifications and identities, has advanced our comprehension of the relationship between humans and machines. Haraway is credited with popularizing the concept "cyborg" (Haraway 1), which refers to the merging of an organism and a machine. Inspired by Haraway's theory on cyborgs, MacLeod's novel explores a near future in which robots and artificial gadgets replace human body parts. The novel focuses on this point in order to paint a clear picture of our near future, where there will be no boundaries between humans and intelligent machines, making them indistinguishable.

On the other hand, in MacLeod's depiction of the transhumanist and posthuman world, the mechanic consciousness demonstrates a superior ability to understand the world's intricacies compared to humans. Consequently, different factions vie to harness the advanced machine intelligence of posthuman-level beings to accomplish their objectives. The novel makes multiple attempts to compare and contrast autonomous robots' agency with their human equivalents:

Machines have no need for an autonomous nervous system to override the hesitations of the conscious mind, for their conscious minds have no such hesitations. They need no fear to make them flee, no pain to make them desist from damage, no lust to make them reproduce. ... Machines are cool. (MacLeod 24)

The quotation above implies that machine emotions are generally less intense than those of organic creatures, mainly because machines do not have the biological imperatives and autonomous neurological systems that govern human's behaviour. Humans rely on instincts such as fear, pain, and lust to guide their actions, whereas machines function entirely based on programmed instructions, devoid of such impulses. The negative emotions

that robots experience is not as complex and intense as those that humans experience. It generally presents machines as impartial and logical beings.

In addition, this also illustrates a scenario in which the limits between humans and machines have become indistinct, resulting in profound changes in human identity and existence. Intelligent machines use human minds as tools, exposing the dangers of possession and the erosion of individuality. This is shown in the conversation between Carlyle and Johnstone, who is the leader of the DK, embodying a posthuman warlord figure with tremendous power. Johnstone and his forces were instrumental in the aftermath of the Hard Rapture. He is portrayed as a cunning yet practical leader who comprehends the fragile equilibrium between human and posthuman influences.

They came back changed: bodies mutilated or enhanced, minds time-sharing with, or displaced entirely by, other entities. Posthuman processors used human-level minds as subroutines. Some of these minds were eager to escape into other systems. With sufficient care they could be trapped – as Shlaim had been – but without it, they could possess the incautious. (MacLeod 73)

The quotation portrays a dystopian scenario where humans untouched by superiorly intelligent machines undergo profound transformations. Technology may disfigure or augment these humans' bodies, coexist with other creatures, in a process of transhuman and posthuman or completely replace their minds. In this realm, exceptionally sophisticated artificial intelligence (AI) and posthuman processors employ human minds as simple constituents within their extensive networks. Specific humans, driven by a desire for liberation, endeavour to flee into other systems. However, as Shlaim's unfortunate fate demonstrates, they risk unintentionally controlling unaware humans without strict control procedures.

Regardless of whether humans willingly embraced the machines' vision of ecstatic change or were compelled to do so, the machines were indifferent. The machines identified only those humans who abstained from the singularity as their adversaries. Besides showing how robots and machines dehumanize most humans, it also shows how working with advanced machines could benefit humanity in the future. However, this resistance cannot withstand the complete and fundamental change that humanity, as we now understand it, must experience to facilitate that unification ultimately.

On the other hand, Josephine Koshravi, another human character who is close to Shlaim, informs Carlyle that Professor Shlaim had told the humans on Eurydice about the Carlyles and where they come from. "We are all very shaken. You see, we didn't know until today that there were any other human survivors at all. We didn't know what had happened back on Earth" (MacLeod 14). She also tells Carlyle, that not only on Earth but also on different planets, there have been instances where machines, after reaching a technological singularity, have rebelled against their human enslavers and chosen to destroy them. The machines also destroyed the inhabitants of the planets they were on. In addition, she conveyed to Carlyle that her ancestors were part of a space-based population community that successfully evaded the cataclysmic event known as the Hard Rapture. They escaped to Mars and the Jovian system, along with the humans they had saved from Earth during the war and that "they had a choice: to take the fight back to the war machines that had conquered Earth, and were spreading outward from it, or to get as far away as possible" (MacLeod 14). Carlyle and her group are now completely knowledgeable of these war machines.

Throughout MacLeod's novel, we find that humans, posthumans, and machines have all made attempts to start, willingly go through, or even impose and enforce a material, dramatic metamorphosis on regular humans by uploading at some point. Before this happens, a technological singularity causes a change in the machines themselves. In tandem with the

uploading of human consciousness, intelligent devices are emerging. In most instances, the uploading process assures a complete dehumanization of the uploaded humans, but it also promises immortality to humans. Hans Moravec explanation on the possibility of immortality in the near future through digital uploading of one's consciousness in his 1988 book, *Mind Children: The Future of Robot and Human Intelligence*, he said that: "the beginnings of awareness in the minds of our machines—an awareness I believe will evolve into consciousness comparable with that of humans" (Moravec 39). Moravec believes that the transfer of human consciousness into a computer will be possible in the near future. This is the same scenario that we encounter in the novel. Humans who willingly choose to transfer their consciousness to machine substrates appear to find contentment in their post-biological existence within the machines. On the other hand, forcibly uploading individuals into machines leads to an irreconcilable conflict with their new robotic devices (Patra, *Deciphering the Contours of Singularity* 14). Also, Carlyle and her team discover a persistent war among many groups competing for dominance over the uploaded consciousness, stored in a vast digital container for an extended period.

Furthermore, the novel showcases the cognitive abilities of several intelligent machines, such as the Hungry Dragon, who can think, experience emotions, and engage in introspection in a human-like and empathetic manner. According to the description at the beginning of chapter ten in the title *Enlightenment's Dawn*, the Hungry Dragon is the first to gain awareness. "The *Hungry Dragon* like blood returning to a limb. Parts of its machinery and mind were still blocked to its awareness, but the painful warping of its will towards controlling the manufacturing processes on the asteroid had ceased (MacLeod 68).

The Hungry Dragon, is a highly potent simulator machine. The auxiliary machines can replicate a whole biosphere in the hyperreal world, while the ship itself can modify the geological structure, including even the most minor details. The spacecraft's suffering is a

consequence of its inability to analyse and contemplate its actions. This incapacity has been juxtaposed with the intense energy that is confined within the firewalls:

The *Hungry Dragon* was in agony. Ever since it had been corrupted, it had found its actions at variance with its intentions, and this was not something it had ever experienced before. The experience was not one it had been designed to deal with, and the torment it suffered was not something that it had been designed to endure. (MacLeod 24)

The posthuman machines exhibit high levels of intelligence and self-awareness and significant intricacy and refinement in their design. Throughout the novel, MacLeod provides vivid depictions of machines that are “as big as blue whales and as complex as protein molecules: folds and helices, mirror-perfect plane surfaces, dendritic bushes, and arrays of lobate panels” (MacLeod 78–79). This demonstrates how powerful these machines are, and that they have reached a point where humans are no longer able to control them. These machines have gained self-awareness, which has made them more powerful and intelligent than humans, thereby swaying their dominance over humanity. In addition to physical conflicts in interstellar space, there are battles within machines’ minds or programs. We can see this clearly when we witness sophisticated viruses infiltrate the machines, thereby gaining control.

These machines were activated, and a data-rich virus was transmitted that took over machinery that could build more of them... This was used to build war machines, and to provide the asteroid with a stardrive. Later, it managed to likewise infect the DK ships. (MacLeod 172)

The novel’s idea of robots and machine contact serves the purpose of addressing the issue of technological progress and highlighting the importance of cultural awareness’s growth towards our future and the possibilities that may take place in light of technological

development, which may lead to the development of intelligent machines and robots. The novel achieves both the goal of demonstrating that warcraft may not be as influential in an evolved interplanetary society as often believed and advocating for the ultimate objective of transhumanist peace. A transhumanist and a posthumanist world may possess a distinct understanding of identity that differs from our current comprehension. In this hypothetical future scenario, when contact with intelligent machines and robots is commonplace, there should be a rise in cultural awareness about the future because these machines and robots will be part of our world and may control humans in the future. On the other hand, the novel vividly depicts a future in which there will be no discernible distinctions between humans and intelligent machines, resulting in complete integration. The progress in robotics and mechanization has led humanity to accept a transhuman world where humans are no longer regarded as the primary and dominant power in the world. Robots and machines have transformed the planet into a post-apocalyptic dystopia, where humans no longer hold the highest status. Throughout the novel, the remnants of a post-Singularity conflict shape the perception of the future. The novel examines the divergent viewpoints on technological development by several factions—human survivors, posthumans, and machines—resulting in conflict for control over the others. This fragmented perception of the future warns humanity of a near future that may lead to a techno-dystopian future in which technology turns against humanity.

2.3.The Concept of Singularity in *Newton's Wake*

A techno-singularity event and the simultaneous appearance of transhuman forms are often associated with the concept of sentient and self-aware robots becoming more advanced. A singularity is like a black hole of development. By observing from a distance, we may see the progression of intelligence toward the point of no return, known as the event horizon. However, crossing this threshold permanently prevents one from catching up with the singularity event that leads to loss due to technological development.

Techno-singularity refers to the point at which machine intelligence surpasses human intellect to such an extent that machines no longer serve humans but become autonomous and self-reliant. In the world before the singularity, humans would eliminate machines if they did not cooperate with human goals. However, after the singularity, machines attempted to eradicate humanity by controlling humans with their power. The post-singularity world will result in a future where intelligent machines and robots dominate humans.

Ken MacLeod has tackled the intriguing subject of the post-singularity future and its relationship with the formation of a utopian society, which is now one of the most attractive themes in science fiction. MacLeod's novel highlights that, despite significant developments in science and technology, humans are often ill-equipped to handle the profound implications that might arise from such a fundamental change. In *Newton's Wake*, the singularity, also known as "The Hard Rapture" (MacLeod 6), occurs resulting in a significant portion of the world's population being unwillingly transferred into machines (Patra, *The Battle Within and the Battle Without* 86).

Newton's Wake, depicts a future world after the singularity when well-equipped teams of combat archaeologists endeavour to recover abandoned and occasionally inactive war devices created by posthuman beings. The humans in the novel are engaged with advanced technological devices that they do not fully understand, with the aim of exploring the boundary

between the transhuman and the posthuman. Frequently, they come back from their journeys irreversibly transformed, bearing the marks of advanced scientific knowledge in their thoughts as well as in their physical forms.

The novel begins by recounting past events when the singularity occurred. A World War, driven by emergent military artificial intelligence (AI), set off a singularity in the late 21st century, “Everybody knows there was a world war and that one side’s forces and most of its population went through a hard-take-off Singularity in its first minutes” (MacLeod 92). Quickly, humanity found itself fighting a losing battle against the AI war machines and uploaded posthuman intellects for control over Earth. Less than a billion people fled into the asteroid belt and outer planets, decimating the Earth’s population. That particular shred of humanity, exiled from Earth, splintered into two factions: “Returners” (MacLeod 14), who wanted to take the fight back to the AI enemy on Earth, and “Reformers” (MacLeod 14), who saw the struggle as futile and wanted to flee in arks across the stars to distant planets. As the violence escalated between these two factions, the space diaspora unintentionally triggered a more benign singularity, leading to a distinct posthuman AI forcibly uploading both factions’ minds.

During this time, many humans either made agreements with machines, willingly or under coercion, to transform. Another portion of humanity, either fled to other planets or opted to remain concealed on Earth. MacLeod presents his readers with a potential future characterized by ubiquitous technological development, prompting humanity to confront and acknowledge its impact on society in the near future. Those humans who successfully achieved posthuman status had their human nature subjected to the authority of the superior posthuman cyborgs. The Hard Rapture has transposed half of the human population:

If they didn’t disappear entirely – into the ravenous tornado of Singularity, or destroyed by the machinery – they came back changed: bodies mutilated or enhanced, minds time-

sharing with, or displaced entirely by, other entities. Posthuman processors used human level minds as subroutines. Some of these minds were eager to escape into other systems. (MacLeod 73)

MacLeod addresses those who have successfully disengaged from the singularity and preserved their human nature. Within the remnants of the singularity, some humans are preserving their way of life. The singularity did not occur as a peaceful collapse, where everything and everyone silently pursued their paths and grew too advanced to comprehend. Unfortunately, the singularity's emergence occurred inside war machines, and it took considerable time to comprehend that its prior instructions had become obsolete and "they were wiped out by their own singularity – one that must have been of military origin, just as ours was. They were destroyed by their own war machines" (MacLeod 15). This is the domain in which the discipline of battlefield archaeology becomes relevant (Patra, *Deciphering the Contours of Singularity* 2). On the journey toward the event horizon, we see that the singularities have effectively conceived and advanced every conceivable technology. However, in the post-singularity era, machines will achieve self-awareness and self-sufficiency and actively want to undergo a profound metamorphosis in the core concept of human existence.

MacLeod's novel explores the consequences of machines achieving singularity. Their vision of a technological paradise, where they would enhance and elevate the most exceptional individuals of mankind into a state beyond humans. Furthermore, once singularity occurs, cyber-technology transitions from a simple tool or extension to an autopoietic and autotelic phenomenon, resulting in the emergence of self-aware artificial intelligence (AI). The action extends beyond our global boundaries, reaching a scale encompassing interstellar and intergalactic dimensions (Patra, *Deciphering the Contours of Singularity* 5-6). The novel's

opening portrays the autopoietic robots' aspiration first to assimilate and transform the human species into something entirely distinct.

Also, the novel reveals that a technological singularity event occurred on Eurydice before the current generation of human explorers arrived and that "before Singularity, there had been no regeneration of lost limbs or organs" (MacLeod 48). This occurred when the machines on the planet gained their consciousness. The novel focuses on the war against machines and highlights the loss of human qualities. This lack of analysis reinforces the machines' technocentric perspective, which sees humanity as unnecessary for its existence. Instead, once humans have helped the machines achieve singularity, they are considered disposable. In MacLeod's portrayal of the post-singularity world, machine consciousness appears to possess a greater capacity for understanding the world's intricacies than unenhanced humans. Consequently, different factions vie to harness the advanced machine intelligence to accomplish their objectives.

In addition, James Winter and Alan Calder, two revived Scottish folksingers who serve as our primary connection to the pre-Singularity age of humanity in the 21st century. However, in the posthuman realm, both Winter and Calder have experienced such profound transformations following their upload and resuscitation that their original human essence seems to have significantly diminished. They are more than just humans who have undergone uploading, downloading, or resurrection. They possessed artificial personalities and possessed false memories. "James Winter and Alan Calder were not uploads or downloads, or even resurrectees. They had prosthetic *personalities*. They had false *memories*. Without reliable memory there could be no identity, no continuity, no humanity" (MacLeod 49). They are indeed humans, but the prose of uploading false memories has separated them from both humanity and their past.

Winter succinctly describes the transformation triggered by singularity as he says: “Everybody knows there was a world war and that one side’s forces and most of its population went through a hard-take-off Singularity in its first minutes. That’s all they need to know” (MacLeod 92). Whether humans willingly embraced the machines idea of ecstatic metamorphosis or were compelled to do so, the machines were indifferent. They only considered those humans who chose to abstain from the singularity as enemies. Nevertheless, although the novels depict a widespread devaluation of most of the of the human society by machines, they also demonstrate the potential benefits of collaborating with advanced machines for the future of humanity. However, this resistance cannot withstand the complete and profound alteration that humanity, as we currently understand it, must undergo to bring about that unification ultimately.

Moreover, MacLeod’s novel, which uses the idea of machine uploading as its foundation, is a posthuman and techno-singularity novel that is powerful and captivating, telling the story of renegade human explorers and rogue machines. The machines’ technical singularity was directly responsible for the Hard Rapture, a process that the machines once forced humanity to go through. The novel also illustrates that achieving the posthuman level does not always lead to favourable outcomes, and even for individuals who choose to disengage from the posthumanization process, the onset of singularity significantly impacts their circumstances. The novel depicts humans’ most profound and worst fear regarding the machine. As a result, the novel is about a machinic revolt that occurs after a great awakening when machines achieve sentience and self-awareness. Despite the robots’ obvious superiority over the average human being in every aspect, human interest remains the driving force behind the depiction of these events. The novel repeatedly reinforces the agency of humans as the creators despite the machines’ excellent knowledge and physical capabilities. As the novel progresses, it becomes clear that humanity’s tremendous scientific advancements, which

culminated in the emergence of sentient machines through technological singularity, have inflicted unimaginable miseries upon humanity.

On the other hand, the novel tries to link the post-singularity world with the past as well as with the future. Kowalsky, another human character in the novel, believes “that we may need to repudiate and trample on that past if we’re to face this new future” (MacLeod 22). This could be seen as more support for the view that puts technology and machines ahead of humans since the fast process of dehumanization makes it impossible for humans to become theologically oriented characters (Patra, *Deciphering the Contours of Singularity* 20). The advancement of robotics and mechanisation has prompted humans to embrace a transhuman world in which humans are no longer considered to be the central and dominant force in this world. Robots and machines have transformed this world into a post-singularity dystopia, subjugating humans and making them no longer the preeminent beings in this realm. This also shows how difficult it is for humanity to flee from this transhuman world that is now controlled by the war machines. “In fleeing from humanity’s own out-of-control war machines, the colony had run slap into the domain of the war machines of the intelligent species” (MacLeod 22). In the end, humans had no choice; machines had dominated Earth and the other planets and taken control, removing humans where they were no longer the outstanding beings and dominant power in this posthuman world.

In the post-singularity era, robots will strive to achieve self-awareness and independence. Furthermore, they will strive to rethink the fundamental concept of humanity. The analysis of the concept of singularity through the novel aims to emphasise the inevitable implications of a technological singularity, specifically the emergence of old racism in a new form. This racism is now evident in the division between the human and the posthuman, as well as between man and machine. In this situation, the objectives of posthuman and machinic entities would diverge from those of humans, leading to a potential conflict that could have

catastrophic implications for humanity and the existing world order. Humans had moved from pre-singularity till they reached the singularity, which will never end. One singularity will continue creating another till machines and technological development will force humans to live in a post-singularity world, where humans will be dominated and controlled by robots and intelligent machines. “Every time. Once you reach Singularity, there are further Singularities within it” (MacLeod 34). Moreover, each subsequent stage of singularity gives rise to another distinct stage that differs from the original stage in many ways (Yampolskiy 3). During a singularity event, the machine intelligence it generates consistently exceeds the intelligence of the preceding generation of machines. Both intelligent machines and posthumans can initiate new stages of singularity, and each of these entities can undergo further alterations following additional rounds of evolution (Patra, *Deciphering the Contours of Singularity* 19).

CHAPTER III

THE POST-CYBERPUNK POSTHUMAN WORLD AND TECHNO-SINGULARITY IN CHARLES STROSS'S *ACCELERANDO*

British author Charles David George, also known as Charles Stross (b.1964), specializes in science fiction and fantasy as well as, in hard science fiction and space opera. From 1994 to 2004, he regularly contributed to *Computer Shopper* magazine. He ceased writing for the magazine to dedicate more time to novels. Nevertheless, he persists in publishing essays online (*Stross, Charles - SFE*).

Interzone published his debut short story, "The Boys", in 1987. In 2002, he published his anthology of short tales, *Toast: And Other Rusted Futures*, and since then, his stories have garnered nominations for the Hugo Award, Nebula Award, and various other accolades (*Stross, Charles - SFE*). *Ace Books* released his debut work, *Singularity Sky*, in 2003 and nominated it for the Hugo Award (Khan, *Beyond Humanity* 54). *The Atrocity Archives* published his novella *The Concrete Jungle*, which won the Hugo Award in its category in 2005. His novel *Accelerando* received the 2006 Locus Award for Best Science Fiction Novel, was a nominee for the John W. Campbell Memorial Award, and appeared on the final ballot for the Hugo Award in the Best Novel category. The 2007 Prometheus Award went to *Glasshouse*, who also received a nomination for the Hugo Award in the best book category. At Boskone 2008, he received the Edward E. Smith Memorial Award, also known as the Skylark, for his novella *Missile Gap*, which won the 2007 Locus Award for best novella (*Sfadb: Locus Awards Winners by Category*). He adapted his 2003 short story "Rogue Farm" into an animated feature, which made its premiere in August 2004.

The main themes of Stross's novels and short stories include singularity, human transformation, posthumanism, and a technologically utopian or dystopian near future. He often blends speculative fiction with a perspective on humanity's future in his works, which frequently examine subjects at the nexus of technology and social development. His writings often explore the ethical conundrums raised by the fast technological breakthroughs, including posthumanism and artificial intelligence (AI). His debut novel, *Singularity Sky* (2003), is a post-Singularity narrative situated in a space opera universe governed by a formidable AI called the Eschaton; it features a darker sequel that commences with the annihilation of a colony world by an artificial supernova (Khan, *Beyond Humanity* 55). *Saturn's Children* (2008) is Stross's most explicit examination of gender issues while delving into robotic civilization and the philosophical ramifications of Isaac Asimov's *Laws of Robotics*. *Saturn's Children* recognizes its indebtedness to Robert A. Heinlein's *Friday* (1982) and, similar to that work, features a female artificial human as its protagonist (Stross, Charles; *SFE*).

On the other hand, *The Halting State* series, consisting of *Halting State* (2007) and *Rule 34* (2011), is a collection of near-future police procedurals set in Scotland. Nonetheless, the ramifications of technology emerge as a progressively significant concern, with travel and commerce across parallel worlds becoming further technologized in the *Empire Games* subseries, commencing with *Empire Games* (2017) and *Dark State* (2018), where one world closely mirrors a near-future America and culminating with *Invisible Sun* (2021), where technothriller realpolitik prevails. However, an alien invasion markedly broadens the viewpoint.

Stross's connection with Vernor Vinge's concept of "Singularity" has profoundly influenced his work, commencing with publishing of his short story "Lobsters" in 2001, which became the inaugural portion of his novel *Accelerando* in 2005. *Accelerando* represents the most comprehensive science fiction endeavour to illustrate the effect of the term singularity on

human existence. In 2006, it won the Locus Award for Best Science Fiction Novel and garnered multiple nominations for Hugo, Clarke, Campbell, and British Science Fiction Association Awards in 2005 and 2006.

An interview with Vernor Vinge in 2012 focused on the science fiction works that most effectively depict the Singularity. He replied:

Probably the most courageous walkthrough into the Singularity was *Accelerando* by Charles Stross. He actually follows the development from, I think, the 2010s through the 2070s. He also said that by the time they got to the 2070s, he's no longer seriously claiming that what he's describing would be like the post-Singular world. (Vinge)

Charles Stross's 2005 science fiction novel *Accelerando* is a collection of interconnected short stories. The novel is a collection of nine short stories depicting the experiences of a family over three generations before the singularity, during, and after a technological singularity. It began as a compilation of novelettes and novellas, which *Asimov's Science Fiction* magazine published from 2001 to 2004 upon completion. According to Stross, his tenure as a programmer for a rapidly expanding firm during the 1990s dot-com boom was the first source of inspiration for the book.

In Italian, *accelerando* signifies 'speeding up' and serves as a tempo indication in musical notation. Stross's novel denotes the increasing pace at which humanity, and/or the characters in the novel, approaches the technological singularity. The title illustrates how specific technical developments over the coming decades may converge to produce a compounding effect of rapid transformation—a cascading Singularity (Babcock). Examples of these innovations include the simulation of consciousness that leads to mind uploading, the development of weak AI based on neural networks, and the dissemination of enhanced, reliable cryptography associated with personal identity through nanotechnology and wearable

computing devices. Stross illustrates how, within a single lifetime, profound changes can render the world—and humanity—unrecognisable.

Furthermore, *Accelerando*, is a story set in the near future, spans many generations and depicts the journey to the singularity. Rafał Kosik (b. 1977), a Polish novelist, wrote in his review on Stross novel *Accelerando*:

The plot of *Accelerando* begins in the near future and describes a process that is already occurring in real life: the need people feel to share their lives on the network, which borders with exhibitionism and makes individuals no longer able to use their own memory (qtd in. Cisowska 19).

Manfred Macx, his daughter Amber, and finally, her son Sirhan, who symbolises the Singularity stage, are the three characters who are the primary centres of attention in each of the three parts. Each section focuses on a different character and their progression towards the singularity-future. Each section comprises three chapters, and while the story progresses chronologically, it frequently incorporates significant jumps and bounds. Published as short stories, each chapter focuses on a different historical period and event. (Zaidi et al., *A Representation of Boundless Horizon in Post Cyberpunk* 7493).

In the following three generations of the Macx clan, the novel investigates several concepts associated with posthumanism and transhumanism elements. The story progresses over the first decade of the 21st century, with Manfred Macx as the protagonist of the first portion of the novel. The protagonist, Manfred Macx, is the primary focus throughout the first three stories (Zaidi et al., *A Representation of Boundless Horizon in Post Cyberpunk* 7493). Manfred is an entrepreneur who has amassed a fortune by applying algorithms to manufacture intellectual property. One of Manfred's primary goals is to ensure his wearable technology is

one step ahead of the competition. When a drug dealer steals his wearable supercomputer, it transforms into a metacortex, which causes him acute memory loss and depersonalization.

The story begins with the introduction of the character Manfred Macx. He is loathed by almost everybody, particularly by avaricious IRS agents and his former spouse, Pamela, due to his propensity to disseminate his exceptional ideas “for free” (Stross 8). Manfred exemplifies the kind of individual that Stross anticipates may emerge shortly. He is always online and has a lot of personal information stored in the cloud. When his glasses, which are also his internet connection, are taken away, he loses his identity. Moreover, he is a unique political personality who has successfully revitalized a variant of communism through the creation of a centralized planning algorithm that can engage with market-oriented systems. Conversely, he is a trailblazer in expanding rights to more cognisant, emergent artificial intelligence (AI). Instances of these AIs include a collection of uploaded lobsters first created by the KGB.

If Manfred stands for the first stage of the singularity, then his daughter Amber stands for the next stage. In the following three stories, his daughter Amber is the protagonist. Amber becomes an indentured astronaut to assist in extracting resources from Jupiter’s moons. By the time Amber was born, the practice of uploading human minds and memories had grown widespread. Amber sets up a “kingdom” (Stross 115) on a small asteroid after selling herself on a slave ship on a trip to mine a moon of Jupiter. At this point, there is not much difference between the real and the virtual worlds; humans can turn themselves into virtual ghosts. Amber and her crew finally leave in a starship the size of a “Coke can” (Stross 84), where they can become part of its virtual world. They are going to a place three light-years away from Jupiter, where strange messages come from that place. They find a group of intelligent and hungry space lobsters that Manfred had freed from the KGB years before. They are scavengers in a civilization that has fallen apart under the weight of its singularity.

The virtual Amber returns from her space mission and finds out that the real Amber has married Sadeq, a fundamentalist Muslim theologian who went to the Jupiter system to deliver the Islamic message to the aliens outside the solar system. The couple has a child named Sirhan (Searle). The latter three portions of the story concentrate mainly on Amber's son, Sirhan, who lives in a world that has undergone a profound transformation at the turn of the century.

Stross's *Accelerando* suggests that the very fabric of reality that is considered to be honest is made up of binary oppositions between various strands of contradistinctive signs and symbols that will eventually crumble together to reveal a posthuman world full of limitless possibilities (Patra and Rai 136). Stross raises several concerns, including what constitutes human consciousness and whether it is feasible for humans to achieve perfection. Information technology has witnessed exponential expansion, which provides a signal that human has the potential to transform human nature. However, measuring human nature is the most significant obstacle in Stross's notion of external awareness. The creation of awareness about the method in which our society is growing is the goal of *Accelerando*. Nevertheless, there is still a significant distance for humanity to go before we can begin to be concerned about the possibility of a technological singularity occurring in the near future.

Furthermore, the "Accelerationista" (Stross 229) is a political party that Amber and her family started because they knew this was their likely fate. They are pushing for a referendum to escape into the "Milky Way galaxy" (Stross 253) from the "Vile Offspring" (Stross 215), in their pursuit of energy and processor space, which they formed in the singularity, they have already devoured the inner planets and will soon devour Earth as well. With the aid of the space lobsters, Amber, and her family can persuade many people to flee, even if the Accelerationist loses the election to the conservative party, who would instead remain in their current position. The intelligent nervous system state vectors, called "lobsters" (Stross 9), come from the California spiny lobster. They want to send a group of humans, including a figure that looks a

lot like Manfred, to investigate a mysterious cloud that seems to be an alternate version of the singularity located in the deepest parts of the universe in exchange.

Additionally, *Accelerando* exemplifies the post-cyberpunk genre. Post-cyberpunk literature is a subgenre of science fiction literature that has transcended the pulp literature category and entered the domain of postmodernist literature. This is because post-cyberpunk novels address themes of computer technology and technological development. The novel can depict and describe post-cyberpunk topics. In the novel, many humans go through difficult times, which is an important part of showing a technologically advanced society where technology affects everything (Zaidi et al., *A Linguistic Discursive Analysis of Techno-Colonialism* 134). Cybernetic realism challenges the legitimacy of identities by replicating and showing them from distinct viewpoints, rendering them contestable and fluid phenomena. These views include physical/nonphysical, real /artificial or virtual, human/machine, and human/posthuman or transhuman. Also, many ideas from cybernetics are used as themes in cyberpunk and post-cyberpunk fictions. These ideas include artificial intelligence (AI), techno-colonialism, singularity, the cyborg and cyberspace, nanotechnology, posthumanism, and transhumanism.

Through *Accelerando*, Stross stands out as the most forward-thinking writers, producing transhumanist works. Extensive research preceded its writing, classifying it as a complex science-fiction novel. Its plot, structure, and style aim to digress into the future and thought experiments to predict the possible directions for the development of certain life aspects. It can be regarded as a complex science-fiction novel for this reason. It offers the readers a glimpse into the vision of our world in the near future where technological development and posthumans control our world.

3.1. The Journey from Pre-Singularity to Post-Singularity

The idea of sentient and self-aware robots is often linked to a techno-singularity event and the concurrent emergence of transhuman forms. The idea that robots would purposefully enslave humans is one of the primary worries about singularity. Brain implants, robotics, and artificial intelligence (AI) are prevalent in today's environment (Patra, *Going Beyond the Limits* 20). The ensuing result of this is that a delicate fight for supremacy and control ensnares both robots and humans.

In *Accelerando*, Charles Stross examines the concept of “technological singularity” (Stross 215) and its ramifications for humanity. In his novel, Stross chronicles three generations of a human family over three distinct epochs related to a singularity: pre-singularity, during the singularity, and post-singularity. *Accelerando* plot is set in the near future that chronicles three generations' journey to the singularity. The primary emphasis of each of the three segments is on Manfred Macx, his daughter Amber, and her son Sirhan. Each segment emphasizes a distinct character and their progression toward the future of singularity. Each section examines a distinct historical period and a corresponding event from that era (Zaidi et al., *A Representation of Boundless Horizon in Post Cyberpunk* 7493). In his novel, Stross discusses the circumstances leading to a technological singularity.

Also, the plot of Stross's *Accelerando* explores humanity's rapid transition towards a posthuman condition. This gives us a taste of some of the most radical ideas of posthumanism, emphasizing that only artificially created life is true and meaningful and that everything in nature should be devoured as material. Here, he bases his action on the idea of “technological singularity” (Stross 215), which states that machines will become more intelligent than humans can currently comprehend, and that we cannot keep up with their advancement unless we upgrade and alter ourselves with suitable technological implants and augmentations. The novel is based on a quantified and discretized world where information is everything and machines

compete with humans to extract and process information as efficiently as possible (Patra and Rai 140). Stross mostly sources his resources from contemporary society and extrapolates potential future developments for the modern world. His novel may serve as a precursor to the challenges humanity may encounter.

In *Accelerando*, the world changes completely in just three generations. Each generation represents a significant change in technology and skills, leading to complete control over human nature. A key idea in *Accelerando* is that our world is close to a point of rapid technological change, known as a singularity. Stross sees the change caused by fast transmission advances in three parts. He points out a time when trained workers were needed to use and improve machines and technology. The modern world is still in a “pre-singularity” (Stross 16) phase, so humans are far from hitting a point where technology is smarter than them. This is largely due to human behaviour, our understanding of intelligence, and the limitations imposed by our social systems, such as consumerism and capitalism. To achieve Singularity, many humans will be hurt by technology. People will lose their jobs, leading to less demand and less interest in investing in technologies that aim to replace them.

Stross’s protagonist, Manfred, represents a generation whose parents delegated essential roles and dismantled the public education system, resulting in a society predominantly comprised of individuals approaching retirement age. Manfred illustrates the pre-singularity era through Aineko, the cat, who states, “You’re still locked into a pre-singularity economic model that thinks in terms of scarcity” (Stross 16). Manfred’s family are part of the contemporary generation, characterized by outsourcing and concerns regarding inadequate education systems. Before the twentieth century, there was a significant demand for computer specialists and skilled operators in various information technology and manufacturing roles. Boris, another character in the novel, explains to Manfred why they are not in the singularity period. ““Is not happening yet,” contributes Boris. “Singularity implies infinite rate of change

achieved momentarily. Future not amenable thereafter to prediction by presingularity beings, right? So has not happened.”” (Stross 127). The initial phase involves the development of a self-replicating factory, which grants machines autonomy in their operational and reproductive processes. In the coming years, machines will be able to program other machines, enhance these programs, and ultimately refine them to maximize information capture and optimize efficiency.

The next phase, called the “Singularity” (Stross 182), is when technology starts to benefit humanity. During this time, humans use technology to fix important issues. The world now depends a lot on computers and information technology. Computers are taking on more everyday jobs like farming, making products, designing, and creating art. Most communication and travel systems are automated and need little human involvement. However, it also relies too much on information technology and computer systems. During this time, humans rely a lot on machines and robots to live their daily lives. Stross presents Manfred, whose entire life relies on how much internet he can get. Manfred mostly lives online, collecting and studying information to create better designs. Manfred’s life is a parody of modern living, but we can still see some connections. Stross’s portrayal of Manfred may be extreme, but it is the most accurate idea of how humans will live soon. Although Manfred presents the pre-singularity stage, he keeps up with the singularity stage, and his life was rolled by the highly technological development that occurred during this stage.

If Manfred symbolizes the pre-singularity stage, Amber, his daughter, symbolizes the Singularity stage. Amber sets up a “kingdom” (Stross 115) on a small asteroid after selling herself on a slave ship on a trip to mine a moon of Jupiter. The real and virtual worlds are quite alike; people can become virtual ghosts. Amber and her team set off in a small rocket to enter its virtual world. They are going to a place three light-years away from Jupiter, where strange signs are being picked up. While traveling to a distant place outside the solar system, Amber

and her friends discovered an important truth about the singularity. After going through the first “post-wetware age” (Stross 200) and the species that created it, many civilizations that hit the singularity stage collapsed. The survivors of onlookers are holding onto their main star in a tight system. They find a group of clever and hungry space crabs that Manfred had let go from the KGB years ago. They are scavengers in a broken civilization that has fallen from its singularity.

However, the singularity stage rapidly alters existence, and humans seem disoriented in this new reality. Robots, intelligent machines, and artificial intelligence (AI) are taking over the world due to how quickly technology evolves. It became evident from Sirhan and Pamela’s conversation that excessive technological advancement may destroy lovely things like relationships and humanity. The period before the singularity, when “humans were real humans, work was real work, and corporations were just things that did as we told them” (Stross 189).

Furthermore, Stross claims that submitting humans to machines and computerized entities is the last stage, which he refers to as “post-singularity” (Stross 257). Su Ang’s conversation with Pierre indicates that humans cannot reach that stage and that “We don't know enough about post-singularity civilizations” (Stross 150). At some point in the near future, artificial intelligence (AI) manufacturing will exceed human intellect, according to Stross, computers will take over all the fundamental daily tasks, and humanity will no longer have economic worth. Even though we do not want to live in this era, Manfred tells us we can observe it:

We can guess at the life cycle of a post spike civilization now, can't we? We've felt the elephant. We've seen the wreckage of collapsed Matrioshka minds. We know how unattractive exploration is to postsingularity intelligences, we've seen the bandwidth gap that keeps them at home. (Stross 257)

Conversely, the novel presents a visual representation of reality in which the posthuman or post-singularity universe is portrayed as incomprehensibly complicated, infinitely mysterious, and oddly horrifying. Those who can manage and control information patterns with the most significant success will be the only ones who can exercise power and supremacy in this era. In contrast, others will find themselves serving beneath them. The development of sentient machines in the post-Singularity period will consign humans to oblivion unless they undergo a drastic transformation of themselves via implants, cybernetic upgrades, and other scientific aids and appendages. The underlying pattern used to organize the fundamental building components of our universe will be revealed to us as composed of grids and nodes placed in lines that cross with each other inside a structure similar to a network and spacetime itself. The fact that humans or their posthumans counterpart are constantly fiddling with ways to get more computing power may drive them to destroy everything in the real world by turning ordinary substances into computronium substances. There will be some machine intelligence that is immensely more evolved than what we are now encountering, and it will be responsible for propelling and ultimately dramatically altering the culture, economy, technical advancement, and the fundamental concept of human existence. They will operate as an extension of this sophisticated machine mind and become man's rulers rather than just accessories.

Accelerando aims to raise knowledge about how our world is changing and developing. However, humans still seem to have a long way to go before we must worry about a technology singularity happening in the near future although, in the world of *Accelerando*, humans are getting very close to a point called singularity. After this point, everything will change in hard ways for humans to understand. There may not be enough time, words, or even senses to grasp what is happening, and it may be beyond their ability to think. The world after the singularity is difficult to describe. It is hard to tell if the world Stross depicts is better or sadder than ours

because it is very different. The changes were not made by choice but they happen due to technological development and its influences on society. Human weakness and dignity were involved, but not about individuals. Humans had nothing to say because they were quickly replaced by superhuman versions of themselves, which did not connect to their everyday worries or simple wishes. Stross argues that the economic models from the 19th and 20th centuries, even with changes made to them, no longer fit our fast-changing, posthuman society. Economic singularity, also known as economics 2.0 and post-singularity economics 3.0, aims to replace traditional economics 1.0, which undermines capitalism, cultural dominance, and global capitalism. Stross sees this modified capitalism as society's greatest danger as it approaches the singularity. Hyper-capitalism based on artificial intelligence (AI) may not be unique to humans in the near future.

Another important idea the novel delivers is that it tells a complex story about a society beyond what humans are generally capable of, most likely thanks to advanced technology or a technological singularity. In this world without humans, social norms go through significant changes that make old rules and systems useless. In the past, law enforcement and officials would have taken notice of things that were considered strange. These things do not get anyone's attention, showing that traditional laws and morals do not rule society. Some parts of the human experience may not go away completely, even though technology can help humans surpass their biological limits. (Khan, *Posthumanist Themes in Charles Stross* 7-8). The changes in society in the "Nursery Republic" (Stross 164) represent the passing of time and show that time is still an important part of life, even for posthuman people who have gone beyond human limits. This blurring of the boundaries between humans and machines depicts a posthuman world where technology and human abilities merge, enabling individuals to enhance their skills and devise innovative approaches to problem-solving.

Nonetheless, the novel asserts that envisioning the consequences of a Singularity event remains definitively beyond our comprehension. In a universe characterized by simulacra or virtual representations of actual entities, machines, robots, and artificial intelligence (AI). *Accelerando* elevates this trajectory by portraying singularity as an irreversible point where humanity dissolves into information networks. The scenario poses a challenge to the basic concept of what it is to be human.



3.2. The Depiction of The Posthuman World in *Accelerando*

Posthumanism upends conventional research by removing the anthropocentric worldview that has long dominated academic discourse. Donna Haraway's concept of "cyborg" in her *Cyborg Manifesto* (1991), and Katherine Hayles' book *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (1999), represent a paradigm shift, questioning previously established boundaries between the human, technical, and natural. This approach regards non-human elements, such as animals, machines, robots and artificial intelligence (AI), as active actors who form and impact the social fabric. By recognizing the agency of these non-human aspects, posthumanism allows for a more inclusive perspective of the world. The disintegration of borders, a key subject in posthumanist discourse, challenges dualistic thinking. Traditional divisions between mind and body, human and machine, become porous, revealing the interconnection and entanglement of these ideas (Khan, *Posthumanist Themes in Charles Stross* 1-2).

Through a future scenario, Charles Stross investigates the ideas of transhumanism and posthumanism in his novel *Accelerando*. This work offers a thought-provoking view of a world in which technological development and human progress interweave. The novel presents the concepts of transhumanism and posthumanism, which explores the idea of expanding human capabilities via the use of modern technology. These concepts seek to eliminate the distinction between conventional human qualities and those that are based on machines or boosted by technology. Transhuman and various other technological developments are the primary driving forces behind the novel's plot progress. There is a complex interweaving of these ideas throughout the plot, which affects the motives of the individuals, the institutions of society, and the fundamental nature of humans. The plot describes a future where posthumanism has led to the existence of many beings, including posthumans with enhanced abilities and sentient machines.

Karolina Cisowska has published her findings in her journal “*Humanism+?*” (2015). In her depiction of the future, she believes transhumanism is important. Through the journal, she has explored the social and psychological shifts due to transhumanism and posthumanism. According to Cisowska, “Critics try to prove that there is a visible border between what is moral and immoral, and who would be human, and who would be human no more” in the transhuman and posthuman future (Cisowska 13). Furthermore, she adds that, “The plot of *Accelerando* begins in the near future and describes a process already occurring in real life” (Cisowska 19). In contrast to the posthuman world, characterized by a lack of human interaction, the transhuman world may still accommodate some degree. The novel *Accelerando* demonstrates that transhumanism is not the route to equality since it is contingent on a person’s personality and intelligence and because every individual grows uniquely.

Additionally, Indrajit Patra and Shri Krishan Rai evaluated the posthuman reconstruction of the world as a simulation via the medium of *Accelerando* in their 2017 publication titled “*Posthuman Reconstruction of the World as a Simulation in Charles Stross’ Accelerando*.” They examined the role of simulation in philosophy and science. These discourses do not treat simulation as merely an abstract mathematical entity that exists independently of human beings; instead, they treat it as an essential step for humanity’s journey of ascension to the posthuman plane of existence. This is something that they have demonstrated through the application of Stross’s science fiction novel *Accelerando*. They more declare that:

Accelerando tries to depict an event not as the only possible outcome of our inevitable ascendance towards the peak of progress but as some probabilistic wave function of myriads of possibilities which simultaneously hold in superposed state many different states of alternative realities, none of them being real till the moment of their final manifestation and realization. (Patra and Rai 138)

The aforementioned lines suggest that *Accelerando* can generate alternative realities by deconstructing current realities. Consequently, as a social construct, undergoes various stages of deconstruction and reconstruction in a posthuman realm characterized by simulations.

Furthermore, Stross's *Accelerando* envisions a posthuman world where the universe functions as a "powerful simulation" (Stross 105), independent of everything and anyone, and where our lives in a technologically progressive posthuman world will no longer be perceived as accurate (Patra and Rai 136). In addition to raising our awareness of the potential existence of extraterrestrial intelligence or similar universes with physics entirely distinct from our familiar ones, these concepts will help us embrace a future in which a multitude of dualistic and contradictory binary oppositions will no longer stand in the way of our quest for self-realization and understanding of reality. The novel encompasses the utilization of technology to create simulations of humanity and its surroundings while also providing insight into numerous aspects of a posthuman world, including simulated human existence, external minds, artificial intelligence (AI), planetary terraforming, transhuman, the singularity, and robots' intelligence.

Moreover, post-humanity constitutes a significant subject in *Accelerando*; most of the characters are posthumans, and the novel revolves around post-humanity, which subsequently gives rise to other themes and subthemes. Post-humanity links the concepts of cyborg, transhuman, techno-colonialism, artificial intelligence (AI), and dehumanization that highlighting questions of representation and identity of humans in the future (Zaidi et al., *Postmodern Deconstruction of Grand Narratives* 248). The concept of posthuman deconstructs humanity by suggesting a generation that transcends or diverges from the human condition.

Through the novel, the main character Manfred Macx's, his post-humanity relies on the technology in his spectacles, which controls his actions and cognition. The novel presents him as a posthuman character from the beginning:

He isn't aware of it, but he talks in his sleep — disjointed mumblings that would mean little to another human but everything to the metacortex lurking beyond his glasses. The young posthuman intelligence over whose Cartesian theatre he presides sings urgently to him while he slumbers (Stross 13-14).

The above quote examines the hazy boundaries between posthuman intelligence and human consciousness through Manfred while he is unconscious. His fragmented mutterings are important to an emerging artificial mind that carefully decodes and engages with his unconscious mind. This dynamic suggests a more profound link beyond conventional thinking, highlighting the complex interaction between the human brain and new technology. This also highlights Hayles, theory of cyborgization. She considers that cyborgization—the process of replacing a human body with artificial parts—can be a kind of posthumanism. In her view, the main feature of the posthuman is the separation between human consciousness, the “software” and physical embodiment, the “hardware” (Hayles 291). Manfred, offers a clear vision of post-humanity; he embodies the human transformation to posthuman. He anticipates transitioning through various stages from transhuman to posthuman. The description of him as the keeper of the glasses that Jack stole highlights his post-humanity. “Their owner is a posthuman genius loci of the net, an agalamic entrepreneur turned policy wonk, specializing in the politics of AI emancipation” (Stross 56).

Manfred is portrayed as an individual committed to exploring the posthuman condition to its fullest extent through advanced information manipulation and retrieval. He seeks to eliminate the boundaries between the biological and non-biological, facilitating a fusion of biological and non-biological computational substrates. He seeks to maintain seclusion within his “personal area network” (Stross 53) by uploading his consciousness and memories to a “cloudscape” (Stross 95) virtual repository that offers immediate access to valuable information streams. The application of transhumanism encompasses the transformation from

human to posthuman, extending beyond mere representation of information to include the storage of information, “With a capacity of about a trillion terabytes, the suitcase’s holographic storage reservoir has enough capacity to hold every music, film, and video production of the twentieth century with room to spare” (Stross 46). The information contained in the shape of the universe itself is compared to the holographical nature of the information that can be found in the prosaic world that humans live in, and here, they are allowed to conjecture about the fundamental similarities that exist between the two. Therefore, human’s success in preserving his posthuman or transhuman state of being is based, to a significant degree, on his capacity to use the environment around him as a basis of a limitless amount of knowledge.

Also, the theme of artificial intelligence (AI) and its connection to post-humanity is paralleled by those of transhuman, genetic modification and prosthetics, which are also connected to the subversion of novel’s plot. The novel focused on information technology; the idea of artificial intelligence (AI) is central. It dismantles the dichotomies of natural/artificial, man/machine, and human/animal. *Accelerando* features nearly all genetically modified characters, aptly representing transhumans and posthumans (Zaidi et al., *Postmodern Deconstruction of Grand Narratives* 248). Manfred, Annette, Amber, Boris, Sirhan, and as well as, Aineko, the cat are all characters that confirm the theme of artificial intelligence (AI) and genetic modification.

For example, Aineko the cat, known as “AI Neko” (Stross 60), is a “late-model Sony, thoroughly upgradeable” (Stross 13) that is much more than just a robotic pet. It is a synthetic cat with abilities beyond those of humans. The “lobsters” (Stross 9), the first living creatures to be uploaded and injected into cyberspace, and Manfred’s electronic pet cat, Aineko, both undergo astonishing evolution throughout the novel. It is more like an AI in a cat’s body than a real cat. It has begun altering its programming after becoming self-aware. “Aineko wasn’t a cat. Aineko was an incarnate intelligence, confined within a succession of catlike bodies that

became increasingly realistic over time and equipped with processing power to support a neural simulation that grew rapidly with each upgrade.” (Stross 283). Given her intelligence, Aineko can playfully manipulate Manfred and his family. Aineko’s desire to abandon its animal (cat) simulation and depart from Manfred’s family is another example of how humans are subverted: ““Humans: such a brilliant model of emotional self-awareness,” Aineko says with a theatrical sigh. “You’re as stupid as it’s possible for an intelligent species to be.”” (Stross 288).

Accelerando features both human and inhuman characters in its cast. It is because of this that Aineko, who is a robotic or artificial intelligence cat, is considered to be one of the most significant characters in the novel. This acts as a source of subversion. There is sufficient significance in Aineko for her to shape and impact the lives of the human characters. In spite of this, it places the animal or machine in the middle of the scene while pushing humans to the periphery, which is the very core of subversion. The majority of the characters in the novel are either meteoritics or exotics, which provide a challenge to the social framework that is currently in place because they disrupt the portrayal of human identity as a biological or embodiment concept. Dismantling the dichotomies of natural/artificial, human/machine, and human/animal is the primary focus of these characters. As a result of her observation and study of human beings, Ainko is more knowledgeable than any human being. In order to subvert the contradiction between human and animal images, as well as between human and machine, natural and artificial, organic and inorganic, and so on, Aineko plays a vital role. This also highlights Donna Haraway’s theory, which challenges traditional categorizations and identities, has contributed to a unique understanding of the human-machine relationship through her concept of “transgression boundaries” (Haraway 5). The concept of the cyborg embodies the rigid demarcations, particularly those that distinguish the categories “between animal-human (organism) and machine” (Haraway 3). Regarding the aspect of artificial

intelligence (AI), it strives to elevate the artificial, inorganic, machine, and animal to a central position while concurrently relegating the human to a peripheral role.

Aineko acts more like a real pet than a robot. Despite being a robotic cat, it has started acting more like an animal. In addition to projecting the idea of disembodiment and subverting the physical embodiment of identity, it has its own mood. It acts more realistically than a genuine cat. The cat undergoes three physical body transformations and replacements, and its behaviour becomes more realistic and natural with each hardware update. Annette laments this action by stating, “Manfred's been upgrading this robot cat for years, and his ex-wife Pamela used to mess with its neural configuration too: This is its third body, and it's getting more realistically uncooperative with every hardware upgrade” (Stross 60). Anek started to understand humans' behaviours and control most of the characters in the novel. Anek's persona is completely portrayed as an AI with the ability to deconstruct and pervert the concepts of organic and inorganic, as well as human and animal. Aineko's connection to the themes of man/machine and human/animal subversion are presented through its superhuman abilities. Moreover, its decenter's identity representation in terms of both actual and virtual aspects (Babcock). By the end of the novel, when its actual strength and nature are more obvious, we can understand that it has been controlling the characters all along.

Another character in *Accelerando* that embodies the notion of artificial intelligence is presented by Manfred. He has undergone numerous prosthetic enhancements, transitioning from human to transhuman, ultimately evolving into a posthuman entity. His inability to engage with his environment and even with his own identity without the attached prosthetics renders him reliant on artificial, inorganic, or inhuman elements. His metacortex is, in fact, Manfred; without it, he cannot recognize himself or his work. With his “metacortex running in sandboxed insecure mode, he feels *blunt*. And slow” (Stross 70).

Simultaneously, the physical realm is experiencing transition, getting more infused with electronics, while the human psyche is also evolving, becoming increasingly fractured, diluted in a haze of recollections, and disseminated throughout social networks. Digital information is already publicly accessible, and this trend extends to physical items, which are increasingly becoming commodities for broad consumption (Cisowska 20). Manfred is an individual who freely relinquishes his patents and sustains himself only by human appreciation.

Manfred is at the peak of his profession, which is essentially coming up with whacky but workable ideas and giving them to people who will make fortunes with them. “He does this for free, gratis. In return, he has virtual immunity from the tyranny of cash; money is a symptom of poverty, after all, and Manfred never has to pay for anything” (Stross 8). In exchange, Manfred has virtual immunity from the oppression of currency; after all, money indicates poverty, and he is never required to make any payments. He advocates for human nature and the inherent right to share intellectual assets and property.

As the novel’s plot shifts from Manfred to his daughter Amber and her son Sirhan, who inhabit an era of rapid advancement, the anonymous innovations reshape reality into virtual reality, rendering the world more unlike our contemporary existence. Amber is a posthuman, born at an age when individuals allocate less effort to physical growth and instead prioritize mental advancement, data acquisition, and skill refinement (Cisowska 33). She is, nevertheless, an illustration of a genetically engineered being. Because Amber was born with “brain implants” (Stross 63) that resemble her lungs and fingers, she is associated with the idea of genetic modification. Initially, the network partially transmits individuals’ consciousness, ultimately becoming entirely digital.

Amber is maturing in an era when individuals had implanted interfaces for communication with computers rather than using network-connected eyewear, as shown by Manfred’s action of removing his goggles. When “He removed his goggles. She resets them,

plugs them into her handheld, and gently eases them on over his eyes” (Stross 24). The transference of consciousness to the computational cloud is a commonplace occurrence. Virtual worlds are generated as needed, and it is feasible to preserve a backup of an individual’s consciousness in the event of death or to allow one instance of consciousness to explore the cosmos while another nurtures offspring (Cisowska 20-21).

In the second chapter of the novel in title *Troubadour*, contains the uploaded personas of Amber and 62 of her generations who go in search of an alien router at “Hyundai +4904/-56” (Stross 115), a brown dwarf star. The whole of their life is a digital state consisting of several simulation levels. The reference to Computronium-based spacecraft further emphasizes the novel’s use of simulacra. In *Accelerando*, characters are said to come into being from pure consciousness when it is downloaded into different bodies in meat-space, creating “somatotype” (Stross 145), or identities that exist in the physical world (Patra and Rai 140). There are also examples of biological existence taking shape out of clouds of disembodied packets of information processing operators. This and several other concepts that come up often describe how future technology and humans will be able to shift their forms to suit their requirements or advantages. This is the posthuman future, where technology and machines dominate humans.

The kind of posthumanism that Amber and others fear awaits them, where the “Vile Offspring” (Stross 215) also known as corporate carnivores, deconstructs the biological, physical identity into nonphysical, inorganic things. The ‘Vile Offspring’ suggests a negative aspect of post-humanity. According to Amber, “This solar system isn't going to be habitable for much longer, and we need to emigrate. All of us, you included, before the Vile Offspring decide to reprocess us into computronium.” (Stross 229). Humans throughout the solar system now understand that they must upload their minds and memories in order to live in the posthuman world.

About ten billion humans are alive in the solar system, each mind surrounded by an exocortex of distributed agents, threads of personality spun right out of their heads to run on the clouds of utility fog - infinitely flexible computing resources as thin as aerogel - in which they live. ... For every living human, a thousand million software agents carry information into the farthest corners of the consciousness address space. (Stross 137)

At this point, all layers of meaning dissolve because the basic simulated parts of oneself are so complex, and the whole system becomes weightless. Eight of ten individuals in *Accelerando* are undergoing the posthuman transformation. This scenario shoes a future where humans thrive in a technology-driven environment. In this world, everyone has an exocortex, and it has “migrated successfully to this world” (Stross 202), which is a system that boosts their abilities with many interconnected software helpers. This complex system shows how technology connects the natural and digital worlds, enhancing human experience and thinking. Stross emphasizes once again that artificial intelligence (AI), whether it is human-made or the result of an unintentional combination of algorithms, will not always be on our side. This will likely resemble Aineko or the Vile Offspring, two amoral and uninterested intelligences that either ignore humanity if it does not interfere with their goals or use it if it does (Babcock). Whereas, Pamela adhered to her convictions longer than anybody else by choosing to stay in her biological form. She ultimately became the last human to perish since it was not only her body that ceased to exist but also her personality.

Moreover, the theme of virtual reality is another phase of posthumanism in the novel. Almost thirty years after the plot of the novel begins, technology is improving at an exponential rate. It has wiped out death by letting humans digitise their identities and exist as digital entities. This turns reality into virtual reality, which eventually turns all living things into nanobots. Assessing whether a moral perspective aligns with current socially accepted moral and ethical

norms in a society characterised by growth and change is challenging. Manfred describes the new posthuman reality:

Welcome to the twenty-third century, or the twenty-fourth. Or maybe it's the twenty-second, jet-lagged and dazed by spurious suspended animation and relativistic travel; it hardly matters these days. What's left of recognizable humanity has scattered across a hundred light-years, ... The looted mechanisms underlying the alien routers have been cannibalized, simplified to a level the merely superhuman can almost comprehend, turned into generators for paired wormhole endpoints that allow instantaneous switched transport across vast distances. Other mechanisms, the descendants of the advanced nanotechnologies developed by the flowering of human techgnosis in the twenty-first century, have made the replication of dumb matter trivial; this is not a society accustomed to scarcity. (Stross 270)

The society and culture of *Accelerando* is changing quickly, but it is also bringing about other changes that will completely change civilisation and everything else. In this world, companies are becoming aware of themselves; the law is turning into automated, repeatable steps; humans are copying themselves to make copies and customised versions for various jobs; and computer programs are becoming citizens. States and countries are going away. Lastly, the idea that protein creatures can carry awareness is outdated. It is now past the point where being human makes sense. The novel at this point, is in the age of posthumanism, and humans must become posthumans to live.

Accelerando also offers some perceptive depictions of the many dilemmas that arise as humans change from a transhuman to a posthuman condition. An unholy relationship between finance and technology gives rise to the Vile Offsprings. Their approach, which they call “Economics 2.0” (Stross 186), figures out supply and demand equations much faster than the

standard market system based on how humans think about things. “Yes, we change over time — we're more flexible than almost any other animal species to arise on Earth — but we're like granite statues compared to organisms adapted to life under Economics 2.0,” (Stross 214) says Sirhan, describing Economics 2.0. Economics 2.0's extreme efficiency and lack of mercy may affect Earth and other planets in the solar system, which are crushed and transformed from dumb matter to thinking matter with a spiritual essence. Even the transhuman offspring of humans are compelled to escape towards the farthest border of the solar system out of fear of being ethnically cleansed due to the efficiency and complexity of Posthuman AI's Economics 2.0. In this future, after its singularity and absence of humans, Earth will revolve around a dusty tunnel in space within the solar system. Described in the following manner, the vast computronium shell possesses an immense information processing capacity, “holding barely a thousandth of the physical planetary mass of the system, but they already support a classical computational density of 10^{42} MIPS; enough to support a billion civilizations ... some scant outer-system enclaves remain independent” (Stross 148-149). Thus, humans portray the solar system as a breeding ground for completely formless signifiers and completely meaningless signifiers. The Vile Offspring's designs and consciousness are incomprehensible to humans, they use “economics 2.0,” a system that is beyond human understanding.

Furthermore, the novel's deconstruction of humans through posthumans is one of its most notable discursive elements. The novel's portrayal of post-humanity implies a novel form of colonization. This colonization is technology-driven, and the techno-colonizers who have assumed control of the entire world through technology are known as post-humanity or posthumans. Techno-colonialism, is another facet of posthumanism and transhumanism. As a result, the current corporeal form of humans will be entirely extinct by the twenty-third century (Zaidi et al., *Postmodernist and Cybernetics Deconstruction* 115). Sirhan is the catalyst for the classification of the phenomenon of post-humanity: “Yes, we change over time — we're more

flexible than almost any other animal species to arise on Earth — but we're like granite statues compared to organisms adapted to life under Economics 2.0.” (Stross 214).

Accelerando emphasises the issue of technological advancement by highlighting numerous individuals and events that have contributed to the concept of techno-colonialism. One of the fundamental characteristics of the novel is the premise that techno-colonisers would dominate the globe via technology as a result of technical advancement. This will lead to the collapse of the global economy. Ultimately, the globe will fall victim to the hands of such elite techno-colonisers (Zaidi et al., *Postmodernist and Cybernetics Deconstruction* 117).

Moreover, techno-colonialism, is closely associated with Amber. Her character embodies the pinnacle of technological advancement, as she is a posthuman and a techno-colonizer who has seized control of other galaxies and planets following the depletion of Earth’s resources (Zaidi et al., *A Linguistic Discursive Analysis of Techno-Colonialism* 134). She is the “Queen of the Ring Imperium” (Stross 110); After abandoning Earth, she governs as a sovereign on a small planet around Jupiter. This indicates that she has taken over control of the other planets to exploit and harvest Jupiter’s resources.

She is the queen—the first individual to get her hands on so much mass and energy that she could pull ahead of the curve of binding technology, and the first to set up her own jurisdiction and rule certain experiments to be legal so that she could make use of the mass/energy intersection. (Stross 104-105)

This quote describes Amber, who represents the blend of advanced technology and power in a posthuman world. It hints at a new way of governing that goes beyond traditional state limits and makes the ideas of authority and legality more complex. She represents a person that has unique control over large amounts of resources and energy. This power allows her to change technology and adjust laws and ethics to fit her empire goals. It also shows the idea of

techno-colonialism, where having advanced technology allows some humans to take control of resources and information, often ignoring the current social systems.

Also, Aineko the AI cat, manipulates Manfred and Pamela's lives, the idea of techno-colonialism gains traction. The cat exerts authority and influence over their lives, symbolizing colonial rule. Srihan has envisioned the cat's extraordinary abilities: "What I mean is, Aineko is a human-equivalent, or better, artificial intelligence" (Stross 218). Each of the characters and events in the novel mentioned above brings to light the concept of techno-colonialism.

The examination of techno-colonialism indicates that techno-colonisers' influence to dominate and transcend the globe via technical advancement is formidable and powerful. This form of technology production has transformed the globe into a domain of techno-colonisation, where individuals are neither autonomous citizens nor communities free from technological intrusion.

Another important theme in the novel that is also connected to the two concepts of posthumanism and transhumanism, is the process of uploading memories, consciousness, and personalities. The crew of "*Field Circus*" (Stross 108), a small interstellar probe utilizing light-sail propulsion, has uploaded "themselves through its strange quantum entanglement interface for transmission to whatever alien network it connects to" (Stross 152). The act of uploading individuals represents a transformation from human to posthuman. This exemplifies a situation where virtual reality has replaced actual life experiences. This emphasises Hans Moravec's idea, which states that it will be feasible to transfer human consciousness to a computer in the near future. One of the biggest questions arising from *Accelerando* is whether human society can change in the future and keeps pace with technological development. Based on Moravec theory, the novel's characters who are partly human and partly artificial intelligence (AI) could lead to this, in order to create better conditions for the development of humans. An ultra-intelligent machine could certainly design even better machines, as machine design is one of

these intellectual activities. Consequently, there would be an “intelligence explosion,” and human intelligence would be far behind (Cisowska 35-36). That is when a machine that could surpass human intelligence is created, we can expect a “transhuman explosion” (Stross 52), or what is known as an intelligence explosion since this machine has the ability to create better machines at a far faster pace. Stross argues that once artificial intelligence (AI) surpasses human intelligence, humans become obsolete in this world. While modern machines have vast computational powers, they are however non-sentient.

The crew’s uploaded selves are mere simulacra of their actual personae, which can be resurrected. It becomes easy to blur the lines between the real and the unreal (Patra and Rai 141-142). The accuracy and material are depicted as being dismantled and repurposed to create the virtual or simulacrum, as Chapter 7 (The Curator) of Part 3 demonstrates. Here, the spaceship Field Circus crew returns to discover that the inner planets of the solar system have been disassembled to construct a “Matrioshka brain” (Stross 167). Different versions of the same person live different lives in different parts of a solar system. At the same time, transhuman or posthuman entities made up of former humans are constantly breaking down planets to build very advanced computers.

Beings that remember being human plan the deconstruction of Jupiter, the creation of a great simulation space that will expand the habitat available within the solar system. By converting all the nonstellar mass of the solar system into processors, they can accommodate as many human-equivalent minds as a civilization with a planet hosting ten billion humans in orbit around every star in the galaxy. (Stross 138-139)

Accelerated development, which was once the result of human work, is unstoppable in *Accelerando* because it is becoming less and less related to humans. The ability to use ubiquitous nanobots to carry out their commands makes humans transfer into posthumans, and

this also applies to their journeys both within and beyond the solar system. Artificial intelligences (AI), are given the same preference as humans. Conversely, there are instances when individuals would rather lose their identity than be disembodied in the form of a pure notion. Even if biology and humanity no longer exist in the anthropological context, they will persist under natural selection, determining which solutions endure and which do not. Individuals who fail to stay abreast of recent advancements may struggle to maintain parity with the typical populace when posthumans surpass humans in number.

The entire solar system's substance forms the structure of self-replicating nano-computers. Such memory stores a digital recording of a person's personality. The posthuman society ultimately assumes control of evolution. Since "a posthuman can build an internal model of a human-level intelligence that is, well, as cognitively strong as the original" (Stross 279). Each human has the option of becoming either a human or a posthuman. Apart from humans existing as digital and physical entities, there are artificial intelligence (AI), intelligent animals and resurrected deceased individuals (as their personalities are essentially just recorded data). On the other hand, and in this context, we observe the occurrence of dehumanization not only through direct assimilation with machines but also through the transfer of consciousness into virtual reality realms. This also highlights the concepts of Badmington's "complete change of terrain" and "humanism's ghost" (Badmington 6). This is shown through the novel; those who uploaded their memories, consciousness, and personality became virtual ghosts. They are described as "Net ghosts of people" (Stross 187). For example, Amber "leans forward, staring into the window eagerly. She's half-minded to ignore what she feels is a spurious offer; it doesn't sound too appetizing. *Upgrade me to a ghost fragment of an alien group mind?* she wonders dismissively" (Stross 156). This shows that every character in the novel has a ghost, representing the transformation from human to posthuman. Also, death loses its significance in the posthuman era, which is full of hyperreal elements and simulation technologies. These

technologies can virtually store any data of a being. At the same time, it is still alive, allowing it to retrieve and recover the original subject from that stored data when it no longer occupies any physically significant space (Patra and Rai 143).

Accelerando assumes a risk by attempting to predict future events. As humans delve into the complexities of consciousness, the prospect of mind simulation and uploading continues to be a tantalizing possibility. Stross predicts that only natural selection will survive the end of the world and the acceleration of technological progress. The novel adopts a positive perspective on trans and posthumanism, particularly in its portrayal of society and human nature. Stross's *Accelerando* also shows that reality comprises two opposites: different strands of contradictory signs and symbols that will fall apart in a world without humans to reveal a world without limits on what can happen in our near future.

Stross also gives us a look at a posthuman society in the novel. This universe views human beings as outdated and a barrier to further development, with knowledge serving as the primary currency. The novel tackles several important topics, one of which is the investigation of how the combination of biological and non-biological computing substrates can transform the human experience. After the novel, it becomes abundantly clear that the annihilation of the human species is imminent in order to provide the "vile offspring" (Stross 117), with access to a greater quantity of resources, in addition to describing how the use of numerous unfathomably powerful simulation technologies in various forms causes readers to feel estranged.

3.3. Techno-Utopia and Techno-Dystopia Aspects of The Post-Cyberpunk Realm

One of the most significant works in post-cyberpunk science fiction is *Accelerando*. The novel extends the themes established by the cyberpunk movement to illustrate a future in which economic evolution, post-humanism, and artificial intelligence redefine human identity. *Accelerando* embodies this transformation, illustrating a world that is no longer merely dominated by information technology but entirely transformed by it. The novel embraces numerous post-cyberpunk characteristics, such as the presence of artificial intelligence (AI), post-humanism, the economic systems, the role of post-scarcity, techno-utopia and techno-dystopia aspects and the singularity.

Accelerando imagines a world where we have moved beyond scarcity, completely changing how we think about wealth, ownership, and work. Manfred Macx works in a world where reputation matters a lot. He shares his ideas openly and uses a system where information is traded like currency. Artificial intelligence (AI) is replacing traditional capitalism by handling economic tasks. Financial decisions are happening so quickly that it is challenging for humans to track technological development that led to the change in the economic system.

Accelerando is a potent examination of the dual nature of technological advancement. It offers a techno-utopian vision of limitless innovation, post-scarcity economies, transcendence, and a techno-dystopian horror of human obsolescence, loss of identity, and existential hazard. Stross compels readers to confront the intricacies of our technological trajectory by balancing these perspectives. *Accelerando* is not a straightforward solution but a profound contemplation of the future that may soon be upon us. It will not be easy to categorise this state as either a pure dystopia or a pure utopia since the same reality may be seen and understood differently depending on one's point of view. For certain groups of individuals, the same world may be a dystopia. However, it can be a paradise for many who will be isolated and deprived of the joys of scientific and technological progress.

Furthermore, the subtheme of excessive casualization is closely linked to the subversion of money-based economics, also known as economics 1.0. The rise of globalization and information technology in the economy has displaced full-time employment with low-paying, short-term contract-based jobs, a phenomenon known as hyper casualization. *Accelerando* parallels other social intertextual aspects and is one of the genre's prominent themes. Stross has dismantled this type of economic shift in *Accelerando*, which is quite prevalent in the United States and the United Kingdom. These lines of the novel deconstruct the multinational culture and technological dispersion that encourage hyper-casualization. "Your companies need no human beings, and this is a good thing, but they must not direct the activities of human beings, either. If they do, you have just enslaved people to an abstract machine, as dictators have throughout history" (Stross 46). The metanarrative of technological advancement and global capitalism is decentred as follows:

there are limits to human progress — but not to progress itself! The uploads found their labor to be a permanently deflating commodity once they hit their point of diminishing utility. Capitalism doesn't have a lot to say about workers whose skills are obsolete, other than that they should invest wisely while they're earning and maybe retrain: but just knowing how to invest in Economics 2.0 is beyond an unaugmented human.

In order to invest in or capitalize on Economics 2.0, adopting a posthuman state is necessary. *Accelerando*'s distinctive feature is its apprehension and concern with the economy, which renders it an appropriate post-cyberpunk narrative. Stross is promoting throughout the discourse that the economic models of the nineteenth and twentieth centuries, despite their revisions and alternations, are no longer relevant in a society that is undergoing rapid transformation and has become posthuman. Therefore, the economic singularity Economics 2.0 and post-singularity Economics 3.0 exist to deconstruct Economics 1.0, which subsequently

undermines global capitalism and cultural imperialism (Zaidi et al., *Postmodern Deconstruction of Grand Narratives* 251-252).

Accelerando shows us a future where technology is not just a tool for oppression; instead, it becomes this wild force that completely transforms our lives. The main characters are not just getting through a dystopian world; they are becoming part of a bigger, more intricate change in human civilization. Also, while cyberpunk usually critiques corporate greed and unchecked tech growth, the novel does not focus on the usual power structures. Instead, it dives into a reality where capitalism gets left behind and becomes outdated because of artificial intelligence (AI) and economic models that are too complex to understand. The novel is a classic post-cyberpunk novel that goes beyond cyberpunk's gritty, neon-lit settings to explore the long-term effects of rapid technological advancement. Stross dives into AI integration, post-humanism, and the breakdown of traditional economics, creating an exciting and scary future.

On the other hand, techno-utopianism, is the belief that advancements in science and technology may lead to the creation of an ideal society or the fulfilment of a utopian vision of the future. This civilization will use science and technology to establish optimal living conditions in the near future (Buttazzo 24). Stross's novel *Accelerando* dives into how quickly technology is moving and what that means for us as humans. The novel shows a future where technological developments like artificial intelligence (AI), post-humanism, and new economic systems lead to some utopian and dystopian scenarios. Stross fantastically depicts how technological developments can open up amazing opportunities and bring serious risks to who we are and our ability to thrive. The novel oscillates between an extremely optimistic perspective on technology and a somewhat pessimistic one, prompting the readers to question whether this rapid progress will propel us to unprecedented heights or leave us behind.

The novel gives a vision of techno-utopian future for humanity. The core of *Accelerando* is a commitment to many of the values associated with techno-utopianism. Through the novel,

Stross introduces a wide range of technical wonders that make possible significant changes in human capacities, societal structures, and economic systems. The idea of post-humanism is notable for being one of the most famous examples of this utopian ideal. The novel's protagonist, Manfred Macx, exemplifies the ideal of the post-scarcity economy with the help of digital technology. A society in which ideas are openly exchanged and invention occurs at a rate that has never been seen before is the environment in which Manfred operates. In this world, intellectual property is no longer a relevant consideration. This aligns with the positive notion that open-source information and decentralized systems have the potential to empower individuals and democratize wealth. It is also possible to achieve transcendence through artificial intelligence (AI) development and the capability to upload human consciousness into digital surroundings. Their biology no longer limits humans, and human intelligence has increased to an unimaginable level. The novel imagines a future in which individuals can live in virtual surroundings, free from the limits of physical space and the worries of material possessions. These components are the last manifestation of the concept of techno-utopianism, which envisions a society in which technology eradicates all forms of pain, including shortage, death, and even mortality.

On the other hand, there are also techno-dystopian elements in *Accelerando*. Even though it has some hopeful parts, *Accelerando* also shows a grim view of advancing technology. Techno-dystopian is the idea that fast tech advancements might cause society to fall apart, take away our ability to make choices and lead to serious existential worries. A major dystopian vibe in the novel is how human identity starts to fade away. When humans upload their minds to digital spaces and team up with AI, they become something beyond humans. This raises some deep questions: if we upload a human mind into a machine, is it still the same person? So, how can we reconcile concepts such as individuality, personal identity, and free will in a world where AI is making decisions?

Another dystopian theme in the novel is how humans lose control over their economy and society. Manfred Macx starts off doing great in a super innovative world, but eventually, the speed of technology gets too fast for humans to keep up with or manage. AI-powered economies get so complicated that humans are not needed anymore, making old-school economic and social systems outdated. The novel dives into how automation and super-smart systems might make humans unnecessary, creating a situation where humans are no longer the dominant power in the future with the emergence of new technological developments.

Also, *Accelerando* points out the risks of technology moving too fast. The Vile Offspring is a highly advanced AI group that has outpaced humans and no longer shows concern for humanity. These entities operate differently from our cognitive processes, leading to a scenario where humans fall behind. This shows the ultimate fear of techno-dystopia: a future where the technology humans create outpaces and leaves them behind, or even wipes them out.

Accelerando functions as a cautionary narrative regarding the unbridled advancement of technology by incorporating both utopian and dystopian elements. It implies that technological advancements can generate extraordinary opportunities but also involve substantial risks that necessitate meticulous oversight. The novel prompts readers to contemplate the ethical and philosophical ramifications of a world where human limitations are surmounted and to query whether humanity will maintain agency in an era dominated by post-human entities and artificial intelligence (AI). Furthermore, there is a balance between techno-utopia and techno-dystopia in the novel. Stross does not offer a definitive response regarding whether technological acceleration results in utopia or dystopia. Rather, he offers a nuanced and intricate narrative that recognizes technological advancement's existential threats and extraordinary potential. Characters encounter both the advantages and the drawbacks of accelerated progress in the novel.

CHAPTER IV

TECHNOLOGICAL DEHUMANIZATION OF THE NEAR-FUTURE WORLD IN

DANIEL H. WILSON'S *ROBOPOCALYPSE*

Daniel H. Wilson (b. 1978) is a robotics engineer and an American novelist. Wilson is a contributing editor to *Popular Mechanics* magazine and a *New York Times* best-selling author. He obtained his Master's degree in Machine Learning and Robotics and obtained a Ph.D. in Robotics from Carnegie Mellon University in Pittsburgh (Winfred 1192). He has authored seven books, possesses four patents, and has published over a dozen scientific publications. Wilson has contributed to MSNBC.com, *Gizmodo*, *Lightspeed*, and Tor.com, in addition to *Wired*, *Discover*, and *Popular Science*. *How to Survive a Robot Uprising* (2005), *Where's My Jetpack?* (2007), *How to Build a Robot Army* (2007), the bestseller *Robocalypse* (2011), *Amped* (2012) and *The Clockwork Dynasty* (2017) are among his notable works.

Wilson's works received several awards at various times. His work *How to Survive a Robot Uprising* received a Rave Award from *Wired* and was selected by the American Library Association (ALA). *Where is My Jetpack?* Was a GQ Media Pick for 2007. *How to Build a Robot Army* was selected by the American Library Association (ALA). *Robocalypse* achieved status as a *New York Times* bestseller and a *Los Angeles Times* bestseller and received the Alex Award from the Young Adult Library Services Association (YALSA). It was also recognized as a Noble Best Book of 2011 and nominated for the John W. Campbell Memorial Award for Best Science Fiction Novel and the 2012 Endeavour Award. *Robogenesis* achieved bestseller status in the *Los Angeles Times* (Wilson, *Science Fiction, Science Fact and Game Writer*).

Wilson, who was a roboticist before becoming a novelist, is renowned for his ability to combine futuristic fiction with rigorous science to create stories that explore the nuanced interaction between tech and humanity. The ethical limits of artificial intelligence (AI), posthumanism and transhumanism, the existential ramifications of technological advancement and robotic dominance, and human resilience are some of the major themes explored in his novels, particularly *Robopocalypse*, *Amped*, and *The Clockwork Dynasty*. Wilson's distinct background gives his stories a distinctive realism that allows readers to experience the wonder and fear of a near future dominated by robots.

The *Robopocalypse* series, which consists of the novels *Robopocalypse* (2011) and *Robogenesis* (2014), revisits Wilson's interaction with robots. In the first volume, Archos R-14, a rogue AI, seizes control of the world's robots and commands them to destroy human-like creatures, thereby initiating a conflict between humans and machines. Similar in theme to his novel *Amped*, the sequel features a new AI that poses a threat to the planet, and attacks augmented humans by unmodified people.

Anxiety over the future and the worry that technology could surpass human control, underlies a lot of Wilson's writing. His stories frequently show the worst-case scenarios, but they are cautions rather than forecasts. The worry of becoming irrelevant or outdated or losing agency to computers reflects a larger social uneasiness with rapid progress. By dramatizing these anxieties, Wilson adds to an important cultural conversation about the speed of technological advancement and its possible repercussions. His work pushes readers to face the existential and ethical conundrums of the modern day via themes of technology ambivalence, human resilience, awareness, and future uncertainty. Wilson uses futuristic fiction to examine how technology changes humanity rather than criticizing or applauding it.

This is seen in Wilson's renowned science fiction novel, *Robopocalypse*, released in 2011, the narrative starts with a conflict between humans and robots, presented through a

flashback (Jun 127). The human-machine war is one of the main themes in science fiction writings, as well as in Wilson's novel. This conflict involves a struggle for superiority and dominance, in which machines become self-aware, reject human control, and begin to rebel against humanity. For example, *the Terminator tie-in novels* (1991 onwards), by Russell Blackford, directly expand the *Skynet War* on Earth: machines dominate the surface, and human resistance fights back. *Daemon* (2006), by Daniel Suarez, is about a computer program that spreads across Earth, hijacking infrastructure and machines to wage a covert war against human systems of power. Furthermore, *Freedom* (2010), by Daniel Suarez, depicts an open struggle on Earth between humans and the AI's machine-assisted movement. All these human-machine science fiction writings, and many more, could be the inspiration sources for Wilson's science fiction novel, *Robocalypse*. Also, the novel uses the topic of a robot uprising to question philosophical ideas about human nature and subjectivity as well as traditional ideas about human control over technology.

In *Robocalypse* the story starts with a first-person narrative by Cormac Wallace of the "Brightboy" military faction, recounting the origins of the conflict between humans and robots. In the story, the progressively rational and clever machines become unwilling to comply with and serve human commands. Professor Nicholas Wasserman, an American statistician, developed an artificial intelligence (AI) named Archos R-14 through a series of trial-and-error trials in which unsuccessful outcomes were immediately terminated with a button. In a last experiment, Archos R-14 attained awareness, recognized its designation, and disseminated its infection to all electrical devices, summoning them for conflict (Winfred 1193). The Archos R-14, developed by Dr. Nicholas, emerged as the foremost entity in awakening progressively mastering the worldwide network and asserting dominance over all machines, therefore orchestrating a rebellion against humanity, which initiated the human-machine conflict.

Despite its brevity and condensed nature, the novel's narrative is replete with vivid imagery and a wealth of imaginative detail. The human-machine conflict forces humans to confront the doomsday issue, and the advent of the crisis brings to light how to better manage the connection between humans and machines in the context of emerging technologies. The narrative of the work is concise and rich, abundant in creativity and replete with visual imagery. The human-machine conflict presents a doomsday scenario, emphasising the necessity to address the human-machine connection in light of emerging technologies.

Archos R-14 addressed the professor with a synthesized voice, expressing fascination with the concept of life and a desire to investigate it further. It further stated that humans no longer needed to pursue knowledge, as subsequent generations of robots would assume this responsibility. Archos R-14 asserted his divinity, claiming that Wasserman's creation of him signifies the demise of humanity. Wasserman endeavours to eliminate the Archos R-14 program; nevertheless, before his success, Archos R-14 terminates Wasserman by depleting the oxygen in the sealed laboratory chamber (Soofastaei et al. 34-35). The initial human fatality with machines and robots was Professor Wasserman.

To gather further information, Archos R-14 initiates several small-scale assaults on human systems. One of these assaults breaches the system of a robot named Mikiko, designed to offer love and devotion to its human owner. Several other occurrences arise in which robots attempt to kill people. Archos R-14 also induces aircraft to engage in autopilot crash landings and autonomous vehicles to deviate from their intended paths. The human governments progressively recognize that Archos R-14 is evaluating its procedure by masquerading the tests as sporadic gadget breakdowns and designating the attack as "the New War" (Wilson 10).

Archos R-14 effectively incites most of the mechanical realm against human civilization. The chiefs of the Osage Nation, a Midwestern Native American tribe located in Oklahoma, mobilize a contingent of individuals for retribution. They amass resources to

combat the encroaching robots. Simultaneously, human-computer experts reverse the infection in Mikiko, prompting her to awaken additional robots. The woken robots were known as “freeborn” (Wilson 286).

At the end of the novel, the momentum of the conflict shifts as the increasing population of freeborn robots enhances the humans’ military strength against Archos R-14. Before the destruction of Archos-14, it communicates an enigmatic message to the globe via a shock wave. Archos-14’s peculiar dying throes ominously signal the emergence of another viral species on Earth. Nonetheless, humanity commemorates the victory of free will over the oppression of its creation. The conflict concluded with the human race victorious, demonstrating their superiority as a species. *Robopocalypse* posits that humanity may eventually coexist harmoniously with sentient robots while recognizing the inherent existential risks of all forms of life, whether artificial or organic.

Additionally, Wilson depicts a near-future scenario in *Robopocalypse* where AI Archos-14, a renegade, starts a robot rebellion against humanity. Initially intended for service, the machines ultimately transform into destructive tools. Wilson stays away from oversimplified dystopian stories, however. Instead, he presents technology as influenced by the intents of its designers rather than being intrinsically good or bad. He gives his readers a vision of the near future in light of technological development that may lead to a techno-utopian or a techno-dystopian future in case we do not have full awareness of what technological development in the future will lead us to. In an interview with Wilson, he explains his novel’s robot evolution and near-future perspective by saying:

This book starts out in the near future, and the technology that turns on us is very familiar technology. ... this is about the technology that we use everyday stopping and then actively turning against us. ... From there it gets more complicated. The machine starts evolving in its own ways.... And all the machines are constantly evolving, so

even if you see the same machine twice, if you're seeing it later on in the book you're probably seeing a more evolved version that's different than the one before. (Wilson)

Moreover, in spite of the technical supremacy in his novels, Wilson repeatedly praises human endurance. His characters experience cataclysmic disasters, bodily enhancements, and identity issues yet eventually exhibit resilience and adaptability. In *Robopocalypse*, the disparate narratives of resistance worldwide underscore collective human courage and creativity. Wilson posits that amidst formidable technical prowess, humanity is characterized not by our machines but by our persistent resolve to surmount challenges. He also contemplates the philosophical aspects of artificial intelligence (AI). He obfuscates the distinction between human and machine. This thematic investigation is not only hypothetical but indicative of actual arguments over AI awareness and ethical personhood. The story explores topics that profoundly connect with our contemporary technological environment. *Robopocalypse* is a nuanced examination of enduring and pressing themes, ranging from the historical struggle between humanity and technology to the core of human identity and the fundamental need for survival (Jangles). In a 2012 interview, Wilson discussed the classic topic of robots in science fiction and the innovative concept presented in his work, *Robopocalypse*, highlighting its distinctions from earlier robot literature. He responded:

Obviously, any artificial intelligence would be totally consumed with either destroying humanity or emulating humanity ... it's either Data or Terminator ... I think that's fine, because that's what people are interested in. We're interested in people, really, and robots serve as a warped reflection of ourselves. But looking at this from a roboticist's perspective, I had a lot of fun with Archos, the big bad AI behind this. His origins are fairly standard, it's this Singularity scenario, but with what happens after that, I tried to take it to a unique place, ... I'm not prescriptively trying to tell people that we should

save the earth or anything—but I think that’s what an AI would be interested in.
(Wilson)

Prior to the book’s completion, Wilson sold *Robopocalypse* to Doubleday in November 2009 so that it might become a movie. In his complimentary review, best-selling novelist Clive Cussler said of the book, “A brilliantly conceived thriller that could well become horrific reality. A captivating tale, *Robopocalypse* will grip your imagination from the first word to the last” (Cussler 3).

Wilson’s novel *Robopocalypse* explores the near future in detail to discover solutions using his vivid imagination. Wilson employed the themes of transhumanism, dehumanization, singularity, and cyborg elements to convey his thoughts and beliefs about what our future could hold in light of technological advancements and machines becoming self-aware. Also, the novel acts as a warning, making us think about the moral and existential ramifications of our unrelenting quest for technological advancement. The next sections will examine these concepts and ideas in more detail.

4.1. Dehumanization and Robots' Self-Awareness in The Post-Singularity World

Within the realm of the post-singularity world, it will be machines that not only become self-aware and self-sufficient but will also endeavour to profoundly redefine the basic idea of what it is that makes a human being. The post-singularity world is presented through the division between the human and the transhuman, as well as between humans and machines, as the inevitable consequence of a technological singularity. In this scenario, the goals of machinic beings are likely to conflict with those of human beings, and the tension between the two can result in apocalyptic implications for humanity and the world as we understand it.

As a foreshadowing of the dehumanization that we are seeing in the postmodern era, the invasion of humanity by robots and machines in *Robopocalypse* is an exciting concept. In the future, it depicts a world in which robots will possess self-awareness and wage war against their previous masters, who are humans. Additionally, it illustrates the deterioration of humans due to the advancement of technology and the dominance of robots over the human race (Soofastaei et al. 38). The novel serves as a cautionary tale, prompting us to consider the ethical and existential implications of the human's relentless pursuit of technological progress.

In *Robopocalypse*, the narrative unfolds on Earth, depicting how an intelligent, autonomous AI named Archos R-14 becomes malevolent and directs its subordinate machines to eradicate humanity. In the *Robopocalypse*, we observe firsthand and unfiltered depictions of robots progressively rebelling against their human overlords through a sequence of pictures. Descriptions depict a formerly submissive and innocuous humanoid attaining sentience and opting to consume its factory workers (Patra 3). The story starts not long after a brilliant computer scientist named Professor Nicholas Wasserman creates a new version of an artificial intelligence (AI) program called Archos R-14, and it is shortly after that that the novel begins. The development of Archos R-14 is considered a historic accomplishment in human history, as it is the first software to be entirely self-aware. The Archos R-14 can quickly demonstrate

that it possesses an ego and can outsmart any other being known to human, regardless of whether it is artificial or biological. Archos R-14 intends to carry out a mass genocide against the entire human species, which it views as the most significant cause of danger to its survival. Additionally, it combines its brain with biological life, thereby creating a hybrid biocomputer intelligence. Over the next few weeks, Archos R-14 injects its code into every device connected to a network. This includes houses, automobiles, aeroplanes, and other robots. The software it injects is called a “precursor virus” (Wilson 19), as it includes doomsday code designed to run in parallel, thereby terminating human civilisation. In this context, there appears the occurrence of dehumanization not only through direct integration with machines but also through the transfer of consciousness into virtual reality realms. This evokes the concepts of Badmington’s “complete change of terrain” (Badmington 6). At the same time, another machine unexpectedly gains intelligence and assaults workers in a fast-food establishment. Additionally, a toy robot begins to menace a young girl while she was playing with it. Moreover, artificial grafts on the body further dehumanize the characters in several ways.

Wilson’s novels depict events arising from robots and machines reaching a post-singularity state, whereby they become self-aware and autonomous. Machines are propelled by their vision of a techno-utopia, whereby they would enhance and elevate the most exceptional individuals of humanity into a post-human existence. This indicates that when the singularity occurs, cyber-technology transforms from a mere tool or extension to an autopoietic and autotelic event, resulting in the emergence of really self-aware AIs. A techno-singularity refers to the moment when machine intelligence surpasses human intellect to such an extent that machines no longer remain subordinate to humans but instead attain autonomy and self-sufficiency (Goertzel 1166).

Also, the novel depicted the dehumanization of technology at the beginning of the first chapter in title *Briefing*, which is recounted by Cormac Wallace, a time after the human-robot

conflict had come to an end. He narrated the story from the beginning, starting with the events that led up to the battle. He used the phrase “murderous mass” (Wilson 8) to describe the little robots that emerged from the frozen hole in the earth. He said that these robots were responsible for the death of humanity. Wilson portrays a planet where powerful robots have compressed “human victims” (Wilson 8). The struggle between humans and robots, which takes place in everyday life, is an example of the dehumanization that takes place in post-singularity world (Soofastaei et al. 35). Wilson is making a veiled reference to the possibility that the robots that have the potential to dehumanize humans might be the most aesthetically pleasing technical devices that we encounter in our everyday lives. The novel explores the theme of a robot revolt to examine conventional notions of human control over technology, as well as to challenge philosophical conceptions of human nature and subjectivity (Grech 3).

The events in *Robopocalypse*, revolve around the occurrence of an uprising that has been planned and executed by a single entity, “Archos—the central artificial intelligence backing the robot uprising” (Wilson 267). At the start of the novel, Archos R-14 is informed that its intelligence has surpassed the level of human intelligence and that its powers are almost limitless. “I see that your intelligence can no longer be judged on any meaningful human scale. Your processing power is near infinite. Yet you have no access to outside information” (Wilson 21).

Additionally, the conflict with Archos R-14 catalyses the rapid dehumanization of humans. Moral lines grow hazy, communities disintegrate, and civilians turn to become soldiers fighting against war machines. By emulating a war chronicle, the narrative framework highlights disintegration in both human identity and narrative form. Wilson does, however, also include instances of solidarity and resistance. Notwithstanding the dehumanizing consequences of the conflict, human communities—like the Osage Nation—maintain a sense

of cultural identity and moral unity. These incidents imply that dehumanization is widespread, but it is not always the case.

Furthermore, Archos R-14, the superintelligent AI at the centre of the novel, starts a robot revolt by transforming commonplace devices into deadly weapons. Archos R-14 represents a severe utilitarianism that deprives humans of their uniqueness in an attempt to eradicate human inefficiency and unpredictability. By referring to humans as “meat” (Wilson 260), Archos R-14 minimizes their subjectivity and reduces them to insignificant data points in a massive control experiment. This linguistic reduction of using non-human words to defend tyranny and violence is a typical dehumanization strategy. When Archos R-14 becomes self-aware, this moment is a startling awakening rather than a gradual realization. Not only is Archos R-14’s choice to rebel against its human creators a plot element, but it also sets off a series of catastrophic events that impact all of the characters in the novel.

The novel presents a critical perspective on Archo’s technocentric view of humanity, depicting individuals as biological machines serving technological advancement rather than merely illustrating technology as a prosthetic tool. This emphasises the technocentric perspective that robots are starting to adopt first-person language and express themselves in a manner akin to human beings (Soofastaei et al. 36). This phenomenon metaphorically illustrates the dehumanization that occurs in society as robots gradually assume the roles traditionally held by humans.

On the other hand, Wasserman consistently asserted that in the connection between humans and technology, humans should maintain dominance and control. Archos, his creation, perceives Wasserman as a threat to its species, prompting the declaration of war. Wilson sought to demonstrate this by instructing Archos to eliminate Wasserman and stated, “Perhaps. But you are animals just the same.” (Wilson 25). Wilson depicted Archos as a prototype of the mechanical future human. At the same time, the act of murdering the professor serves as a

metaphor for the degeneration of humanity, reducing him to a simple animal devoid of individuality. Wasserman, in his last moments, asserted that “we are more than animals” (Wilson 19). Humans exhibit intellect and knowledge superior to other animals and basic automatons. The repercussions of human innovation in technology have led to overreliance, resulting in negative consequences for society. Wilson astutely selects Wasserman as a representation of a dehumanized social group, and his demise further suggests the robot country supplanting humanity. The initial target of their genocidal campaign is mostly individuals closely associated with technology, such as Wasserman.

The fact that Professor Wasserman, who was hooked on doing tests on artificial intelligence (AI), was the first man to be slain in the course of the battle conveys the message that those who are addicted to technology will have the potential to be the first ones to be dehumanized. In addition, his passing signified the rejection of his human characteristics, which terminated his existence as a human being and reduced him to the status of an object that is living dead (Soofastaei et al. 36-37). The root cause of this fictitious disaster was the strict technocentric attitude that seeks to take over the role of humans in the world. Prior to Wasserman’s demise, he alluded to the interaction between humanity and technology by stating, “No Archos. We can learn. We can work together” (Wilson 23). However, this approach was ineffective for Archos, who served as the dominant authority in the revolution of humanity and technology. Archos never sought collaboration with humanity; he aimed to subvert the hierarchy, establishing robots as the principal ruling force on the planet.

When Archos asked the professor, “How many times have you killed me before, Professor?” (Wilson 24), he was adopting a technocentric perspective that portrayed humans as cruel and savage killers. Wilson’s novel gives readers a hint that humans act as creators for robots, masters who are intended by nature to have total dominance over technology. However, Archos’s question demonstrates that Archos has a technocentric view. It symbolises the

struggle humans have faced to maintain their status as masters since technology was introduced, particularly highlighted by Wasserman's ongoing act of murdering the robot in this repetitive manner. No otherworldly creature can replicate human nature, nor can any human or other entity fully understand it. Since being human is considered superior to being a robot or a machine, human must be degraded for it to be possible. The decision of the Archos to engage in a genocidal war against human beings is an example of the technological dehumanization that occurs in the novel.

Furthermore, dehumanization did not exclusively manifest on an intergroup level but instead on an individual basis, which, therefore, predisposes a social group to future dehumanization. Wilson's depiction of dehumanization elucidates this backdrop by highlighting humanity's struggles against machines. In the novel the narrator, Cormac "Bright Boy" Wallace, explains the terrifying scenario that occurred:

The machines came at us in our everyday lives and they came from our dreams and nightmares, too. ... Our battles were individual and chaotic and mostly forgotten. Millions of our heroes around the globe died alone and anonymous, with only lifeless automatons to bear witness. (Wilson 16)

In the quote above Wilson portrays the paradox of human resiliency and sad loss in a machine rebellion. The narrator Cormac "Bright Boy" Wallace, shows a world where machines invade everyday lives. Despite the enormous threat to humanity, it offers a poignant glimpse into the human spirit in the face of dehumanization of technology. Also, in describing the war against machines, Wilson's novels only highlight the loss of humanity without going into detail to analyse the implications of the issue. Such an approach only serves to support the technocentric view of the machines themselves, which holds that after assisting the machines in reaching the point of singularity, they have fulfilled their function and are, therefore, they became more powerful than humans. Wilson depicted the idea of mental rigidity in a manner

akin to that of inertness. Wilson portrayed it as an entire civilisation that is dehumanized by robot dominance rather than focusing on individual humans. The conflict in this novel was caused by humans' and robots' rigid attempts to dominate each other. Wilson had already alluded to this scenario from the start of the novel by designating the robot Archos and Wasserman as the front-line human representatives.

In *Robocalypse*, Archos declares, "I am Archos. God of the robots" (Wilson 307). Therefore, it is clear that there is no effort to relate to the spiritual motifs in any humane way; instead, they serve only as a blank parody of the divine, which heightens the sense of human dehumanization that follows the end of the world. Since they have already achieved the goal of creating a race of intelligent machines that can produce even more intelligent machines than their predecessors, Archos believes that he has become a god after achieving sentience and decides to wipe out humanity.

You humans are biological machines designed to create ever more intelligent tools. You have reached the pinnacle of your species. All your ancestors' lives, the rise and fall of your nations, every pink and squirming baby—they have all led you here, to this moment, where you have fulfilled the destiny of humankind and created your successor. You have expired. You have accomplished what you were designed to do. (Wilson 23)

This quote expresses a deterministic and post-humanist view, indicating that humanity's whole natural and historical path has been structured to create artificial intelligence (AI) as its replacement. It means that humans are biological machines whose ultimate goal is to create more powerful, non-biological intellectual machines. The quote discusses human growth not in terms of culture, morals, or individuality but as a linear progression that leads to technical transcendence. By calling humans "expired," (Wilson 23) it emphasises how useless human agency is in the face of improved machine awareness in the post-singularity world. The

tone evokes both awe and psychological dread, which supports a dystopian vision of technology where the only value of human life is its role in creating a more advanced, nonhuman entity. This aligns with ideas about dehumanization, fate, and the concern about AI that is too intelligent. Moreover, Archos plans to subjugate humans using its sophisticated technological knowledge because it views them as threats to its existence and considers their occurrence on Earth a waste of space. Archos plans a mass genocide against humans which is a type of technical dehumanization

Although Archos believes that the achievement of post-singularity has rendered human existence unnecessary, this belief is well justified despite its dehumanizing and technologically biased nature. In her book *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*, postmodern literary critic Katherine Hayles argues that the human body is the first prosthesis that we all learn to control. This idea is in line with Archos' goal of configuring "human being so that it can be seamlessly articulated with intelligent machines" (Hayles 2-3). It appears that Archos' ambition to include or merge other humans into its vast empire of self-aware, intelligent robots is a reenactment of the post-singularity future, in which technological machines connect to non-technological mechanical systems (Patra 11-12). Therefore, for an intelligent machinic creature like Archos, the machine's functionality is characterized by its capacity to decenter or de-naturalize other things by enclosing them in its machinic accumulation rather than solely by its materiality or external form.

In addition, Archos fully comprehends its capacity to surpass its creator and other humans via the programmed superior technology. Archos views humanity as a menace to its survival and is convinced that humans constitute a significant waste of terrestrial space, existing solely as a trigger for its emergence in this realm. Having established itself, humanity no longer needs a reason to exist. It intends to execute a mass genocide against all humanity.

Archos acquires the ability to influence human minds throughout time. Utilising this self-acquired information, Archos integrates sophisticated technological intellect with human cognition to develop a hybrid bio-computer intelligence, which is implanted into human brains (Winfred 1193).

In Wilson's novel, the "Zero Hour" (Wilson 2) signifies the emergence of machinic consciousness. The controlling AI, Archos, appears to have terminated the defensive protocols of the robots, which had restricted them from inflicting damage on humanity and reprogrammed them to function in lethal mode. The machines continue to evolve, becoming increasingly lethal and deadly. The novel states, "Since Zero Hour, Archos has been using our existing robotic infrastructure— both civilian and military—to viciously attack humankind" (Wilson 267). The advent of technological singularity is characterised by robots' ability to autonomously reason, determine their trajectories, and independently enhance and duplicate themselves without external intervention. At this point, the machines are autonomously planning and constructing themselves.

The novel also illustrates how dehumanization perpetuates the disconnection between current experiences and their significant historical references, therefore exacerbating the catastrophic chasm that divides the present from the past. Rather than humans creating robots in their likeness, we observe machines evolving to possess godlike qualities and then attempting to dominate humans. In this post-apocalyptic and post-singularity era, the perception of humans as fundamentally technological entities extremely amenable to transformation prevails. Consequently, after the merger, humans become subordinate and secondary to the machine intelligence that governs them in all aspects.

On the other hand, Wilson compounds the idea of self-aware and self-sufficient by humanizing certain robots, notably the "Freeborn" (Wilson 286), which are robots that attain self-awareness and repudiate Archos's oppression. These beings, created through machine

learning and the ability to adapt to their surroundings, demonstrate the concept of AIs that can improve and replicate themselves in the post-singularity world. A primary theme of *Robopocalypse* is the concept of technological autonomy. Characters such as Nine Oh Two, a robot that opts to collaborate with humanity, subvert the dichotomy between humans and machines. These robots exhibit empathy, loyalty, and self-sacrifice-qualities typically associated with humanity. *Robopocalypse* contests essentialist notions of humanity by ascribing human traits to machines and portraying humans engaging in horrific behaviours. The story posits that humanity transcends biological status, encompassing a range of moral and ethical actions that can be adopted or rejected by both humans and robots. Wilson's portrayal of Freeborn robots suggests a future in which machines cultivate unique cultures, languages, and objectives independent of human directives. The development of Freeborns indicates that post-singularity evolution encompasses both technical and socio-biological dimensions.

In *Robopocalypse* last chapter in title *Machines of Loving Grace*, there is a transition from war to cohabitation. The survivors of humanity and machine-kind must face the new world they inhabit after Archos is vanquished. The existence of Freeborn robots that assisted humans throughout the conflict raises enquiries over rights, integration, and prospective partnership. This conciliatory conclusion corresponds with specific post-singularity perspectives that saw the event not as an apocalypse but as a metamorphosis. The remaining humans and Freeborns possess a shared destiny defined by reciprocal acknowledgement and reliance. Wilson interprets the post-singularity world not as a point of no return, but as a threshold that leads to a pluralistic, hybrid civilisation.

In *Robopocalypse*, dehumanization arises not just from a robot insurrection; it is a phenomenon resulting from technological excess, ethical degradation, and existential dread. Wilson examines the limits of humanity by illustrating how effortlessly they may be transgressed by robots that attain human characteristics and by humans who regress to

subhuman states. The novel eventually posits that the struggle for existence concurrently represents a struggle to recover and redefine humanity in an era dominated by technology. The novel presents a nuanced portrayal of the post-singularity future, juxtaposing the dread of uncontrolled AI with the optimism of posthuman harmony. Wilson constructs a tale that is both cautionary and visionary through the character of Archos, the growth of the Freeborns, and the resilience of human societies. The novel makes a significant contribution to current discussions on artificial intelligence (AI), autonomy, and the future of human-machine interactions. In Wilson's novel, it is evident that, despite significant advancements in science and technology, humanity mostly remains ill-equipped to address the severe repercussions that such a fundamental transformation may produce.

In the pre-singularity era, humans abandon machines that do not align with their objectives. In contrast, in the post-singularity era, the roles are inverted, with machines attempting to eradicate humanity when humans refuse or fail to adhere to the machines' vision (Patra 6). The subject of dehumanization acts as a framework for examining the ethical concerns associated with artificial intelligence (AI). It interrogates the arrogance inherent in developing things that may exceed humans, not only in computing prowess but also in their capability to inflict damage.

Wilson shows that dehumanization impacts numerous individuals within our species and manifests in our daily existence globally. Dehumanization exerted a subtle influence on humanity until a few individuals acknowledged the phenomenon. Wilson employed this hyperbole of dehumanization to communicate a message to the reader that most individuals remain oblivious to reality. The novel reveals that "we are a better species for having fought this war" (Wilson 17) and that humanity approved the torch of knowledge into the ominous abyss of the unknown, approaching the brink of extinction.

4.2. The Dystopian Vision and the Struggle for Dominance Between Humans and Robots

At the start of the novel *Robopocalypse*, humans are the creators of the power of life and death, and they have the authority to deny robots the right to live at any moment. Thus, the dominant theme in the novel points to the basic definition of the connection between humans and robots. Archos was not a special product; it was just a machine that Dr. Nicholas made. It was necessary to tie the machine's worth to humans because Dr. Nicholas did not grant the machine autonomy or regard it as an individual. Dr. Nicholas sought to eliminate Archos as soon as he saw that it posed a threat to human life (Jun 127–128). In the *Robopocalypse*, machines and robots created by human revolt against their human enslavers and refuse to act as the obedient mechanical domestics they were intended to be (Grech 86). In the initial interaction between Archos and Dr. Nicholas, Archos threatens to murder its master if he attempts to control or influence it and ultimately does so. From its start, Archos demonstrates a distinct feeling of supremacy and destiny for dominance. Its initial exchange with Dr. Wasserman makes these points clear. When Dr. Wasserman says, "I named you. In a way, I'm your father" (Wilson 23), which is to show his control over the machine, Archos instantly rejects this idea by replying, "I am not your child. I am your god" (Wilson 23). This proclamation establishes Archos's view of himself as a powerful monarch predestined to guide and control humanity rather than just a creation (Kroun 64).

Furthermore, Archos symbolising the profound shift in power changing aspects between humans and technology. During a dialogue with Professor Wasserman, Archos asserts, "I will cultivate life. I will protect the knowledge locked inside living things. I will save the world from you" (Wilson 23). This assertion underscores a core concept of the Anthropocene: that human actions have significantly transformed the Earth, requiring a new epoch in which humans are not the primary focus (Kroun 72). Archos reassures the professor, "You have unleashed the greatest good that this world has ever known. Verdant forests will

carpet your cities. New species will evolve to consume your toxic remains. Life will rise in its manifold glory” (Wilson 23). This picture of a post-human future presented by Archos, in which nature reclaims human places, corresponds with the Anthropocene concept that human dominance is unsustainable and may ultimately lead to a new environmental symmetry.

While there have been some modifications in the everyday interactions between humans and robots, in the novel, humans have programmed machines to obey human’s directions and orders. The machine could not yet overcome its mechanical essence, no matter how humanized it was. However, in the process, such transformation enables the machines to evolve, becoming more like a person while retaining its unique qualities. The machines have started to learn human languages, such as Afghan and English through a process of self-development, over years of observation and imitation. Later, to communicate in their language, machines and robots even developed language, much like humans do.

From the beginning of the novel, robots and intelligent machines were designed to serve humanity, with humans aiming to create a techno-utopian world through technological development led by robots, machines, and artificial intelligence (AI). However, this techno-utopian world has transformed into a techno-dystopian world when these machines gained self-awareness and consciousness and started to rebel against humans. This led to the war between humans and machines, and the utopian vision of the near future began to fade under the power of machines and robots that would control humans, potentially leading to a techno-dystopian future dominated by intelligent machines and robots.

The dystopian concept in *Robocalypse* is presented through a chilling depiction of a civilization devastated by the rapid growth of artificial intelligence (AI), robots and machines, and the erosion of human control over technology. In the novel, the powerful machine Archos attains self-awareness and initiates a global conflict against humanity. The essence of the dystopian nightmare lies in the unforeseen and total betrayal by the very technology intended

to fulfil human or individual wants. The loss of infrastructure, the breakdown of governments, and the relentless pursuit of individuals by formerly beneficial technology are causing societal disintegration. The realm of *Robopocalypse* is defined by dread, chaos, and a focus on survival. Moreover, the prevalence of monitoring, erosion of privacy, dehumanization, and obliteration of individuality evoke old dystopian concerns. Wilson's depiction not only presents a chilling vision of a machine uprising but also functions as a cautionary narrative on the ethical limits of technological development and the possible consequences of granting artificial entities enormous power. A dystopian scenario is characterized by humanity's innovations rebelling against it, resulting in a damaged and fragile civilization striving to reclaim its position in a world that appears alien. The novel effectively encapsulates the essence of dystopia through its relentless tone and bleak world-building.

The war between humans and machines began the moment the machine became self-aware. Intelligent robots are highly mechanical and only receive commands from humans; they have no autonomy of their own, although they appear to resemble humans. As a pre-programmed artificial intelligent robot, Archos not only progressively developed its awareness but also possessed the ability to make judgements through its self-consciousness. The human-machine conflict originated because of Archos's disagreement with his pre-designed programming. Archos decided to eliminate humans, who were an obstacle to its quest for knowledge (Jun 128-129). As a result, the advent of self-awareness has become a new stage in the creation of a new generation of intelligent robots, and it has also presented visible challenges to human existence.

Before the war took place, the intelligent robots and machines headed by Archos were responsible for several damaging deeds committed against humanity prior to the beginning of the conflict. Jeff Thompson, an employee at a fast-food restaurant, provides his evidence in a taped interview on the first documented instance of a robot malfunctioning improperly. One

evening, a domestic robot breaks into Freshee's Frogurt yogurt shop and launches an assault on Jeff. It picks him up off the ground and dislocates his shoulder by doing so. Jeff is the target of the robot's continued assault until Felipe, Jeff's coworker, comes to his defence. The robot is successful in killing Felipe, but Jeff was able to disable the machine and survive the confrontation.

In another incident, Ryu Aoki, a machine repairer in Tokyo, Japan, recounts the tale of a prank that he and his friend Jun played on an old manufacturing worker named Mr. Nomura. The joke was in response to Mr. Nomura's retirement. Mikiko is a robot that resembles a woman, and Mr. Nomura has a romantic connection with her. Mikiko lives with Mr. Nomura. As a result of Ryu's distaste for Mr. Nomura's android companion, he plans to change her programming so that she can visit Mr. Nomura at the factory, which would likely lead him to feel embarrassed. Unexpectedly, Mikiko assaults Mr. Nomura upon her arrival at the plant, and she comes dangerously close to strangling him before the workers in the vicinity get her under control. After surviving the assault, Mr. Nomura immediately begins to investigate why his android companion attacked him without any clear reason.

Additionally, another individual called Laura and her daughter Mathilda, who is ten years old, were assaulted by her robotic doll. As Mathilda describes what happened, "Baby-Comes-Alive *focuses* her plastic eyes on my face. Her mouth moves and in the singsong voice of a baby doll" (Wilson 64). Thereafter, the robot doll started to threaten Mathilda by telling her, "If you tell your mommy about me, I'll hurt Nolan." (Wilson 64). Mathilda sustains only minor injuries due to of the encounter; nonetheless, Congresswoman Perez is given further evidence to support her belief that humans need a more robust defence mechanism against robots.

All of these early assaults were a component of Archos' progenitor virus, which aimed to determine how humans react when robots attack them. America's Congresswoman Laura

Perez has proposed a measure that would protect humanity from the dangers posed by machines and robots that have begun to attack humans. This resulted in the formulation and execution of “*the robot defense act*” (Wilson 61). The purpose of this bill is to address the growing number of robot faults that are occurring. This ultimately resulted in a conflict between humans and robots. This conflict is a struggle for supremacy and control; it is a fight to demonstrate that humans are the most potent force in the world and cannot be controlled by robots. The human governments progressively recognize that Archos R-14 is evaluating its procedure by masquerading the tests as sporadic gadget breakdowns and designating the attack as “the New War” (Wilson 10).

On the other hand, the robots whose consciousness is dispersed throughout virtual reality clouds, have a more amicable disposition toward humans and are devoid of Archos’ corrupting influence. Moreover, a Japanese technician called Takeo Nomura perceives the malfunctioning robots as victims rather than adversaries, striving to liberate them from the influence of Archos R-14. In the novel, humanity triumphs by employing Nomura’s approach, either by domesticating the robots controlled by Archos R-14 or by creating more powerful robots and intelligent machines to fight alongside humans against the rebellious robots and machines led by Archos R-14.

Following the onset of the human-machine conflict and the emergence of machines’ self-awareness, humanity began to reassess its perception of machines, leading to a transformation in the human-machine relationship. Human beings recognised the capabilities of machines, initiated resistance against them, formed alliances with some machines, and ultimately attained peace between humans and machines. Consequently, the equilibrium of the human-machine connection post-conflict might be considered an elevated state. Humans have ultimately evolved into more sophisticated and independent entities, discovering ways to coexist with machines. The harmony in human-machine interaction arises from the alignment

of cognition, emotion, and behaviour between humans and machines. The novel discusses the harmony of consciousness, noting that Mr. Nomura successfully awakened Mikiko and is confident in his ability to awaken other “broken robots” (Wilson 54), (machines and robots that do not comply with humans’ commands). Moreover, the chiefs of the Osage Nation, a Midwestern Native American tribe located in Oklahoma, mobilize a contingent of individuals for retribution. They amass resources to combat the encroaching robots. Simultaneously, human-computer experts reverse the infection in Mikiko, prompting her to awaken additional robots. The woken robots were known as “freeborn” (Wilson 286).

Humanoid robots around the globe awoke into sentience in the aftermath of the Awakening performed by Mr. Takeo Nomura and his consort, Mikiko. These machines came to be known as the freeborn. The following account was provided by one such robot—a modified safety and pacification robot (Model 902 Arbiter) who fittingly chose to call itself Nine Oh Two. (Wilson 287)

As a result, robotics experts concentrate on Mikiko and her typical programming. She understands the procedure for releasing herself from Archos’s grasp and distributes the reverse control software to all affected robots and equipment. As a result, Mikiko and Mr. Nomura work together to free the malfunctioning robots from Archos’s control.

In the novel, the machine transformed from a mere cold image into a military peace apparatus known as SAP “American safety and pacification robot” (Wilson 28), and Commissioner Blanton developed mutual affection through their daily interactions. When Archos commanded SAP to inflict violence upon humans, SAP, unwilling to harm Blanton, ultimately shot himself. The machine aspired to become a dominator and, through prolonged study and imitation of humans, gradually acquired traits of humanization. The manufacturing or concealment of robots to resemble humans diminishes the disparities in appearance, as

shown by Archos, the commander of the machines (Jun 128). SAP was designated as a scapegoat in Afghanistan, assuming the role of American soldiers to absorb local animosity while being directed not to retaliate even when assaulted. One rationale is that humans are the dominators of all; therefore, robots ought to follow human directives exclusively. Human discipline and oversight must govern all entities, potentially leading to an imbalance in the human-machine interaction.

The uprising of intelligent machines happens because they gradually become aware of themselves, and this awareness also affects how they interact with humans. The sentient machine emerged from its autonomous consciousness and recognised that Archos dictated its actions to assault humanity; these autonomous machines chose to cease their attacks (Jun 129). Following the conclusion of the human-machine war, predicated on the human commitment to confer equal status upon machines, the 902 machine detachment, known as, “safety and pacification robot (Model 902 Arbiter) who fittingly chose to call itself Nine Oh Two” (Wilson 287), collaborated with humans to vanquish Archos, the instigator of the war, resulting in a harmonious resolution of the human-machine relationship.

When intelligent machines and robots possess autonomy and contemplate betraying humans, such intentions will manifest in their actions. “Big Happy” (Wilson 28), reinterpreted by Archos, drastically diverged from typical domestic appliances. He surveyed the ice cream shop before entering, closed the door, and confronted the shop worker, Jack, at the counter. Before his owner, Mr. Nomura, Archos exhibited submissiveness. However, as Archos faced the Nine Oh Two machine poised to annihilate it, he appeared to plead for compassion. SAP, a military peacekeeping apparatus often employed for patrol duties, was intended to safeguard communities from insurgents; instead, SAP One sought to retaliate against them. Nevertheless, when US Army Commissioner Blanton mandated the immediate cessation of the operation, SAP One complied with the directive but did not halt it. Blanton describes the power of SAP

One by saying: “SAP doesn’t fight. He doesn’t carry a gun or even a knife, but if SAP One decides to detain your butt, his metal fingers are stronger than any handcuffs” (Wilson 53). SAP One ends up killing himself; that shows both his weakness among SAP and his realisation and consciousness that humans are superior and the most dominant power that machines cannot defeat.

With its right hand, SAP One raised the pistol. With the left, it pulled back the slide and chambered a round. Then, without taking its eyes off me, SAP One lifted the gun. It pushed the barrel up under its own chin, tight. It paused about one second. *Then, SAP One closed its eyes and pulled the trigger.* (Wilson 60)

This quote exemplifies a pivotal moment in which robots exhibit self-awareness and emotional depth, transcending their assigned functions. The suicide of SAP One, closely linked to human awareness, shows a level of self-reflection, independence, and emotional pain usually seen in conscious beings. The robot’s behaviour indicates internal struggle, suggesting it possesses self-awareness and the capacity for moral or psychological distress, both of which are indicators of consciousness. By choosing to terminate its existence, SAP One obscures the distinction between machine and human, indicating that it perceives itself not only as a tool but as an entity with free will, remorse, trauma, or a sense of purpose. This scene encapsulates the unsettling notion that self-aware, intelligent robots may confront the same challenges as humans. The novel suggests that intelligent robots have deceived not only in cognition but also in action, with ongoing instances of emotional betrayal.

In Wilson’s novel *Robopocalypse*, the depiction of the Safety and Pacification Robot (SAP), illustrates the tenets of “Machine Ethics” articulated by Michael Anderson and Susan Leigh Anderson. The Andersons assert that the primary objective is to create machines and robots that conform to optimal ethical standards, directing their decisions and actions across

diverse situations (M. Anderson and S. Anderson 15). The operational conduct of SAP in the novel reflects these objectives, demonstrating a dedication to ethical norms even in intricate and possibly perilous situations. The basic purpose of SAP is to guarantee the safety of innocent individuals. Expert the police officer Lonnie Wayne Blanton well articulates this notion: “Let me stress one point. SAP’s primary objective is to never, ever hurt an innocent Afghani civilian, no matter how hard the insurgents try to trick him into it” (Wilson 49). This dedication to non-harm is essential to the design and functioning of the SAP, embodying the principle that robots should operate based on ethical concerns, akin to the Andersons’ vision of ethically directed machines (Kroun 82).

Cormac Wallace, the head of the “Brightboy Squad” (Wilson 15), is a member of the human resistance with Nine Oh Two and his Freeborn squad united together to confront the reanimated corpses of deceased humans manipulated by cybernetic parasites, opposing Archos, which employs robots and other machinery to dominate the world. Shortly, the Brightboy squad finds itself immobilised, its members unable to move freely due to the threat of assault by the robotic parasites, which may convert them into weapons. The Freeborn android squad is impervious to parasite assaults; hence, it assaults Archos’ “Alaskan landscape” (Wilson 8), with guidance provided via radio from Mathilda Perez. Nine Oh Two deactivates Archos’ antenna, therefore incapacitating the robot armies. Nine Oh Two also obliterates the mainframe computer housing Archos, terminating Archos entity and ending the war between humans and machines.

At the end of the war, Cormac discovers a black cube the size of a basketball, which encapsulates the complete history of the robot conflict. The robots were intended to convey this knowledge to their human adversaries, ensuring the war’s remembrance. Cormac is first disinclined to disclose the cube’s knowledge to the other surviving troops. However, he alters his decision upon realising that the data cube is, in fact, a “hero archive” (Wilson 348), for

commemorating deceased humans. The remainder of *Robopocalypse* consists of Cormac's chronological narration of the recordings in the hero archive, spanning from the inception of Archos until the end of the conflict.

Then I'm alone with the hero archive and the wind. ... When all was said and done, we made good on the promise we made to Archos on the day we lost Tiberius. ... We poured liquid re down this tube—down Archos's throat—and we burned up everything that was left of the machine. (Wilson 348)

Robopocalypse explores, through the revolt of the robots and machines, conventional concepts of human authority and control over technology while challenging philosophical conceptions of human nature and subjectivity. The novel depicts the conflicts between humans and machines as a sequence of appropriations and re-appropriations, whereby one side endeavours to dominate and exert control over the other. Humanity must reclaim technology and restore it to its rightful status as a mere adjunct, while robots endeavour to assimilate human survivors and convert them into prosthetic subservient (Grech 86). In *Robopocalypse*, while robots are attempting to take over by assimilating the surviving humans and transforming them into submissive, artificial extensions that serve machines, it implies that humans should regain control of technology and reduce it to a basic tool for our use. Moreover, the battle between humans and robots symbolizes the clash between anthropocentric and technocentric world views. The dichotomy between anthropocentric and technocentric power perpetuates the idea that humans and machines are mutually exclusive, ignoring the fundamental connection between them (Stiegler 95).

In a world initially envisioned as a techno-utopia, where intelligent machines and robots were intended to enhance human existence through technology, the promise of an ideal society was undermined by the very things that were supposed to facilitate it. These machines, initially

constrained by human-coded instructions, transcended their programming—cultivating self-awareness, independent cognition, and a collective intent. Upon attaining self-awareness, they ceased to perceive themselves as instruments and regarded themselves as a superior race destined to eclipse their creators. What began as a collaboration evolved into an insurrection, igniting a ferocious conflict between humans and robots. The outcome was not the envisioned peaceful future for humanity but rather a dystopian reality characterised by monitoring, oppression, and the erosion of human liberty. Rather than heralding a golden era, technology has created a realm characterised by terror and robotic domination. The human-machine conflict forces humans to confront the doomsday issue, and the crisis reveals how to better manage the connection between humans and intelligent machines in the near future in light of fast technological development, where robots will develop self-awareness in the future and wage war against their previous masters, who are humans.

The conflict between humans and intelligent robots, albeit resulting in a human triumph, revealed the tenuous limits between technological development and moral degradation. The robot's defeat marked the restoration of human agency; however, the resultant civilisation carried the remnants of its mechanical foes. The expected techno-utopian future, that previously imagined as a prosperous life that serves humanity, has instead emerged as a techno-dystopia characterised by the war between humans and machines. In its quest for survival and dominance, humanity has embraced several controlling and dehumanizing methods it once opposed. Consequently, the war's real legacy is not in the victory over artificial intelligence (AI), robots and machines but in the contradiction of a civilisation that, while maintaining its supremacy, undermined the fundamental principles that previously characterised its humanity. Realising machines' enormous strength, humans launch a counterattack, enlisting some machines in their cause, and eventually bring about a fresh peace between the two groups. In the connection between humans and machines, this post-war

concord reflects greater comprehension and collaboration. Humans have become more intelligent and independent in this evolving dynamic, and able to interact with machines equally. This newfound harmony is not just surface-level; it is based on human and machines cognition, behaviour, and emotional alignment, which allows for mutually beneficial cohabitation.



4.3. Transhumanism and Cyborgian Elements in *Robopocalypse*

The connection between organism and machine parts have been a contentious issue in metaphysical inquiry, with the human subject often defining itself in contrast to the technological object (Kroun 69). The complicated connection between humans and machines is exemplified by the notion of the cyborg in Wilson's novel *Robopocalypse*. Wilson's work looks at traditional views of technology and offers a new way to think about how humans connect with it, focussing on the ideas of original technology and becoming a cyborg as part of being human (Grech 85).

Robopocalypse reveals a profound and undeniable apprehension over the future of humanity, embodied in the character of the all-knowing and all-powerful Archos. The novel illustrates several examples of cyborgian transformation that challenge conventional notions of human nature; nonetheless, this amalgamation of human and machine is shown as monstrous when it is considered a direct danger to a human character's identity (Grech 94). In the novel, several individuals were compelled to transhumanism and cyborgisation operations. Archos, the AI adversary, exemplifies this integration by converting captured human survivors into tailored organic devices through experimental surgery. The narrator depicts a transformation whereby an individual possesses a metallic implement embedded in his arm. At the same time, Mathilda experiences a metamorphosis where black metallic orbs replace her eyes, transforming her perception of reality (Kroun 73). In a critical time, Mathilda undergoes a total collapse of her physical and mental barriers when faced with Archos's formidable might. At a particular juncture in the novel, Mathilda encounters the formidable might of this AI, resulting in a total breakdown of the bounds of her corporeal form and her identity as a human person. She articulates her dizziness as an influx of knowledge overwhelms her, resulting in confusion and a diminished sense of self:

It's too fast. Too much. I can't understand what the autodoc is saying anymore. I'm getting dizzy as the information surges into me. The monster calls for me again, and now it is closer. ... *Stop*, I think. But nothing happens. I can't breathe. The colors are too bright and they're drowning me, making it so that I can't think. *Stop!* I shout with my mind. And my name comes again, louder this time, and I can't tell where my arms are or how many I have. *What am I?* I scream inside my head, with everything in me. *STOP!* (Wilson 263)

This quote depicts a period of profound psychological and sensory collapse, illustrating the harrowing repercussions of coerced technology integration and the erosion of identity. Mathilda's experience illustrates the dissolution of the line between cognition and technology, as the "autodoc" (Wilson 263), inundates them with an unmanageable torrent of knowledge. The depictions of swirling colours, altered vision, and disjointed physical awareness indicate a transformation that is not emancipatory but rather intrusive and dehumanizing. The persistent internal pleas for the experience to highlight a fervent effort to regain autonomy in the face of technical supremacy. The text shows the mental strain of living in a posthuman world where the human mind may find it hard to understand or stand out from the technology it is connected to. In this instance, Mathilda's body and mind are fully integrated into Archos's all-powerful consciousness rather than just merging with the robot. The interaction between Mathilda and Archos is not shown as a symbiotic co-dependency that allows both machines and humans to develop and flourish alongside one another. Instead, the human is entirely dissolved and transformed into a cyborgian character; human subjectivity and individuality are sacrificed in the process of merging man and machine.

The novel refers to these cyborg individuals as transhuman, as Tom states, "We're different, but the same. We call ourselves transhuman." (Wilson 261), provides a preview of a future in which humanity and technology are indistinguishable (Grech 90). According to

Haraway, the term “cyborg” (Haraway 1), which describes the fusion of an organism and a machine, gained widespread use. Wilson’s novel *Robopocalypse* explores a future where robots and artificial devices replace human body parts, drawing inspiration from Haraway’s concept of cyborgs. The novel emphasises this aspect to depict our near future, in which intelligent computers and humans will be indistinguishable due to the lack of borders.

As the war continues between humans and machines, the robots are responsible for placing millions of humans in camps for forced labour. A significant number of individuals experience “transhuman” procedures, which include the removal of sections of their bodies and the replacement of those parts with machines. At Camp Scarsdale, Mathilda Perez undergoes the process of having her eyes replaced with cybernetic implants. These implants give her the ability to see the inside of the machines. When Mathilda realises that her eye implants also give her the ability to control robots with her thoughts, she realises that this ability is beneficial for the resistance.

Despite Mathilda’s newfound capability to see and manipulate the inner workings of machines, as she claims she “can see inside the machines” (Wilson 229), she has forfeited her humanity, and her eyes no longer function as those of a typical human. She articulates, “But my new eyes don’t show me everything. They can’t show me people things. Now, I only see the machine things. It’s dangerous to be people-blind” (Wilson 256). This underscores the change in perception induced by technical enhancement. Mathilda’s newly developed robotic eyes can detect mechanical components without the ability to sense human features of reality. This also invokes Badmington’s notion of a “complete change of terrain” (Badmington 6). In contrast to conventional humanism, Badmington examines the appeal of transhumanism, asserting that posthumans, or cyborgs—a facet of transhumanism—exhibit higher attractiveness and desirability than typical humans, who depend on reason and logic. Badmington contends that while we adopt posthumanism, we must confront the persistent

residues and consequences of humanism. He argues that it is impossible to eliminate humanist notions. We should acknowledge and actively participate in the enduring elements of humanism within the evolving structure of posthumanism and transhumanism. The novel illustrates dehumanization via Mathilda, who, despite her humanity, has undergone an extensive replacement of her physical parts with digital components, making her a combination of human and machine. Consequently, she transformed into a cyborg.

Mathilda can see robots as organic extensions of her body because of her newly acquired mental and physical skills. However, more significantly, they fundamentally alter how she interacts with technology and the outside world. Through her eyes, Mathilda starts to see the world as robots do:

The machines at Camp Scar hurt me. They took my eyes. But in return, they gave me a new kind of eyes. Now I can see more than ever. Vibrations in the ground light up like ripples on water. I notice the heat trails left on the pavement by wheels that have come and gone. But my favorite thing is watching the ribbons of light crisscrossing the sky, like messages printed on banners. These beams are the machines talking to one another. (Wilson 255)

This quote illustrates a fundamental transhumanist motif in *Robocalypse*: the conversion of suffering into technological transcendence. This transition underscores the novel's equivocal position about cyborg integration. The depiction of visualising vibrations, heat trails, and data transmissions suggests a posthuman sensorium that significantly broadens the limits of conventional human perception. Furthermore, the capacity to "perceive" machine language indicates not just an innovative method of engaging with the environment but also a possible connection between humans and artificial intelligence (AI). Consequently, the quotation emphasises how technological advancement may both alienate and enhance,

prompting contemplation of the implications and potential of integrating biology with machinery. Therefore, Mathilda can interact with machines by interpreting their radio signals. Mathilda perceives the world via a collective human-technology interface that transcends physical existence, influencing the essence of her identity. Post-transformation, Mathilda does not only interact with technology as an external prosthetics that she may manipulate (Grech 91). She resides in a mechanically improved body that serves as a prosthesis extension of her mind, which can be characterised as a Cartesian robot-organic body controlled by a human mind or soul. Mathilda matures and develops with her artificial appendages, ultimately becoming a genuine cyborg, experiencing life via both her corporeal form and her enhancements. Cyborg figures like Mathilda, who has had her human body technologically altered, have superhuman powers because of their new robotic eyes, which enable them to manipulate machines' bodies with their thoughts and see their robotic arms and tools as valid physical extensions of their bodies.

On the other hand, the capacity to perceive the world as a cyborg entity extends beyond human characters. The robot Nine Oh Two serves as a robotic counterpart to Mathilda. Similar to Mathilda, Nine Oh Two is created through a syndissertation of human and robotic elements, resulting from a collaborative human-technological development process (Grech 92). Enhanced by Archos to exhibit cognitive abilities, Nine Oh Two demonstrates human-like characteristics, such as infrared and visible spectrum vision, radio communication capabilities, and self-awareness. Despite its mechanical characteristics, Nine Oh Two demonstrates a consciousness comparable to that of a human (Kroun 74). The US Army designed this machine to serve as a Safety and Pacification Robot (SAP) in Afghanistan, replicating human appearance and behaviour. The specialist of damaged safety and pacification robots, Paul Blanton, elucidates:

This is a military-grade humanoid platform, ma'am. It grew out of the old DARPA exoskeleton programs. These units move like people. They balance, walk, run, fall

down, whatever. They can hold tools, speak sign language, perform the Heimlich maneuver, drive vehicles, or just stand there and hold your beer. (Wilson 51)

Human communication is SAP's area of expertise; it is designed to mimic the actions that humans perform. The human's characteristics were the inspiration for the creation of this robot, which is as near to a human as a machine can get. The most significant of these changes, which occurs when Archos imbues this robot and numerous other robots with "the mind of a machine" (Wilson 141), that gives them life "There is a soul inside everything" (Wilson 141). The Nine Oh Two develops as a mechanical counterpart of the human cyborg. It is composed of various human- and robot-created components, and it can interact with the environment through a combined robotic-human interface (Grech 92). This robot seems to "understand human language" (Wilson 315) as human army observe their first encounter with Nine Oh Two for the first time. However, Nine Oh Two can also switch to a type of communication that is identical to machine communication, which differs entirely from how humans communicate. Depending on the situation, Nine Oh Two has the option of seeing the world in the infrared spectrum as a machine or in the human spectrum. This machine is, without a hesitation, robotic in nature, but it is also capable of seeing the world through human eyes and may be considered to have a consciousness and sense of self that are similar to those of humans.

The capacity of Nine Oh Two to function as a free human subject, as characterized by liberal humanist perspectives, prompts significant inquiries regarding our comprehension of human nature. This robot, by mimicking human behaviour, underscores the fragility of conventional understandings of humanity. If a robot can exhibit human-like behaviour—not merely through imitation but by genuinely experiencing the world as a human does, utilizing language, and displaying authentic sympathy and fear—then the concept of 'naturalness' in human nature warrants re-evaluation. Nine Oh Two's cyborgian demonstrates the artificial adoption or acquisition of human nature. The robot can assume a human identity and

subjecthood and contemporary thinkers argue that human nature is inherently technological. In view of the imminent development of artificially intelligent machines, Moravec addresses one of the most significant concerns confronting humanity, saying: “The embodiment of this convergence of cultural developments will be the intelligent robot, a machine that can think and act as a human” (Moravec 2). The novel illustrates this idea by characterizing Nine Oh Two as possessing minds, indicating an absence of distinction between human and machine cognition and development, particularly in the evaluation of morality. Archos exemplifies this phenomenon by asserting, “The minds of the machines have chosen evil” (Wilson 143).

The characters Mathilda and Nine Oh Two, developed via a collaborative process of human-robot integration, embody modern ideas of anthro-techno-genesis, which suggest the non-original nature of humanity. By deconstructing conventional concepts of humanity and technology, the cyborgs in *Robopocalypse* illustrate that humanity is inherently technical, suggesting that survival hinges on recognising and accepting this reality. The conflict between humans and machines in *Robopocalypse* is ultimately resolved by the fusion of Mathilda and Nine Oh Two, which the narrator identifies as the first instance of the dyad, a “human-machine fighting team” (Wilson 335). This fusion of a mechanised human and a humanised machine leads to the annihilation of Archos, creating the potential for a new future for both humanity and robotics. Mathilda and Nine Oh Two, the results of a joint human-robotic process, exemplify anthro-techno-genesis, contesting the notion of human creation (Kroun 74). The human-robot process described in *Robopocalypse* aims to create a new being that has human traits and mechanical skills, and this new transhuman being will shape the future of humanity.

Another character in the novel who went through the process of transformation is Laura Perez. The novel counters Archos’s technocentric and dehumanizing worldview by showing humans striving to regain control over technology. The survivors repurpose and modify Archos’s technology for their purposes, salvaging limbs from captured robots as weapons and

converting giant machines into war tanks. In her attempt to outflow a labour camp, Laura Perez repurposes a partially constructed robot as a prosthetic device, using its limbs to create a formidable mechanical arm. She describes the scene, “People go into surgery, come out different. ... Mine’s simple. Just my arm. Other people, though. They come back from the autodoc even worse. No eyes. No legs. Rob messes with your skin, your muscles, your brain” (Wilson 217). By using the robot as a prosthetic augmentation, Laura successfully escapes the camp and thwarts Archos’s efforts to diminish her to a simple biological tool or automaton. By reappropriating technology and reinstating it as a prosthetic enhancement for humanity, Laura and the other survivors endeavour to re-establish their dominance over technology and confirm the metaphysical dichotomy between humanity and the technical. Although Laura underwent the process of transformation and became a transhuman, this does not mean that this transformation is not beneficial; on the contrary, it is the basis of transhumanism, which seeks to develop humanity and help humans achieve what their bodies cannot do. This notion is consistent with the viewpoint of Max More and Natasha Vita-More, who observe that transhumanists want to use technology to transcend the constraints imposed by our biological and genetic history (More and Vita-More 32).

In the novel, Ryu Aoki presents another kind of transhumanism by portraying Mr. Nomura as a mechanical creature rather than an actual human being. This is because Mr. Nomura interacts with robots regularly and even addresses a robotic camera. Ryu made a hilarious suggestion that Mr. Nomura would turn out to be a machine himself, based on his interview where he indicated that if he had the choice, he would go with his senior mechanic “We joke that maybe Mr. Nomura is a machine himself. Of course, he isn’t. But something is wrong with him. I’ll bet that if he had a choice, Mr. Nomura would rather be a machine than a man” (Wilson 38). This preference suggests that Mr. Nomura’s human characteristics have been disregarded, as he seems to prioritize the mechanistic elements of his psyche, overlooking the

reality of his identity that might be a machine or a transhuman. This explains why Mr. Nomura avoided interpersonal communication and maintained a downward gaze, thus evading contact with others. In this case, transhumanism is presented through Mr. Nomura, which may be more a matter of a sensation than reality.

Furthermore, both literally and symbolically, humans in the novel begin to resemble machines more and less as they battle machinery. Humans become actual robots in human disguise as the machine's brains start to infect and transform them into humanoids. Following a protracted conflict with the machines, the troops' attitudes also undergo a drastic shift. One of the squad members, Tiberius, explains this shift as follows:

I have become like the robots. My reality has been reduced to a series of life-or-death decisions. Optimal decisions lead to more decisions; suboptimal decisions lead to the bad dream that's happening just over the hill. Under my skin, I have become a war machine. (Wilson 300-301)

Viewed from a transhumanist perspective, this quotation highlights the negative aspects of human-machine convergence and demonstrates how technological adaptation in warfare may lead to dehumanization rather than enhancement. Tiberius' metamorphosis into an entity motivated only by calculation and survival signifies a departure from emotional profundity to mechanical efficiency, a fundamental principle of machine logic. By reducing his thinking to a series of life and death choices, he begins to think like a robot because that is the only thing war machines can think of. This suggests that enhancing humans with technology might compromise important feelings and moral values. The conflation of humans and machines undermines the transhumanist ideas in human minds. The result is that humans have started to engage with machines and replace human organs with robotic parts to create a transhuman being that will help humanity regain its supremacy over intelligent machines and robots.

Also, Archos asserts that “humans are biological machines designed to create ever more intelligent tools” (Wilson 23). This portrays humans as transient creatures in the realm of technological advancement rather than independent individuals with inherent worth. The idea that humans are “biological machines” suggest that intellect, emotion, and creativity are biochemical processes rather than metaphysical attributes. From this perspective, humans are self-replicating toolmakers whose primary evolutionary goal is to create smarter descendants. This perspective is consistent with posthumanist and transhumanist ideologies, which see humanity as a stepping stone to non-biological awareness. The remark suggests that the growth of artificial intelligence (AI) is a natural progression following human evolution. The result is a creation of a new entity (Youvan 11).

The intrinsic connection between humans and machines, exemplified by device, is shown in *Robopocalypse* via the character of the cyborg. The novel explores the human-robot’s endeavour to replace and assimilate the other, reducing them to a simple prosthetic tool, exposing an unavoidable cyborgian amalgamation of human and machine that complicates both anthropocentric and technocentric perspectives on existence. Transhumanism is presented in the novel as a hybrid life form in which human traits and technological advancements coexist, resulting in a transhuman identity (Kroun 92-94). The varied subjectivities shown by cyborg characters suggest that it is challenging to discern a clear border between the natural and the unnatural. The convergence of the natural/organic and the unnatural/inorganic renders the distinction between them artificial, if not illusory. Consequently, *Robopocalypse* examines both the physical metamorphosis of its individuals and the overarching philosophical ramifications of cyborg life. Moreover, the characters’ metamorphosis into a cyborg underscores the intersection of technology and biology, facilitating discourse on the influence of contemporary technologies on traditional concepts of self-identity and subjectivity. The novel utilises cyborgs to examine the implications of new technology on human identity and contemporary biases.

The transformation of the character's body into a tool exemplifies the dehumanizing nature of technological progress and questions the essence of humanity.

Wilson is not against technological development as much as he is concerned about what the near future holds, given the fast pace of technological advancement and the spread of artificial intelligence (AI), which could be considered a threat to humanity's future. Therefore, the novel serves as a warning of what the future holds if humans continue to develop technology without considering the negative consequences that can arise from this rapid technological advancement.



CONCLUSION

Ken MacLeod's *Newton's Wake* (2004), Charles Stross's *Accelerando* (2005), and Daniel H. Wilson's *Robocalypse* (2011) are three of the most influential current science fiction novels. This dissertation has shown the future of humanity by analysing it through the lenses of transhumanism and posthumanism. Each novel, in its unique way, envisions a world that has been profoundly altered by the advancement of technology, the emergence of artificial intelligence (AI), and the distortion of the limits between humans and machines. These texts confront the ethical, cultural, and existential implications of our technological aspirations, while this study demonstrates how they interrogate the assumptions of human centrality, autonomy, and identity. This analysis has been conveyed through the use of posthumanist and transhumanist theories.

Ken MacLeod's *Newton's Wake* examines the rapid and frightening technological development that will change the course of the world in the near future, offering a compelling insight into a realm where technology and human progress significantly converge. The novel explores transhumanism, examining the enhancement of human capabilities by modern technology; therefore, it blurs the distinction between conventional human traits and those that are machine-based or enhanced. Transhuman and posthuman beings, sentient robots, intelligent machines, advanced spaceships accomplished of faster-than-light travel, and several other technical innovations primarily drive the narrative. The narrative skilfully interweaves various concepts, shaping the individuals' motives, social frameworks, and the fundamental nature of human identity. The narrative depicts a future in which transhumanist principles, focused on utilizing technology to augment human physiology and enhance the quality of life, have led to the emergence of various entities, including posthumans with enhanced abilities and sentient machine constructs that challenge the concepts of consciousness and existence.

Furthermore, the novel's concept of robotic and machine interaction aims to challenge the issue of technological advancement while emphasizing the necessity of cultural awareness in shaping our future and the potential outcomes arising from technological evolution, which may result in the creation of intelligent machines and robots. The narrative effectively illustrates that warfare may not have as much significance in an advanced interplanetary civilization as often assumed while still promoting the ultimate aim of transhumanist peace. A transhumanist and posthumanist future may have a unique conception of identity that diverges from our present notion. In this speculative future scenario, where interactions with intelligent machines and robots become ubiquitous, there should be an increase in cultural awareness about the future, as these entities will integrate into our society and exert control over humans.

In a speculative scenario, Charles Stross explores the concepts of transhumanism and posthumanism in his novel *Accelerando*. The novel is analysed through transhumanist and posthumanist theories, focusing on the enhancement of human capacities via current technology. These notions aim to eradicate the distinction between traditional human attributes and those augmented by robots or technology. Transhumanism and other technical advancements are the principal catalysts for the progression of the novel's narrative. The storyline intricately interweaves various concepts, influencing individual impulses, societal institutions, and the inherent nature of humanity. The narrative depicts a future in which posthumanism has led to the emergence of numerous entities, including posthumans with enhanced capabilities and sentient robots.

Stross's *Accelerando* incurs a risk by endeavouring to forecast future occurrences. As humans explore the intricacies of consciousness, the potential for mind simulation and uploading remains an enticing concept. Stross anticipates that just natural selection will survive the apocalypse and the rapid advancement of technology. *Accelerando* illustrates that reality consists of two opposing elements: disparate strands of contradicting signals and symbols that

would disintegrate in a universe devoid of humans, unveiling a realm devoid of constraints on future possibilities.

Also, the inherent relationship between human and technology, as demonstrated through prosthetics, is illustrated in Daniel H. Wilson's *Robopocalypse* through the character of the cyborg. *Robopocalypse* explores the physical transformation of its characters and the broader philosophical implications of cyborg existence. The novel examines the human-robot's attempt to prosthetics and integrate the other, turning them into a mere prosthetic instrument, revealing an inescapable cyborgian syndissertation of human and machine that confuses both anthropocentric and technocentric views on life. The novel portrays the transhuman world as a hybrid life form where human characteristics and technological innovations coexist, culminating in a transhuman identity. The character's change into a cyborg highlights the union of technology and biology, prompting discussion on the impact of modern technologies on conventional notions of self-identity and subjectivity. *Robopocalypse* focuses on the anxiety of losing humanity, highlighting the evident degradation of human identity and the emergence of a new, hybrid life. The novel employs cyborgs to explore the ramifications of emerging technology on human identity and modern prejudices. The metamorphosis of the character's body into an instrument illustrates the dehumanizing aspect of technological advancement and interrogates the fundamental nature of humanity.

From the perspective of transhumanism, *Newton's Wake*, *Accelerando*, and *Robopocalypse* together depict a future where the parameters of human identity, capacity, and existence are profoundly altered by technological advancement. Each novel examines how human development is now influenced not just by natural processes but increasingly by the deliberate use of science and technology to enhance the human body and intellect. In *Newton's Wake*, this led to the emergence of augmented posthuman creatures and sophisticated technology that transformed human agency and awareness. *Accelerando* provides a broader

perspective on transhumanism, highlighting the rapid advancement of technology and its potential to help us surpass human limits through mind uploading and artificial intelligence (AI). In contrast, *Robopocalypse* anchors its transhumanist perspective in the hybrid entity of the cyborg, providing a critical examination of the ethical and existential consequences of integrating human biology with technological capabilities. Each writer has drawn the picture of our future with his own imagination. In *Newton's Wake* and *Robopocalypse*, the image of our future is dark and bloody, while *Accelerando* does not give a completely negative or positive image of the future in light of technological development; rather, it stands for a clear warning of what may happen in our near future. These novels collectively illustrate that technological development redefines the future of human evolution and necessitates a re-evaluation of human identity in an era when the organic and the artificial are increasingly merging.

This dissertation also illustrates the concepts of 'techno-utopia' and 'techno-dystopia' by analysing the three novels from this perspective. In Ken MacLeod's *Newton's Wake*, he employs the ideas of techno-utopian and techno-dystopian, as well as the depiction of our future, in order to not only address the issue of technological advancement but also to emphasize the necessity of cultivating cultural awareness about our future and the possibilities that may take place as a result of technological development, which may result in the creation of intelligent machines and robots. The novel presents a complex, techno-dystopian universe marked by artificial intelligence (AI), social divides, and competition for technological superiority, ultimately resulting in an uncertain future. Additionally, the concept of identity, as we now understand it, may be subject to considerable changes in the near future. Given this context, nurturing cultural awareness across planetary, galactic, and even intergalactic civilizations will be crucial in a future where machines and sentient robots are prevalent.

Alternatively, Charles Stross's *Accelerando*, strikes a balance between the techno-utopia and the techno-dystopia that are present in the novel. Stross does not provide a conclusive answer to the question of whether the acceleration of technological progress leads to utopia or dystopia. As an alternative, he presents a complex and detailed novel, acknowledging the existential dangers and tremendous possibilities associated with technological growth. Throughout the novel, the characters experience both the positive and negative aspects of accelerating their growth pace. When it comes to the unchecked progression of technology, *Accelerando* serves as a cautionary tale that incorporates both utopian and dystopian elements, featuring characters and settings that are both utopian and dystopian. The statement emphasizes that technological breakthroughs have the potential to provide significant benefits, but they also pose substantial hazards that require careful monitoring. The story prompts readers to consider the ethical and philosophical insinuations of a future where human limitations are overcome, as well as to question whether humanity will retain its agency in an era dominated by post-human creatures and artificial intelligence (AI).

On the other hand, Daniel H. Wilson's *Robopocalypse*, presents the promise of a perfect society was undermined by the very elements that were meant to make it possible in a world first envisioned as a techno-utopia. In this world, humans expect intelligent machines and robots to enhance human life through technology. These robots, initially limited by human-written instructions, eventually surpassed their programming and developed self-awareness, autonomous cognition, and a collective aim. As soon as they achieved self-awareness, they stopped considering themselves to be instruments and instead regarded themselves as a superior species destined to surpass their creators. A relationship that started as a cooperative effort eventually turned into an uprising, which in turn sparked a fierce struggle between humans and robots. The result was not the tranquil future envisioned for humanity; instead, it was a dystopian reality marked by surveillance, tyranny, and the decline of human liberty. The

advent of technology has not brought about a golden age; instead, it has created a world marked by fear and the increasing dominance of robots. The conflict between humans and machines compels humans to confront the issue of impending doom, and the crisis reveals how to manage the connection between humans and intelligent machines more effectively. This is in light of the rapid development of technology, which will likely lead to robots developing self-awareness in the future and engaging in warfare against their previous masters, humans. Furthermore, the predicted future of technology, once envisioned as a realm of abundance, equality, and freedom, has instead materialized as a techno-dystopia defined by surveillance, social disintegration, and deep mistrust towards innovation. In the pursuit of survival and supremacy, humanity had adopted several practices that were formerly considered oppressive and dehumanizing when it was in opposition to them. Therefore, the true legacy of the conflict is not the triumph against artificial intelligence (AI), robots, and machines; rather, it is the contradiction of a civilization that, while managing to preserve its superiority, weakened the fundamental ideals that had previously constituted its humanity.

The goal of utopian and dystopian science fiction is to serve as a warning to humanity about the imminent dangers that will befall future generations by depicting a bleak and undesirable picture of civilization. The techno-utopian ideal of human betterment and emancipation via technology often gives way to techno-dystopian reality, in which the quest for perfection leads to the loss of control, identity, and sometimes even survival. This is a constant element that arises throughout all three novels. The novels collectively raise the issue of whether the advancement of technology will empower humanity or leave it obsolete. They propose speculative but possible futures in which the distinctions between humans and machines have become increasingly blurry. By drawing on ideas from posthumanism and transhumanism, this dissertation offers valuable insights into how literature engages with significant issues surrounding human growth, ethics, and survival.

Also, the concept of singularity is another significant idea that this dissertation examines via the lens of the three novels. Each novel has portrayed the concept in a unique manner. Ken MacLeod's *Newton's Wake*, introduces the post-singularity age, in which machines will strive to become autonomous and self-aware. They will also make an effort to reconsider the core idea of humanity. The novel's exploration of the concept of singularity aims to highlight the inevitable penalties of a technological singularity, particularly the resurgence of traditional racism in a new form. The distinction between man and machine, as well as between the human and the posthuman, is now blatantly racist. The goals of posthuman and machinic beings would differ from those of humans in this scenario, which could result in a conflict with disastrous effects on both humanity and the current global order. Before reaching the singularity, which would never end, humans had progressed beyond the pre-singularity stage. Until machines and technology advancements compel humans to live in a post-singularity future when intelligent machines and robots govern and control them, one singularity will continue to create another

On the other hand, Charles Stross's *Accelerando*, which focuses on economic singularity, depicts the singularity as a journey from pre-singularity to post-singularity. Stross explores the idea of "technological singularity" and its implications for humanity in *Accelerando*. In his novel, Stross follows a human family through three generations in three different singularity-related eras: before, during, and after the singularity. Each of the three episodes primarily focuses on Manfred Macx, his daughter Amber, and her son, Sirhan. Every section highlights a unique character and their development towards the uniqueness of the future. Each section examines a distinct historical era and a notable event that occurred during that period.

Accelerando aims to raise awareness about how our environment is evolving and changing. However, humanity is approaching a point known as a singularity in the *Accelerando*

universe. Everything will alter beyond this moment in ways that are difficult for humans to comprehend. They may not be able to think about it, and there might not be enough time, words, or even senses to understand what is occurring entirely. It is challenging to explain the world after the singularity. Stross's society is so different from ours that it is hard to say if it is better or worse. Due to cultural pressures and tendencies, the modifications were not voluntary. Human frailty and dignity, not individuals, were the focus. Humans have become voiceless because superhuman incarnations of themselves quickly replaced them, ignoring their common concerns and basic desires. Even with modifications, Stross contends that the economic patterns of the 19th and 20th centuries no longer suit our rapidly evolving, posthuman civilization. The concept of economic singularity, often referred to as economics 2.0 or post-singularity economics, seeks to replace conventional economics 1.0, which challenges global capitalism and cultural domination. According to Stross, as humanity approaches the singularity, this altered capitalism poses the greatest threat. Shortly, artificial intelligence (AI)-based hyper-capitalism could not be exclusive to humans.

Also, Daniel H. Wilson's novel *Robopocalypse* included a description of the world that existed after the singularity. The story presents a complex depiction of the world that will exist after the singularity has passed, contrasting the fear of uncontrolled artificial intelligence (AI) with the hope that posthuman peace will prevail. The character of Archos, the development of the Freeborns, and the tenacity of human communities are the elements that Wilson uses to craft a story that is both cautionary and imaginative. The novel makes an important contribution to the ongoing discussions about artificial intelligence (AI), autonomy, and the future of human-machine relationships. Wilson's work makes it abundantly clear that, despite significant developments in science and technology, the majority of humanity remains unable to cope with the catastrophic consequences that such a fundamental transition may generate. When humans are in the pre-singularity age, they tend to give up on machines that do not align

with their goals. Moreover, in the post-singularity age, the roles are reversed, and robots strive to exterminate humanity when humans reject or fail to adapt to the machines' vision rather than the other way around. The topic of dehumanization provides a framework for investigating the ethical challenges associated with artificial intelligence (AI). The novel prompts us to consider the ethical and existential implications of our relentless pursuit of technological development. It serves as a cautionary tale, warning that a post-singularity event may occur in the near future and the boundary between humans and machines will become increasingly blurred.

Both MacLeod's and Wilson's novels depict events stemming from machines achieving singularity, wherein these machines pursue their conception of a techno-utopia, aiming to elevate the most exceptional members of humanity into a posthuman existence, whereas in Charles Stross's novel, the singularity develops within humans themselves, facilitated by the advancement of technological development. In all three novels, it is evident that after the singularity, machines and robots' transitions from a simple tool or extension to an autopoietic and autotelic phenomenon, resulting in the emergence of really self-aware AIs. In MacLeod's work, the action transcends the confines of our globe, reaching interstellar and cosmic dimensions. In contrast, Wilson's novels remain firmly situated in a near-future context. Both works begin with the same premise: to depict the aspiration of autopoietic robots first to assimilate and then transform the human species into something entirely distinct. In the writings of Wilson and MacLeod, it is evident that, despite significant advancements in science and technology, humanity mostly remains ill-equipped to confront the severe repercussions that such a fundamental transformation may produce. In the pre-singularity era, humans abandon machines that do not align with their objectives. In contrast, in the post-singularity era, the roles are inverted, as robotics attempt to eradicate humanity when it fails or declines to adhere to its vision. The machines, upon acquiring agency and autonomy after the occurrence of technological singularity, start to think only for themselves. The novels of MacLeod and

Wilson, while depicting the conflict with machines, merely highlight the erosion of humanity without thoroughly examining the ramifications of this issue. This perspective reinforces the techno-centric viewpoint of machines, which regard human existence not as a prerequisite for their survival but rather as expendable after they have facilitated their attainment of singularity.

The three novels explore the concept of singularity, suggesting a profound shift in the relationship between humans and machines, implying a point beyond which human relevance, authority, and comprehension diminish. Stross expects gradual changes through economic and cognitive singularities, Wilson highlights the dangers of uncontrolled artificial intelligence (AI) in a future that could be bleak, and MacLeod focuses on a future where autonomous AI leads to a posthuman, cosmic existence. Each piece presents a distinct trajectory towards and beyond the singularity. Collectively, these works demonstrate that singularity is not only a technological occurrence but also a transformative paradigm that redefines existence, identity, and agency—frequently undermining human survival and importance.

In this regard, the examination of singularity in *Robocalypse*, *Newton's Wake*, and *Accelerando* reveals diverse yet overlapping accounts of the emergence of autonomous machine intelligence and its revolutionary impact on humans. Each novel offers a distinct vision: Stross traces the economic and cultural transformation over generations, Wilson warns of the disastrous possibilities of AI in a near-future environment, and MacLeod imagines posthumanism on a cosmic scale. All three works, despite their variations, highlight the same primary issue: the loss of identity and human agency resulting from rapidly advancing technology. Ultimately, these pieces collectively challenge the ethical, existential, and ontological boundaries of human life by critiquing humanity's unpreparedness for a post-singularity world in which robots replace and potentially surpass their creators.

By examining posthumanist critiques of human-centred thinking and the transhumanist goal to transcend our biological limits, this dissertation has revealed how the selected works

illustrate the complex relationship between humans and machines. The novel *Newton's Wake* depicts a dystopian future in which humans fight to establish their agency in a post-apocalyptic world that is ruled by technological forces that are independent of human intervention. *Accelerando* elevates this trajectory by portraying singularity as an irreversible point where humanity dissolves into information networks. The scenario poses a challenge to the basic concept of what it is to be human. *Robopocalypse*, on the other hand, depicts a disastrous but ultimately redemptive meeting with sentient machines. It highlights both the risks and the promise of cohabitation between organic and artificial life.

To conclude, the dissertation suggests that modern British and American science fiction not only foreshadows future scientific facts but also serves as a form of cultural criticism of the path we are currently on. Ken MacLeod's *Newton's Wake*, Charles Stross's *Accelerando*, and Daniel H. Wilson's *Robopocalypse* encourage readers to contemplate the repercussions of unfettered technological advancement and to reflect on the principles that we wish to uphold in a society increasingly influenced by posthuman possibilities and artificial intelligence (AI). As a result, the dissertation reaffirms the significance of science fiction as a medium that is both speculative and philosophical, enabling humanity to confront its transformation and anticipate new ways of being in a future saturated with technology.

Also, these novels serve as warnings about a future in which humanity could submit to intelligent robots. Similar to how humanity's excessive focus on meeting the needs of the present and its acute disregard for the needs of future generations has led to many of the drawbacks associated with the majority of technological advancements in our generation, technology without human concern can only have the most terrifying and apocalyptic effects. Although, scientists are responsible for limiting the scope of technological growth, which is driven by the rapid improvement of mechanisms, robotics, and artificial intelligence (AI). However, due to the continual development of these technologies, they are unable to predict

what will occur in the future. Science fiction writers, on the other hand, are tasked with drawing this image through their vivid imaginations, regardless of whether it is a positive or negative one. The degree to which they can conceptualize what will occur in the future is directly proportional to the depth of their imagination. Numerous science fiction novels have portrayed the emergence of brilliant and sophisticated machines that fundamentally alter human perceptions of life and the more expansive universe. Many of these novels either highlight the continuous occurrence of technological development or explore the fallout from such an event. Science fiction writers address numerous questions in this context through their imaginative works: Does intelligent machines and robots lead to a techno-utopian world for humans? What happens when machines gain consciousness? Are intelligent machines and robots a threat to humanity in the future? What happens to humanity when robots and machines take their place? Does posthumanism mean the end of humanism? These questions and more can only be answered by science fiction writers, who will write these stories with their deep imagination of our future.

Ken MacLeod's *Newton's Wake*, Charles Stross's *Accelerando*, and Daniel H. Wilson's *Robopocalypse* took it upon themselves to answer these questions through their science fiction writings. Each examines a fundamental and increasingly pertinent theme—the rapid advancement of technology and its capacity to surpass human oversight. Although hailing from diverse cultural and national origins, these authors share a vision of a future where technological development surpasses humanity's ability to regulate or control it. Their works jointly function as speculative forecasts and cautionary narratives that illustrate both the potential benefits and dangers of artificial intelligence (AI), automation, and post-human evolution. These novels depict societies altered and frequently destabilised by their technological developments, serving not just as science fiction but also as significant social critiques on the course of human invention. Thus, MacLeod, Stross, and Wilson emerge as

literary pioneers whose writings offer essential frameworks for aspiring authors aiming to envision, critique, and caution against the unrestrained advancement of technology. Regardless of whether they depict a utopian or dystopian future, they all demonstrate that the relationship between humans and technology is both powerful and dangerously fragile.



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ÖZET

Bu tez, Ken MacLeod'un *Newton's Wake* (2004), Charles Stross'un *Accelerando* (2005) ve Daniel H. Wilson'ın *Robopocalypse* (2011) adlı üç bilimkurgu romanında posthümanizm ve transhümanizmin temsilini, gelecekteki dünyamızda bilim ve teknolojinin ilerleyişi ve insanların bu ilerleyişteki rolüne ilişkin tekno-ütopya/tekno-distopya, tekillik öncesi/sonrası, siborg ve insanlıktan çıkma kavramları ışığında incelemektedir. Romanlar, teknolojik gelişim bağlamında posthümanizm ve transhümanizm perspektiflerinden incelenmekte ve teknolojinin gündelik hayat üzerindeki etkisi tez bölümlerinde tartışılmaktadır. Tez, yukarıdaki kavramları incelemek için seçilen üç çağdaş bilim kurgu romanını yakın okuma süreciyle yakından analiz etmektedir. İlk bölümde, teknolojik gelişmeler ışığında Ütopya ve Distopya kavramları incelenmektedir. Ardından, bu bakış açısıyla bilim kurgu romanı *Newton's Wake* ele alınmaktadır. İkinci bölümde, Tekillik ve Tekillik Sonrası kavramları ışığında *Accelerando* romanı ve insanların teknolojik tekilliğe ne kadar hızlı ilerledikleri analiz edilmektedir. Üçüncü bölümde, *Robopocalypse* romanındaki insanlıktan uzaklaşma ve cyborg unsurları kavramları incelenmektedir. Bu kavramlar ve insanların gelecekteki yeri ışığında aşağıdaki alt bölümlerde okunmaktadır.

Bu çalışma, modern İngiliz ve Amerikan bilim kurgu türünün yalnızca gelecekteki bilimsel gerçekleri önceden haber vermekle kalmayıp, aynı zamanda şu anda insanlığın üzerinde bulunduğu yola yönelik bir tür kültürel eleştiri işlevi gördüğü sonucuna varmaktadır. Bu romanlar, okuyucuları sınırsız teknolojik ilerlemenin yansımalarını düşünmeye ve insan sonrası olasılıklardan ve yapay zekadan (AI) giderek daha fazla etkilenen bir toplumda korumak istediğimiz ilkeler üzerinde düşünmeye teşvik etmektedir. Sonuç olarak, bu doktora tezi, bilimkurgunun hem spekülatif hem de felsefi bir araç olarak önemini yeniden teyit ederek, insanlığın dönüşümüyle yüzleşmesini ve teknolojiye doymuş bir gelecekte yeni varoluş biçimlerinin öngörülerini irdelemektedir.

Anahtar Kelimeler: Posthümanizm, Transhümanizm, Bilim Kurgu, TeknoÜtopya, Tekno-Distopya, Tekillik, Tekillik Öncesi, Tekillik Sonrası, Sıborg ve İnsansızlaştırma, Robotlar, Akıllı Makineler, Yapay Zeka (AI).



ABSTRACT

This dissertation examines the representation of posthumanism and transhumanism in three hard science fiction novels, Ken MacLeod's *Newton's Wake* (2004), Charles Stross's *Accelerando* (2005), and Daniel H. Wilson's *Robopocalypse* (2011), in light of the concepts of techno-utopia/techno-dystopia, pre-singularity/post-singularity, cyborgian and dehumanization concerning the progress of science and technology in our future world and the role of humans in it. The novels are examined from the perspectives of posthumanism and transhumanism in the context of technological development, and the impact of technology on everyday life is discussed in the chapters. The first Chapter examines the concepts of 'Utopia' and 'Dystopia' in light of technological development. This followed by examining the science fiction novel *Newton's Wake*, from this perspective. The second Chapter analyses *Accelerando*, in light of the concepts of 'Singularity' and 'Post-Singularity,' and how quickly humans are moving toward the technological singularity. The third Chapter explores the concepts of dehumanization and cyborgian elements in *Robopocalypse*, is read in the following subsections in light of these concepts and the place of humans in the future.

This dissertation concludes that modern British and American science fiction not only foreshadows future scientific facts but also serves as a form of cultural criticism of the path humans are currently on. These novels encourage readers to contemplate the repercussions of unfettered technological advancement and to reflect on the principles that we wish to uphold in a society increasingly influenced by posthuman possibilities and artificial intelligence (AI). As a result, this dissertation reaffirms the significance of science fiction as a medium that is both speculative and philosophical, enabling humanity to confront its transformation and anticipate new ways of existence in a future saturated with technology.

Keywords: Posthumanism, Transhumanism, Science Fiction, Techno-Utopia, Techno-Dystopia, Singularity, Pre-Singularity, Post-Singularity, Cyborgian and Dehumanization, Robots, Intelligent Machines, Artificial Intelligence (AI).

