The Fictional Works of Bruce Sterling and Greg Egan: A Study in Posthumanism

(Thesis submitted to Nagaland University in partial fulfilment of the requirements for the award of Ph.D. Degree in English)

By

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2024

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I, **Temjentula Pongener**, hereby declare that the thesis entitled **The Fictional works of Bruce Sterling and Greg Egan: A Study in Posthumanism** is the bonafide record of research work done by me, under the supervision of **Prof. Dr. NDR Chandra**, Professor, Department of English, Nagaland University during the period 2017-2024, and that the thesis has not been submitted for the award of any previous degree, fellowship, associateship, etc., to any other university or institute. This is being submitted to Nagaland University for the degree of **Doctor of Philosophy in English.**

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Name of the Research Scholar	Temjentula Pongener
Title of Ph.D. / M.Phil, Dissertation	The Fictional Works of Greg Egan and Bruce Sterling: A Study in Posthumanism
Ph.D. / M.Phil Registration Number	Ph.D./ ENG/ 00035
Name & Institutional Address of the Supervisor	Prof. NDR. Chandra Department of English Nagaland University Kohima Campus Meriema, Kohima, Nagaland- 797004
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Author Name	Temjentula Pongener
Title	THe Fictional Works of Bruce Sterling and Greg Egan: A Study in Posthumanism
Paper/Submission ID	1908954
Submitted by	nndas@nagalanduniversity.ac.in
Submission Date	2024-05-31 06:59:27
Total Pages, Total Words	207, 60791
Document type	Thesis

Result Information

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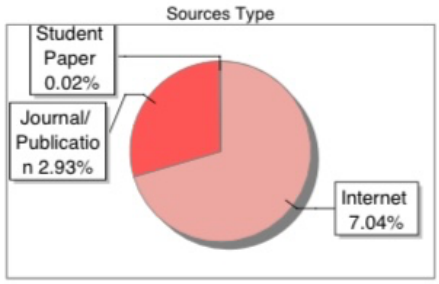

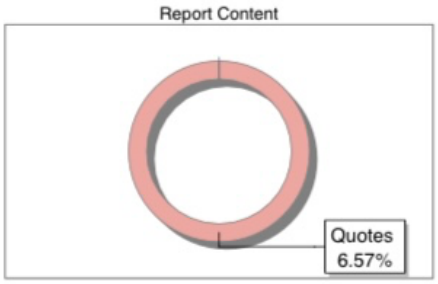

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ACKNOWLEDGEMENT

My academic pursuits have led me on a profound and unexpected journey filled with countless twists and turns, resulting in a longer-than-anticipated writing process for this thesis. Through this experience, I've gained valuable insights into approaching subjects with both an open mind and an open heart. This thesis represents a long-awaited opportunity for me to express my gratitude and formally acknowledge the kindness, generosity, grace, and advice extended to me by all those who have supported me along this journey. Words alone cannot fully capture the depth of my appreciation for each individual who has guided me through this creative odyssey, but I offer my heartfelt thanks nonetheless. While the thesis bears the name of a single author, it stands as a testament to the collective effort and contributions from various sources that have been indispensable to its completion.

At the completion of this thesis I would like to express my deepest regards and gratitude to my supervisor Professor. N.D.R. Chandra, who has guided me very methodically all through my study. Without his supervision and guidance this thesis would not have been impossible to complete. His innovative, inspirational and scholarly guidance with constructive feedback has thoroughly assisted me in improving the quality of my work.

I would also like to thank Professor. Nigamananda Das, for his supportive attitude right from the time of selection in this course till the end of my thesis. I would like to thank Dr. Lemti Alinger and Dr. Neha Rawat for their valuable suggestions and scholastic insights in regards to the content of my thesis, without which the completion of this study would have been impossible.

I would also like to thank all the office staffs of my Department and Library staff of Nagaland University for their kind help and cooperation.

Last but not the least, I express my profound gratitude to my parents, my siblings, and my dear friends who have encouraged me in every step of this journey with their prayers, love and support. And to the almighty God above who has been a cardinal entity in overseeing everything without any complications and blessing me with this opportunity.

Place: Kohima

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CONTENTS

Abstract

When contemplating the future of humanity, our focus often shifts to the species' ability to adapt and thrive amidst evolving global conditions. The profound shifts in our understanding of the human body, space, and our integration with technoscience underscore the interconnected nature of humanity and technology in today's world. From Donna J. Haraway's concept of the cyborg to the discussions of Posthumanism by N. Katherine Hayles and Cary Wolfe, it's evident that we've embarked upon the era of the Posthuman. Science Fiction, as a creative medium, explores diverse potential futures for humanity enhanced by technological advancements, while Posthumanism delves into how humans ought to navigate the evolving relationships between technology, animals, the environment, and other nonhuman entities. Science Fiction with a Posthuman focus represents a distinct genre, examining the human experience within the realms of science and technology and its interactions with the broader nonhuman world.

This thesis examines Posthumanism, Artificial Intelligence, and the Anthropocene in Science Fiction from a thematic perspective. The introductory chapter of the thesis provides an orientation to Posthumanism and its definition. It also focuses on giving an elaborate study on Science Fiction as a genre, with an exploration on its different features, themes and significance. The thesis catapults into researching the myriad existing library of Posthuman theories and therefore arriving at a chapter dedicated to theorizing Posthumanism. The Theories that have been discussed in Chapter two are applied in chapter three, four, and five, where selected fiction by Bruce Sterling and Greg Egan have been analysed with a close reading. The thesis aims to establish a study on the collapse of Humanity depicted in the novel *Schismatrix* and examine the themes of Longevity which is seen as an important tenet of Posthumanism in the novel *Holy Fire.* The thesis also focuses on exploring the Posthuman Future portrayed by

Greg Egan in the novel *Quarantine* and the Philosophical aspect of an Artificial Life is interrogated in the narrative presented in Permutation city. As Posthumanism is a theory that has been evolved from the previous theories of Modernism and Postmodernism central to Literature, the thesis also brings forward a comparison of the themes like Consciousness, Locale and Simulation from texts pertaining to the Postmodern era to examples from the selected novels for this research. It aims to establish the notion that Posthumanism rightfully takes its characteristics from Postmodernism and enhances it with the emphasis on advancement of Technology and advanced Medical sciences.

As these features of Posthumanism is being learned and researched through the works contributed by Bruce Sterling and Greg Egan, two prominent hard science fiction writers, the thesis will attempt to arrive at an elaborative study on Posthuman writing, Posthumanism, its meaning, and its implications. The thesis endeavours to demonstrate that these Science Fiction novels serve as a glimpse into the future.

CHAPTER ONE
Introduction

This chapter serves as the Introduction to the thesis, it attempts an elaborative exploration on the topic of Posthumanism by studying its meaning and its role in Literature. It provides a window to the world of Science Fiction which we learn is the host of what Posthumanism characterizes as. The chapter provides a detailed interpretation of Posthumanism and its significance and also gives an overview of the two selected authors; Bruce Sterling and Greg Egan through their fictional works which embodies the substance of Posthumanism.

The term 'Posthumanism' has previously been employed within the field Philosophy to describe a collection of arguments against the conception of humanity in a humanist tradition, but also to describe the effects on humans caused by a massive development within the fields of genetics and medical technology. There are two ways in which Posthumanism can be comprehended; one is the subject of grave fear and scepticism and on the other great optimism and hope. It is known that in respect to this particular area many established authors have used their utmost capabilities in terms of new writings, techniques and archetypes. It is with Literature that Posthumanism which has always been attached to, paved the way for its innovation and creativity. Now, one questions what Posthumanism is. Are we fully equipped to comprehend or be aware of its meanings in terms of time and space? Interestingly, here again the answer lies in Literature to enlighten or practice this very discourse. As the questions are being raised on the meaning of Posthumanism, there is a need for an in depth exploration. Hence, this chapter attempts to orient the readers with a definition towards the term Posthumanism.

The primary texts selected for analysis are fictional works by Bruce Sterling and Greg Egan. Chapter Three of the thesis delves into an analytical study of Bruce Sterling's two selected

novels namely, *Schismatrix* (1985) and *Holy Fire* (1996) and Chapter Four of the thesis focuses on the analytical study of Greg Egan's *Quarantine* (1992) and *Permutation City* (1994) .

1.1: Posthumanism: An Orientation

Humanism, originating in the Enlightenment era, heralded a departure from religious and mystical interpretations of the universe. It envisioned a future shaped by human influence rather than predetermined by fate or divine intervention. This outlook fostered democratic ideals, emphasizing equality and the capacity to shape one's destiny. Central to humanism was the elevation of human perspective and agency, championing individual rights, self-improvement, and the pursuit of comprehensive knowledge, which formed the basis of the Humanities disciplines. In *The Bloomsbury Handbook of Posthumanism*, Hans Ulrich Gumbrecht notes that this forward-looking perspective served as the foundation for a fresh democratic approach to politics. This approach emphasized equality and the empowerment of individuals to shape the future.

In contrast, posthumanism challenges the primacy of human-centric views and abilities. It explores the blurring boundaries between humans, technology, nature, and other entities. Posthumanism questions the fixed nature of human identity, advocating for a recognition of hybridity, augmentation, and potential transcendence of traditional human limitations. It emphasizes interconnectedness and inclusivity, inviting a reconsideration of our relationship with non-human elements and the ethical implications of emerging technologies like AI and biotechnology. In essence, posthumanism urges a departure from exclusive human-centred perspectives, embracing a more holistic understanding of existence that acknowledges diverse forms of agency and value in the world.

Neil Badmington sees the philosophies of René Descartes as emblematic of humanism. In his book on Posthumanism, Badmington provides a summary of Descartes' perspective:

> There is an absolute difference between the human and the inhuman: only the former has the capacity for rational thought. Reason belongs solely to the human and, as such, serves to unite the human race. 'We' may have different types of bodies, but because reason is a property of the mind (which, for Descartes, is distinguishable from the body), deep down 'we' are all the same. (Badmington 23)

Descartes' philosophy underscores reason as the fundamental distinction between the human and the nonhuman, delineating a clear separation between the mind (regarded as rational, spiritual, and quintessentially human) and the body (seen as cumbersome, worldly, and essentially animalistic). Posthumanism, on the other hand, endeavors to challenge these dualistic frameworks.The concepts of agency and equality feature prominently in humanist discourse, often forming the bedrock for declarations of civil and human rights as well as historical revolutions. However, despite humanism's aspirations toward equality, a cursory examination of history reveals that many individuals were excluded from this vision of unity. The human depicted by humanism was distinctly specific: typically male, white, able-bodied, and often associated with Western cultural norms. As Rosi Braidotti observes:

> Not all of us can say, with any degree of certainty, that we have always been human, or that we are only that. Some of us are not even considered fully human now, let alone at previous moments of Western social, political and scientific history. Not if by 'human' we mean that creature familiar to us from the Enlightenment and its legacy.
>
> (Braidotti 76)

The humanist concept of 'Man' both excludes numerous individuals and overly generalizes the human experience. It is precisely these universalizing deficiencies that give rise to

Posthumanism. Posthumanism endeavors to reintegrate the human (or 'hu')Man into a more carefully delineated network of nonhuman entities while acknowledging the exclusions and injustices inherent in Enlightenment-era Humanist ideology.

Defining Posthumanism and the Posthuman

Posthumanism challenges the traditional humanist conception of the (hu)Man, particularly its portrayal as distinct from or superior to its environment. It represents a facet of critical theory that has developed over the past century, aiming to decenter the human perspective, acknowledge the significance of the nonhuman, and explore the interconnections between humans and nonhumans. Unlike Descartes' philosophy, which sharply delineates between humans, animals, and machines, posthumanism rejects such rigid distinctions. Instead, it highlights the shared material foundations of all entities, emphasizing their coexistence and interdependence. Many scholars argue that a Posthuman perspective is increasingly essential in our daily lives. We find ourselves situated in the Anthropocene, characterized as "the age of the human," where human activities profoundly influence the Earth's systems and environments. Climate change serves as a stark reminder of the consequences of prioritizing human interests above all else. As natural disasters grow in frequency and severity, the interconnectedness between humanity and the environment becomes more evident than ever before. This underscores the urgency of adopting a Posthuman perspective, which recognizes the complex relationships between humans and nonhumans and acknowledges the need for more sustainable and inclusive approaches to coexisting with the world around us. According to Braidotti, Posthuman theory serves as “a generative tool to help us re-think the basic unit of reference for the human in the historical moment when the Human has become a geological force capable of affecting all life on this planet” (Braidotti 33).

Posthumanism contends that the very idea of the human as a distinct and autonomous entity is inherently problematic. As effectively illustrated by Donna Haraway in *When Species Meet,* human genomes are present in only about 10 percent of all the cells within the body. The remaining 90 percent contain genomes of various microorganisms, some of which are essential for sustaining life, while others coexist harmlessly. This scientific understanding challenges the notion of the human as a self-contained or exceptional life form; instead, humans are inherently intertwined with and reliant upon a vibrant network of nonhuman life forms for their existence.

Likewise, Darwinian evolutionary theory informs us that human beings emerge from a continuum of nonhuman transformations. Our anatomical features, such as the coccyx bone and the webbing on our hands and feet, bear traces of our primate and aquatic ancestors. In this light, the human condition is inherently Posthuman, or more-than-human, as it is intricately connected to and shaped by nonhuman elements throughout our evolutionary history.
Furthermore, as our reliance on technology grows, we become increasingly intertwined with the inorganic nonhuman world — from medical implants like pacemakers and prosthetic limbs to the algorithms shaping our social media feeds and the virtual realms of the Metaverse. In response to this interconnected reality, Posthumanism prompts us to reexamine the nature of humanity, to give greater consideration to the nonhuman, and to contemplate the permeability of the boundaries between human and nonhuman domains.

Acknowledging this fluidity, Braidotti succinctly encapsulates Posthumanism in *Posthuman Knowledge*:

> The Posthuman is not so much a dystopian vision of the future, but a defining trait of our historical context. I have defined the Posthuman condition as the convergence of Posthumanism on the one hand and post-anthropocentrism on the other, within an

> economy of advanced capitalism. The former focuses on the critique of the Humanist ideal of 'Man' as the allegedly universal measure of all things, while the latter criticizes species hierarchy and anthropocentric exceptionalism. (Braidotti 90)

While Posthumanism may appear as a recent development or a trendy trend in critical theory, its roots extend far beyond the current century. Posthumanist scholars have delved into earlier works to identify instances where Posthumanism is applicable and recognizable, spanning classical literature, Renaissance philosophy, and antebellum antislavery discourse. Many cultures, particularly indigenous communities, have cultivated knowledge systems that inherently acknowledge the interconnectedness between humans and nonhumans.

In its rejection of humanism, Posthumanism also challenges the academic disciplines that owe their origins to humanist principles, notably the Humanities. Traditionally, the Humanities have centred on the exploration of what constitutes human experience. In a Posthuman world, what role do the Humanities play? Does Posthumanism pose a threat to the very disciplines that birthed it, or can we conceive of a concept like the "post-humanities," wherein scholarly pursuits embrace Posthumanist ideas? Posthumanism not only redefines the human but also advocates for anti-anthropocentrism, highlighting the agency of nonhuman entities. Despite efforts by writers, filmmakers, critics, and theorists to depict a Posthuman reality, they often inadvertently revert to humanist or anthropocentric perspectives, or veer towards ideologies like transhumanism and hyper-humanism, which are merely variations of human-centric thought. The challenge of portraying a truly Posthuman world lies in the limitations of our own human consciousness and imagination.

Critics and scholars approach the term posthumanism with a certain level of skepticism, much like they do with other "post-" configurations. Cary Wolfe's book, *What Is Posthumanism?,* intriguingly opens with a definition of humanism sourced from Wikipedia, a move that may seem thematically clever but also raises eyebrows. While the book's title suggests a straightforward exploration of the topic, its initial reliance on internet sources feels somewhat coy, especially considering that Wolfe's clearest statement about humanism only emerges much later in the text.

Despite some initial ambiguity, Wolfe eventually clarifies his key terms, notably emphasizing that posthumanism does not entail a rejection of the human category. Wolfe critiques N. Katherine Hayles's seminal work, *How We Became Posthuman* (1999), arguing that it tends to associate posthumanism with a celebration of disembodiment. In contrast, Wolfe's conception of posthumanism focuses on the embodiment and embeddedness of humans within their biological and technological contexts. His usage of the term rejects the notion of transcendence beyond embodiment; instead, it opposes the fantasies of disembodiment and autonomy inherited from humanism itself. Thus, posthumanism, as defined by Wolfe, is not truly "posthuman" in the sense of moving beyond embodiment but rather opposes the ideals of disembodiment and autonomy perpetuated by humanism.

Throughout his work *What Is Posthumanism?,* Wolfe critiques what he perceives as the imaginative constructs of scientists, artists, philosophers, activists, and others regarding the essence of humanity. As the editor of the Posthumanities series at the University of Minnesota Press, Wolfe is recognized for his exploration of the connection between posthumanism and "the question of the animal," as articulated by Derrida in his later writings on animals (exemplified in "The Animal That Therefore I Am"). Wolfe is a leading figure in posthuman

animality studies, aiming to challenge the perspective of animals as inferior versions of humans and advocating for a shift beyond human-centric paradigms, as also advocated by Marianne DeKoven in her essay *Why Animals Now?* which references Wolfe's work. In his book's central chapter, *Flesh and Finitude: Bioethics and Philosophy of Living,* Wolfe delves into the interconnectedness of the animal question and the broader inquiry of posthumanism, examining the notion of who and what can count as a subject of ethical consideration.

While animality studies, or animal studies (the terminology of which is often debated within this expanding field), is a significant focus spanning multiple chapters in Wolfe's work, it is not the sole subject, nor even the primary one in terms of coverage, of this extensive examination. *What Is Posthumanism?* exhibits a sort of virtuosic versatility across its ten chapters, engaging with a broad array of cultural phenomena and artifacts with what seems like boundless energetic resolve. Wolfe scrutinizes contemporary art (including drawing and installation), Lars von Trier’s notorious musical film and Björk vehicle "Dancer in the Dark" (2000), Rem Koolhaas and Bruce Mau’s urban landscape design "Tree City" for Toronto’s Downsview Park, Ricardo Scofidio and Elizabeth Diller’s architectural project "Blur", Ralph Waldo Emerson’s essays, Wallace Stevens’s philosophical poetry, and Brian Eno and David Byrne’s album "My Life in the Bush of Ghosts" (1981), among other sources of intellectual inspiration. The book seems committed to demonstrating that there is no domain of culture or interaction untouched by the relevance of Posthumanist insights and practices.

Across animality studies, "The Idea of Order at Key West," and Brian Eno, a consistent theme in "What Is Posthumanism?" is a strong emphasis on deconstruction and systems theory. The book centrally revolves around systems theory, particularly what Wolfe identifies as the "second-order" systems theory pioneered by German sociologist Niklas Luhmann, following

the first-order systems theory of figures like MIT's Norbert Wiener, the mathematician known as the founder of cybernetics. While first-order systems theory focused on feedback, second-order systems theory, as Wolfe extensively explores, delves into emergence and self-organization. Wolfe exhibits a profound admiration for systems theory and for Luhmann (1927–98), with significant portions of most chapters dedicated to quotations from Luhmann. If the book has a key message, apart from critiquing "liberal humanism," it might be summarized simply as: systems theory is applicable to a wide range of subjects—animals, Emerson, and beyond—and warrants greater attention from people.

Another key theoretical pillar in Wolfe's book is deconstruction, with Derrida serving as his primary intellectual interlocutor throughout the diverse scope of the study. In his opening chapter titled "Meaning and Event; or, Systems Theory and 'The Reconstruction of Deconstruction,'" Wolfe argues for the essential nature of the "joining of forces between deconstruction and systems theory" (Wolfe 26). According to Wolfe, they converge at a conceptual juncture; within his interpretation of systems, as influenced by Luhmann, they are self-referential and self-generating, making them autopoietic—a term introduced by Chilean biologists Humberto Maturana and Francisco Varela in the early 1970s, which becomes a keyword for Wolfe. Both systems theory and deconstruction, Wolfe contends, revolve around what Luhmann terms "openness from closure" (Wolfe 15). The formal dynamics of self-reference, iterability, and recursively, central to deconstruction, are also echoed in systems theory, which, according to Wolfe, "needs systems theory to help carry out work toward which it has…only gestured" (Wolfe 24). Wolfe's attraction to systems theory—and his dedication to illustrating Luhmann's broad applicability to diverse subjects—stems from its functional rather than ontological nature. Its principles replace the traditional ontological dichotomies of humanism (such as culture/nature, mind/body, spirit/matter, reason/feeling, etc.) with the

functional distinction between system and environment. Moreover, systems theory shifts the focus from "what" questions to "how" questions; it enhances deconstruction by connecting its insights to "historical emergence and the specificity of particular social forms" (Wolfe 26). Although neither deconstruction nor systems theory equates to posthumanism, Wolfe suggests that they can assist in advancing the insights of these methodologies and practices.

This clarity is most evident in Wolfe's discussions of the animal question, an area where he has established expertise. While his chapters on animality studies may sometimes seem unwieldy, they are ambitious, filled with insights and clarity despite their occasional choppiness. Wolfe expertly deconstructs the constitution of the field and its objects of analysis. Although he occasionally targets easy critiques, such as bioethics textbooks, he effectively challenges "prejudice based on species difference," rejecting anthropocentric philosophies like Martha Nussbaum's "rights" discourse and Peter Singer's utilitarian calculus for missing the mark by sidestepping the complexities of ethics in favour of summative formulations. What's particularly fascinating in these chapters is how clearly Posthumanist insights illuminate philosophical inquiries into the moral status of nonhuman animals. Wolfe adeptly navigates nuances of argumentation while addressing fundamental issues, such as the definition of the ethical. Drawing from Derrida, Wolfe characterizes the ethical as a perpetual struggle, an "unforecloseable" practice requiring "eternal vigilance" (Wolfe 96).

Where Wolfe's argumentation becomes less persuasive is in his analysis of contemporary art. Beyond his insightful examinations of animality studies, where he adeptly navigates nuances and acknowledges both strengths and limitations, his later chapters often adopt a binary approach, juxtaposing figures as either good or bad, or simply lauding works as exemplary without sufficiently nuanced critique. This approach results in chapters like "From Dead Meat

to Glow-in-the-Dark Bunnies," where Wolfe discusses drawer and printmaker Sue Coe, known for her project "Dead Meat" (1995), and installation artist Eduardo Kac. Wolfe's lack of sensitivity to the nuances of media aesthetics and the distinct platforms of these artists is evident (it's immediately apparent which artist will be criticized and which will be revered). His analysis of still images lacks vigor and rigor, as he critiques Coe's supposed sentimentality and lack of sophistication in her work's witnessing function, clumsily questioning why photographs of stockyards and slaughterhouses couldn't achieve the same ethical impact. His aversion to Coe's work seems rooted in a fear of the visual, particularly visual display (he criticizes the lack of concealment in her work). Additionally, it's surprising that Wolfe does not engage with Adorno's seminal essay "Commitment," which presents a schema of "committed" artwork versus art that resists its own intentions—a framework that aligns closely with Wolfe's arguments about Coe and Kac. Throughout this chapter, and others, Wolfe's analysis often leans toward privileging the artists' own interpretations and intentions, a tension in his methodology that seems at odds with a truly Posthumanist critical approach.

In his exploration of vision and visuality, Wolfe occasionally falls back on commonplaces about the mastery and centrality of visual perception, describing it as the "human sensory apparatus par excellence" (162) and emphasizing "our lust for the visual and its (humanist) centrality" (163). However, he also highlights instances where artists like Kac disrupt or challenge visuality. For example, Wolfe interprets von Trier's "Dancer in the Dark" as depicting the protagonist's agency growing in the absence of vision. He also connects Luhmann's ideas to Emerson, illustrating observation without reliance on vision. Despite the book's engagement with Haraway, the absence of her nuanced perspective in "The Persistence of Vision" feels significant, like a missed opportunity to add complexity to the discussion. Incorporating her insights could have enriched the analysis in a productive way. Haraway writes, “I would like

to proceed by placing metaphorical reliance on a much maligned sensory system in feminist discourse: vision. Vision can be good for avoiding binary oppositions. I would like to insist on the embodied nature of all vision, and so reclaim the sensory system that has been used to signify a leap out of the marked body" (Haraway 289)

While Luhmann and the insights of systems theory provide plausible frameworks for many chapters in *What Is Posthumanism?,* they are not always compelling. The book's strength lies in its breadth and thorough examination of the system, which Wolfe conceptualizes as a detotalized totality. However, this expansive approach can also be a drawback, leading to repetitiveness despite the evident depth of scholarship. *What Is Posthumanism?* is not necessarily a book to be read cover to cover, but rather one to be sampled, particularly for its passionate engagements with Posthumanist perspectives on animals, which form a central intellectual core of the study. Wolfe's ambition to enact and broaden the scope of systems theory is commendable and ambitious. Ultimately, the book offers a series of propositions about posthumanism, with one of the most fundamental being: " 'we' are not 'we.'…Rather, 'we' are always radically other, already in- or ahuman in our very being—not just in the evolutionary, biological, and zoological fact of our physical vulnerability…but also in our subjection to and constitution in the materiality and technicity of a language" (Wolfe 89). In essence, the human is always heterogeneous to itself.

Humanism and Posthumanism

Humanism and Posthumanism are complex concepts that defy simple categorization. Critics of Humanism should recognize its diverse manifestations, as Fassin distinguishes between Humanism I, II, and III. Similarly, Posthumanism encompasses various approaches and should not be oversimplified or dismissed entirely. While rejecting core elements of Western thought

may seem attractive in academia's pursuit of theoretical novelty, integrating aspects of Modernity's legacy can enrich reflexive critiques. Both Humanism and Posthumanism offer valuable insights that can contribute to a nuanced understanding of contemporary issues.

Posthumanist perspectives are closely tied to broader societal trends, particularly the rapid advancements in artificial intelligence (AI) and biotechnology. These developments are blurring the boundaries between humans and non-humans in ways that are still not fully understood. Concurrently, the rise of Posthumanism coincides with increasing challenges facing the Humanities, including significant funding cuts and diminishing social appreciation. This poses a direct threat to critical thinking and, by extension, democracy itself. As we navigate an uncertain future, it may be prudent to recall some of the core philosophical and ethical values of Humanism.

Instead of completely discarding Humanism, there is value in considering the proposition for a New Humanism put forth in philosophical anthropology by authors like Wentzer and Mattingly and Simonsen. This New Humanism advocates for an approach that does not rely on religious or metaphysical assertions regarding human essence or superiority. It does not align with a secular, anti-religious cultural movement, nor does it view human civilization as progressing through developmental stages. Rather, it calls for a commitment to understanding "the human" as a fundamental and essential concept in both ontological and ethical realms within anthropology and related disciplines.

Viewed through this lens, New Humanism serves as both a critique of the pitfalls of traditional Humanism and a call to prioritize human concerns in a world increasingly threatened by dehumanization. Simultaneously, it advocates for a commitment to global sustainability.

In the context of archaeology, we advocate for an approach focused on studying the human past. However, this is not done to reinforce outdated notions of superiority or progress. Instead, the goal is to comprehend the non-linear, diverse, and interconnected nature of human experiences across time and space, including their relationships with non-human entities. We recognize that human identity is shaped differently throughout history and geography, encompassing a broad spectrum of non-human entities and relationships. Thus, archaeology is not simply the study of material objects; rather, it is the exploration of human existence through material culture and its interactions.

Understanding the complexity and diversity of the past necessitates the use of various theoretical approaches and viewpoints. Many archaeologists already employ a spectrum of perspectives to achieve this understanding. Rather than rigidly dividing between pro- and anti-humanist approaches, fluid methodologies that allow for the integration of different theoretical elements appear more inclusive and productive.

Some Posthumanist perspectives can be integrated by authors who, like us, see value in maintaining the centrality of humans within archaeological studies. As Fassin suggests, there may emerge a post-post-humanism—a critical approach to human worlds that acknowledges the challenges facing both humans and nonhumans. This post-post-humanism would emphasize the importance of human responsibility in shaping the world, despite the ambiguity surrounding the concept of "human" .Posthumanism prompts a necessary re-evaluation of the dominant humanist or anthropocentric account of human identity. It challenges traditional notions of who "we" are as human beings, highlighting the interconnectedness between humans and other entities. In light of Posthumanist theory and culture, our understanding of ourselves and others is continually evolving.

According to humanism, exemplified notably in René Descartes's *Discourse on the Method* (1637), humans hold a central and immutable position in the universe. They are fundamentally distinct from machines, animals, and other non-human entities. Each human shares a unique essence with all others, serving as the origin of meaning and the sovereign agent of history. Human nature governs their behavior and beliefs, positioning humans as exceptional, autonomous beings above the world around them. "Man" is the measure by which all things are judged, a problematic notion deeply ingrained in descriptions of the human condition.

In contrast, posthumanism arises from the acknowledgment that "Man" is not a privileged center. Humans are not entirely distinct from animals, machines, or other forms of the "inhuman." They are products of historical and cultural contexts that challenge the notion of a universal, timeless human essence. Humans are shaped as subjects by linguistic systems that exist independently of them, and they lack the ability to direct world history towards a singular human goal. Posthumanism emerges from the theoretical and practical shortcomings, even impossibilities, inherent in humanism. It stems from the realization that the human is relative, not absolute.

Chapter 1.2: Science Fiction and Posthumanism

Science fiction, often abbreviated as SF or sci-fi, is a genre of fiction primarily concerned with exploring the impact of actual or imagined science on society or individuals. The term "science fiction" gained popularity, if not originated, in the 1920s through the efforts of Hugo Gernsback, a prominent advocate for the genre. The prestigious Hugo Awards, established in 1953 by the World Science Fiction Society, are named in his honor and recognize excellence in SF writing, editing, illustration, film, and fanzines.

Although themes common to modern science fiction were occasionally addressed by writers in antiquity, their stories lacked the scientific and technological plausibility that distinguishes SF from earlier speculative writings and other contemporary genres like fantasy and horror. The formal emergence of the SF genre occurred in the West, driven by the social upheavals of the Industrial Revolution, which prompted writers and intellectuals to speculate about the future impact of technology. By the early 20th century, standard SF themes had developed, including space travel, robots, alien beings, and time travel. The characteristic elements of science fiction encompass prophetic warnings, utopian visions, elaborate scenarios of imaginary worlds, catastrophic events, fantastic journeys, and political commentary presented through various literary forms such as sermons, meditations, satires, allegories, and parodies. SF literature reflects a wide range of attitudes towards technological and social change, ranging from cynical despair to transcendent optimism.

Science fiction writers often draw inspiration from new scientific and technological developments to envision radical techno-social changes that challenge readers' cultural norms and expand their consciousness. This approach was exemplified by H.G. Wells, a pioneer of the genre and one of its greatest writers. Wells, influenced by the ideas of 19th-century scientist T.H. Huxley, infused his literary works with radicalism, aggressive satire, utopian visions, and dire predictions of technological destruction. The dystopian strain within science fiction is evident in the works of T.H. Huxley's grandson, Aldous Huxley, who wrote the classic dystopian novel "Brave New World" (1932). Similarly, H.P. Lovecraft's creations, such as the Necronomicon, evoke a sense of dread and horror, while Philip K. Dick's metaphysical narratives explore themes of identity and reality. Olaf Stapledon's novels offer a cosmic perspective, depicting human history as fleeting amidst the vast expanse of space and time.

In its early days, science fiction was considered disreputable, particularly in the United States, where it initially appealed to a juvenile audience. However, following World War II, the genre gained prominence worldwide, fueled by scientific breakthroughs like nuclear energy, space travel, and cloning. By the 21st century, science fiction had evolved into a vibrant subculture, with avid fans enjoying a plethora of SF-related products and activities, from books and movies to conventions and collectibles.

The Evolution of Science Fiction

The roots of science fiction extend far into the past, with early examples dating back centuries. One such example is the 2nd-century CE Syrian-born Greek satirist Lucian, who, in his work "Trips to the Moon," describes voyages to the Moon. These fantastical tales served as a popular platform for satirizing government, society, and religion, allowing writers to evade censorship and persecution. However, the clearest precursor to the science fiction genre emerged in the 17th century with the swashbuckler Cyrano de Bergerac. In his writings, Cyrano depicted a voyage to the Moon, where the protagonist discovers a utopian society free from war, disease, and hunger. Despite facing expulsion for blasphemy, the protagonist's journey continues to the Sun, where he stands trial for humanity's crimes. Cyrano's works aimed to make the impossible seem plausible and had a significant influence on later satirists and social critics.

Two notable works influenced by Cyrano's style include Jonathan Swift's "Gulliver's Travels" (1726) and Voltaire's "Micromégas" (1752). These works feature bizarre creatures, unconventional settings, and biting satire, reflecting Cyrano's impact on the development of science fiction. Louis-Sébastien Mercier's "L'An deux mille quatre cent quarante" ("The Year 2440"; Memoirs of the Year Two Thousand Five Hundred), written around 1771, serves as another precursor to science fiction. This French work of political speculation presents a

utopian society set in the 25th century, where science is revered. Unlike previous utopian depictions, which often took place in mythical lands or distant futures, Mercier's novel postulates a utopian society on Earth within a foreseeable future.

The book faced swift censorship by the French ancien régime, which recognized Mercier's subversive revolutionary sentiments masked within his futuristic fantasy. Despite the ban, "L'An deux mille quatre cent quarante" became an international bestseller, owned by notable figures like Thomas Jefferson and George Washington. Mercier's novel stands as an early example of science fiction's ability to challenge contemporary societal norms and explore speculative futures.

The 19th and Early 20th Centuries Proto-Science Fiction

In 1818, Mary Wollstonecraft Shelley made a significant contribution to the evolution of science fiction with the publication of "Frankenstein: or, The Modern Prometheus." Shelley is often hailed as the "mother of science fiction" for her innovative approach in the novel. Departing from the supernatural elements typical of the Gothic genre, she crafted a protagonist who is a practicing "scientist," albeit before the term "scientist" was officially coined in 1834. Dr. Victor Frankenstein's interest in galvanic electricity and vivisection reflects the advanced technologies of the early 19th century.

Despite the fantastical concept of reanimating corpses, Shelley imbued her narrative with a sense of scientific plausibility, captivating readers with a masterful blend of wonder and fear. "Frankenstein" has endured through generations, remaining in print since its initial publication and inspiring numerous film adaptations, beginning with a silent version in 1910. The novel's themes and imagery, particularly the character of Frankenstein's monster, continue to resonate

into the 21st century. For instance, opponents of genetically engineered food have coined the term "Frankenfood" to express concerns over the unforeseen consequences of human manipulation of food sources. Shelley's work thus stands as a timeless testament to the enduring power of speculative fiction.

Ray Bradbury, a prominent science fiction writer, held Edgar Allan Poe in high regard, particularly appreciating Poe's story "The Fall of the House of Usher." Bradbury admired Poe's ability to create atmosphere and evoke a sense of dread, which he believed was essential to the science fiction genre.In Bradbury's view, "The Fall of the House of Usher" exemplifies Poe's mastery of psychological horror and Gothic storytelling. Bradbury praised Poe's use of language and imagery to convey a sense of unease and impending doom. He believed that Poe's themes of madness, decay, and isolation resonated deeply with readers and contributed to the enduring popularity of the story.

Additionally, Bradbury appreciated Poe's exploration of the human psyche and existential themes, which he believed were essential to the science fiction genre. He saw *The Fall of the House of Usher* as a precursor to modern science fiction, demonstrating the genre's ability to delve into the complexities of the human condition and explore the boundaries of reality. Overall, Ray Bradbury considered Edgar Allan Poe to be a master of the macabre and a significant influence on his own work in the science fiction genre. He saw Poe's storytelling techniques and thematic concerns as timeless and relevant to the ongoing evolution of speculative fiction.

Classic British Science Fiction

During the 1880s and 1890s, both Great Britain and France experienced a period of heightened creative imagination. This era saw the emergence of innovative literary works that pushed the

boundaries of traditional storytelling. Notable landmarks of this period include Robert Louis Stevenson's *The Strange Case of Dr. Jekyll and Mr. Hyde* (1886) and H.G. Wells's remarkable trio of novels: *The Time Machine* (1895), *The Invisible Man* (1897), and *The War of the Worlds* (1898).

These works introduced fantastical events that appeared scientifically plausible, disrupting the ordinary routines of daily life. By utilizing scientific principles and concepts, authors like Stevenson and Wells challenged the established norms and values of Victorian society. Themes such as space travel, time travel, utopias, dystopias, and encounters with alien beings became prominent features of British literature at the turn of the 20th century. Overall, this period marked a significant shift in storytelling, as authors used science fiction to explore new realms of possibility and imagination, leaving a lasting impact on literature and popular culture.

The late 19th century witnessed a strong inclination towards technology and laissez-faire capitalism, prompting a reaction from those yearning for a return to a simpler, preindustrial way of life. William Morris's *News from Nowhere* (1890) epitomized this sentiment by envisioning a pastoral utopia set in the 21st century, blending socialist ideals with the serene values of the 14th century. While some critics dismissed Morris's work as merely a communist manifesto, others, like C.S. Lewis, praised its style and language. Lewis, along with authors like Lord Dunsany, E.R. Eddison, and J.R.R. Tolkien, infused pastoral settings with heroic and mythic elements, often drawing from a Christian ethos. This trend wasn't limited to Britain; in the United States, William Dean Howells explored similar themes in his novels *A Traveller from Altruria* (1894) and *Through the Eye of the Needle* (1907), depicting a utopian society based on a fusion of Christian principles and the U.S. Constitution, termed "ethical socialism." Although heroic fantasy remained a niche interest for many decades, it experienced a surge in

popularity during the latter half of the 20th century, becoming a dominant genre in bookstores and book clubs. This shift reflects a broader cultural fascination with escapist literature and the enduring appeal of idealized worlds and epic adventures.

The “Golden Age” of Science Fiction

Hugo Gernsback, a Luxembourg native who settled in New York City, built his career by publishing technical magazines aimed at radio and electrical enthusiasts. Recognizing the emerging interest among young readers in fictional tales of thrilling technological marvels, Gernsback began republishing works by authors like Verne, Poe, and early H.G. Wells in abundance. His magazine, Amazing Stories, which he founded in 1926, paved the way for numerous imitations and successors, including his own subsequent periodicals like Science Wonder Stories, Air Wonder Stories, and Scientific Detective Monthly (later renamed Amazing Detective Tales), along with a flood of other pulp publications. This prolific output led many, particularly Americans, to incorrectly believe that science fiction was an American invention.

By 1934, the readership of science fiction in the United States had grown large enough to support the formation of the Science Fiction League, a fan organization sponsored by Gernsback himself, with chapters also established in the United Kingdom and Australia. Like a form of secret society, science fiction fandom spread across the nation, with enthusiastic young fans seeing their own stories published and eventually transitioning into seasoned professionals within the SF pulp industry. Various literary groups, such as New York's Futurians, Milwaukee's Fictioneers, and the Los Angeles Science Fiction League, engaged in ideological debates through amateur presses. Conventions became a regular occurrence, fostering both rivalries and friendships, as science fiction embarked on a journey toward broader acceptance, though not necessarily mainstream respectability.

John W. Campbell, Jr., an influential figure in science fiction, served as the editor of Astounding Science Fiction from 1937 to 1971. Campbell's insistence on scientific accuracy (he had studied at the Massachusetts Institute of Technology and earned a B.S. in physics from Duke University) and his attention to literary style greatly influenced nearly every major American science fiction writer of his time. Though notable as a writer himself, particularly for his story "Who Goes There?" (1938), which inspired film adaptations such as "The Thing from Another World" (1951) and "The Thing" (1982 and 2011), Campbell is primarily remembered for his editorial work. His tenure at Astounding, particularly from roughly 1938 to 1946, is often referred to as science fiction's golden age due to the frequent publication of stories by renowned authors like Robert Heinlein, Isaac Asimov, A.E. Van Vogt, and Theodore Sturgeon.

Despite this acclaim, some literary critics humorously countered that the "golden age" of science fiction is actually the age of 14, jokingly referring to the typical age when many fans become enamored with the genre, often overlooking its literary merits in favor of its new scientific ideas. However, even critics acknowledge that, despite its sometimes juvenile nature, especially in its American incarnation, science fiction has served as a profound source of scientific wonder and inspiration, motivating generations of scientists and engineers to pursue the dreams they cherished in their youth.

Soviet Science Fiction

The expansive world of Soviet state publishing rivaled the production scale of U.S. science fiction. The Soviet promotion of "scientific socialism" provided a fertile ground for the genre within Soviet society, offering writers numerous opportunities for relatively unrestricted expression due to its often allegorical nature.

Soviet science fiction encompassed a wide range of subgenres, including the Red Detective stories centered on Marxist world revolution and numerous Cosmonaut space operas. Among its notable achievements was the Constructivist silent film "Aelita" (1924), adapted from Aleksey Tolstoy's 1923 novel of the same name. The film's imaginative set and costume designs profoundly influenced Fritz Lang's "Metropolis" (1927), while its depiction of an Earthman leading a Martian proletarian uprising against an oppressive regime resonated in the 1930s American film serial "Flash Gordon."

Another significant work from this period was Yevgeny Zamyatin's "My" (written in 1920, circulated in manuscript, and not published in Russian until 1952; translated into English as "We" in 1924), which garnered international readership despite the author's exile under Joseph Stalin due to its satirical boldness. Zamyatin's portrayal of life under a totalitarian state served as a major influence on two other iconic dystopian novels of the 20th century: Aldous Huxley's "Brave New World" (1932) and George Orwell's "Nineteen Eighty-Four" (1949; adapted into films in 1956 and 1984).

Science Fiction after World War II: New directions in Fiction

After World War II, publishers shifted away from pulps towards paperback books and digest-sized magazines. Despite this change, science fiction found a new home in small specialty presses, notably in two new digest magazines: The Magazine of Fantasy and Science Fiction (1949–) and Galaxy Science Fiction (1950–80), which thrived. The genre's popularity also surged following the atomic bomb's creation in 1945 and the launch of Sputnik in 1957.

Under the editorial guidance of these new SF digests, American science fiction of the 1950s evolved to become more sophisticated, urbane, and satirical. The raw enthusiasm for

technology diminished, making way for more anthropologically-based speculation about societies and cultures. Many books and films of the era reflected Cold War-induced fear and paranoia. Notable works include Walter M. Miller's A Canticle for Leibowitz (1960), which portrays the efforts of a Catholic religious order to preserve knowledge after a post-nuclear holocaust, and Invasion of the Body Snatchers (1955), which taps into communist paranoia with its tale of ordinary people being replaced by look-alike beings.

While science fiction films of the period tended to be cheaply produced and formulaic, the genre's fiction flourished with authors like Robert Heinlein, Isaac Asimov, Ray Bradbury, and later, Arthur C. Clarke enjoying worldwide fame and unmatched popularity. Although Anglophone science fiction dominated during the 1950s and '60s, writers from other countries, such as Stanisław Lem from Poland and Italo Calvino from Italy, also contributed to advancing the genre.

In Soviet Russia, the political and cultural thaw under Nikita Khrushchev in the 1950s, combined with the country's prominence in the space race, led to a surge in Soviet science fiction. Writers like Ivan Yefremov, Kir Bulychev, and the Strugatsky brothers became renowned figures in Russian-language science fiction. A similar surge occurred in Chinese science fiction following the end of the Cultural Revolution (1966–76), with Chinese publications boasting massive readerships.In Britain and the United States, editorial polemics by figures like Michael Moorcock and Harlan Ellison spearheaded a rebellious New Wave movement in science fiction. This movement, characterized by a countercultural disregard for taboos, an interest in mind-altering drugs and Eastern religions, and experimental literary styles, pushed the genre in new directions. While much of the avant-garde experimentalism faded by the late 1970s, the New Wave significantly expanded the subgenre of "soft" science

fiction, which focuses more on exploring social aspects and "inner space" rather than purely technological elements.

SF Cinema and TV

In contrast to earlier decades, traditional science fiction experienced unprecedented popularity on television and in film during the late 1960s and early '70s. American SF television series like Star Trek (1966–69), created by Gene Roddenberry, potentially paved the way for serious science fiction cinema adaptations. Films such as Fahrenheit 451 (1966), 2001: A Space Odyssey (1968), and Charly (1968), based on works by Bradbury, Clarke, and Daniel Keyes respectively, garnered critical acclaim and drew prominent directors and actors to the genre. The blockbuster success of films like Star Wars (1977), Close Encounters of the Third Kind (1977), and E.T.: The Extra-Terrestrial (1982) demonstrated that science fiction had transcended its earlier status as drive-in B-films. By 1982, U.S. box-office receipts for science fiction, fantasy, and horror films skyrocketed from 5 percent to nearly 50 percent, solidifying science fiction as one of Hollywood's most significant movie genres.

Ridley Scott's Blade Runner (1982), based on Philip K. Dick's Do Androids Dream of Electric Sheep? (1968), anticipated the rise of cyberpunk in the 1980s. This subgenre combined a fascination with cybernetics with a socially conscious "punk" ethos, blending elements of both soft and hard science fiction. William Gibson's Neuromancer (1984) introduced the term "cyberspace" to describe a computer-mediated virtual world, further defining cyberpunk literature. Other notable works in this subgenre include John Shirley's City Come A-Walkin' (1980), Bruce Sterling's Schismatrix (1985), and Lewis Shiner's Deserted Cities of the Heart (1988). The advent of state-of-the-art special effects in American SF films after the 1970s solidified Hollywood's dominance in the genre, showcasing its technical superiority over other

cinemas worldwide. Films like the Terminator series, the Alien series, and the Jurassic Park series became global box office hits, further cementing the genre's popularity.

Meanwhile, heroic fantasy, previously a niche interest, surged in the 1990s, becoming a dominant subgenre known as "sword and sorcery." The Science Fiction Writers of America, the largest professional association in the field, reorganized as the Science Fiction and Fantasy Writers of America, Inc., reflecting the growing prominence of fantasy literature. The unprecedented success of fantasy works like J.K. Rowling's Harry Potter series and J.R.R. Tolkien's Lord of the Rings trilogy led to wildly successful film adaptations, solidifying fantasy's place in popular culture.

Major Science Fiction Themes

Utopias and dystopias

Sir Thomas More’s insightful satire Utopia (1516), deriving its title from a wordplay between the Greek terms "eutopia" (meaning "good place") and "outopia" (meaning "no place"), provided a reasoned examination of 16th-century England through rational and humanistic lenses. Utopia presented an idealized society within a hypothetical realm, allowing More to engage in a thought experiment without directly challenging established interests. Since More’s era, utopian ideals have primarily appealed to marginal political thinkers who lack practical influence within contemporary power structures. In such contexts, the publication of speculative thought experiments that expose underlying dissatisfactions can provoke profound insights and garner widespread public interest.

Utopias can take various forms, ranging from extravagant fantasies to nostalgic retreats, biting satires, and thinly veiled political treatises disguised as novels. Society's appreciation for

utopian visions has fluctuated over time. The collapse of Soviet communism drastically shifted the perceived value of utopian literature from serious social engineering to mere irrelevance gathering dust. The boundary between visionary reform and fringe political ideology is often tenuous. Utopian ideals flourished during the 19th century's fascination with scientific progress. Many philosophers, including Karl Marx, envisioned a future where historical forces and the accumulation of rational knowledge would culminate in a final "end state" of history. According to this perspective, the discerning futurist only needed to identify and nurture emerging progressive trends while dismantling feudal superstitions to bring about social perfection as inevitably as the passage of time.

Notable fictional works in this vein include Edward Bellamy’s Looking Backward (1888), where a protagonist awakens in the year 2000 to find a society where industry is nationalized, wealth is equitably distributed, and class divisions are abolished under the ideology of Nationalism. Bellamy's ideas spurred the formation of Nationalist clubs and influenced socialist movements, such as Eugene V. Debs' Populist Party. Conversely, William Morris countered Bellamy's vision with News from Nowhere, portraying a British pastoral utopia in reaction to the rationalized, bureaucratic industrial state.

German politician Walther Rathenau contributed technological utopias, rejecting nationalization in favor of increased worker participation in management in works like Von Kommenden Dingen (1917; In Days to Come) and Der neue Staat (1919; The New Society). Rathenau's ideas faced opposition, and he was assassinated by anti-Semitic nationalists during the tumult of Weimar society.

H.G. Wells emerged as a fervent socialist advocate, envisioning rationalized, technocratic societies in works like A Modern Utopia (1905), Men Like Gods (1923), The Open Conspiracy: Blue Prints for a World Revolution (1928), and The Shape of Things to Come (1933). However, Wells lived to witness the atomic bomb, and his final essay, "Mind at the End of Its Tether" (1945), grimly predicted humanity's demise due to its perceived inability to manage its own fate. In B.F. Skinner's Walden Two (1948), the members of a small communal society are conditioned through the use of rewards and punishments. Skinner became more explicit in Walden Two Revisited (1976), expressing that Russia after fifty years was not a model to emulate, and while China might be closer to the solutions he discussed, envisioning a communist revolution in America was difficult.

Technocratic utopias, such as those imagined by Wells and Skinner, face a significant conceptual challenge: determining where, how, and why the process of "improvement" should cease. It becomes challenging to advocate for "progress" when depicting a world where further advancement seems impossible. This dilemma doesn't apply to pastoral utopias, which reject technology in favor of a timeless world characterized by stability and peace. These utopias typically serve as an imaginative escape from the technological forces shaping the author's real-world environment. They often depict quiet, reflective village settings devoid of industrial elements like smokestacks, newspapers, loans, and traffic jams. Major works in this genre include Morris's News from Nowhere, Samuel Butler's satirical Erewhon (1872), James Hilton's Lost Horizon (1933; adapted into films in 1937 and 1973), Aldous Huxley's psychedelic Island (1962), and Ernest Callenbach's environmentally conscious post-industrial Ecotopia (1975). Ursula K. Le Guin's The Dispossessed (1974) portrays an anarchist state striving to uphold its ideals, but like many modern science fiction utopias, it emphasizes ambiguity rather than asserting that history supports the author's views. Kim Stanley

Robinson's Martian Trilogy—Red Mars (1992), Green Mars (1994), and Blue Mars (1996)—depicts settlers on Mars establishing an idealistic pioneer society adapted to Martian conditions.

One of the central challenges of utopian fiction is the absence of dramatic conflict, as a state of perfection is inherently uneventful. Dystopia serves as the counterpoint to utopia, replacing hopes for improvement with fears of the dire consequences of present-day actions. Utopias often present a placid façade of false benevolence, while dystopias portray a more sinister reality. Utopian narratives commonly feature "modern" characters undergoing a transformative experience to adopt the utopian mindset, after which the narrative often stagnates. In contrast, dystopian stories frequently involve a modern character being pursued, persecuted, degraded, and sometimes killed. For instance, in Huxley's Brave New World, an intellectual dissident is targeted and exiled by self-serving rulers intent on maintaining their oppressive status quo. Orwell's Nineteen Eighty-Four famously depicts a future where history is halted, epitomized by the image of "a boot stamping on a human face—forever." Terry Gilliam's satirical film Brazil (1985) blends elements of Orwellian dystopia with Kafkaesque absurdity.

E.M. Forster's widely anthologized story The Machine Stops (1909) serves as a counterpoint to Wellsian optimism about technology. It portrays a soulless, interconnected world controlled by push-button convenience. The sudden collapse of Forster's dystopian society propels the plot forward, a narrative trope so common in science fiction that it's known as the "house-of-cards" plot. In Norman Spinrad's darkly humorous novel The Iron Dream (1972), an embittered Adolf Hitler emigrates and reinvents himself as an American pulp science fiction author, yielding a strangely persuasive narrative. Whether portraying idyllic or sinister worlds, heavenly or apocalyptic scenarios, both utopias and dystopias shared a striking sense of being

detached from historical context. In these narratives, all solutions were inherently permanent, leading to either triumph or calamity destined to endure for at least a millennium.

Alternative Societies

By discarding the notion that time inherently leads to either improvement or deterioration, the range of possibilities in speculative fiction expands dramatically. Science fiction writers have invested considerable effort in imagining societies that are neither utopian nor dystopian but rather intriguingly different, fundamentally alien to human experience.

Robert Heinlein's widely celebrated novel Stranger in a Strange Land (1961) follows the journey of a prophet and social reformer raised by Martians. Unbound by earthly conventions, the story's enigmatic protagonist boldly challenges nearly every traditional human custom related to sex, death, religion, and wealth. Unsurprisingly, Heinlein's work became an emblem of countercultural defiance in the 1960s.

Many science fiction authors, like Heinlein, derive satisfaction from subverting fundamental aspects of the human condition. John Varley's The Ophiuchi Hotline (1977) serves as a repository of methods to disrupt established human norms: characters experience death and rebirth through cloning, effortlessly change genders, create backups of their personalities, and undergo radical surgical procedures—all within a spacefaring society where such practices are considered ordinary. William Gibson's Neuromancer, as previously mentioned, garnered attention for its vivid portrayal of a postnational world order dominated by feudal global corporations. In this setting, immensely powerful artificial intelligences, controlled by a select few, preside over a fractured society teeming with outlaw geneticists, cybercriminals, vibrant street gangs, and even orbiting Rastafarians. Neal Stephenson's Snow Crash (1992) presents a vision of a future society that has forsaken traditional land-based governance in favor of a

system characterized by electronic cults and nomadic interest groups. In this globalized world, the Mafia operates pizza delivery services, the CIA functions as a profit-driven entity, Hong Kong has evolved into a network of capitalist Chinatown franchises, and online existence often holds greater significance than real-world experiences.

Sex and Gender

Due to the inherent challenges of legislating relations between genders through conventional political means, and the ability of fiction to explore a multitude of new social arrangements, science fiction has often been closely aligned with feminism, a relationship that has been mutually beneficial. Early examples of feminist utopias include Mary Bradley Lane's Mizora (1890), which presented a society advocating feminist ideals, and Charlotte Perkins Gilman's Herland (1915), envisioning a community of women reproducing through parthenogenesis.

This interest extended to male authors as well, with Theodore Sturgeon's Venus Plus X (1960) examining gender boundaries in a world where sexuality and reproduction are surgically manipulated. Ursula K. Le Guin's The Left Hand of Darkness (1969) provided a nuanced exploration of gender, depicting a society where individuals are genderless but can adopt either male or female characteristics temporarily. Shulamith Firestone's feminist treatise, The Dialectic of Sex: The Case for a Feminist Revolution (1970), though not originally aimed at a science fiction audience, found resonance within the genre. It proposed that true liberation for women could only be achieved through the industrialization of childbirth and child-rearing, influencing works like Marge Piercy's Woman on the Edge of Time (1976) and Suzy McKee Charnas's Motherlines (1978).

While much feminist science fiction hoped for gender justice and speculated "if only," a dystopian strain emerged, suggesting that relationships between genders could deteriorate to catastrophic levels. Katharine Burdekin's Swastika Night (1937) portrayed a world dominated by Nazi cults of hyper-masculinity, while Joanna Russ's The Female Man (1975) critiqued the imposition of femininity by oppressors. Margaret Atwood's The Handmaid's Tale (1985), drawing from contemporary anxieties, depicted a dystopian society ruled by a repressive religious regime. This bleak world ultimately collapses under its own misogyny, reflecting a broader intellectual engagement with historical processes that transcends traditional utopian and dystopian frameworks.

Alien Encounters

Encounters with nonhuman intelligence in literature have always been speculative, given that human beings are currently the only known form of fully sentient life. In the 17th and 18th centuries, writers produced numerous tales of travel to and from other inhabited worlds, but these works often portrayed extraterrestrial beings as merely variations of humans, as seen in Voltaire’s Micromégas, where Saturnians are depicted as giant humans rather than truly alien entities.

As knowledge of natural history advanced, writers began to imagine that life on other planets could evolve differently from life on Earth. Astronomer and science popularizer Camille Flammarion's 1864 work, Les Mondes imaginaires et les mondes réels (“Imaginary Worlds and Real Worlds”), introduced the idea of otherworldly forms of life evolving within unique biological environments. This concept was first explored in fiction by J.H. Rosny Aîné's short story Les Xipéhuz (1887), which depicted an evolutionary conflict between prehistoric humans and a threatening crystalline life-form.

Initially, aliens were often portrayed as Darwinian competitors to mankind, as exemplified in H.G. Wells's work. In The War of the Worlds (1898), Wells depicted Martians as slimy, bloodsucking creatures with vast and indifferent intellects, presenting a chilling vision of alien intelligence. The success of Wells's novel was heightened by its implication that the technologically advanced British Empire was now facing the consequences of its own imperialistic actions. Orson Welles's 1938 radio adaptation of The War of the Worlds famously caused panic among listeners who mistook it for a genuine news broadcast, making it one of the most iconic radio dramas of all time.

Wells' The First Men in the Moon (1901) introduced antlike aliens, creating a sinister lunar counterpart to human society. This sparked a wave of alien invasion stories characterized by strident tones and predictions of impending doom. The iconic "bug-eyed monster" became a staple of science fiction during this period. Stanley G. Weinbaum's A Martian Odyssey (1934) offered a more nuanced portrayal of aliens, presenting beings whose behavior, while whimsical and colorful, remained profoundly enigmatic to human understanding. Similarly, Raymond Z. Gallun's Old Faithful (1934) depicted Martians as generally decent individuals. Even authors of "serious" literature like Olaf Stapledon explored alien life forms in works such as Star Maker (1937). Stapledon's novel, more a philosophical treatise than a traditional narrative, delved into themes of science, human nature, and the divine, inspiring later science fiction writers like Arthur C. Clarke.

Aliens present unique challenges as dramatic characters. If too humanlike, they lose their impact; if genuinely alien, they defy traditional narrative conventions. Stanisław Lem's Solaris (1961) exemplifies this dilemma, with its alien sentience so fundamentally different from humanity that it induces hallucinations and mental breakdowns in human observers.

Hal Clement's Mission of Gravity (1954) stands out for its portrayal of intelligent centipede-like creatures navigating a hostile alien environment, highlighting the difficulty of imagining truly alien beings.

Given these challenges, science fiction often focuses on "first contact" narratives, such as those depicted in Steven Spielberg's Close Encounters of the Third Kind (1977), allowing audiences to experience the thrill of encountering the unknown without delving into the complexities of ongoing interactions with aliens.

In science fiction, the motif of alien invasions endures, as seen in films like Alien (1979) featuring ruthless, parasitic creatures. However, a distinct and increasingly prevalent trend portrays aliens not as adversaries, but as collaborators, colleagues, and even romantic interests. This shift is evident in works such as various iterations of Star Trek and Alien Nation, where aliens take on roles ranging from science officers to love interests. Additionally, human characters undergoing extensive genetic modification, as depicted in Paul Di Fillipo's Ribofunk (1996), can be as exotic as aliens themselves.

Aliens, as products of evolution on other worlds, and intelligent robots, as mechanical creations, both serve similar thematic purposes in science fiction. The concept of robots was first introduced by Czech playwright Karel Čapek in his play R.U.R. (1921), where robots, much like standard alien invaders, outcompete humanity in the realm of industrial production and threaten its existence. Robots continue to serve as central figures in science fiction, serving as catalysts for thought experiments that prompt discussions about humanity's role in a technologically driven world. Isaac Asimov, in particular, dedicated significant effort to developing an ethical framework for humans and robots. His renowned Three Laws of Robotics are as follows: "(1) a robot may not injure a human being or, through inaction, allow a human

being to come to harm; (2) a robot must obey the orders given it by human beings except where such orders would conflict with the First Law; (3) a robot must protect its own existence as long as such protection does not conflict with the First or Second Law."

Asimov crafted a compelling series of novels and stories based on these principles, despite their never being implemented for real-world robotic control. In reality, 21st-century robotics are exemplified by semi-autonomous military devices like cruise missiles, designed to self-destruct upon reaching their targets and inflict substantial damage. Lester del Rey's short story "Helen O'Loy" (1938) provides a classic exploration of the robot as a reflection of humanity. Helen, the titular character, distinguishes herself from earlier female robots like the sinister Maria from the film Metropolis (1927) by establishing her own sense of womanhood. She accomplishes this by marrying her inventor and ultimately sacrificing her mechanical existence upon his death.

In contrast, male robots in works such as Tanith Lee's The Silver Metal Lover (1981) and Marge Piercy's He, She, and It (1991) often serve as distorted reflections of human men, reflecting the complexities and challenges of gender and identity. Humanoid robots, or androids, remain popular fixtures in science fiction cinema, appearing in numerous productions such as Westworld (1973), The Stepford Wives (1975 and 2004), Star Wars (1977), Bicentennial Man (1999), A.I. Artificial Intelligence (2001), and I, Robot (2004). These portrayals continue to captivate audiences with their exploration of the relationship between humanity and artificial intelligence.

Space Travel

Flight into outer space stands as one of the quintessential themes of science fiction. Jules Verne's groundbreaking work, De la terre à la lune (1865; From the Earth to the Moon), was

the first to approach space travel as a coherent engineering challenge, explicitly addressing issues such as the absence of gravity and atmosphere. Verne's narrative, however, didn't provide a plausible method for landing on the lunar surface; instead, his characters pass by the Moon in close proximity, marveling at its features from afar. This early conceptualization of space travel focused on the sheer exhilaration of venturing beyond Earth's confines, embracing the possibilities of the extraterrestrial realm.

Georges Méliès further immortalized the concept of space travel in cinema with his fictional trip to the Moon captured on film in 1902. This pioneering cinematic endeavor marked the birth of science fiction cinema, coinciding with the emergence of cinema itself.

Following the actual Moon landing in 1969, a certain disenchantment with the theme of space travel naturally ensued, as the reality of human life in outer space proved to be far from idyllic. Rather than the swashbuckling adventurers often depicted in science fiction, astronauts and cosmonauts were highly trained technicians whose primary concern was the preservation of their equipment. Their daily existence involved grappling with strict limitations in fuel, power, water, oxygen, and privacy, all within the confines of cramped living quarters—more akin to submarine service than the romanticized luxury of space travel.

While some science fiction works embrace this nuts-and-bolts realism of space travel, they remain a minority taste. More commonly, the genre glosses over the unromantic aspects of space travel, often employing devices like the "faster-than-light drive" or "warp drive" to enable adventures on alien planets. While such technologies are scientifically implausible, they are essential for the fantastical worlds and narratives that define science fiction.

A significant portion of creative energy within the genre has been devoted to "space opera," characterized by grand, romanticized narratives set on a galactic scale. The Star Wars film cycle, spanning several decades, stands as a prime example of space opera, offering a spectacle

of "widescreen baroque" that combines elements of pulp fiction with advanced scientific technology. In the Star Wars universe, audiences encounter not only futuristic technology but also princesses, smugglers, robots, sword fights, mystical teachings, levitating mentors, monsters, barroom brawls, heroes with mysterious origins, elaborate chase scenes, and gothic death traps—all contributing to its enduring popularity and appeal.

In a manner akin to the black-clad figures orchestrating the props in Japanese Noh theatre, enthusiasts of space opera readily and wholeheartedly embrace its fantastical elements. Throughout the 20th century, writers of space opera have occupied esteemed positions within the realm of science fiction. Renowned figures such as E.E. ("Doc") Smith, Edmond Hamilton, John W. Campbell, Jack Williamson, A.E. Van Vogt, Jack Vance, Anne McCaffrey, Lois McMaster Bujold, and C.J. Cherryh have contributed significantly to the genre's legacy.

Far from being stagnant, space opera continues to thrive, with a particularly extravagant form emerging as the hallmark of the New British Science Fiction movement in the 21st century. This movement represents a departure from the introverted post-imperial insularity that had previously characterized British science fiction. Instead, a group of writers, including Iain M. Banks, Stephen Baxter, Justina Robson, Peter F. Hamilton, Charles Stross, and Ken MacLeod, have reinvigorated the genre with vibrant bursts of star-smashing neo-cosmology, propelling space opera into new and exciting territories.

Time Travel

Time travel serves as a captivating complement to space exploration, allowing for journeys through historical epochs and speculative futures. A prototype of the time travel narrative can be found in Charles Dickens's A Christmas Carol (1843), where the Ghost of Christmas Yet to Come transports Scrooge to witness the consequences of his actions. However, it was H.G.

Wells's The Time Machine (1895) that introduced the idea of mechanical time travel, laying the foundation for the science fiction version of this concept.

The allure of time travel lies in its potential to explore processes of historical change and reshape the course of events. Stories like Mark Twain's A Connecticut Yankee in King Arthur's Court (1889) and L. Sprague de Camp's Lest Darkness Fall (1941) offer intriguing contrasts between modernity and the past, often with humorous or thought-provoking results. However, attempts to alter historical events, as depicted in Stephen King's 11/22/63 (2011), often lead to unforeseen consequences. Time tourism, a subgenre within time travel narratives, explores the repercussions of altering past events. Examples include Ray Bradbury's A Sound of Thunder (1952) and Robert Silverberg's Up the Line (1969), where small actions in the past have significant consequences for the future.

Another variant of the time travel theme involves objects displaced in time, such as the futuristic doctor's bag in C.M. Kornbluth's The Little Black Bag (1950). Additionally, narratives like Poul Anderson's Guardians of Time (1960) and Fritz Leiber's The Change War (1978) depict warring factions of time travelers battling across different time periods. A one-way trip into the future, often through suspended animation, is a common trope in time travel stories. This concept, seen in tales like Martin Amis's Time's Arrow (1991), allows characters to escape the constraints of time-bound mortality, offering new perspectives on life and existence.

The enduring British television series Doctor Who (1963–89, 2005–) introduced audiences to an eccentric time traveler whose iconic mode of transport was disguised as a common blue police box. Portrayed by various actors over the years, the Doctor captured the imagination of viewers with his timeless appeal. This popularity is evident in numerous time-travel films,

spanning decades and genres. Examples include The Time Machine (1960 and 2002), Slaughterhouse-Five (1972), Time Bandits (1981), Back to the Future (1985), Terminator (1984), Twelve Monkeys (1995), Primer (2004), and Looper (2012). Each of these films explores the concept of time travel in its own unique way, contributing to the enduring fascination with the idea of traversing the temporal landscape.

Alternate Histories and Parallel Universes

Stories centred on time-travel paradoxes emerged as a distinct subgenre within science fiction, presenting intriguing metaphysical conundrums when characters break free from conventional chains of causality. One classic paradox involves a man traveling back in time to kill his own grandfather, thereby ensuring that he, the time traveller, can never be born. Resolving such paradoxes often parallels the intricate solutions found in locked-room murder mysteries.

Murray Leinster's Sidewise in Time (1934) expanded upon these possibilities by introducing the concept of a vast multiplicity of "histories," all unfolding simultaneously. In Leinster's framework, individuals could traverse between numerous alternate worlds existing in parallel—a concept known as the "multiverse." This notion of a multiverse opened up endless potential for fictional exploration, with humanity's universe merely one among countless others. Narratives set in the future offered a tangible connection to reality, while the concept of parallel universes remained entirely conjectural and hypothetical. Initially, readers viewed parallel worlds as an amusing but inconsequential conceit, akin to works set in the future. However, they soon realized the unique pleasures offered by the notion of uchronia (or "no-times"), such as the ability to manipulate actual historical figures and events in fictional settings.

The passage of time had a complex, uchronic effect on science fiction itself. Concepts presented in Nineteen Eighty-four, such as omnipresent video surveillance, became less far-fetched as the 21st century unfolded, highlighting Orwell's enduring political concerns. Nineteen Eighty-four also exemplifies the uchronic novel—it exists in a peculiar netherworld that is neither futuristic nor historical, reflecting the evolving landscape of science fiction classics. Even historical fiction explored the "what if" scenarios posed by uchronias. G.M. Trevelyan's speculative essay on a Napoleonic victory at Waterloo inspired J.C. Squires's anthology If It Had Happened Otherwise (1931), where notable figures like Winston Churchill and G.K. Chesterton pondered counterfactual historical turning points—a parlour game reminiscent of science fiction's speculative nature.

Alternate histories extended beyond the bounds of science fiction, encompassing works like Len Deighton's thriller SS-GB (1978) and Vladimir Nabokov's intricate Ada (1969). These narratives often revolved around dramatic junctures in history, with World War II and the American Civil War being popular subjects. Some ventured into more fantastical realms, imagining scenarios like a global Roman Empire or a world where dinosaurs never faced extinction. The film It's a Wonderful Life (1946) illustrates the concept of alternate histories in a sentimental context, showing how an individual's presence can shape the course of events and prevent a dystopian outcome—a testament to the significance of individual agency.

In a broader sense, all works of fiction can be seen as alternate histories and parallel worlds, as they present imagined protagonists and events. As fiction evolved, readers became increasingly open to narratives detached from their cultural framework, embracing works that challenged conventional notions of time and space.

High Technologies

Leo Marx, author of the techno-social study The Machine in the Garden (1964), coined the useful term technological sublime to indicate a quasi-spiritual haze given off by any particularly visible and impressive technological advance. Science fiction dotes on the sublime, which ruptures the everyday and lifts the human spirit to the plateaus of high imagination. Common models of the technological sublime include railroads, photography, aviation, giant dams, rural electrification (a particular Soviet favourite), atomic power and atomic weapons, space flight, television, computers, virtual reality, and the "information superhighway." The most sublime of all technologies are, in reality, not technologies at all but rather technological concepts—time machines, interplanetary starships, and androids.

Humans quickly lose a sense of awe over the technological advancements that have been fully integrated into the fabric of everyday life. Technologies such as immunization, plumbing, recycling, and the birth control pill have had a profound cultural impact, but they are not considered sublime nor are they generally subjects for science fiction. The reason for this is not directly related to the scientific principles involved or any inherent difficulties of the engineering. It is entirely a social judgment, with distinctly metaphysical overtones. Science fiction is one of the arenas in which these judgments are cast.

Space flight is one high technology to which science fiction has shown a passionate allegiance. For the most part, the space shuttle remains sublime, even though it is three decades old and in its final years of operation. Were space shuttles as common as 747s, they would quickly lose their sublime affect. Outer space and cyberspace, once relegated to the realms of science fiction, share a common technological allure despite their disparate mediums and historical contexts. However, as cybertechnology rapidly gains widespread acceptance and becomes

ubiquitous, its futuristic charm is waning. Consequently, science fiction has begun to explore the realm of biotechnology with renewed interest, a connection dating back to Mary Shelley's "Frankenstein." Unlike computers, biotechnology has deep roots in ancient practices such as medicine and agriculture, eliciting significant social resistance to gene-altered organisms, including humans.

While the early novelty of computers masked their potential for illicit activities like pornography and cybercrime, the societal implications of cloning were readily apparent, inspiring a wave of science fiction works such as Aldous Huxley's "Brave New World." In the 1980s, Czech "biopunk" stories used genetic narratives to critique societal moral decay under Warsaw Pact rule. The portrayal of genetically altered "posthumans" has evolved from menacing figures to individuals grappling with unconventional personal challenges. Despite many science fiction concepts becoming reality and integrating into mainstream culture, the rapid advancement of scientific knowledge ensures ongoing speculation about its future societal impacts. The allure of science fiction's predictive capabilities remains potent in contemporary society.

An Overview of Bruce Sterling and Greg Egan's Fictional Works and their Writings

Bruce Sterling

Bruce Sterling, a pioneer of cyberpunk fiction, began writing in the 1970s with works like *Involution Ocean*, a futuristic homage to *Moby-Dick.* His writing explores themes of technology and genetic engineering, notably in his acclaimed series *Schismatrix*. Sterling has earned numerous awards, including two Hugo Awards and an Arthur C. Clarke Award. As a critic and journalist, he has contributed to esteemed publications such as Metropolis and Wired. Sterling is deeply engaged in the technology and design communities, teaching classes globally and editing Wired's blog, *Beyond the Beyond*. Residing in Austin, Texas; Belgrade, Serbia; and Turin, Italy, Sterling's influence extends across continents.

Greg Egan

Greg Egan is renowned for his expertise in hard science fiction, particularly exploring mathematical and quantum ontology themes, along with the nature of consciousness. His works also delve into genetics, simulated reality, Posthumanism, mind transfer, sexuality, artificial intelligence, and the contrast between rational naturalism and religion. As a recipient of the Hugo Award and the John W Campbell Memorial Award for Best Novel, Egan's contributions to the genre are highly esteemed.

In his collection of stories and novellas, Egan meticulously crafts narratives that challenge conventional notions of humanity. From "Learning to be Me," where organic brains can be replaced by the innovative "jewel," to explorations of human consciousness exploitation in "Bit Players" and "Axiomatic," Egan's stories push the boundaries of human existence. Interconnected narratives like "Luminous" and "Dark Integers," along with novels such as "Quarantine" and "Permutation City," delve into the intersections of quantum mechanics and consciousness, imagining how these forces could profoundly alter humanity. Through richly detailed predicaments, Egan masterfully captures the complexities of the Posthuman condition, solidifying his place as a significant figure in the genre.

Chapter Two In this chapter the definition of Posthumanism will be studied along with the historical connotations of its terms from the period of its emergence. This Chapter will primarily focus on the premise of arguments and answers from critical essays and works on Posthumanism and its salient features. There has been a significant progress in the field of Posthumanism in the last two decades with many theorists, finding the need to theorize Posthumanism and cement its position in the study of both Humanities and the Sciences.

Theorist heavily invested in the field of Posthumanism will be studied, naming a few; theories by Donna Haraway, Stefan Herbrechter, Bruce Clarke, Cary Wolfe and Katherine Hayles have been selected in order to formulate a better understanding about the concerned area study

through its theories. Donna Haraway's breakthrough Essay *The Cyborg Manifesto* has been selected to study the famous Posthuman character known as the Cyborg.

Chapter Three This chapter will explore the Posthuman Characteristics in Bruce Sterling's novel *Schismatrix,* challenging conventional perceptions of what it means to be natural and humane. The argument presented emphasizes that Posthumanism defies the essence of humanity in all its facets. It explores four potential paths for the future of humanity: Evolution, Usurpation, Alteration, and Exogamy. The novel presents a futuristic vision that challenges conventional notions of humanity and therefore the collapse of humanity and its causes will be researched through the selected novel. Sterling's work has been influential in shaping the cyberpunk genre, earning him recognition as a leading figure in literature and cyberspace theory. *Schismatrix* offers a compelling narrative that underscores the negation of humanity's essence, aligning with the themes explored in Davies's analysis of Humanism and Posthumanism.

Another text where the elements of Posthumanism has been explored is the novel *Holy Fire* by Bruce Sterling. This portion of the chapter will explore Sterling's writings about the altered human extension of life, by examining characters like Mia Ziemann in order to establish the universal truth of what it means to achieve immortality through the advancement of technology. Themes like the 'Lure for Longevity and Immortality' will be studied in this novel.

Chapter Four This chapter will focus on the outlook of the Posthuman world and the catastrophic phenomenon that could occur in the future where the world could be engulfed by extraterrestrial mechanisms. Through his expertise in Quantum Mechanics Greg Egan creates a world of highly intelligent software and technologies where one can manipulate his or her feelings, emotions and consciousness through Mods or advanced computers. This chapter will look into the possibilities of how science fiction presents a narrative where Posthumans can

dwell on the realms of outer space and the solar system, which can be an escape from the deteriorating planet earth. This Exhaustion of our planet has been heavily emphasized by the author Greg Egan, therefore prompting him to create an alternate universe or a virtual reality where the human race can transport to. This futuristic alter universe has been depicted through the works of his novel *Permutation City,* which will be studied closely in this chapter with its connotations to the Artificial life and Artificial Intelligence. As Egan paints a futuristic picture in all his novels, a close reading of the selected novel *Quarantine* will be utilized for portraying and establishing a Posthuman Future.

Chapter Five This Chapter will highlight the Influence of Postmodernism in the select works of Posthuman writers, Bruce Sterling and Greg Egan. Posthumanism being the new theory much related to our present day scenario and a window to our future. Through these fictional works, I will explore the Posthuman Characteristics like the advancement in technology and the locale coupled with the play of consciousness and mechanism of simulation embedded in the texts. This chapter will delve into the understanding that Posthumanism is also a movement which has evolved from the days of enlightenment, Posthumanism depicts the turning point from all these movements and suggests an urge for expansion. Upon research we see that there has been a journey of the movement from Modernism, Postmodernism to Posthumanism; juxtaposing as almost like an evolution of Humanity, this chapter will present examples from literature to proof this journey from one movement to the other.

Conclusion

In the twenty-first century, we are awakening to the realization that technology is not merely a tool but rather lies at the heart of critical discourse on culture and nature. Posthumanism blurs the lines between technology and artificial intelligence, almost equating the two. The fictional works of Bruce Sterling and Greg Egan are brimming with narratives that fit into the

Posthuman genre, characterized by themes of technology and augmented mechanisms poised to reshape the future of humanity.

Firstly, this research will study the construction of the Posthuman in terms of socio cultural and political underpinnings. How does one define the Posthuman? Its characteristics will be explored through the works of Bruce Sterling and Greg Egan.

Secondly, if Posthumanism entails two different perceptions, one that of grave fear and scepticism and the other that of great optimism and hope. This research will examine the two school of thoughts reflected by Posthumanism and ascertain the possibilities of a promising future.

Furthermore, focusing on the importance of technology established in the Posthuman sphere, its deeper symbolic and aesthetic dimensions will be studied albeit its effects on the human nature whether good or bad. Through this research the outcome resulting in the human nature will be demonstrated.

Also the nature of Posthumanism and its aspects with relevance to currency in today's world will be evaluated which interestingly prompts one to explore more in the area of Posthumanism and contribute to the existing body of researches.

Lastly, with context to literature and the myriad themes inculcated in the fictional works of the two chosen authors, Greg Egan and Bruce Sterling, this research will analyse how much of the themes like that of philosophical and psychological aspects is attached with the subject of Posthumanism.

CHAPTER TWO

Theorizing Posthumanism

The second chapter of the thesis focuses on the origins of the term Posthuman and Posthumanism. Before taking a theoretical approach to the term, a historical background on its emergence has been magnified in this chapter. It also directs its attention to the premise of arguments and answers from critical essays and works on Posthumanism and its salient features. An exploration of the Theories contributing to the definition of Posthumanism has been depicted in this section of the thesis. Naming a few, theories by Donna Haraway, Bruce Clarke, Francis Fukuyama, Stefan Herbrechter, David Roden, Sidney Dobrin and a few others will be used as background reading and hence applied in order to represent and establish comprehensive research on the theory in regards to the field of literature.

Introduction

In contrast to Posthumanism, Humanism is renowned for its recognition of the conscious and purposeful human individual as the primary locus of agency deserving of scholarly focus. Emerging during the Renaissance, Humanism has undergone diverse interpretations across history. In this chapter we firstly break down the concepts of humanism and posthumanism, as well as their implications in scholarly discourse:

1. Humanism: Humanism emerged during the Renaissance period and emphasizes the importance of the human being, particularly their conscious and intentional agency, as the central focus of intellectual inquiry.

Key tenets of humanism include:

Autonomy from Nature: Humans are seen as separate from and superior to nature due to their intellectual faculties, which enable them to control their environment.

Speech and Reason: Humans are uniquely capable of language and rational thought, which distinguishes them from other beings.

Exceptionalism: Humanism often positions humans as exceptional creatures, superior to other animals due to their intellectual and cultural achievements.

Humanist thought has influenced Western philosophy and culture, reinforcing a dualistic view of nature and culture, where human culture is seen as distinct and superior to nature.

2. Posthumanism: Posthumanism is a philosophical and theoretical perspective that challenges humanist assumptions about the nature of humanity and its relationship with the world. Posthumanist scholars reject the nature/culture dualism inherent in humanism, instead advocating for an understanding of the human as deeply interconnected with its environment.

Key aspects of posthumanism include:

Entanglement with Environment: Posthumanism emphasizes the interconnectedness of humans with their surroundings, rejecting the notion of humans as separate from nature.

Interdisciplinary Approach: Posthumanist scholars draw on a wide range of disciplines, including art, ecology, psychology, and quantum physics, to explore the complex relationships between humans and their environment.

Posthumanism challenges anthropocentric perspectives by questioning the privileged position of humans in the world and exploring alternative ways of understanding existence.

In the realm of communication studies, a posthumanist approach would involve examining how communication processes are shaped by and shape human-environment interactions. This might involve studying phenomena such as digital communication technologies, ecological communication systems, or the role of non-human actors in communication processes. By adopting an interdisciplinary perspective, posthumanist scholars aim to offer more nuanced and inclusive understandings of communication and human existence.

The critical perspective posits that the era of humanism has reached its conclusion, challenging its fundamental assumptions that humans are fully knowable and rational beings. This

viewpoint rejects the notion of clear boundaries between humans and non-human entities, considering them fluid and indistinct. Central to this perspective is Donna Haraway's exploration of cyborgs, which underscores the interconnectedness of humans and technology. Furthermore, it disputes the notion that human reason alone qualifies humans as sole stewards of the planet and its non-human inhabitants. Posthumanism, characterized by its ecological consciousness, stands as a significant discourse in this reevaluation.Posthumanism heralds a deliberate and overdue reassessment of the prevailing humanist perspective, which places humans at the center of existence. Through the lens of Posthumanist theory and culture, our understanding of ourselves as human beings undergoes profound transformation. "We" no longer adhere to the conventional notion of who we thought we were, and likewise, our perception of "others" diverges from prior conceptions.

Humanism, exemplified in works like René Descartes's Discourse on the Method (1637), places the human being at the pinnacle of existence. In this framework, humans are distinctly separate from machines, animals, and other non-human entities, possessing a unique essence shared among all human beings. They are seen as the source of meaning, the architects of history, and guided by an inherent "human nature." Humanism positions humans as exceptional, autonomous beings, elevated above the world around them, with "Man" serving as the ultimate measure of all things. In contrast, Posthumanism challenges this anthropocentric view by acknowledging that "Man" is not inherently privileged or separate. Posthumanism recognizes that humans are not entirely distinct from animals, machines, or other forms of the "inhuman." It acknowledges the influence of historical and cultural differences, which invalidate claims to a universal human essence. Additionally, Posthumanism emphasizes that humans are constructed as subjects by language systems that exist independently of them, and they lack the ability to unilaterally shape the course of world history toward a uniquely human

objective. In brief, “Posthumanism arises from the theoretical and practical inadequacy or even impossibility of humanism, from the relativization of the human that follows from its coupling to some other order of being” (Clarke 3).

Posthumanist criticism shares some similarities with the "antihumanism" often linked with theorists like Louis Althusser, Michel Foucault, and Jacques Lacan. However, it diverges from antihumanist discourse particularly in its approach to the concept of 'Man'. Antihumanists typically aim to disrupt the dominance of humanism by actively breaking away from the traditional understanding of the human, sometimes through radical or explicitly scientific means. Althusser, for instance, discussed in *For Marx* how, "the myth of Man is reduced to ashes by the mature science of historical materialism” (Althusser 229), while Foucault embarked on his *History of Madness* with the intention of recounting the narrative of insanity itself, aiming to challenge the rational and anthropocentric narratives often presented by psychiatry, “which is a monologue by reason about madness” (Foucault 28).
Posthumanism, on the other hand, frequently begins by acknowledging not only the inadequacy but also the intrinsic instability of humanism. The notion of 'Man' doesn't always require a deliberate overthrow or abandonment through a dramatic leap, as 'he' is already depicted as a declining or diminishing figure. Consequently, the role of the critic or artist devoted to Posthumanism transforms into that of mapping and fostering this gradual decline.

Much scholarly inquiry has devoted significant attention to various facets of Posthumanism in recent years. Indeed, as Bruce Clarke astutely points out, “the last two decades the theoretical trope of the Posthuman has upped the ante on the notion of the postmodern” (Clarke 2). In fact, as early as 2002, the Modern Language Association of America (MLA) signaled its recognition of the growing interest in Posthumanism by contemplating the addition of the subject term "the

Posthuman" to its prestigious MLA International Bibliography, as noted in one of its newsletters (Grazevich 6). Recent statistical data from the online MLA Bibliography, as provided by Richard Nash in his chapter on Animal Studies in this volume, appears to affirm that the MLA could not overlook the ascendance of "the Posthuman." Moreover, the extensive array of academic disciplines where Posthumanist concerns have been explored—ranging from literary studies, cultural studies, and philosophy to film studies, theology, geography, animal studies, architecture, politics, law, sociology, anthropology, science and technology studies, education, gender studies, and psychoanalysis—underscores how Posthumanism transcends traditional disciplinary boundaries.

Subsequently, Posthumanism transcends mere academic discourse, as popular culture plays a pivotal role in both examining and expanding Posthumanist concepts. Works of fiction such as William Gibson's Neuromancer (1984), Bruce Sterling's Crystal Express (1989), Richard Powers's Galatea 2.2 (1995), and China Miéville's Perdido Street Station (2000), along with television series like Star Trek: The Next Generation and films such as Blade Runner (dir. Ridley Scott, 1982), Tetsuo: The Iron Man (dir. Shinya Tsukamoto, 1989), Ghost in the Shell (dir. Mamoru Oshii, 1995), and eXistenZ (dir. David Cronenberg, 1999), depict a nuanced and complex interaction between humans and machines, where they interface and transform each other in novel ways. Encountering such narratives challenges the certainties of humanism and leads to a reimagining of bodies, minds, desires, limits, knowledge, and existence itself, in ways that defy traditional anthropocentric perspectives. These films and science fiction works serve as centers of discussion and inspiration, showcasing that Posthumanism has evolved beyond mere theory, becoming as much a question of fiction as it is a matter of theoretical inquiry. Indeed, a significant acknowledgment within Posthumanist culture is that "the boundary between science fiction and social reality is an optical illusion" (Haraway 66). As the

traditional dichotomy between the human and the inhuman is deconstructed, so too fades the conventional demarcation between fact and fiction.

The flourishing of Posthumanist ideas may give the impression that the term "Posthuman" is a recent invention, possibly linked to the advent of online existence or the development of the microchip. However, "Post-Human" (with the hyphen, subsequent capitalization, and italics) can be traced back as early as 1888, when it briefly appeared in H.P. Blavatsky's *The Secret Doctrine*, a complex theosophical work (Blavatsky 684). Blavatsky, however, did not elaborate on the concept of the Posthuman, nor did the few writers, including Jack Kerouac, who used the term sporadically in the first half of the twentieth century (Kerouac 81). It seems that the term emerged prematurely, awaiting its opportune moment. This moment arguably arrived with the publication of Donna J. Haraway's "A Cyborg Manifesto" in 1985. Although Haraway did not explicitly employ the terms "Posthumanism," "Posthumanist," or "Posthuman" in her essay, she proposed a series of interconnected "boundary breakdowns" that transformed the conventional notion of the human into a hybrid cyborg (Haraway 68). Haraway observed that Humanism traditionally relied on strict distinctions between humans and animals, organisms and machines, and physical and non-physical entities. However, she argued that numerous contemporary developments in science, technology, capitalism, race and ethnicity studies, militarism, animal studies, and feminism had rendered such rigid dichotomies unsustainable and politically problematic. As she famously stated, "By the late twentieth century, our time, a mythic time, we are all chimeras, theorized and fabricated hybrids of machine and organism; in short, we are cyborgs. The cyborg is our ontology; it gives us our politics" (Haraway 66). With this assertion, Haraway suggests that the cyborg, as a hybrid entity of machine and organism, fundamentally shapes our understanding of existence and informs our political beliefs and actions. The traditional notion of the human has become outdated; the singular

figure of "Man" has been supplanted. Haraway argues that we cannot revert to previous ideological or material states; instead, we must embrace the complexities of cyborg existence and navigate the implications for our society and politics.

While acknowledging the troubling origins of the cyborg in "militarism and patriarchal capitalism," Haraway's essay also presents a compelling case for viewing the cyborg as a source of hope and promise. She acknowledges that, from one perspective, a cyborg world may signify the imposition of control and abstraction, epitomized by scenarios like a Star Wars apocalypse waged in the name of defense or the appropriation of women's bodies in war. However, she advocates for embracing a different interpretation of the cyborg—one that celebrates lived social and bodily realities where people are unafraid of their connections with animals and machines, and comfortable with partial identities and contradictory viewpoints.

In essence, Haraway proposes that a certain manifestation of the cyborg should be embraced and celebrated for its ability to challenge essentialist and universalist thinking. The transition from humanism to a Posthumanist cyborg condition need not be a cause for alarm among "progressive people," as it offers enchanting new possibilities for being, becoming, ethics, and politics. It is through the dissolution of the "last beachheads of [human] uniqueness" that Haraway sees the emergence of exciting prospects for human existence.

In the aftermath of Haraway's influential manifesto, numerous accounts of Posthumanism have emerged, exploring how modern techno-scientific culture has profoundly challenged the dominance of anthropocentrism. Works such as N. Katherine Hayles's "How We Became Posthuman" (1999), Chris Hables Gray's "Cyborg Citizen" (2001), Elaine L. Graham's "Representations of the Post/human" (2002), and Thomas Foster's "The Souls of Cyberfolk" (2005) delve into the Posthumanist implications of cybernetics, cyberspace, informatics,

artificial intelligence, genetics, and medicine, often drawing upon Donna Haraway's seminal manifesto for inspiration.

In these works, the ramifications of advancements in technology are explored in depth. From computers surpassing humans in activities like chess, to viewing life as decipherable code, to the redefinition of death through radical medical interventions, to the revelations of the Genome Project regarding genetic similarities between humans and chimpanzees, to the seamless integration and superior performance of artificial limbs compared to organic counterparts, and to speculations about achieving immortality through transferring human consciousness into computers, the traditional humanist paradigm appears increasingly inadequate in addressing the complexities of the present reality.

The rigid and absolutist stance articulated in Descartes's "Discourse on Method" loses its persuasive power in the face of such paradigm shifts. Only through a thoroughly revised account—a Posthumanist account—can we begin to comprehend and navigate these transformed landscapes.

Posthumanism is not purely a question of high technology, however, and not merely because, as Hayles points out in How We Became Posthuman, technological rapture can all too easily shore up some of the most fundamental assumptions of humanist discourse. While it is true that a great deal of criticism and fiction has imagined the Posthuman as a technological figure, other strands of scholarship have examined Posthumanism in terms of architecture (Hays 1992), mathematics (Baofu 2008), intersex (Morland 2007), geography (Castree and Nash 2006), education (Spanos 1993), paleoanthropology (Mordsley 2007), sensation and cognition (Merrell 2003), rights (Baxi 2009), fetishism (Fernbach 2002), complexity theory (Smith and

Jenks 2006), extraterrestrials (Badmington 2004), botany (Didur 2008), autopoetic systems theory (Clarke 2008), and Postcolonialism (Lin 1997).

Cary Wolfe's *Animal Rights* stands out as one of the most compelling and influential texts advocating for a Posthumanism that extends beyond reliance on technology. In this work, Wolfe directs attention to the pervasive but often overlooked framework of speciesism that forms the foundation of anthropocentric discourse. By highlighting the inherent biases embedded within human-centric perspectives, Wolfe challenges readers to reconsider their assumptions about the hierarchical relationship between humans and other species. Through his critique of speciesism, Wolfe opens up new avenues for exploring ethical and philosophical questions surrounding the treatment of animals and the broader concept of what it means to be human in relation to the natural world.

Wolfe begins his exploration by highlighting the pervasive presence of speciesist assumptions within literary and cultural studies, despite some acknowledgment of the limitations of humanist perspectives in popular culture, as evidenced by articles in mainstream publications like Time and Newsweek. He observes that the traditional humanist tendency to confine subjectivity within the boundaries of the human species is increasingly recognized as problematic, if not entirely unsustainable. According to Wolfe, Western humanism is deeply rooted in and sustained by a hierarchical binary opposition between the categories of "human" and "animal." He argues that the ideal of human freedom, which aspires to extend to all individuals regardless of race, class, or gender, is made possible by the absolute control exerted over the lives of nonhuman beings. This control over nonhuman others serves as the material condition that sustains the humanist project, reinforcing the hierarchical structures that privilege human interests over those of other species.

Drawing heavily upon the insights of Jacques Derrida, "Animal Rites" offers valuable strategies for destabilizing the dominance of speciesist discourse and recognizing that the concept of the "human" is inherently unstable and constructed. According to Wolfe, the notion of humanism is ultimately a myth—a compelling and influential myth, to be sure, but ultimately unsustainable and dubious. He argues forcefully that as long as the humanist and speciesist framework remains intact, it perpetuates a system of subjectivization that justifies the exploitation and killing of nonhuman animals solely based on their species membership.

Wolfe's challenge is directed squarely at those who believe that politics and ethics are contingent upon the preservation of humanism. He asserts that as long as the humanist discourse of species continues to be upheld institutionally, it will inevitably be used to justify violence not only against nonhuman animals but also against marginalized human groups based on factors such as race, gender, class, or sexual orientation. In doing so, Wolfe underscores the interconnectedness of various forms of oppression and the urgent need to challenge the entrenched hierarchies that underpin them.

In the same year that Wolfe's groundbreaking book reshaped the discourse surrounding Posthumanism, Donna Haraway released "The Companion Species Manifesto," a title that notably evokes her earlier "Cyborg Manifesto." However, Haraway's new work quickly reveals a sense of discomfort with the cyborg, a figure that had become closely associated with her name by 2003. She reflects on the role of cyborgs in her previous work, noting that she had initially deployed them as agents for feminist inquiry during the politically charged atmosphere of the mid-1980s, often referred to as Reagan's "Star Wars" era. However, as the millennium drew to a close, Haraway found that the concept of the cyborg was no longer sufficient for the task at hand. She metaphorically suggests that cyborgs had become inadequate substitutes for

the role of a proper herding dog, which was needed to gather the diverse threads of critical inquiry. This shift in Haraway's perspective reflects a nuanced evolution in her thinking and signals a departure from the earlier emphasis on cyborg imagery within her work. The reference to a herding dog offers insight into Haraway's evolving focus, as she elaborates:

> So I go happily to the dogs to explore the birth of the kennel to help craft tools for science studies and feminist theory in the present time, when secondary Bushes threaten to replace the old growth of more livable nature cultures in the carbon budget politics of all water-based life on earth. Having worn the scarlet letters, “Cyborgs for earthly survival!” long enough, I now brand myself with a slogan only Schutzhund women from dog sports could have come up with, when even a first nip can result in a death sentence: “Run fast; bite hard!” (Haraway 4,5)

The reason for this transition away from the cyborg and towards animals is subtly hinted at in the slim pages of "The Companion Species Manifesto." However, two texts published since 2003 offer more explicit clarification. Initially, in an interview featured in Theory, Culture and Society in 2006, Haraway addresses inquiries regarding the term "Posthuman," its significance to her, and whether she deems it beneficial and empowering:

> Katherine Hayles writes this brilliant book “How We Became Posthuman”. She locates herself in that book at the right interface – the place where people meet IT apparatuses, where worlds get reconstructed as information. I am in strong alliance with her insistence in that book, namely getting at the material of information. Not letting anyone think for a minute that this is immateriality rather than getting at its specific materiality. That I’m with, that sense of “how we became Posthumanist.” Still, human/Posthuman is much too easily appropriated by the blissed-out, “Let’s all be Posthumanists and find our next teleological evolutionary stage in some kind of transhumanist techno

> enhancement.” Posthumanism is too easily appropriated to those kinds of projects for my taste. Lots of people doing Posthumanist thinking, though, don’t do it that way. The reason I go to companion species is to get away from Posthumanism. Companion species is my effort to be in alliance and in tension with Posthumanist projects because I think species is in question. In that way I’m with Derrida more than others, and with Cary Wolfe’s reading of Derrida. (Haraway 140)

Secondly, two years later, Haraway's "When Species Meet" emerged as the third installment in the "Posthumanities" series curated by Cary Wolfe for the University of Minnesota Press. The opening chapter of this book, which extends and expands upon the themes explored in "The Companion Species Manifesto," features a noteworthy declaration regarding Posthumanism:

> I find [the notion of “companion species”], which is less a category than a pointer to an ongoing “becoming with,” to be a much richer web to inhabit than any of the posthumanisms on display after (or in reference to) the ever-deferred demise of man. I never wanted to be posthuman, or posthumanist, any more than I wanted to be postfeminist. For one thing, urgent work still remains to be done in reference to those who must inhabit the troubled categories of woman and human, properly pluralized, reformulated, and brought into constitutive intersection with other asymmetrical differences. … I am not a posthumanist; I am who I become with companion species, who and which make a mess out of categories in the making of kin and kind.
>
> (Haraway 17–19)

Haraway's recent scholarship indeed reflects a noticeable unease surrounding the term "posthumanism." However, her pivot towards companion species retains a potent resistance to humanism akin to that found in her "Manifesto for Cyborgs." She suggests that "human

exceptionalism" is something companion species cannot tolerate, emphasizing that everyday interactions between humans and animals hold the potential for fundamentally reimagining anthropocentric discourse.

While Cary Wolfe and Donna Haraway may diverge in their views on the term "posthumanism," their work shares a common insistence that the problematic dominance of "Man" will persist until the entrenched binary opposition between "the human" and "the animal" is interrogated. Texts such as "Animal Rites," "The Companion Species Manifesto," and "When Species Meet" find resonance in the scholarship of critics like Erica Fudge and Julie Ann Smith, who explore how humanist speciesism unravels in ordinary encounters between humans and animals.

However, there are also voices of anxiety within this discourse. While much scholarship on posthumanism celebrates the decline of humanist discourse—Haraway famously declaring she would "rather be a cyborg than a goddess"—it would be erroneous to assume unanimous support for a posthumanist existence among all scholars exploring the subject.

For instance, political theorist Francis Fukuyama published a widely discussed book titled "Our Posthuman Future" in 2002, in which he argued that the contemporary departure from the principles of humanism posed a dangerous threat that needed urgent rectification. Fukuyama viewed modern biotechnology as a potential "threat" because it could potentially alter human nature, leading humanity into a "posthuman" stage of history. He asserted that human nature is a meaningful concept that has provided a stable continuity to human experience as a species.

As humanism teetered on the brink of sliding into the "potential moral chasm" of posthumanism, Fukuyama called for a staunch defense of human nature, emphasizing the transcultural "common humanity" that enables moral relationships between individuals

worldwide, as well as the "natural differences" between men and women. In the final section of "Our Posthuman Future," Fukuyama advocated for strict regulation of biotechnology and an outright ban on "unnatural" practices like reproductive cloning. He concluded that posthumanism represents a "false banner of liberty," asserting that true freedom can only be attained through the preservation of humanism.

In essence, while writers such as Donna Haraway and Cary Wolfe have emphasized the ethical and political potentialities arising from the transition from humanism to posthumanism, Fukuyama perceives only profound loss in the fading of "Man." He staunchly opposes the posthuman future identified in the title of his book, advocating instead for the preservation of humanism at all costs. Contrary to the perspectives of Haraway and Wolfe, Fukuyama asserts that politics cannot exist without recourse to "Man."

Posthumanism is a philosophical perspective that offers a unique understanding of how change unfolds in the world. It conceptualizes and historicizes both agency and the notion of the "human" in a manner distinct from traditional humanism. While humanism often portrays the human as autonomous, conscious, intentional, and exceptional in driving change, posthumanism takes a different approach. It posits that agency is distributed across dynamic forces, in which humans play a part but do not possess complete intention or control.

From a Posthumanist standpoint, the human is characterized as: (a) intricately interconnected with and reliant upon the physical, chemical, and biological environment; (b) propelled to action through interactions that engender affects, habits, and reasoning processes; and (c) devoid of any inherently unique human attributes, instead being part of a larger evolving

ecosystem. Within posthumanist scholarship, there is no consensus regarding the extent to which a conscious human subject can actively instigate change. However, it is acknowledged that humans do play a role in shaping and participating in processes of change.

In Comprehending the essence of Humanity believed to be transpired into the Cyborg world, this chapter will also attempt to establish the social construct of evolution in humans which has been pictured, believed and assimilated in today's world of Technology. By exploring the Cyborg world presented by Donna J. Haraway, in her works such as 'A Cyborg Manifesto', 'Simians, Cyborgs and women' and 'when species meet', these works will elicit the reality of a future we are living in now, wherein we are perceived and identified as Cyborgs. This reality enabled by scientific advancements entail all realms of our existence, such as political, social, religious and cultural, that can be influenced and affected by this approach.

Included in this is Techno feminism which is an approach that commands a deeper study and ideology worth keeping alive. My argument gravitates towards the optimistic approaches along with philosophical notions in order to salvage the possibility of a humane Techno culture in today's world and the future. Donna J Haraway's essay is pregnant with hypothetical question of a world of Cyborgs and in the ways, it's going to blur the boundaries between man and the machine and man and animal. And hence, essentially breaking these boundaries could be the solution to a humane Technoculture.

Donna Haraway's academic background encompasses biology and philosophy, while her political stance aligns with socialist feminism. She penned her "Cyborg Manifesto" in 1985, later revising and expanding it for publication in 1991. This period was marked by various events, including Ronald Reagan's controversial "Star Wars" defense initiative. The C3I system, standing for command-control-communication-intelligence, represented a significant

$84 billion allocation in the US defense budget of 1984. Haraway's Manifesto can be viewed as a response to the radical feminist movement that gained traction during the 1970s and 1980s in the United States and Europe. Radical feminism, a cornerstone of "second wave" activism, sought to dissect the underlying causes of gender oppression, with its moniker derived from the Latin term "radicalis," meaning "having roots."

As a materialist critic, Haraway resonated with the motivations driving radical feminism. However, as a philosopher of science, she diverged from the radical feminist notion that the underlying causes of a socially constructed issue like patriarchy could be definitively pinpointed through exhaustive research. Specifically, Haraway expressed concerns that the radical feminism advocated by figures such as Adrienne Rich and Audre Lorde appeared to offer women a utopian "starting point" for gender and identity, divorced from other influential cultural factors. In poststructuralist parlance, this conceptual fallacy is termed "essentialism."
Haraway's concerns were validated by the emergence of the "Goddess feminism" movement in America, which sought to eschew technology and reestablish women's connection to nature. Haraway viewed this movement as regressive rather than progressive feminist politics. However, certain feminist thinkers of the 1980s greatly resonated with Haraway. She was particularly influenced by French writers Monique Wittig and Luce Irigaray, who urged women to reject masculinist narratives and instead explore the "truth of their bodies" through means such as autobiography and performance. This approach, known as "écriture féminine," left a lasting impact on a generation of feminists.
To a significant extent, Haraway's "Cyborg Manifesto" operates within the spirit of "écriture féminine," employing non-linear, performative, and autobiographical language to articulate the truth of a new type of body: that of the cyborg.

For Haraway, the cyborg symbolized a means to confront and transcend the political, patriarchal, and hegemonic capitalist culture. Drawing upon the practical achievements of post-war scientific and cultural theory, she famously argued that these theories had effectively deconstructed the hierarchical dualisms entrenched in Western thought. Haraway contended that these dichotomies—between mind and body, animal and human, primitive and civilized—were now ideologically contested, having been cannibalized or "technodigested."

In response to this paradigm shift, Haraway advocated for the development of a new form of posthuman cultural politics embodied by the cyborg. This notion challenged conventional boundaries and hierarchies, offering a vision of hybridity and interconnectedness that transcended traditional categories and limitations. By embracing the cyborg as a symbol of resistance and transformation, Haraway envisioned a path towards a more inclusive and equitable future. For Haraway, “The Cyborg is a kind of dissembled and reassembled Postmodern collective and personal self. This is the self that feminist must code.” (Haraway 163)

The manifesto as an Ironic Political Mythology

In her essay, Haraway embarks on the creation of what she terms a "political myth" tailored to contemporary circumstances, blending elements of feminism and materialism. Drawing inspiration from the tradition of manifesto writing, exemplified by figures such as Marx and Marinetti, Haraway asserts that her new political myth should provoke readers with its blend of "blasphemy" and irony. She extols irony as both a rhetorical device and a political tactic, advocating for its greater prominence within socialist feminism. By adopting irony as a central

tenet of her political mythology, Haraway seeks to challenge conventional norms and stimulate critical reflection on prevailing social and political structures.

Definition of a Cyborg

In her essay, Haraway establishes the cyborg as the central metaphor, delineating its significance through four distinct definitions. Firstly, she portrays the cyborg as a "cybernetic organism," underscoring its integration of biological and technological components. Secondly, she characterizes it as a "hybrid of machine and organism," highlighting its synthesis of mechanical and organic elements. Thirdly, Haraway portrays the cyborg as "a creature of lived social reality," emphasizing its existence within the complex fabric of human society. Finally, she presents the cyborg as "a creature of fiction," acknowledging its conceptual origins in speculative and imaginative realms. These multifaceted definitions collectively elucidate the diverse dimensions of the cyborg as a symbol of hybridity, boundary-crossing, and fluidity.

Cyborg changes what counts as experience

Indeed, Haraway emphasizes that the four descriptions of the cyborg—cybernetic, hybrid, of the present, and of the future—are not isolated concepts but rather intertwined and mutually influential. She contends that in philosophical terms, the distinction between "lived social reality" and "fiction" is blurred, as each category continuously shapes and informs the other. Haraway illustrates this idea by highlighting how feminists have employed the notion of "women's experience" as both a narrative construct and a tangible political reality.

Similarly, she argues that the cyborg will redefine and reshape the notion of experience for women in the late twentieth century, challenging traditional boundaries between fiction and reality. By transcending conventional categories and blurring the lines between the real and the

imagined, the cyborg emerges as a transformative force that redefines what constitutes experience and identity in contemporary society. Thus, Haraway underscores the interconnectedness and fluidity of these descriptions, illustrating how they collectively contribute to the evolving understanding of the cyborg as a symbol of hybridity and change.

The Political Implications of Cyborg Existence

Haraway's assertion that "cyborgs already give us our politics" encapsulates her belief that the concept of the cyborg fundamentally shapes and influences contemporary socio-political discourse and structures. By framing the cyborg as a metaphorical representation of hybridity, interconnectedness, and boundary-crossing, Haraway suggests that our understanding of politics and power dynamics is inherently intertwined with technological advancements and the blurring of traditional categories. In essence, Haraway argues that the emergence of cyborgs, both in fictional narratives and in real-world technological developments, challenges established notions of identity, agency, and social organization. The cyborg disrupts conventional binaries and hierarchies, such as those between human and machine, nature and culture, and self and other, thereby reshaping the terrain upon which political struggles are waged.

Furthermore, Haraway's assertion implies that the cyborg offers new possibilities for political agency and resistance, as individuals and communities navigate the complexities of a technologically mediated world. By recognizing the cyborg as a central figure in contemporary politics, Haraway invites us to reconsider our assumptions about power, control, and the boundaries of the human, and to envision alternative pathways towards social change and liberation.

The border of the Cyborg is an optical illusion

Haraway contends that the struggle to define and exert control over the concept of the cyborg can be likened to a border conflict. This conflict, she notes ironically, unfolds within a realm that is predominantly illusory: the ambiguous space between the realms of science fiction and present-day reality. Contrary to popular belief, Haraway argues, cyborgs are not merely futuristic constructs; they already permeate various facets of modern life. From advancements in modern medicine to the realms of reproduction, manufacturing, and warfare, cyborgs are already deeply embedded within contemporary society.

In essence, Haraway asserts that we are all, in a sense, cyborgs, whether we are cognizant of it or not. This assertion stems from the idea that the cyborg is not just a speculative concept but rather an intrinsic aspect of our ontology—the very essence of our being. Moreover, Haraway suggests that the cyborg shapes our politics, influencing the power dynamics and social structures that govern our lives. Thus, she implies that acknowledging our cyborg nature is essential for understanding the intricacies of contemporary existence and navigating the complex terrain of modernity.

Cyborg doesn't have a Freudian Origin

Haraway finds the metaphor of the Cyborg appealing because it offers a means to reconceptualize socialist feminism within a postmodernist, non-naturalist framework. Unlike traditional conceptions of gender that rely on human reproduction, the Cyborg exists beyond the confines of gender. It transcends the limitations imposed by Freudian mythologies that have long plagued feminist discourse. Unlike the figure of Frankenstein, which symbolizes dependence on a master or father figure for salvation, the Cyborg rejects notions of completeness tied to heterosexual relationships or the nuclear family.

In the section titled "Fractured Identities," Haraway explores the implications of Cyborg politics for feminist organizing. She critiques identity politics, arguing that there is no inherent bond among women based solely on gender. Instead, she advocates for affinity politics, which operate through oppositional consciousness rather than fixed identities. Haraway challenges radical feminism, particularly the essentialist approach of thinkers like Catherine MacKinnon, suggesting that the search for an essential woman is not only futile but also potentially harmful. Instead, she proposes viewing "woman" as a socially constructed category, akin to other constructed identities like "homosexual" or "youth."

Haraway's approach to feminism illuminates the gender-neutral possibilities embraced by the Cyborg. By deconstructing essentialist notions of gender and embracing fluid, constructed identities, Haraway suggests that the Cyborg offers a liberating alternative to traditional feminist frameworks.

Donna Haraway delves into the concept of Cyborg feminist science fiction, asserting that Cyborgs serve as a potent political myth. She notes that in feminist science fiction, Cyborgs challenge conventional distinctions between genders, human and machine, and individual and community, making it challenging for readers to relate to them in traditional ways. Haraway highlights several notable Cyborg tales, such as Joanna Russ' "The Female Man," which depicts four versions of a single genotype that, even when combined, fail to form a complete whole. She also references Samuel R. Delany's "Tales of Neveyon," which satirizes origin stories by revisiting the Neolithic Revolution, and James Tiptree Jr., who explores reproduction through non-mammalian technologies like male brood pouches and nurturing. Additionally, Haraway mentions John Varley's portrayal of a supreme Cyborg in his feminist examination of Gaea, and Octavia Butler's novels that probe reproductive, linguistic, and nuclear politics within a

mythic framework influenced by race and gender dynamics of the late twentieth century. Finally, she discusses Vonda McIntyre's "Superluminal," where no character is simply human, challenging human status and intersecting feminist theory with colonial discourse in the realm of science fiction.

Feminist Cyborg science fiction has advanced progressive politics by prioritizing regeneration over rebirth, a departure from traditional narratives featuring monstrous entities. Donna Haraway illustrates this concept by referencing the salamander, which naturally regenerates lost limbs. She explains that for salamanders, regrowth involves the restoration of structure, acknowledging that while the regenerated limb may appear monstrous, it possesses significant potential. Haraway draws a parallel, suggesting that similarly, "We have all been injured, profoundly. We require regeneration, not rebirth, and the possibilities for our reconstitution include the utopian dream of the hope for a monstrous world without gender." (Haraway 171)

The Cyborg world envisioned by Haraway transcends gender distinctions, favoring regeneration over rebirth. She equates the Cyborg with the concept of a monster, suggesting that being labeled as a monster is advantageous because monsters lack feelings and are devoid of gender. Haraway draws a comparison between monsters and Cyborgs, highlighting how monsters historically delineated the boundaries of community in Western thought. Examples include Centaurs and Amazons in ancient Greece, as well as conjoined twins and hermaphrodites in early modern France. However, in feminist science fiction, Cyborg monsters "define quite different political possibilities and limits from those proposed by the mundane fiction of Man and Woman." (Haraway 173)

Haraway argues that feminist science fiction's reimagining of the cyborg underscores the idea that machines are not separate entities to be controlled or feared; rather, they are integral to our

processes and embodiment. She contends that humans can take responsibility for machines, as they are not inherently dominant or threatening. This perspective is exemplified in Anne McCaffrey's novel, The Ship Who Sang, where a severely handicapped girl's brain is connected to complex machinery, blurring the boundaries between human and machine. Haraway questions why our bodies should be confined to skin boundaries when machines can serve as prosthetic devices and extensions of ourselves.

This concept of humans as cyborgs living in a genderless society represents a utopian vision for Haraway. Despite acknowledging that creation and destruction will be inherent in this cyborg future, she expresses a preference for being a cyborg over a goddess. Her vision is not one of a universal feminist language, but rather a celebration of heteroglossia, acknowledging diverse voices and perspectives. Haraway acknowledges the complexities of cyborg politics, which will involve both building and dismantling machines, identities, and relationships. However, she maintains that this cyborg world offers a better alternative to the present condition.

Posthuman examples: Cyborgs & Monsters

In the realm of Posthuman discourse, scholars like Haraway often turn to imaginative creatures such as cyborgs and monsters to explore the possibilities of hybrid, more-than-human identities. Both science fiction and gothic/horror literature have long been fascinated with the nonhuman and have continually probed the boundary between what is considered "human" and what is deemed "other." Through their narratives, these genres offer rich material for Posthuman analysis.

Cyborgs, aliens, and monsters depicted in science fiction and horror literature have historically challenged conventional notions of humanity, prompting audiences to ponder where the human ends and the "other" begins. Badmington observes that the surge in popularity of science fiction films during the mid-twentieth century reflects a growing awareness of the diminishing grip of humanism, suggesting a collective acknowledgment that humanity's perceived dominance may be eroding, if indeed it ever truly existed:

> While Lacan was holding court in Paris, productions such as Invasion of the Body Snatchers, War of the Worlds, and The Blob were emerging from the Hollywood studios. In these science-fiction films — as in their literary counterparts — Man faced a threat from an inhuman other: 'his' position at the Centre of things was at risk. 'They' were ready to take over, to subject 'us' to 'their' rule. Debate about the end of humanism, in other words, was not the exclusive property of critical theory: it pervaded everyday life. (Badmington 20)

Indeed, in fiction and film, nonhuman creatures are frequently depicted as menacing adversaries, symbolically reinforcing humanity's dominance and superiority. However, many scholars who study monsters and embrace Posthumanist perspectives view these creatures differently. Rather than mere threats to be vanquished, monsters are seen as complex figures that offer profound insights into human existence and the potentialities of Posthuman futures.

Monsters serve as mirrors, reflecting aspects of human nature and society back to us. They embody our fears, desires, and anxieties, while also challenging conventional boundaries and norms. In this way, monsters offer glimpses into alternative modes of being, suggesting what humans could become if they were to embrace Posthuman possibilities fully.

Furthermore, monsters play a crucial role in policing the boundaries of the possible. They exist at the margins of society and challenge established categorical distinctions between human and nonhuman, natural and supernatural, normal and abnormal. By blurring these boundaries, monsters disrupt traditional ways of thinking and invite us to reconsider our assumptions about identity, difference, and the nature of reality.

The question of what constitutes humanity and where the boundaries lie between the human and the nonhuman is central to discussions of creatures like Frankenstein's monster, vampires, zombies, and werewolves. Frankenstein's creature, despite being constructed from human parts, is often perceived as nonhuman due to various factors such as his large proportions, superhuman strength, and lack of a biological mother. His physical attributes, combined with his tragic existence as a rejected creation, contribute to his otherness and estrangement from humanity. In the case of vampires, zombies, and werewolves, these creatures are often depicted as once having been human before undergoing a transformation that imbues them with nonhuman characteristics. Vampires are typically humans who have been infected with vampirism, becoming undead beings with a craving for blood. Zombies are reanimated corpses that retain some semblance of their former humanity but are driven by primal instincts. Werewolves are humans who transform into wolf-like creatures, often during the full moon, due to a curse or infection.

The fear provoked by these creatures varies depending on their perceived humanity or lack thereof. Beings that were once human, such as zombies, may evoke fear due to the loss of identity and agency associated with their condition. On the other hand, beings that elude understanding entirely, like H.P. Lovecraft's Cthulhu or Ridley Scott's Alien, inspire terror

through their incomprehensible and otherworldly nature. These entities challenge human comprehension and highlight the limitations of human knowledge and understanding.

As Stefan Herbrechter suggests, the Posthuman monster, exemplified by characters like Frankenstein's creature, confronts humanity with questions about its own nature and actions. By challenging the boundaries of humanity, these monsters force us to reflect on what it means to be human and the consequences of our creations.

Conclusion

In conclusion, there is no easy consensus on the topic of posthumanism. Various critics have interpreted the term differently and arrived at distinct conclusions. Furthermore, posthumanism does not belong exclusively to any single academic discipline; rather, it traverses and disrupts traditional boundaries separating different fields and modes of inquiry. One thing remains clear: posthumanism has emerged as a significant locus of debate in recent years because anthropocentrism, with its emphasis on human exceptionalism, no longer provides a satisfactory or convincing explanation of the world as we know it. As N. Katherine Hayles depicted in 2005:

> The interplay between the liberal humanist subject and the posthuman that I used to launch my analysis in How We Became Posthuman [in 1999] has already begun to fade into the history of the twentieth century. In the twenty-first century, the debates are likely to center not so much on the tension between the liberal humanist tradition and the posthuman but on different versions of the posthuman as they continue to evolve in conjunction with intelligent machines. (Hayles 65)

The study of theories of Posthumanism has indeed led to a significant shift in our understanding of the human condition and its relationship to the world around us. For centuries, since the

Renaissance period and even earlier, the discourse has largely been anthropocentric, with humans placed at the center of the universe, both metaphorically and philosophically. However, the emergence of Posthumanism as a theoretical framework has challenged this perspective, leading to the recognition that humans are not the sole focus of existence.

Research on Posthumanism, particularly in relation to concepts such as the Posthuman and Cyborgs, has shed light on the blurring of boundaries that once seemed fixed and immutable. Traditionally, humans have been seen as distinct from animals and machines, with clear delineations between these categories. However, Posthumanist theories have revealed the interconnectedness and fluidity of these distinctions.

One of the key insights of Posthumanism is the recognition that humans are not separate from nature but are deeply intertwined with it. This perspective emphasizes the interconnectedness of all living beings and the environment, challenging the notion of human exceptionalism. Additionally, the idea of the Cyborg, a hybrid entity that combines organic and artificial elements, further blurs the boundaries between the human and the machine.

Moreover, Posthumanist research has highlighted the ways in which technological advancements are reshaping our understanding of what it means to be human. As humans integrate technology more deeply into their lives, the distinction between natural and artificial, organic and mechanical, becomes increasingly blurred. This has profound implications for how we perceive ourselves and our place in the world.

Overall, the study of the theory of Posthumanism has led to a reevaluation of traditional anthropocentric perspectives and has opened up new avenues for understanding the complex relationships between humans, animals, machines, and the environment. By embracing the interconnectedness and fluidity of existence, Posthumanism offers a more nuanced and inclusive understanding of the human condition.

CHAPTER THREE

Posthumanism in the Select Novels of Bruce Sterling

In understanding the essence of Humanity through the selected author Bruce Sterling, this chapter will highlight the Posthuman Characteristics present in the novel Schismatrix by Bruce Sterling. On observing and analyzing these particular characteristics embedded in the text, the result defines what we truly perceive as natural and humane in contrast to the Posthuman elements. This chapter puts forward the findings on Posthumanism being a concept or theory which negates the meaning of being human in every possible sense. Henceforth displaying a Posthuman world in the Novel Schismatrix where Humanity has collapsed. The other Primary Text chosen for Chapter Three by Bruce Sterling is the novel *Holy Fire,* wherein the question of Immortality has widely been studied through the character of Mia Ziemann the protagonist of the book.

Introduction

Science fiction writers envisioned and penned descriptions of inventions well before they became reality. “It was science-fiction writers whose imagination put submarines, rockets, atomic weaponry, space ships, and computers to work before they had even been invented” (Willingham 4). “They imagined new possibilities for humanity transgressing past and present experience”(Willingham 2). Despite science fiction writers envisioning the potential advancements of science and technology, they also harboured fears regarding the repercussions of these new, disruptive inventions. Artificial intelligence stands out as one of the most prominent themes explored in science fiction. It serves the dual role of both imagining technological progress and cautioning against potential dangers. The prevalent apprehension

of artificial intelligence surpassing human control and leading to the catastrophic demise of humanity underscores the intricate relationship between science fiction and Posthumanism.

Within the realm of science fiction, examples of the Posthuman vary widely, spanning from optimistic depictions of augmented embodiment surpassing human limitations to contemplations on a world beyond the anthropocentric values of humanism. Conversely, there are also darker portrayals of how contemporary technoscientific advancements such as genetic modification, neural mapping, and nanotechnology are fundamentally altering the essence of humanity.

Bruce Sterling is an esteemed American author and a pioneer of the cyberpunk science fiction movement. His writing career commenced in the 1970s with his inaugural novel, "Involution Ocean," a science fiction homage to Herman Melville's "Moby-Dick," featuring a whaling ship navigating through an ocean of dust. Sterling's repertoire includes a series of stories and a novel titled "Schismatrix," set in the Shaper/Mechanist universe, which often delves into themes of computer-based technologies and genetic engineering. Sterling's literary contributions, comprising five short story collections and ten novels, have garnered numerous accolades, including a John W. Campbell Award, the famous Hugo Awards, a Hayakawa's SF Magazine Reader's Award, and an Arthur C. Clarke Award. Beyond his endeavours as a fiction writer, Sterling has also made significant strides as a critic and journalist, contributing to publications such as Metropolis, Art forum, Icon, MIT Technology Review, Time, and Newsweek, among others. He also curates "Beyond the Beyond," a blog hosted by Wired.

Furthermore, Sterling is actively engaged in the technology and design sphere. In 2003, his web-exclusive art piece, "Embrace the Decay," was commissioned by the Museum of Contemporary Art, Los Angeles, becoming the most-visited exhibit in the museum's digital gallery. He has imparted his expertise in design through teaching engagements at esteemed

institutions such as the Gerrit Reitveld Academie in Amsterdam, Centro in Mexico City, Fabrica in Treviso, Italy, and in Los Angeles with the Art Centre College of Design . Sterling currently divides his time between Austin, Texas; Belgrade, Serbia; and Turin, Italy.

3.1. The Collapse of Humanity in the Novel *Schismatrix*

Many have pondered the future of the human race and its trajectory amidst the pervasive influence of artificial intelligence. There are generally four avenues considered when contemplating what lies ahead. Firstly, there's Evolution, inspired by the ideas of H.G. Wells, which explores how natural processes over time might alter humanity. Secondly, Usurpation encompasses the belief that humanity may face extinction due to its own actions or be supplanted by another species, whether biological or artificial.

Then there's Alteration, the most common assumption, suggesting that humans will adapt themselves to changing circumstances, whether through mechanical, biological, or digital means. This concept draws parallels with current practices such as prosthetics and medical technology. Lastly, Exogamy involves some form of integration with the alien, whether through voluntary merger or involuntary infection, though this route is less common than others.

As these answers have sparked more exploration and experimentation, there's a growing need to theorize Posthumanism and delve into the various approaches defining this discourse in literature. 'Posthumanism' was initially employed in Philosophy to challenge traditional humanist views and address the impacts of advancements in genetics and medical technology on humanity. Meanwhile, the concept of the 'Posthuman,' originating in science fiction, Futurology, contemporary art, and philosophy, refers to entities existing beyond typical human boundaries. This concept raises questions about ethics, language, communication, social structures, and interdisciplinary intellectual pursuits.

Francis Bacon, in his Novum Organon (1620), instituted the scientific method as the way to gain control over all the things of nature in order to improve human livelihoods. In terms of cultural and literary thought, Posthumanism deviates from the notions of Humanism itself, the dependence on scientific methods as Francis Bacon states all the more make humans strive towards an unnatural life and blur the boundaries from machines and animals.

In the novel *Schismatrix,* the setting first of all introduces a different environment, many circumlunar, circumsolar colonies and states that are formed outside of planet Earth. The Author creates a futuristic fiction when the normality of the present-day human race is no more visible in the future of the *Schismatrix* world. As Sterling takes us far out into the future with the Posthumans living in two-hundred-year-old circumlunar colony, which was an artificial habitat orbiting Earth's Moon. With *Schismatrix* the plot does not give you a near future but plays with the possibilities of life far into the future, leaving us with the thought of where humanity stands at that period. Or rather inspect into the whereabouts of the human race; which is as we have previously established through the theories of Posthumanism, no more an anthropocentric species.

Bruce Sterling models his plot with the introduction of the two prominent races that are existing in the Posthuman futuristic world, the Shapers and the Mechanist. The Elder Radicals wielded authority from their entrenched positions within the ruling hospitals. These venerable aristocrats, each surpassing a century in age, were augmented with advanced Mechanist technology, prolonging their lives through intricate prosthetic enhancements. However, the exorbitant medical costs were plunging the Republic into bankruptcy, already heavily indebted to the medical Mech conglomerates. Imminently, the Republic teetered on the brink of becoming a Mechanist puppet state.

Yet, the Shapers deployed their own arsenal of allurements. Years prior, they had groomed and indoctrinated Lindsay and Constantine. The Shapers were the group of Posthumans who would alter their bodies through genetic modification and mental training. The Shapers represented the young preservationists who were considered as rebellious plebes. Lindsay and Constantine, both Mechanist are the two main Protagonist of the novel, and the lengthy plot would stand as a canvas for their long-lasting enmity and betrayal, a fight for power and survival. Through these two companions, prominent figures of their era, the Shapers stoked the indignation of the youth, witnessing their inherent entitlements pilfered for the Mechanists' gain.

Sterling employs a vision into hundred years of future with locations unimaginable to the human mind. According to Sterling, Earth is already an exhausted planet, and all earthlings have been shifted to other planets and asteroids or artificial satellites for their habitat. Sundog zones are such places where citizens who were considered as traitors were banished or exiled into these zones. In the novel these zones were initially considered as lunar alliances because their civilization depended on the lunar craters and mares that provided raw materials for their survival, and there were as many as ten such circumlunar colonies, Zaibatsu being one. But because of technical decline in these colonies and deeper space explorations that emerged, the republics left the neighboring lunar colonies into other planets and solar spaces leaving the lunar colonies as barren and exile zones only for the unwanted citizens or Sundogs. Sundogs were considered as people who were traitors, defectors, outlaws and exiles. Zaibatsu is where Lindsay Abelard is shipped to on his exile, where he would be called a Sundog, and therefore the plot on the fight for survival in the novel commences for Lindsay from this very place. As Lindsay lands on Zaibatsu, security check is done by a camera that speaks into the air, "You are Abelard Malcolm Tyler Lindsay? From the Mare Serenitatis Circumlunar Corporate Republic? You are seeking political asylum? You have no biologically active materials in your

baggage or implanted on your person? You are not carrying explosives or software attack systems? Your intestinal flora has been sterilized and replaced with Zaibatsu standard microbes?" (Sterling 9)

The question of Survival, just like on planet earth is also seen as a crucial desire for a Posthuman far out into the future. Death and Survival are themes that surpasses any other distinctive composition inhabiting the world of *Schismatrix.* In the present world we consider our civils rights the most important trope to our existence, it is what makes us feel like citizens living on this planet earth. It is what gives us security and protection. Sterling in the novel showcases a future wherein, he denounces all human traits like justice, ethical values, religion and morality. There is only room for death and survival in the Schismatrix world, for instance Lindsay is informed that, “The Zaibatsu recognizes one civil right: the right to death. You may claim your right at any time, under any circumstances. All you need do is request it. Our audio monitors are spread throughout the Zaibatsu. If you claim your right, you will be immediately and painlessly terminated. Do you understand?" (Sterling 10)

The question of Humanity is revisited on every turning point of the novel, because if life on earth have been exhausted as projected by Sterling in the novel, and the human race; now heavily altered by genetic modification, mechanist technologies and mind training were considered a Posthumans in the Schismatrix world were left without any humanistic traits, these Posthumans would no longer see a grain of humanity. Therefore the collapse of humanity in this chapter is being interrogated and studied closely through the actions of the characters and the activities of the republic and the myriad circumlunar, circumsolar colonies and their governments.

As emphasized by many theorist and critics that Posthumanism does not simply mean that the demise of humanity prompts reflection on what potential avenues might await in the realm of a humanist afterlife. “The post of posthumanism can thus function not merely in a temporal sense (after humanism), but in a conceptual sense as the exploration of a beyond: the acknowledgment that the human still exists as an effective and affective intensity, but that the conditions that have given rise to the human as such an intensity are shifting and open to being reconfigured. Indeed, the question of the human has always been a question of relating the human to that which lies outside of it” (Landgraf, et al 40)

Reimagining the meaning of being Human in *Schismatrix*

As we've established, Posthumanism fundamentally challenges the notion that advances in technology or revelations about animals are leading toward fundamental changes in the human species and its relationship with the world. This perspective requires a radical re-evaluation of the dominant humanist narrative concerning our identity. In the humanist framework, epitomized by the 17th-century writings of René Descartes, humanity occupies a natural and eternal position at the centre of existence. Here, humans are distinctly separate from machines and animals, possessing a unique and universal essence shared by all. Human beings are perceived as the originators of meaning and the sovereign agents of history, acting in accordance with a concept known as 'human nature'. Within this paradigm, 'Man'—despite its gendered connotations—is deemed the measure of all things, enjoying automatic and unquestionable hegemony.

In stark contrast, Posthumanism challenges this anthropocentric viewpoint by acknowledging that 'Man' is not inherently privileged or protected. It recognizes that humans are not entirely distinct from animals and machines, and are instead shaped by historical and cultural contexts

that render any appeal to a universal human essence futile. Within this perspective, humans are understood as products of diverse subjectivities rather than as singular, autonomous entities.

Focusing on the universal human essence, with reference to the Merriam Webster dictionary, the simplest definition of Humanism would be the Doctrine, attitude, or way of life centered on human interests or values; especially a philosophy that usually rejects supernaturalism and stresses an individual's dignity and worth and capacity for self-realization through reason. The word supernaturalism itself is a word embedded in the definition of Posthumanism; it is what Posthumanism stands for or rather the word 'supernaturalism' in the definition depicts everything that Humanism defies and Posthumanism embodies. The two doctrines through their definitions can be deemed as two opposing theories but if we look into the history of Humanism, we get a better understanding of its origins and in the process learn how Posthumanism has emerged.

The book Humanism by Tony Davies is an essential guide to an in-depth definition and meaning of Humanism and he explains the chapters like "The invention of Humanity", "Humanist before Humanism: The Renaissance" and "Humanism and Enlightenment" by giving an elaborate understanding of its origin and historical instances to enrich our knowledge on Humanism. Tony Davies in the book says,

> When Dodgson, wrote, 'humanism' was a word of recent coinage; but already the complex of ideas to which it referred was associated with another nineteenth- century word the 'renaissance', a dauntingly complicated constellation of political, cultural and intellectual developments in fifteenth- century Europe whose very existence is dismissed by some twentieth- century historians as a fiction, even while others continue to identify it as the birthplace of the modern world. (Davies 4)

He continues by saying that, “On one side, Humanism is saluted as the philosophical champion of human freedom and dignity, standing alone and often outnumbered against the battalions of ignorance, tyranny and superstition. On the other it has been denounced as an ideological smokescreen for the oppressive mystifications of modern society and culture, the marginalization and oppression of the multitudes of human beings in whose name it pretends to speak, even, through an inexorable ‘dialectic’ of enlightenment’, for the nightmare of fascism and atrocity of total war.” (Davies 5)

It is important to note that we have to start from the roots and deconstruct what we have now and for the future, similarly Tony Davies’ perception and knowledge of Humanism transpired into his texts reflects upon our idea about Humanism and all the more our orientation with Posthumanism. Having said that, we can draw a conclusion from the two definitions of Humanism and Posthumanism that they are in their cultural, political and philosophical sense of being opposing of one another’s doctrine and Posthumanism as we have concurred negates the essence of humanity. In *Schismatrix*, there is this battle of retaining or trying to embrace these human traits with the last string of thread left to hold onto and at the same time we witness a complete denouncement of anything humane in the characters, which leaves us pondering upon this very curiosity of humanity’s existence.

Abelard Lindsay on his exile in Zaibatsu encounters a character called Fyodor Ryumin who is identified as a hundred- and forty-two-year-old Mechanist. As they introduce each other and Ryumin learns about Lindsay’s past he exclaims, "How fascinating. I've met many borderline posthumans in my day, but never one of you. Is it true that they enforced an entire second state of consciousness? Is it true that when you're fully operational, you yourself don't know if you're speaking the truth? That they used psychodrugs to destroy your capacity for sincerity?" (Sterling

Through the conversations between the two characters and Lindsay; the protagonist, Sterling is able to give us an insight about how Posthumans underwent the myriad treatments to survive and also an intel into the different factions existing in the solar system. In an episode where Lindsay and Ryumin join forces to fool the Black Medicals and the Geisha bank through a Play they plan to direct and showcase together through the funding of the Black medicals, Ryumin invites Lindsay to venture out into the space and explore more factions and learn about their ways of living he tells Lindsay:

> Why not tag along with me? It would do you good to see more of the System. There are two hundred million people in space. Hundreds of habitats, an explosion of cultures. They're not all scraping out a living on the edge of survival, like these poor bezprizorniki. Most of them are the bourgeoisie. Their lives are snug and rich! Maybe technology eventually turns them into something you wouldn't call human. But that's a choice they make—a rational choice.….This Zaibatsu is only a criminal enclave. Come with me and let me show you the fat of the System. You need to see the cartels.
>
> (Sterling 40)

Amongst the characters living in the Schismatrix world we come to a recognition that they are aware of themselves possessing Posthuman and sometimes lesser of a human or not having human traits at all, as Ryumin points out they would not even call the cartels Humans because of their dependency on technology for their survival. The boundary between Machine and Man has been diminished, and they are significantly depicted in novels like *Schismatrix.* One character in the novel where Sterling designs his version of a posthuman in the future is the character of Kitsune belonging to the Geisha Bank. Upon Lindsay's arrival to the Geisha Bank he encounters Kitsune, she was the brain child behind the Geisha bank, Kitsune tells Lindsay that she was given to the surgeons, they had taken her womb out, and had brain tissue put in instead. Kitsune in no sense was a normal person, nothing defined her characteristics as human.

According to Lindsay, “Kitsune was an artificial creature, and accepted her feverish world with a predator's thoughtlessness. Hers was a pure and abstract life, a hot, distorted parody of sainthood…..She had spent eight of her twenty years within the Bank, where she dealt with customers and rivals on terms she thoroughly understood. Still, she knew there was a realm of mental experience, taken for granted by humanity, that was closed to her.” (Sterling 39)

In this Posthuman world of the Schismatrix, people like Kitsune took pleasure in the fantasy world, they have lost all consciousness of being a human, due to the heavy surgical treatment of inhuman capacities done to her body. Shame, pride, guilt, love—these emotions flickered within her like faint shadows, swiftly incinerated by an overwhelming surge of ecstasy. It wasn't that she lacked human feeling; rather, it had become subdued, a secondary subconscious, an intuitive stratum beneath her posthuman mode of thought. Her consciousness melded cold, pragmatic logic with convulsive pleasure, forming an amalgamation of sensations both cerebral and visceral.

The concept of consciousness permeates in the novel with such instances with Kitsune, a character Sterling has developed in order to show the future scenario of women and their place in the Universe. It is imperative to identify Kitsune’s role as a pleasure offering geisha who have accepted her plight and now only lives in the fantasy realm, because humanity has collapsed for her. For Kitsune, “the world of humanity was a world of losses, broken hopes, and original sin, a flawed world, yearning always for mercy, empathy, compassion.... It was not her world.” (Sterling 39) The exhaustion of Earth and its people fleeing from the planet, has altogether left behind any sense of humanity. Her altered body no longer a model of anything human, has lost its capability to recognise her emotions such as her compassion for Lindsay, neither does she try to admit it to herself about these feelings.

Schismatrix unfolds these deep rooted complexities of what really defines a Posthuman, Sterling’s imagination or vision into future is distorted and perplexing as he tries to model the

scenario and civilization of the space with that of the structure formulated on Planet earth, whether it's the colonies representing different factions similar to that of states and nations that were once a part of the world order. The existence of the Pirates, the Mech cartels, the Geisha bank or even the Black Medicals all represent a model replica of the same that existed on Planet earth. In Schismatrix we witness a surrendering of all human traits or humanity by characters like Kitsune and Ryumin, and in contrast characters like Constantine and Abelard Lindsay are Posthumans who still possess these human traits of the hunger for Power and strong emotions of hatred and love felt between each other.

If we study the concept of loss and grief, as emotions felt by the characters in *Schismatrix* we can apply some thoughts mentioned by some theorists of the posthuman, like Patricia MacCormack in her work *Posthuman Ethics* (2012), have delved into the realm of 'necrophilosophies,' a term she credits to both post-structuralism and posthumanism. These philosophical frameworks share a common thread: they lament the loss of something and are characterized by a profound 'focus on what is lost.' Additionally, they've influenced the understanding of death itself in more specific ways. Similarly this concept of loss is felt by Lindsay when Vera and Nora both die by unavoidable circumstances relating to him.

Sterling designs characters like Lindsay who is holding on to humanity and grasping its last clutches unwilling to accept the fate of the collapse of Humanity in the lunar and solar spaces. Wellspring who was once known as Wells appears in Czarina's palace and Lindsay immediately recognizes him as his fellow friend, who was born on earth and was now a two hundred year old man. According to Lindsay Wellspring was a "a man of mystery, a maneuverer par excellence, a visionary, even a prophet." (Sterling 177) As Lindsay laments on his grief about Nora's suicide and how he was anticipating her reunion, when he learnt about her death, Wellspring consoles Lindsay and tells him not to be distracted or blinded towards his ultimate aim. He calls Lindsay a Posthumanist and questions him about his life choices and goals, "Are

you on the side of life, or aren't you? If you're not, then you'll let the pain overwhelm you. You'll go against Constantine and die as Nora did. Accept her death, and stay with us. The future belongs to Posthumanism, Lindsay. Not to nation-states, not to factions. It belongs to life, and life moves in clades." (Sterling 178) People like Wellspring are Posthumans who have accepted the fate of humanity being collapsed and is a character directly opposite of Lindsay, which Sterling has employed in order to show the perplexity of the situations presented in a Posthuman future. Lindsay who has a glimpse of hope towards humanity replies to Wellsprings saying, "I've heard your spiel before, Wellspring. If we embrace the loss of our humanity then it means worse differences, worse struggle, worse war." (Sterling 178)

This is an ongoing battle of consciousness on the minds of the characters in the novel *Schismatrix,* Posthumans like Wellspring see their existence as a world of opportunity, a universe of endless possibilities, for them the collapse of Humanity means a life with no limits and no rules. Narratives on the collapse of humanity often explore themes of societal breakdown, environmental catastrophe, technological dystopia, or a combination of these elements. These narratives delve into the unravelling of social structures, the erosion of moral values, and the struggle for survival in a world teetering on the brink of chaos. They may examine the consequences of unchecked greed, political corruption, or the exploitation of natural resources, leading to widespread suffering, conflict, and despair. Within these narratives, characters grapple with questions of identity, purpose, and morality as they navigate the harsh realities of a world in decline. Ultimately, stories of humanity's collapse serve as cautionary tales, urging reflection on the choices and actions that shape our collective future. And hence Schismatrix is a depiction of the collapse of humanity depicted by Sterling from a science fiction point of view.

Furthermore, as we analyse the text we witness Abelard Lindsay's hopes in mankind and humanity, through myriad episodes in his life that has been spanned out throughout the plot. This an attempt by the author to establish the fact that humanity ceases to continue in the outer spaces away from planet earth. It simply isn't the same anymore, and to draw out this distinctive feature of the future, Sterling has utilized Lindsay's charismatic integrity to stand as a sole character who cherishes the old cultural heritage of planet earth and its humanities. Hence it is his idea to create and direct the play with Ryumin. The Play reminiscent of theatres that dated back to centuries old Shakespearean plays gave a sense of solace and hope for Lindsay to keep alive the art of entertainment for the soul. When Lindsay initially introduces the idea of creating a Play, Ryumin comments about it by calling him an Antiquarian and questioning him about his steps towards breaking the ongoing interdict with Planet earth.

In Sterling's *Schismatrix* stories, what stands out is the stark contrast between the vivid portrayals of the hyper-embodied and the pitiful state of humanity. On one hand, we encounter genetically modified Shapers who undergo radical transformations, adopting various forms ranging from aquatic posthumans to cerebral "Patternists." On the other hand, there are depictions of frail human bodies awaiting alteration. Sterling initially introduced these striking, hyper-embodied images with the portrayal of an alien queen in the short story *Swarm* (1982). The descriptions of her "monstrous body" and "warm, pulpy flesh" evoke feelings of disgust and terror. This alien queen serves as a reproductive hub for the colony, perpetually digesting material and producing eggs—a biological machine stuck in an endless cycle of production.
Sterling skilfully introduces a tension between the gritty, organic human body, teeming with bacteria and odours, and its antithesis through various dichotomies. He juxtaposes the frailty of flesh with the hyper-rationalized, disembodied existence of the wire-heads. Characters like Ryumin, encountered by Lindsay during his transformation into a "sundog," exemplify this

detachment from the physical form, opting for a purely digital existence. Later encounters reveal Ryumin as a computer-generated visage, reminiscent of William Gibson's super AI Wintermute from "Neuromancer" (1984). Lindsay, tainted by the bacteria of a newly encountered space habitat, suffers from a rampant upper-respiratory infection, manifesting symptoms like a runny nose, potential rashes, and eczema. These physical afflictions underscore the vulnerabilities of the human form, motivating the Shapers to pursue radical embodiment while compelling the Mechanists to forsake corporeal constraints entirely.

However, it's important to acknowledge that Sterling's Shaper/Mechanist narratives maintain a steadfast humanist foundation, particularly in their reaffirmation of the intrinsic value of life over death. The novel opens with a profoundly tragic human motif: suicide. Lindsay Abelard, Sterling's youthful protagonist, identifies as a Preservationist, residing aboard a lunar orbiting world with aspirations of salvaging remnants of old-Earth culture before humanity's dispersion across space. Sterling vividly depicts Lindsay's anguish as he witnesses his beloved Vera soaring above him in a glider, only to plummet to her death—a poignant act of existential assertion, demonstrating agency through self-termination. Echoing elements of Shakespeare's "Hamlet" and "Romeo and Juliet," Lindsay contemplates following Vera into oblivion. Yet, fate intervenes as Lindsay is redirected to another orbiting world, embarking on a journey away from mundane human desires toward a multitude of posthuman identities. Amidst this narrative backdrop, tensions arise between conventional human values and the novel possibilities presented within the Schismatrix solar system, delineating along several thematic fault lines.
Indeed, suicide serves as a significant motif in the final confrontation between Lindsay and his antagonist, Philip Constantine. Once a friend who shared Lindsay's Preservationist ideals, Constantine now embodies the allure of conquest and ambition. Following their duel, Constantine is left wounded and adrift, hovering between life and death. Despite salvaging his

physical existence, he remains in a state of liminality, resigned to his fate and ready to embrace death. He acknowledges Lindsay's divergence from the path of those advocating for the creation of aquatic posthumans, recognizing Lindsay's enigmatic nature as a "sundog," a survivor of perilous encounters who defies death's grasp. This adaptability becomes a defining trait of Sterling's protagonist, challenging the thematic significance of traditional humanistic values in the narrative, paving the way for more radical insights.

Nevertheless, Sterling retains suicide as a focal point of humanist concern. In "Cicada Queen" (1983), he introduces discreet rooms—places of privacy devoid of surveillance—where individuals, consumed by despair, choose to end their lives. Additionally, in the concluding mini-narrative of *Schismatrix Plus*, titled *Sunken Gardens* (1984), protagonist Nikolai Leng succumbs to ennui, opting for self-termination. These characters yearn for death as an escape, yet what they seek to preserve is their connection to a shared human heritage rooted in the past. This longing for preservation is epitomized by the lunar world where the novel commences, transformed into a museum commemorating a bygone era. Pongpianskul, the curator, symbolizes this reverence for cultural legacy amidst humanity's transformative journey. Despite the proliferation of hyper-embodied imaginings, Sterling maintains a latent humanistic nostalgia and romanticism, underscoring the enduring value of our shared human experience.

Another realm that Sterling plunges into with this novel is the process of cloning around the decades that spans out in the plot. As a method demonstrative of all science fiction narratives, in *Schismatrix* too, Sterling employs this direction with character like Kitsune’s clone named Murasaki and Vera Kelland’s clone named Vera Constantine. Cloning is the process of creating an exact genetic replica of an organism, typically a plant, animal, or microorganism. In biological terms, cloning involves producing genetically identical copies of an individual by

replicating its DNA. In a posthuman future, cloning could represent a significant aspect of the societal landscape, offering both opportunities and ethical challenges. Cloning in the Science Fiction realm can unfold in context such as: Enhancement and Customization, when Cloning technology could be utilized to create genetically modified individuals tailored for specific roles or functions. It can involve enhancing traits such as intelligence, physical strength, or resistance to disease, leading to a proliferation of specialized clones optimized for different tasks or professions. In Reproduction and Family Planning, Cloning could offer alternative methods of reproduction for individuals or couples unable to conceive through traditional means. It might also provide a way for individuals to reproduce asexually or for same-sex couples to have genetically related children. With Medical Application, Cloning can be used for therapeutic purposes, such as generating tissues or organs for transplantation, or for studying genetic diseases and developing targeted treatments. Cloning might also enable the creation of animal models for research into human health and disease.

In *Schismatrix,* Cloning embraces the total Progeny, or a copy version of the existing female characters. It leaves no room for ethical questions on how dangerous these clones could be posited to the Posthumans because it is seen as a common practice now in the Schismatrix world. The Clones of Kitsune and Vera Kelland, both lovers of the protagonist Lindsay Abellard resonates with Kazuo Ishiguro's novel *Never Let Me Go,* which is novel with the concept of cloning. Set in an alternate reality where human clones are created and raised for the sole purpose of providing organ donations, the story follows the lives of three clones—Kathy, Ruth, and Tommy—as they navigate their existence within a society that views them as disposable commodities. In Ishiguro's *Never Let Me Go,* cloning plays a central role in the narrative's exploration of identity, ethics, and the nature of humanity, its portrayal emphasizes the moral and existential dilemmas faced by the clones, who grapple with questions of autonomy, agency,

and their place in the world. Despite being genetically identical to ordinary humans, the clones are systematically denied the same rights and freedoms, treated as objects rather than individuals with inherent worth. The novel explores the psychological impact of knowing one's predetermined fate and the profound sense of loss and longing that accompanies it. As the characters mature and confront the reality of their purpose, they struggle to find meaning and purpose in their lives, despite the inevitability of their eventual "donations." Through the lens of cloning, Ishiguro prompts readers to reflect on broader themes such as the ethics of scientific experimentation, the implications of technological advancement, and the fragility of human relationships. *Never Let Me Go* serves as a poignant meditation on what it means to be human and the ethical responsibilities inherent in the pursuit of scientific progress.

Unlike Ishiguro's portrayal of the clones in the novel, Sterling in Schismatrix almost deploys this sense of Power to the clones that have been produce. It signifies the idea of being reborn, and in a Posthuman future, clones are not regarded as productions of security breaches and identity larceny. In a chapter of the novel, when Lindsay meets Murasaki, she notices him staring at her so she looks at him quizzically and immediately Lindsay responds by apologising to Murasaki in advance saying "You mustn't mind if I stare, You remind me so much of your mother" he continues by saying that "Clones are their own people. In the Ring Council, I had a family once. My congenetics—my children—were clones. And I loved them." (Sterling 212, 13) The widespread use of cloning would raise complex ethical questions regarding the rights and status of cloned individuals, as well as concerns about autonomy, identity, and discrimination. There would be debates over issues such as the ownership of genetic material, consent for cloning procedures, and the potential exploitation of cloned individuals. But in Sterling's futuristic world he normalises the practice of Cloning and fails to address its dangers.

As Cloning is suspected as a challenge towards traditional notions of family, kinship, and identity, leading to shifts in societal attitudes and norms. It could also exacerbate existing inequalities if access to cloning technology is restricted based on socioeconomic status or other factors. This is seen as steps towards the denouncement of humanity, hazardous practice that can end the human race, and hence we see that *Schismatrix* represents a world already past the stages of dangers attributed to cloning that it is one of the reasons for Earth's exhaustion along with the wars and plagues that have taken over humanity. Overall, through a close reading of *Schismatrix* and novels like *Never Let Me Go,* cloning in a posthuman future would likely be accompanied by a range of scientific, social, and ethical developments, shaping the trajectory of human evolution and the nature of human society.

As the story of Abelard Lindsay through hundreds of years take place, we discover a recurrent notion that has been implanted by the author and that is the strive for survival. For every character, survival becomes their sole mission in the indefinite realm of the universe. Whether it is Lindsay's goal to survive by repeatedly going through the process of life extension medical treatments and mechanical engineered hand and limps that he installs, or even Constantine's ultimate reason for going against his very own cousin Lindsay is for the very reason of survival. Survival also comes in the form of the clones that are produced, these clones act as an agency for the characters who have died to carry on with their lives.

For this very act of survival and the posthumans ability to move around in the universe creating colonies and nation states for themselves, when many of the circumlunar and circumsolar nations get destroyed, Lindsay starts a new project, this is his goal to create a new space a new home for his people. The Europa projects leads him back to planet earth in search of ecosystems that he can bring back to his modelled space called Europa. In the passage below, Sterling's

descriptive prowess shines as Lindsay immerses himself in the Earth's seas, capturing organisms for his Europa project:

> Lindsay descended into the depths, his senses enveloped by the ethereal dance of aquatic life. Sunlight fractured into a mosaic of shimmering hues, illuminating the vibrant tapestry of coral reefs and swaying kelp forests. With each stroke, he felt the cool embrace of the water, a reminder of his intimate connection to this primordial realm.
>
> As he explored the underwater landscape, Lindsay marvelled at the kaleidoscope of life teeming around him. Schools of iridescent fish darted through the crystal-clear waters, their graceful movements a symphony of fluidity and grace. He reached out, his hands brushing against the delicate tendrils of anemones, their pulsating forms a testament to the intricate beauty of the natural world.
>
> Amidst the tranquil serenity of the ocean depths, Lindsay worked tirelessly, collecting specimens for his ambitious project. Each organism he gathered held a story, a fragment of the vast tapestry of life that thrived beneath the waves. With meticulous care, he catalogued his findings, capturing the essence of this wondrous ecosystem in every delicate detail." (Sterling 231)

As Lindsay gallivants around the deserted topography of planet earth, he is reminded the age when humans had departed from the planet earth after its exhaustion, the humanity that has collapsed on this very planet. Tears welled in his eyes, streaming down his cheeks unchecked. He wept silently, mourning not just for mankind but also for the profound blindness of humanity, which clung to the belief that the cosmos adhered to rules and boundaries that could shield them from their own inherent freedom. Yet, there were no shelters, no ultimate destinations. Futility and freedom reigned supreme, absolute in their essence. As he recalls the partition of humankind from earth he comes to one resolution noting that, "By this token he

knew that humanity on Earth had become a relict. In the long term, the vast biological timescape that had become Lindsay's obsession, rust ate anything that failed to move. Earth's future did not belong to humanity but to the monstrous weeds, grown strange and woody, and whatever small fleet creatures leaped and bred among them. And Lindsay felt justice in it." (Sterling 232)

3.2. Lure for Longevity in the Novel *Holy Fire*

In the Novel *Holy Fire* by Bruce Sterling the author creates a 2095 Earth, where life extension treatments have created a society run and designed by Gerontocrats (a government ruled by elders) poses some very real and interesting questions about our future. Medicine has advanced to the point where humans stay healthy and productive well beyond the century mark. As such, there has been little to no generational transfer of wealth and the youth are getting restless. In a post-plague world, the medical establishment has fused with the government to extend the lives of the most useful, practical and healthy of its citizens.

The Novel, published in 1996 is set in the near future, and explores themes of biotechnology, transhumanism, and the intersection of technology and human consciousness. One of the main themes of the novel is the concept of "self-actualization" through the use of technology. The protagonist, Mia Ziemann; a medical economist, is a woman who is dissatisfied with her aging body and seeks to transcend it through the use of biotechnology. Through the use of advanced medical procedures, she is able to extend her life and improve her physical abilities, ultimately becoming a "neo-human" who is no longer bound by the limitations of her biological body. The novel also explores the idea of the "Posthuman" and the impact of advanced technology on human consciousness. Mia's transformation leads her to question her own identity and her place in the world, as she becomes something that is no longer entirely human. The novel suggests

that as technology continues to advance, the boundaries between human and machine will become increasingly blurred, raising ethical and philosophical questions about what it means to be human.

Another important theme in *Holy Fire* is the idea of "technological determinism," which is the belief that technology shapes and determines social and cultural development. The novel suggests that the rapid advancements in biotechnology and other fields will have a profound impact on society, and that the choices made about how these technologies are used will shape the future of humanity. The novel is written in a style that is both engaging and thought-provoking, and its themes are explored through a complex and multi-faceted narrative. Sterling's use of descriptive language paints a vivid picture of the world of the future, and his characters are well-developed and relatable. Its themes of self-actualization, the post-human, and technological determinism and the author's descriptive language, complex narrative, and relatable characters make the novel an engaging Posthuman fiction.

In Bruce Sterling's *Holy Fire*, the central theme of a life devoid of risk being devoid of meaning takes center stage. However, the novel also delves into broader societal issues, including healthcare, control, and the ethical implications of extending life within a democratic framework. Sterling provocatively examines the intersection of these themes with the realm of art, probing questions about the nature of creativity and its relationship to longevity and societal values. Through his exploration of these multifaceted topics, Sterling offers readers a thought-provoking narrative that challenges conventional wisdom and prompts reflection on the complex interplay between individual agency, societal norms, and the pursuit of a meaningful existence.

For readers familiar with Bruce Sterling's works, *Holy Fire* represents a continuation of his exploration into humanity's interaction with emerging technologies. Building upon the framework established in his Shaper/Mechanist stories, which traced the divergence of humanity into two distinct factions—the bio-modifying Shapers and the tech-integrating Mechanists—Sterling presents a new vision of Posthumanity in *Holy Fire*. Unlike his previous narratives where these groups were pitted against each other, here they exist in separation from mainstream humanity.

Mia Ziemann is the main character and the author has fixated her as the protagonist throughout the novel. However, the interest of this chapter lies in the fact that Mia is one intriguing character that lets us explore more about the entity that characterizes a person that is beyond Human, it explores the realm of immortality. As Mia is described as a Ninety-four-year-old woman, who has been living on medical drugs for life extension, Sterling in *Holy Fire* talks about the narrative of the future and paints elaborative explanation about how the future looks and about how it feels to be a gerontocrat living with life extensions. The first sign of this is depicted in the beginning of the novel, wherein the narrator informs us that:

> Mia had lived through a long and difficult century. She had witnessed massive global plagues, and consequent convulsive advancements in medicine. She'd been a deeply interested witness to vast new crypts and buttresses and towers, added to the ancient House of Pain. She had professionally studied the demographics of the deaths of millions of lab animals and billions of human beings, and she had examined the variant outcomes of hundreds of life-extension techniques. She'd helped to rank their many hideous failures, and their few but very real successes. She had meticulously judged advances in medical science as a ratio of capital investment. She had made policy recommendations to various specific organs of the global medical-industrial complex.

> She had never gotten over her primal dread of pain and death, but she no longer allowed mere dread to affect her behavior much. (Sterling 7).

Subsequently as we are introduced to the other characters of the novel, we learn about Mia's former lover Martin Warshaw, a film producer who is in his death bed when the novel opens. Martin who has also had various life extensions done do his body has been faced with a biological shutdown of his organs or rather a system failure. As Mia goes through his prognosis, we learn about his health concerns leading him to his death. "Martin was dying. He had, in point of fact, amyloid neural degeneration, partial spinal paralysis, liver damage, and kidney nephritis, all of which had led through the usual complex paths of metabolic decline to a state his records neatly summarized as insupportable." (Sterling 14)

Sterling focuses in this opening chapter with a lot of emphasis on the prospects that leads up to the plot of the rest of the novel, he not only introduces the themes that takes focal point in this narrative but he also brings to light the parting gift that Martin has left for Mia. The Memory palace, which was a castle in virtual sand, Martin offers her the keys to this virtual fortress, which would become the sole reason for Mia's escapes and survival when she would undergo her convalescence. In this farewell meeting between the Mia and Martin, we also witness a futuristic phenomenon as Mia is greeted and welcomed by a talking dog Plato. Martin says that; " I've had Plato for forty years, he's one of the oldest dogs in California. One of the most heavily altered dogs in private ownership, he's even been written up in the breeders' magazines. Plato's rather more famous than I am, these days." In response Mia says; "I can see that you've done a great deal with him." (Sterling 5)

Through this encounter with Martin and his Dog Plato we are able to locate a world in the future where even the animals have been altered significantly, where they begin to embody human – like features, in terms are Plato fetching the chair for Mia upon her entrance into the room and also Plato talking to his owner Martin. The boundaries that Donna Haraway discussed in her essay *A Cyborg Manifesto* truly begins to take shape when we witness a character like the Dog Plato who is more than an animal with human capabilities. Also the lure for longevity is being showcased here wherein Plato has been living for more than 40 years.

In *Holy Fire*, Sterling revisits the theme of Posthumanity, portraying a society where technological advancements have led to a clear demarcation between the modified and unmodified. This dichotomy serves as an exaggerated reflection of current societal trends, particularly the growing divide between the elderly and the young. A character that represents the distressed youth in the novel, is the character of Brett. As we dwell more on the topic of dichotomies of the old vs. the young, we discover this posthuman world which seemed to give the upper hand for opportunities largely to the gerontocrats; which clearly gave way to this divide. The theme of young vs. old is also channeled through the envious perception of the urge to be young again or to be young forever from the Protagonist' point of view. Mia Ziemann goes through this sudden urge of wanting to be young again, a lure for longevity, when she overhears the young couple fighting on the street in regards to their plans of travelling to Europe. Nostalgia takes over her mind as she's reminded of her youthful days when she would travel all over Europe.

Mia in this episode as she follows the two-quarrelling couple, intervenes and tells them to go to Europe, to make that decision because they are still young and they have the resources. He tells the man to take his partner and fulfil the plans because they have time in their hands. Time is of the essence here and Mia Ziemann who has lived for decades know how important it was.

She tells the young couple that they can run a lot of risk since they are young and they have the energy. The idea of being young and having the leverage to do whatever one wanted to do, has been a recurrent theme in many Science Fiction Novels, it has been a desire in many poets and authors to remember their youthful bygone days. Not only is it a theme explored in Science fiction but it has also been a theme utilized by many poets from different literary periods dating back to the Elizabethan Era or even the Ancient Greek literatures. The romantics like William Wordsworth and William Blake would compose poems remembering their youth and how precious that time was. Or the interpretation of the poem *Youth and Age* by Samuel Taylor Coleridge is one that interprets the value of time, he recollects his youthful days and the joy and strength that he once possessed, where he exclaims that "Life was an everlasting spring". Old age was always seen as a fear and an unavoidable circumstance in one's lifespan, authors love to prioritize such themes and write about it. But in Sterling's Fiction, the fear of old age has been reduced by the extensive medical care, drugs, bioengineering body enhancements that was available to the Gerontocrats.

This divide is seen significantly in the novel when the animosity between the young citizens and the old are highlighted by the couple, mainly their despise for the gerontocrats. It gives us an insight about the situation of the status quo in the late twenty first century. When Mia approaches the young man, intervening whilst they quarrel about their euro trip, the man replies to Mia by calling her out on being a gerontocrat, he voices his hatred by saying, "Like it's a big hazard for some gerontocrat to make fun of us! Look at you—you got your ambulances standing by for you around the clock! You got every advantage in the world! What have we got?" (Sterling 40)

From this encounter Mia is left with the young woman named Brett who she spends more time with. Sterling curates a visual of the young vs. old, when he characterises Brett as this

carefree young woman with her pet snake in contrast to Mia as an old responsible women almost pushing a century old. Responsibility according to Mia is the only Important thing that an old person can carry with them for their survival, nothing else mattered; “When you live a really long time, it changes everything. The whole structure of the world, politics, money, religion, culture, everything that used to be human. All those changes are your responsibility, they benefitted you, they happened because of you. You have to work hard so that the polity can manage. Good citizenship is a lot of work. It needs a lot of self-sacrifice.” (Sterling 42) *Holy Fire* illustrates the dilemmas of being young and having the time but not the luxuries and opportunities that were granted to the Gerontocrats, in contrast to the old citizens who were provided extensive care and treatments with control over the government and diplomacy of the nations, but with great price to pay in sacrificing their body to various experiments that it had to undergo in order to survive longer.

Sterling in *Holy Fire* posits the two important female characters, Mia and Brett as examples of the Old vs. Young dichotomy often used as literary analytical apparatus. Brett is the only character (apart from the Posthuman dog Plato and her daughter Chloe) who has seen the old Mia and the young Maya, therefore she accidentally meets Mia in the beginning of the novel and comes back into Maya’s life towards the end of the novel. On further observation we see the consistency in Brett’s character, an advocate for the rights of the youth against the Gerontocrats. Brett voices her antagonistic feelings towards the old people and lashes out on Mia, especially after learning about Mia’s radical transformation:

> You’re not young. That’s it, isn’t it? You stole my life because you’re older than me, and stronger than me. So for you, it was always easy. I mean, maybe you can panic, maybe you can be wracked with guilt, maybe you can even be terrified out of your skin by some stupid wired-up dog. But even when you don’t know who you are, you

> *still* know who you are. You're five times older than me, and five times stronger than me. And you just won't get out of the way. (Sterling 306)

As Mia is teased by Brett about her emotional incidence in the bus, where she was crying to the young couple, Mia tells her that it was not the loss of her love, but because of the human condition that made her weep. She laments on the Posthuman condition's design that has exposed everyone towards this lure for longevity. It was a trap for all humans to transcend and extend their bodies in order to live longer, but with what price? Is the question Mia ask herself.

The Posthuman world that Sterling creates in this novel, is one that has some similarities with the ancient world but at the same time portrays a stark difference to today's world, the food that were once considered nutritious and vital to someone's health is considered repugnant and detestable. Feeding vegetables to a child was considered as a crime to Brett and she continues this conversation with Mia stating that, "They're really *nasty*. Especially spinach. And corn is disgusting. This big lumpy yellow cob with all these little *seeds* on it ..." (Sterling 51) We learn from this conversation that the planet earth has changed drastically over the decades that at present anything that grew from the soil was inedible, food was genetically engineered and produced in labs. It is imperative to note that the changes pertaining to this planet earth and its people is what is represented in a Science Fiction world.

This encounter with Brett is crucial to the story of *Holy Fire* because Mia Ziemann here realises her desires to be young again and to live a life of the youth without any responsibilities. This thought of her wanting to be young emerges when she gazes upon the young woman in her apartment floor, sleeping peacefully. As she continues to look at Brett, there is a sense of "Envy rose in Mia like poisoned smoke. She walked back to her bed and sat in it, and thought bitterly

about the tissue of events that she called her life" (Sterling 55) This feeling leads her to undergo the treatment which was newly introduced and had not been available to many Gerontocrats. Mia being a Medical economist and someone who had saved up a lot of wealth is able to get the opportunity of transforming herself. This of course suggests the vital theme of the novel, which is the lure for longevity. Mia embodies this interest to transform when she is accepts the truth about her ageing body, and her desire to be a young woman again. Sterling explains the decaying body of a Posthuman when he details Mia's health conditions:

> Sutures knotting and calcifying. Cartilaginous membranes ossifying. Mineral deposits of stonelike hardness forming in the gall bladder, liver, the major arteries. Nails thickening, skin going scaly, hair thinning, graying, going all brittle. Nipples darkening, breasts sagging, ducts shrinking, glands puckering. The urogenital system, evolution's canny trade-off of fertility for mortality, permanently bewildered. Deposits of rich bloody marrow dying out in their bony nooks and crannies, replaced by thick yellow pockets of inert fat. Loss of acuity in the retinas and in the weirdly complex machineries of the inner ear. The ancient gland that was the brain, tirelessly shifting its hormonal sediments until its reptilian backwaters filled with toxic deposits as tough to clean out as a childhood neurosis. (Sterling 54)

Through this description, we are aware that, "Mia wasn't sick, and she certainly wasn't dying, but she was very far from young. She had kept her brain quite clean, but the repeated neural scrubbings had caused serious wear on certain peripheral nerves." (Sterling 54)

It is crucial to note that if given a chance with the medical advancements humans would go to lengths to immortalise themselves, to extend their lives and to transform themselves to be young again. And this is exactly what the Protagonist of the novel Mia Ziemann does, when she is presented with the opportunity of undergoing a life extension upgrade where she could emerge out of it as a young woman.

The beginning of Chapter Two, leading up to Mia's treatment, is especially dense with hard science fiction details. Through Sterling's insight on quantum physics and the world of information technology, the chapter is able to get a grasp into the nature of the medical-industrial complex. In the novel we see that this interest in the character only grows over time and she never pales in the reader's mind. But then she takes the new treatment, and everything changes dramatically or rather traumatically. "Mia's choice of upgrade was known as Neo-Telomeric Dissipative Cellular Detoxification, or NTDCD. It was a very radical treatment that was very little tried and very expensive. Mia knew a great deal about NTDCD, because she was a professional medical economist. She qualified for it because she had been very careful. She chose to take it because it promised her the world, and she was in a mood to gamble." (Sterling 61)

Her change is astonishingly well-portrayed and upon a few instances we witness the self-analytical thoughts from the new Mia: "The Mia thing was meek and obliging and accommodating, and not very interesting. The Mia seemed to be really tired and didn't care very much about anything. The Mia was nothing but a bundle of habits" (Sterling 76). Sterling presents numerous intriguing premises and delves into inquiries such as: What occurs when we gain mastery over our biological makeup, especially if character is traditionally believed to be dictated by biology? In the Posthuman world of Holy Fire we witness a growth in the specific field of medicine, Sterling informs his readers that, "the medical-industrial complex dominated the planet's economy. Biomedicine had the highest investment rates and the highest rates of technical innovation of any industry in the world. Biomedicine was in a deliberate state of controlled frenzy, giving off enough heat to power the entire culture." (Sterling 58)

As the goal of Survival runs through with every motive in life's advancements in the biomedical or biotechnological field Francis Fukuyama, voices this concern of its Pros and cons stating that, " Biotechnology will cause us in some way to lose our humanity- that is, some essential quality that has always underpinned our sense of who we are and where we are going, despite all of the evident changes that have taken place in the human condition through the course of history." (Fukuyama 101)

The Posthuman world of Holy Fire was one that was living in the boon of the biotechnological revolution, every law was run according to the field that was responsible for the economy of the state. Conditions for a citizen was shaped and modelled according to the standards of the medical field; "If you wanted to destroy your health, that was your individual prerogative. Once you were thoroughly wrecked, the polity would encourage you to die. It was a ruthless system, but it had been invented by people who had survived two decades of devastating general plagues." (Sterling 61) Following the plagues, the world underwent a transformation akin to the aftermath of a global conflict. The profound impact of widespread death, pervasive fear, and deserted cities had forever altered societal sensibilities. Some individuals perished while others survived. Those who actively fought against mortality would be systematically recognized, while those who displayed foolish behavior would be laid to rest alongside the others.

In Holy Fire as Mia's transformation into a full Posthuman takes Centre stage several questions about religion, ethics and the human consciousness are being raised. Dr. Rosenfeld who is in charge of Mia's operation informs her that if she goes through the transformation, it would be impossible to activate her egg-cell lines as she is post-menopausal, and working on an egg-cell restoration treatment would be something that the ethicist would not approve. He also warns

her that after the transformation she is prone to side effects like subtle disturbances leading to culture shock, post operation melancholy, a few symptoms of bipolar disorder and Impatience. Dr. Rosenfeld ponders upon these symptoms with great amusement about the human consciousness and it being "the highest and complex metabolic function in all of nature." (Sterling 67) no matter how advanced the sciences would go, the soul was an entity that was far out of reach to be manipulated.

It is interesting to note that Sterling presents a group of people into the plot, a group often perceived as a mysterious community for centuries, termed as the outsiders, the odd one out. Throughout history, it is known that the Romani people, commonly referred to as Gypsies, have faced systemic oppression and discrimination across various regions. Dating back to their migration from northern India around the 11th century, they encountered hostility and marginalization in Europe, with instances of enslavement, forced assimilation, and persecution. During the Middle Ages, they were subjected to laws branding them as outcasts and were often expelled from towns and countries. In the 20th century, the horrors of the Holocaust saw the genocide of hundreds of thousands of Romani individuals by the Nazi regime, paralleling the atrocities committed against Jewish communities. Even after the war, discrimination persisted, with Romani communities facing segregation, poverty, and targeted violence in many European countries. Despite efforts to address these injustices, the Romani people continue to endure marginalization and struggle for recognition of their rights and cultural identity.
Sterling in Holy Fire too depicts the Gypsies as they were from ages ago and what is distinctive about this very same community in the Posthuman world is that they were the only community who rejected the idea of life extension treatment. Upon their encounter by Ulrich and Mia (now Maya after the Transformation) in Germany, she raises this curiosity to Ulrich, a young man she meets upon her arrival to Germany. Ulrich's perception of the Gypsies is very stereotypical

as he spitefully attaches all derogatory names like “nomads, and outcasts, and thieves, and pickpockets, and swindlers, and anarchists, and dirty *lumpenproletariate* who don’t use life extension or birth control!” It is clear from this incident that there existed a group of humans who were not considered as Posthumans because they simply would not resort to the new normal of having life extensions. In truth for people like Ulrich and many others, the Gypsies were whom they admired, the Gypsies were people who according to Ulrich:

> never declared a war. They never started a progrom. They never enslaved another people. They have no God, no kings, no government. They are their own masters. So, they despise us and they rob us and out our rules. They are an alien people, truly outside society. I’m a thief and you’re an illegal, but compared to them, you and I are spoiled children of the polity, we are nothing but amateurs. (Sterling 108)

The animosity arises because of the human nature to hate the position they are in and to envy the other side of the grass which always seems greener. For youth like Ulrich and Brett the old people and the gypsies were people they strong despised because of the opportunities presented to the old and the strong ground that the Gypsies held onto for their existence denouncing all artificial and life extension possibilities. They hate them because they feel trapped in their position and wished that they were in their position. Similarly Gerontocrats like Mia despite given the opportunity of living a long extended life, envies the other side of the spectrum of society where she wishes to be young again. And for the Gypsies, because of their oppression for many years and the sense of belonging that they lacked, their apprehensions and ruthless behaviour stems from their desires to be a part of the society and to be given the platform of inclusivity. This is just a normal circle of human tragedies that Sterling employs in the plot to showcase the human consciousness of always wanting what one does not have. And certainly we can see that this distinctive feature of human trait is persistently instilled even in the posthuman world.

As history repeats itself the plight of the gypsies is further enunciated by Sterling, giving them a similar historical debacle even in the future, Mia exclaims to Ulrich saying, “I can’t believe they’re not on extension treatments. They don’t get check-ups or anything? Why not? Why do they want to live and die like this? What’s really driving them?” (Sterling 109) to which Ulrich gives her a narrative about the gypsies who Fifty years ago, were exposed to gypsy programs all over Europe. But the people accused them of being dirty and carrying the plague. They accused the gypsies of breaking the quarantines. “And people, absolutely normal civilized European people, picked up hatchets and shovels and chains and iron bars and ran to Romany ghettos and Romany camps and they beat the Romanies and tortured them and raped them and set fire to their homes.” (Sterling 111)

As with the information on the Gypsies, we also learn about the plagues that were once a catastrophic disaster to humankind, in the Posthuman future Maya affirms that Plagues are no longer going to exist, they were all over because the Posthumans have acquired the ability to abolish them and to be immune to Plagues if any unseen circumstances occurred. This is the future that Sterling illustrates through Maya’s journey in the novel. As for emotions and feelings, pertaining to the very core of human traits, we witness an episode where Maya is a posthuman who has disposed all her emotions and she really embraces her Posthumanist transformation when she leaves Ulrich after he has helped her get around Europe in the initial days knowing that she was an illegal tourist.

Mia’s journey in the novel is analysed with great adventures, her curiosity into the different types of people or Posthumans living in the new world, her strife for making connections with the society’s most known actors, writers, professors, artists is what makes this fiction about life all the more intriguing. As we explore other themes like the issue of Identity crisis prevalent in

today's world, and predictable enough for the future world with advancement in technology to battle with the same issue, this chapter also looks at the model protagonist as a we explore these glimpse of Identity crisis faced by Maya/ Mia.

In Bruce Sterling's novel *Holy Fire,* the theme of identity crisis permeates the narrative, driven by the protagonist's struggle to reconcile her past self with her current reality. It has been narrated in the text that, "One night at the shop in late February, Maya awoke to find herself sleepwalking, yet still compulsively putting the stock in order. That was Mia's doing. Mia was all right now. Mia liked this situation. Mia felt very safe and at ease now that she had duties." (Sterling 116) As Mia navigates her rejuvenated existence, she grapples with questions of identity, authenticity, and personal history. She must confront the dissonance between her memories of her previous life and the new experiences she encounters in her rejuvenated body. The rejuvenation process forces Mia to confront the passage of time and the consequences of her decisions, leading to a profound existential crisis. Another instance when Mia is finding it problematic to gain control of her consciousness and losing control over grasping her new identity Maya and her old Identity Mia is when she's in a train:

> She had a very bad moment then, an all-over shudder of identity crisis and culture shock, so that she swayed where she stood and felt sweat break out all down her back. Then the nausea passed and she came out of it, and she felt extremely different. She was Mia Ziemann. She was Mia Ziemann and she was having a very strange reaction to the treatment. (126)

Furthermore, Mia's rejuvenation highlights societal attitudes towards aging, beauty, and technology. She must navigate a world where youth and vitality are prized, yet her rejuvenated identity raises questions about the true nature of identity and the authenticity of human experience. As a complex demonstration of how identity could be glitched in a highly advanced

technological era, with super computers and medical treatments, where one cannot grasp her own identity, Mia is a perfect example to shed a light on this issue, although she goes through her NTDCD treatment successfully, there are instances when her transformation is believed to be only a physical transformation but not the essence of her personality and soul:

> Maya walked down the block and let herself into Emil's studio. Emil wasn't there. Emil's absence might have been worrisome, but she deduced from the state of his kitchen that he'd had to leave the place to eat. She scrubbed and mopped for a long time, and inoculated the studio with certain handy packets she'd acquired in Stuttgart. The studio began to reek of fresh bananas. This solid victory over the unseen world of the microbial gave Maya a great sense of accomplishment. She walked back to Novak's in the cold and darkness, and knocked again. (Sterling 203)

Maya herself does not realise it but by her behaviour of being obsessive enough to clean and scrub Emil's or any lover that she stayed with, she was going back to her old self; displaying mannerism of the old Maya or Mia Ziemann true nature that was bursting out of the transformed identity. Through Maya/Mia's journey, Sterling explores complex themes of self-discovery, transformation, and the search for meaning in a rapidly changing world. The novel delves into the profound implications of altering one's identity and the challenges of finding stability and belonging in an ever-evolving society.

Holy Fire also casually talks about the practice of Cloning, a process commonly resorted to by the posthuman future, Sterling uses Cloning, as we have seen in the previous chapter as a nonchalant step towards extending one's body. In *Holy Fire* Cloning is depicted as a small normal step to identify the modern futuristic world. In Therese's Boutique, where Mia/ Maya

is hired to work as a salesgirl, due to the attractive features that Mia possessed, they decide to clone her and make replicas of her body as futuristic mannequins for the boutique:

> We lost interest in this one, we figured we had a flaw in our procedurals. I'm thinking now that maybe self-portraits are the next conceptual step. We scan you, we show you yourself, then we plot out your attention algorithm as you're looking at your own replicated body. That way we can cast your internal self-image in permanent plastic.

This is seen as all too overwhelming and exciting for the new Mia, or the young Mia. With new digital gadgets and concepts, Mia is frolicking around Europe like she has never been here before. Devices like the Spex are seen to be worn by everyone, it was a device that helped in visual clearance and language barriers. As Mia says, "many people in Praha, even the kids, wore spex, but nobody wore glasses anymore. Corrective lenses were a prosthetic device as dead as the ivory pegleg." She goes on to describe the people in the European country:

> Europe's female gerontocrats, ladies who were poised, serene, deeply experienced, deliberate, and detached. Firm but gentl*e femmes du monde*, who were all the more tolerant of human foibles since they were left with very few of their own. Gracious women who knew how to listen, distinguished women who could love their enemies until those enemies fell into little pieces. Beautiful, clever, accomplished women, gently quivering with the electricity of determined and long-tested ego. (Sterling 130)

Through these lines, Sterling elaborately paints a picture of the nineteenth or twentieth century European folks, it's definitely a sight of the past and we are reminded of the Genteel community of the London literary club when Mia would later go on to attend and be a regular member of the Tête. "The Tête de Noyé was in Opatovicka Street, a three- story building with a steeply pitched tiled roof. You entered it by walking up a short set of worn stone steps with ornate iron

railings, and then directly down a rather longer set of wooden steps into the windowless basement, where they kept the bar." (Sterling 132)

In such scenarios and the setting that Sterling employs, one can see the resemblance to the past and are immediately curious about the writers intention about the Posthuman world. Is it a replica of the past society with technological developments or is it what the future world represented. The picture of the posthuman world in Bruce Sterling's *Holy Fire* is a stark contrast to the space venturing locations that has been painted in the novel *Schismatrix.* Keeping in mind that the two novels are centuries apart and Holy Fire is located in the near future. Yet, the European culture that we see through Mia's eyes is a stark replica of the ancient days. The Intellectuals that Mia and Klaudia encounter in Maya's initial first outings of her rendezvous with Europe, also reminds us of the Intellectuals of the 18th century European Enlightenment, as Klaudia arrives at the scene in Tête de Noyé, she gives a snide comment about the intellectuals saying that, "this is a party for intellectuals. It's really stupid to be an intellectual when you're young. You should be an intellectual when you're a hundred years old and can't feel anything anymore. Intellectuals are so pretentious! They don't know how to live!" (Sterling 133)

Sterling plays with the setting and scenario of the future Europe, piecing together references from ancient European antiques, this is an attempt of authors like Sterling to bring normalcy to a futuristic world by bringing in the theatrics of the ancient world with the Posthuman world. The authors attempts to value and treasure the old architecture and heritage of the ancient past, is depicted when Maya explores Praha with her fellow sales girl Klaudia.

> She found herself suddenly understanding the profound alliance between old European city centres and young Europeans. All the world's real and serious business took place in the giant, sophisticated, intelligent high-rise rings around the downtowns— buildings

> with advanced infrastructure, buildings with the late twenty-first century embedded in their diamond bones and fibre- optic ligaments.
>
> Still, those in power could not bring themselves to demolish their architectural heritage. To destroy their own cultural roots was to leave themselves without even the faction of an alternative, marooned in a terrible vacuity of post-industrial pragmatism. They prized those aging bricks and those mouldering walls and, for oddly similar reasons, Europe's young people were similarly prized, and similarly side-lined. (Sterling 131)

The Posthumans feel the need to stay grounded to their cultural roots despite their urge and desires to be at the forefront with the futuristic world and its advancements. In *Holy Fire* we see this deep rootedness and admiration of the past ancient world in the field of Art and Architecture, whether it is the buildings or the design of the cafes, library or even the fashion of the Europeans as mentioned above. But it is imperative to note that when it comes to knowledge and the intellect, it would be futile to even draw a comparison with the intellectuals of the ancient world to the Posthumans who possessed every intel and knowledge they could amass with the help of the medical, technological advancements. Posthumans like Klaudia no longer regarded the Intellectuals of the ancient world as powerful as they were once believed to be. The Gerontocrats, the old citizens, the Scientist and the people with connections in the medical field, held the power in the society.

Apart from the Intellects, Sterling brings this ancient world narrative in contrast to the Posthuman world with characters like Benedetta who is introduced as a catholic, as if it was a thing of such wonder to the crowd. We have to understand here that in the Posthuman world religion was not a structure of order and reverence as it was in the days of the Medieval Era. Therefore for the crowd gathered at Tête De Noyé it was a thing to be talked about when

introducing Benedetta to Maya. The Catholics in *Holy Fire* were a denomination that were against the life-extension treatment and as Benedetta's clearly points she goes on to say that, "I am *not* a Catholic! Bologna is the least Catholic city in Europe! I am an anarchist and an artificer and a programmer! I plan to hang the last gerontocrat with the guts of the last priest!" Benedetta identifies herself as an artificer and a programmer and does not attach herself to any religious sect, emphasizing on the fact that she was a part of the youth that despised the Gerontocrats.

This particular episode in the novel also brings to light the meaning of "Holy Fire", it is first referenced to, when Paul calls Eva Maskova the lady who has painted the Mural of The Garden of Eden on the walls of Tête. Paul says that "In her own day, Eva had the Holy fire". The Holy Fire as the title of the novel implies upon is what Maya is searching for, in Maya's world the Holy Fire was what she strived for, hence her transformation. Maya in the novel believes that she could attain the holy fire only if she was young again. It signified the talent, the artistry, the thrill of doing what she can and the satisfied that one achieved when she would be in her prime days. Maya knew that inkling of Holy fire was burning in her, but she had lost it due to her old age and hence we recognise her hunger for this Holy fire to be filled up in her when she transforms herself and sets out on a journey of soul searching and adventure. For Maya shedding the old Mia and rediscovering herself is what her goal was, a young woman with no responsibilities and as carefree as the youth was in the posthuman world.

Another driving force central to the plot of the novel is the memory palace in virtual space that Martin Warshaw gives to Mia Ziemann as a parting gift. This is one of the motif that Sterling uses to highlight the Posthuman feature in building a science fiction novel. For Maya who is illegally roaming around Europe without any IDs or savings, the memory palace she had in her name now was the only source of survival in her now transformed state. As Maya learns that

Benedetta is a programmer she instantly gets an idea to ask Benedetta a favour to operate the programme to the memory palace. The Memory palace was an illegal programme which needed someone who knew coding and programming to operate it with a touchscreen, which Maya did not possess. Benedetta is suspicious of Maya's possession but nevertheless decides to help her:

> A touchscreen! It must be fate that I brought my furoshiki." Benedetta whipped her kerchief off, set it on the table, and smoothed it at. "This will work. It's from Nippon. The Nipponese love the obscure functionalities." She plugged the corner of the inert cloth into her notebook and the cloth ashed into vivid glowing eggshell white.
>
> "I've never seen one of these furoshiki." Maya leaned over the table. "I've certainly heard of them.... " The intelligent cloth was woven from a dense matrix of fiber-optic threads, organic circuitry, and piezoelastic fibre. The hair-thin optical threads oozed miniscule screen-line pixels of coloured light. A woven display screen. A flexible all-fabric computer. (Sterling140)

This favour that Maya asks of Benedetta will stand as a crucial decision of her inviting Benedetta into her little secret because she would come into trouble and regrets by it in the future. Maya voices this concern straightforwardly by saying, "This is a big secret. I'm being very rash in trusting a stranger with this. I'm sure you realize that, Benedetta." (Sterling 141)
Bruce Sterling as a male science fiction writer is critiqued upon for his impulses to how he portrays women in his fiction, as we have seen in many of his stories and novels, and also an example from the previous selected novel by Sterling, In Schismatrix we recognise the subjugation of women still prevalent in the posthuman era as depicted by the Posthuman Authors opposed to the theory of the cyborg and the Posthuman by Donna Haraway and other female Posthuman theorist who claim that the future is women and that the Posthuman era is a an era for the Female. But oppose to that we see the Posthuman women still sexually objectified

in many science fiction novels. The statement below by Benedetta is one such instance that depict the plight and status of the Posthuman woman:

> It's even worse now that women's bodies last forever. We women are so much of the female body it's fatal to us, we even have to die beautiful. Even Paul ... he talks to me about theory. Like a colleague! Like a philosopher! Then the glamour girl appears in her wig and lipstick and it's like his little Muse just jumped off the train for him. Women never learn! Men contemplate beauty, but we have to *be* beauty. So the female is always the other, and we're never the centre."
>
> Maya blinked. "Men and women just think differently, that's all."
>
> "Oh, that's so stupid! 'Anatomy is destiny.' That's all gone now, you understand? Anatomy is *industry* now! You want to do some terrifying male mathematics, little glamour girl? Put enough stickers on your head and I'll teach you calculus in a week!" (Sterling 141)

Outer appearances of a female, was still viewed as the only valuable physical trait that held importance in the society. One was given respect, attention and recognition only if she presented herself well, and possessed attractive features. Hence, this is the very reason why Mia when she goes through the Posthumanization, of transforming herself to Maya, a young women of twenty years old, she gets away with most of the circumstances that comes her way. Maya who appears to be a slim, tall, nice featured pretty lady, is seen as someone who appears to be charming enough to get things done her way without any interference from the law or the government, when she enters Europe illegally without any IDs or passport. She conveniently attracts a young man Ulrich and he is the person who selflessly helps Maya as she lands in Europe without any monetary support or food for her survival. Maya is also readily hired by Therese for her clothing boutique to help her as a sales girl and also to pose as a model and a mannequin because of her attractive physical traits. These instances in *Holy Fire* thus dictate

how Women are perceived in the Posthuman world, rightfully as Josef Novak, the photographer, who Maya sought after says upon her arrival at his doorstep, “She’s very pretty, There are sometimes uses for someone very pretty.” Maya is immediately taken in by Josef Novak as his apprentice and she goes a journey of success amongst the society, because of this very thing called beauty that she possessed. Therefore much like today’s world, where beauty is a priority, sexuality is objectified and women are viewed as a commodity, the same is seen as carried forward into the Posthuman world.

Conclusion

In the novel Sterling deviates from the dystopian aspect of most Science fictions and gives *Holy Fire* a picture of opportunities for Immortality and Longevity. He creates a narrative that illuminates the advantageous, fruitful and liveable life of the Posthuman Future, despite the challenges depicted by many of the youth. According to Mia Ziemann the protagonist, life in the posthuman world is paradise; as she listens to Brett’s prejudices she replies by saying that, “Eighty years ago, we basically lived like savages. We had plagues and revolutions and mass die-off and big financial crashes. People shot each other with guns when I was young. Compared to eighty years ago, this is heaven! And now you’re just abusing me, and not making one bit of sense.” (Sterling 307)

Thus, by extrapolating these contemporary dynamics into a future context, Sterling invites readers to contemplate the implications of advancing technology on the evolution of human identity and social structures.

CHAPTER FOUR

Posthumanism in the Select Novels of Greg Egan

In this chapter the selected novels *Quarantine* and *Permutation City* by Greg Egan will be analysed in order to highlight the themes and examples that we have learnt about from the previous chapters on the theory of Posthumanism. The novels selected firstly gives us a glimpse into the Posthuman future, the different accessible universes and the virtual reality dimensions that have come into existence as, Biotechnology, nana technologies and Artificial Intelligence progresses in the world. Various themes like The Posthuman Future and the Philosophical aspect of an Artificial Life have been explored through the plot, characters, spaces and meaning of the chosen text.

Introduction

Stephen Baxter, a Science Fiction Author comments on Greg Egan's work and his contribution to Science fiction claiming that "Greg Egan is the 21st Century's most important SF writer…Read Egan today, because it's what everybody else will be reading tomorrow"

Greg Egan is renowned for his expertise in crafting hard science fiction narratives, often delving into themes of mathematics, quantum ontology, and the nature of consciousness. His repertoire also encompasses explorations of genetics, simulated reality, Posthumanism, mind transfer, sexuality, artificial intelligence, and the advocacy of rational naturalism over religious ideologies. As a recipient of the prestigious Hugo Award and having been shortlisted for the Hugo awards three additional times, as well as clinching the John W. Campbell Memorial Award for Best Novel, Egan's accolades underscore his stature in the genre.

Greg Egan's literary prominence in science fiction is deeply rooted in his ability to navigate intricate and technical subject matter with meticulous depth and innovation. While some of his earlier works may bear elements of supernatural horror, Egan's oeuvre is marked by his adeptness at tackling a wide array of scientific and philosophical themes. Over his more than thirty-year career, he has explored topics ranging from artificial intelligence and higher mathematics to the conflict between science and religion, the nature of consciousness, and the transformative impact of technology on human identity.

In this comprehensive collection, Egan showcases his prowess as both a master storyteller and a rigorous thinker. Each of the twenty stories and novellas contained within is a meticulously crafted gem, delving into a diverse range of speculative concepts.

For instance, "Learning to be Me" portrays a society where the organic human brain can be supplanted by a remarkable piece of technology known as The Jewel, granting recipients a form of immortality. "Bit Players," the first installment in a trilogy followed by "3-adica" and "Instantiation," envisions a world where artificially generated software beings are exploited for crass commercial ends.

Egan further explores interconnected narratives, such as the mathematically themed "Luminous" and "Dark Integers," and a pair of stories centered on the intricate relationship between a physicist and a mathematician: "Singleton" and "Oracle." "Reasons to be Cheerful" delves into the life of a young boy whose brain tumor unexpectedly alters his outlook on life and the world around him.

"Axiomatic" unfolds in a society where implants can manipulate human personality, often with perilous consequences. Finally, the Hugo Award-winning novella "Oceanic" offers a poignant portrayal of a boy whose deeply held religious beliefs are shaken by his discoveries about the laws of the physical universe. Through these richly imagined narratives, Greg Egan cements

his status as one of Australia's foremost science fiction writers, showcasing his unparalleled ability to weave together complex ideas and compelling storytelling.

Briefly these above novels and shorts stories all focus on one thing which is the world of Posthumanity. Greg Egan Dwells in this Realm and his narrative is pregnant with such Predicament that explores and defines the Posthuman. Another two important novels that Egan has created is the novel *Quarantine* and *Permutation City*. I have selected these two novels from the cosmology trilogy for an extensive research on the fictional works of Greg Egan that contributes to the significance of Posthumanism. *Quarantine* being the first book and *Permutation City,* that follows after. The books are not a sequel of each other but they do focus on the same genre and themes, which explores how humanity could be changed by the way on how Quantum Mechanics interacts with Consciousness.

Quarantine is a 1992 hard science fiction novel written by Greg Egan. Embedded within a detective fiction framework, the narrative delves into the repercussions of the Copenhagen interpretation of quantum mechanics, specifically its consciousness-causes-collapse variant. Egan candidly acknowledges that this choice was driven more by its entertainment value than its likelihood of correctness.

Meanwhile, *Permutation City,* published in 1994, is another compelling science-fiction work by Greg Egan. This novel traverses a plethora of concepts, including quantum ontology, as it delves into the philosophical dimensions of artificial life and simulated reality. Portions of the story were adapted from Egan's 1992 short story *Dust,* which similarly engaged with these profound philosophical themes. *Permutation City* garnered critical acclaim, earning Greg Egan the prestigious John W. Campbell Award in 1995 for the best science-fiction novel. It also received a nomination for the Philip K. Dick Award in the same year. Notably, the novel was referenced in a 2003 Scientific American article on multiverses authored by Max Tegmark, highlighting its enduring relevance and impact within the realm of speculative fiction.

4.1. The Posthuman Future explored in *Quarantine*

Quarantine lays out a possible future with the advancement in bioengineering wherein the human race could face a life of endless probabilities and advantages or a total breach in security with one's Identity. Greg Egan paints these probabilities by bringing to life the everlasting human desires to be whatever one wants to be or do whatever they want, with the help of Quantum Mechanics in the novel. The author uses these dichotomies to give us a glimpse into the future, where we as humans or Posthumans at that stage decide our fate on planet earth where we could possibly end the human race by these very same wishful desires. *Quarantine* is a novel which takes place in the future, set in the late 21st century. It starts with humanity being compromised and being cut off from the rest of the universe with an impenetrable shield known as 'The Bubble' that has blanketed the entire solar system.

The Bubble according to the author exists as a flawless sphere, boasting a radius of twelve billion kilometres—roughly twice the span of Pluto's orbit—and encircling the sun at its centre. It materialized as a complete entity in an instant. However, owing to the Earth's position at a distance of eight light-minutes from its core, the duration before the final vestiges of starlight reached us varied across the celestial expanse, birthing the expanding swath of darkness. Stars vanished initially from the direction nearest to The Bubble, with the disappearance progressing toward the farthest point—precisely behind the sun. Functioning akin to a concave rendition of a black hole's event horizon, The Bubble manifests an intangible surface. It absorbs sunlight entirely while emitting naught but a bland trickle of thermal radiation, markedly colder than the cosmic microwave background, which now eludes our grasp. Probes approaching its surface undergo redshift and experience time dilation, yet they encounter no perceivable gravitational force to rationalize these phenomena. Those on trajectories intersecting the sphere seem to decelerate gradually until they reach an apparent standstill and vanish into darkness.

Most physicists contend that, in the probe's local timeframe, it traverses The Bubble swiftly, unhindered—yet they remain certain that this traversal unfolds in our unfathomably distant future. The presence of further barriers beyond The Bubble remains uncertain. Even if absent, the question persists: Would an astronaut embarking on the irreversible journey emerge to find an unaltered universe outside, or would they bear witness to its moment of annihilation, arriving just in time? The phenomenon of the Bubble is what the setting of this Posthuman fiction projects, a catastrophic outcome which incites panic and uncertainty of the future. There are questions posited by the citizens that only garner unpredictable answers about the future. The question of uncertainty and unpredictability emerges in such futuristic situations, just like the Bubble engulfing the solar system is unpredicted by any scientist in the novel *Quarantine,* David Orwell in his paper published in the Macmillan Interdisciplinary Handbook titled *Posthumanism: The Future of Homosapiens* explores this very idea of Unpredictability of the future where he states that:

> The same limitations apply to our sophisticated mathematical models. So what can be said about concrete predictions for our human (or posthuman) future? As with other predictions, will these turn out to reflect current concerns more than any future reality? Can we predict the interplay between society, technology, biology, culture, and so on better than we can predict the economy? And can we foresee the formation of new inventions better than we can predict the formation of a cloud? (Orrell 35,36)

In the novel the consequences of the Bubble formation leads planet earth into the edge of darkness, stars are not visible to the human eye and with the loss of this natural vision, the human race questions every possibility to their existence. “Although a handful of theoreticians valiantly struggled to concoct a model for The Bubble as a spontaneous natural phenomenon,

there was always really only one plausible explanation: a vastly superior alien race had constructed a barrier to isolate the solar system from the rest of the universe.

The question was: Why?" (Egan 17,18)

The narrator goes on to set up an array of possibilities, according to him if the intention was to dissuade humanity from rushing out to conquer the galaxy, the effort was arguably unnecessary. By 2034, human exploration had barely extended beyond Mars. The closure of the U.S. lunar base six years earlier, following just eighteen months of operation, epitomized the limited scope of our off-world endeavours. The sole vessels to depart the solar system were relics of the late twentieth century, meandering aimlessly along trajectories devoid of purpose. Plans for an unmanned voyage to Alpha Centauri, initially slated for 2050, faced postponement to 2069, with hopes that the centenary of Apollo XI might facilitate fundraising.

Admittedly, an extra-terrestrial civilization with a far-reaching perspective might view the millennium preceding humanity's hypothetical foray into interstellar conquest as a mere precautionary buffer. Nevertheless, he says that the notion that a culture capable of manipulating space-time in incomprehensible ways would fear them appeared absurd.

With deeper contemplation and uncertainty, Nick implores that perhaps the creators of The Bubble were altruistic benefactors, safeguarding them from a fate vastly more dire than confinement within a delimited cosmic domain where, with prudence, they could thrive for hundreds of millions of years. Speculations abound: The galactic core might be undergoing cataclysmic upheaval, necessitating The Bubble as their sole shield against lethal radiation. Alternatively, malevolent extra-terrestrial entities could be wreaking havoc nearby, and The Bubble serves as their bulwark against their incursions. Less sensational conjectures include The Bubble shielding their fledgling civilization from the rigors of interstellar trade or the solar system being designated a Galactic Heritage Zone. Nick just like any other individuals comes

up with myriad theories for the Bubble Phenomenon, but the author Greg Egan gives us the answer to the origins of the Bubble only towards the end of the Novel, when Nick discovers the real truth of the Ensemble.

Egan's projection spans a modest forty years into the future (seventy from the time of his writing), lending credence to the plausibility of the depicted advancements. Living on the frontier of scientific exploration seemingly grants him a knack for forecasting future developments. Egan crafts a society where individuals can readily download modifications, illustrating a world where police officers augment themselves to maintain composure under duress. The plot of the novel unfolds by introducing the character of Nick Stavrianos where he is assigned to find a kidnapped Laura Andrews. His journey in search for Laura, who has escaped from a mental Asylum helps him in unravelling the secrets of the origins of the bubble and the key to an immortal life with the help of a specially designed and discovered mod. The Protagonist Nick is a heavily altered Posthuman with several Priming mods in his skull that functions his brain and hence his daily activities. In an episode where he is on a mission to find Laura Andrews, during his research for any suspicious leads he makes use of the Priming mods that have been downloaded onto his brain, as he invokes his mods, he details their usage:

> I spend ten minutes reviewing all that I know about the case so far. I'm struck with no new insights, which is no great surprise; **P3** eliminates distractions and makes it easier to focus the attention – and thus to reason more swiftly – but it doesn't grant any magical increase in intelligence. The other priming mods all provide various facilities: **P1** can manipulate the user's biochemistry, **P2** augments sensory processing, **P4** is a collection of physical reflexes, **P5** enhances temporal and spatial judgment, **P6** is responsible for coding and communications ... but **P3** 's role is largely that of a filter, selecting out the

> optimal mental state from all of the brain's natural possibilities, and inhibiting the intrusion of modes of thought which it judges inappropriate. (Egan 63)

In this Posthuman Future easily available Pods are used to prime humans for altering their emotions, their gestures, suppressing their hunger, controlling the body's chemistry, metabolism and many traits that helps individuals make their life easier and ward off unwanted pre-existing human traits. As Nick is seen as a great example of a heavily altered Posthuman in the novel, we are able to attest the value of the Pods and the advanced technological alterations and nano computers made accessible to humans. The Future not only opens up a platform for advantageous possibilities but also a negative connotation to the human race when mixed with evil intent which could serve as a predator to a human's brain.

This is addressed by Nick when he says that it is his choice for him taking the step to Prime his brain with the various computerised Mods, like P1,P2, P3, P4 and P5 which monitors his actions and behaviour to certain circumstances in his brain. When he questions himself about the ethical use of these Mods he says: "Unprimed, I may joke about zombies – but primed, I have no doubt that this is where the real strength of neurotechnology lies: not in the creation of exotic new mental states, but in the conscious, deliberate restriction of possibilities – in focusing, and empowering, the act of choice." (Egan 76)

As his journey as a hired detective in order to find the missing women Laura Andrews fails, with him being caught by a group of people called 'the Ensemble', this encounter leaves him trapped, drugged and finally implanted with a Loyalty Mod which is a result of him being recruited by the Ensemble. The Ensemble recognises his capabilities and the efficiency in locating his targets and hence recruits him as a security guard in the mysterious functions of the group under the BDI, known as the Biomedical development International. Nick in

contemplation and acceptance towards his fate, claims that his loyalty to the Ensemble would prevail and he had no choice but to carry out the mission given by the higher orders without even having an ounce of knowledge on what the Ensemble represented. The Loyalty Mod is a specially designed programme uploaded onto the brain in order to monitor, the actions of the employees working for the Ensemble. This Mod would determine an employees real agenda and motive towards the secret mission that the group carried out. As Nick is caught and recruited into the group and the Loyalty Mod is enforced on him by the Ensemble, he states that:

> I've lived with **P3** . I've lived with **Karen** . I've never had a mod forced on me, but the principle is the same. Deep down, I must have swallowed the fact, long ago, that my emotions, my desires, my values, are the most anatomical of things. On that level, there are no paradoxes, no contradictions, no problems at all. The meat in my skull has been rearranged; that explains everything. (Egan 86)

In a world where we still consider emotions, desires and values as an abstract quality and a part of our consciousness, traits that have to do more to our psyche than anatomy. It is hard to imagine that in the Posthuman future, these traits become merely a part of the structure of a body. The Anatomical of things like in the words of Nick Stavrianos. Therefore we see a clearer picture of his decision on Priming himself from the very beginning, when he witnesses the death of his wife Karen.

Greg Egan succeeds in creating the perfect Posthuman in the character of Nick, the Protagonist of the Novel. He masters the art of diverting a perfectly normal human cop into a posthuman who has denounced all emotions and feelings with the help of the Priming Mods. Nick in the very beginning introduces his wife Karen in the novel as he invokes her, "a mod- generated hallucination of my dead wife Karen, standing on the balcony beside me, slips an arm around my waist…."(Egan 5). In the realm of science, a 'mod' typically refers to a modification made

to a software application, often a video game, by a user with the intent of altering its appearance or functionality. Here in the novel *Quarantine* we learn that Nick's wife dies in a bombing tragedy, in which after he directly decides to prime himself so that he does not go through the grieving or rather mourning of his death wife. In a conversation with Po Kwai at the ASR centre, upon an enquiry about his wife, Nick tells Po Kwai that, "I have a mod that ... defines my responses. I don't grieve for her. I don't miss her. All I can do is remember her. And I don't need anyone else. I *can't* need anyone else." (Egan 185) he continues with the backstory of his wife's death and the consequences, trying to narrate with a stark believe in himself saying, "I wasn't hurt by her death – but I knew that I would be. I knew that as soon as I deprimed – shut down my behavioural mod – I'd suffer. Badly. So I did the obvious, sensible thing: I took steps to protect myself. Or rather, my primed self, took steps to protect my unprimed self. The zombie boy scout came to the rescue." (Egan 186)

Here, Egan deliberately sabotages any human elements left in Nick's character by depicting a non-human behaviour in his act of nonchalance and his denial to mourn his dead wife Karen. For a Posthuman living in the late 21st century it was with the tap of a finger or voice signal into the installed mod to erase any unwanted memories, to restrain oneself from certain reactions, or even detach themselves from certain sentiments; otherwise prompted by the natural process of human consciousness. Similarly, we see many instances of the erasure of memory in Science fiction Novels and Films. One such popularly acclaimed film which touches upon the idea or existence in the future of a highly advanced technology that ensures an erasure of memories, is the American Science fiction film directed by Michel Gondry, titled *Eternal Sunshine of the Spotless Mind.* In the film the protagonist Joel Barish discovers that his estranged girlfriend, Clementine Kruczynski, has undergone a procedure to have her memories of him erased by the New York City firm Lacuna. Heartbroken, he decides to undergo

the same procedure. In preparation, he records a tape recounting his memories of their volatile relationship.

The same technique is employed here in Nick's case, where he erases the grief that one should have if their partner or spouse dies. As Po kwai finds Nick's reason on how he allowed his primed self to take charge all the more incomprehensible. He justifies this action of erasing the grief out of his life by arguing with Po kwai's "maybe", with a reply:

> What? That it's all some kind of awful travesty? That I'd rather not be this way? That I should have gone through the *natural* process of grief, and emerged with all my *natural* emotional needs intact?.....No. The mod is a complete package, a self-contained set of beliefs on every aspect of the matter – including its own appropriateness. The zombie boy scout was no fool; you don't leave any loose ends, or the whole thing unravels. I *can't* believe it's a travesty. I *can't* regret it. It's exactly what I want, and it always will be. (Egan 187)

As mentioned in the beginning with the Posthuman world we witness a pattern of escapism, and Egan has rightfully utilized the theory of getting what humans want with the help of advancement in science and technology. Francis Fukuyama in his book Our Posthuman Future: Consequences of the Biotechnology Revolution mentions the outcome of our Posthuman Future where he states that; "we might thus emerge on the other side of a great divide between Human and Posthuman history and not even see that the watershed had been breached because we lost sight of what that essence is. And what is that human essence that might be in dange of losing? For a religious person, it might have to do with the divine gift or spark that all human beings are born with. From a secular perspective, it would have to do with human nature: the species- typical characteristics shared by all human beings qua human beings. That is ultimately what is at stake in the biotech revolution." (Fukuyama 101)

What he means here is the total surrender of human traits that make us humans in the first place, being manipulated and erased by the biotechnology revolution and the exponential advancement in computer science. The proliferation of advanced technology presents a dual-edged sword in contemporary society, wherein the ease of access to sophisticated digital tools also amplifies the risks of identity theft. With the advent of biometric authentication, machine learning algorithms, and interconnected databases, individuals' personal information has become increasingly vulnerable to exploitation. Cybercriminals adept at exploiting technological vulnerabilities can swiftly circumvent traditional security measures, accessing sensitive data such as social security numbers, financial records, and personal identifiers. Furthermore, the proliferation of social media platforms and online services inadvertently contributes to the vast reservoir of personal data available for exploitation. The ramifications of identity theft extend far beyond financial losses, encompassing psychological distress, reputational damage, and prolonged legal battles to reclaim one's identity. As technology continues to evolve, concerted efforts must be made to fortify cybersecurity protocols, implement stringent data protection measures, and foster digital literacy to mitigate the pervasive threat of identity theft in the digital age.

Quarantine is one such Novel in which this very same exploitation has been made, with incidents from the protagonist’s journey into the search for Laura Andrews to him being told to escape, he uses these high technologies as an aid for him to find something or escape from something. As we follow the disappearance and the protagonist Nick shifts between every variables in which Laura might have been taken to or smuggled out of the country. He comes to the option of Laura being flown out by a plane, casually agreeing to himself that; “Getting Laura onto a plane would not be difficult. Her imbecility would be almost as easy to conceal as her face; there are dozens of illegal mods which could transform her into the walking puppet

of a traveling companion, or even a semi-autonomous "robot," capable of such rudimentary tasks as laughing and crying at all the right moments during the in-flight movie." (Egan 30) What's more dangerous is that in this Posthuman world, the double edged quality of technology is being depicted with limitless guarantee of data being breached and cybersecurity being easily manipulated. Nick ensures that, " Faking an exit visa record in the Foreign Affairs database is no big deal. It would vanish an hour or two later, and the airline's files would also be appropriately amended. Foreign Affairs, Customs, and the airlines, are all being screwed blind, twenty-four hours a day, by a hundred different hackers – and, ironically, *that's* what makes it possible, if you're lucky, to trace an illegal traveller. Hackers may run rings around the target systems' own archaic security, but they can't avoid making their presence known to each other. In the process of capturing data essential for their own work, they can't help capturing details of other violations in progress. Like all information, this is for sale." (Egan 30)

Nick lays out various possibilities in which Laura might have been kidnapped, in trying to locate her whereabouts, he deduces many theories, from fingerprints to DNA signature, retinal patterns and skeletal measurements. In this posthuman future not only are fingerprints and retinal patterns relatively easy to alter by nanosurgery but one could escape being caught by altering or modifying the bone length of their body. As Nick comes to a conclusion that Laura could have been sent as Cargo, he also points out the only type of cargo that Laura might have been flown out as and that is as a Human corpse cargo. As he runs the programme on the corpses flown out, which he acquired with the help of the routine security X-rays carried out, Nick finds a lead by matching with a corpse cargo that had left Perth to New Hong Kong listed as its destination. Henceforth the Novel shifts its location from Australia to New Hong Kong and Nick immediately lands up in the country navigating through the crowd with the help of

Déjà vu, a device that helped in sublimating up to date street maps and travel information packages.

Egan adeptly utilizes technology to explore themes of identity manipulation in the narrative, particularly evident when the character Nick, originally a black-skinned Australian, undergoes a transformation to an olive complexion to evade detection while on the run. Following an encounter with Lui from the BDI, who implicates Nick as a fugitive terrorist responsible for the ASR building bombing, Nick finds himself in a precarious situation, collapsing under the weight of false accusations and the need to conceal his true identity. This plot twist not only delves into the intricate interplay between technology and personal identity but also propels the narrative forward, intensifying the stakes for Nick as he navigates the consequences of being wrongly targeted.

Nick goes through the transformation process when he rummages through the small traders around dawn, and he manages to buy a batch of cosmetic nanomachines, and a change of clothes, before the streets begin to grow crowded. He details the transformation as he “hide in the stall of a public toilet while the nanomachines take effect, breaking down a significant proportion of the melanin in my skin. The change is almost fast enough to perceive…..” (Egan 219)There is no denying that the defining feature of the global economy in the twenty-first century is its heavy reliance on technology and scientific advancement. Specifically, it thrives on the convergence of four key branches of technological and scientific progress: nanotechnology, biotechnology, information technology, and cognitive science. These interconnected fields play a crucial role in erasing traditional boundaries between human and non-human realms of existence on Earth. An evident manifestation of this phenomenon is the prevalence of the 'bio-genetic structure' within contemporary economies. This structure's significance is underscored by the substantial financial and institutional investments directed

towards endeavours such as the Human Genome project, stem cell research, and biotechnological interventions in various aspects of life including animals, seeds, cells, and plants. Advanced forms of capitalism have effectively capitalized on and exerted control over globally interconnected processes, essentially commodifying all aspects of life. This systemic prioritization of commodification, driven by profit-centric capitalist principles, ironically reinforces the intrinsic value of life itself, as emphasized by monistic vitalism. Consequently, we witness a paradoxical and opportunistic form of post-anthropocentrism, where market forces willingly exploit life itself for economic gain. The potential to commodify everything, even life itself, is an inherent characteristic of an economic system where the pursuit of exchange value governs all aspects of existence. “One of the greatest challenges for the humanities in the current context has been to re-invent themselves in the face of ‘the decline of the primacy of “Man” and of Anthropos’. This is not to suggest that they have abandoned their humanist roots, but, rather, to maintain that they have had to revise their presuppositional underpinnings, some of which seem obsolete in the posthuman age.” (Susen 70)

This paradigmatic shift entails a fundamental revaluation of life, emphasizing the equal significance of all forms of existence, human and non-human alike. It signifies an "anthropological exodus" from the conventional perception of humans as the pinnacle of creation and the custodians of knowledge, towards a hybridized understanding of species. In essence, we have transitioned into a posthuman era, marked by a reconfigured understanding of life that transcends traditional anthropocentric boundaries. As we dwell into the realm of the Posthuman, a futuristic world like Egan has designed in *Quarantine,* gives way to more synthetic dreams, synthetic bodies and hence synthetic or the Artificial state of mind.

In the last few meetings with Po Kwai, Nick engages in deep questions about his wife’s death and more to do so with the Mods that were primed into his skull. Egan here introduces the

Artificial state of mind through the character of Po Kwai where she questions him if he ever wondered about what he would think or feel if he functioned without the mods, or rather if he was not in an artificial state. To this enquiry, Nick takes an offence and justifies his actions saying that:

> Everyone's in an artificial state. Everyone's brain is self-modified. Everyone tries to shape who they are. Are neural mods so terrible, simply because they do it so well – because they actually let people get what they want? Do you honestly think that the brain wiring that comes from natural selection, and an accidental life, and people's own – largely ineffectual – striving to change themselves 'naturally', is some kind of touchstone of perfection? (Egan 187)

This conversation between Po kwai and Nick opens up a dialogue on significant features of the Posthuman that was prevalent at this juncture in the future. The artificial state of Human life is what we have discussed in the previous chapters and rightly so would be a distinctive feature of the Posthuman future. Egan advocates for this future where he showcases the artificial state of mind just as valid and logical as a normal human being with the actions and reactions that Nick possesses in the plots. Nick falls short of any flaws that could interrupt him during his mission or even his day to day life. This is all as Egan points out thanks to his artificial state of mind, a heavily Primed Posthuman.

As the novel takes us into an interrogating journey on Laura's escapism theory, we are also enlightened by the fact that Laura might have manipulated eigenstates in order to gain access to the power of escaping without a trace. Now for a better understanding of this thesis and the brain behind the novels plot, we dissect the meaning of Eigenstates and hence come to learn that Eigenstates are fundamental concepts in quantum mechanics. In simple terms, they are the states of a physical system that correspond to definite values of observable properties, such as

position, momentum, energy, etc. In the context of the Schrödinger equation, eigenstates are the solutions to the equation that represent the possible states of a quantum system. Each eigenstate corresponds to a specific eigenvalue, which is the value that the observable property takes when the system is in that state. For example, in the case of the position operator, the eigenstates are the wavefunctions that represent the probability distributions of finding a particle at different positions in space. Similarly, for the energy operator, the eigenstates correspond to the energy levels of the system.

Eigenstates play a crucial role in quantum mechanics as they provide a mathematical framework for describing the behavior of quantum systems and predicting the outcomes of measurements. They are essential for understanding phenomena such as wave-particle duality, quantum superposition, and quantum entanglement. Po Kwai further explains the science to Nick by giving an example of the Schrödinger's Cat, which is an illustration of the quantum measurement problem. Now, according to a famous thought experiment called Schrödinger's cat, if we picture a box containing a cat, this cat could be both alive and dead at the same time until you actually check on it. This weirdness is described by something called a "wave function." It's like a mathematical description of all the possible states the cat could be in.

But the experiment gets stranger when one finally opens the box and looks inside, the wave function collapses. It means that suddenly, the cat isn't both alive and dead anymore. It's just one or the other. This change happens because of one's observation. It's like the act of looking which makes the cat pick one state over the other. This specific state the cat ends up in after looking inside is called an Eigenstate. So, in simple terms, the collapse of the wave function means that before you check, the cat could be in multiple states at once. But as soon as you peek, it decides to be in just one state, and it stays that way whenever you look again.

Here Po Kwai also acts as the voice of a Quantum theorist Advocate by voicing some of the factual concerns that the author transmits through her character, she adds here that, “Quantum mechanics is the most successful scientific theory ever – *if* you take for granted the collapse of the wave function. If the entire theory was wrong, there’d be no such thing as microelectronics, lasers, optronics, nanomachines, ninety percent of the chemicals and pharmaceuticals industry ... Quantum mechanics meets every experimental test that anyone’s ever performed – so long as you assume that there’s this special process called ‘measurement’ – which obeys totally different laws from the ones that operate the rest of the time.” (Egan 115)

Po-kwai's revelations surpassed all expectations. The Ensemble's inquiries delved into the profound questions concerning the essence of reality, the essence of humanity, and perhaps even the origins of The Bubble itself. Reflecting on past doubts, a sense of shame washed over Nick as he remembered entertaining the idea that the alliance's primary objective revolved around the exploitation of Laura's escaping abilities. It became clear to him now that their endeavours held a loftier purpose, one that transcended mere exploitation and hinted at something far greater.

Quarantine thus dances on the spheres of circumstances when Power such as these nano technological advantages comes into the wrong hands of powerful conglomerates or individuals the Posthuman future could leave the human race in a debacle. Characters like Lui, whom Nick blindly trust are characters that with immense knowledge on the workings of Quantum Mechanics and its opportunities can unravel themselves as life-threatening to humanity. Or even powerful groups like that of the BDI or the Ensemble can hold power that may seem detrimental if used with malicious and evil intent.

The novel is heavily embedded with the quantum theory of Smearing, it is designed by Greg Egan to form the premise of the plot. As proclaimed by many of his contemporaries on Egan’s

talent to produce hard science fiction, he thus fixates his narratives on giving lengthy explanations on how the science behind the plot is generated. Karen Burnham on her scientific analysis on the Modern Masters of Science Fiction, points out that “Science is central to Greg Egan’s approach to literature. The fact that humanity is able to comprehend that fundamental nature of the universe is a source of endless wonder, something his stories constantly seek to illuminate.” (Burnham 101) Hence novels such as Quarantine are a testament to Egan’s knowledge about the Sciences.

The Process of Smearing is the theme that encapsulates the plot of the novel, from the mysterious formation of the Bubble, to the disappearance of Laura Andrews and the Protagonist himself going through the process of Smearing, the novel thus immerses a reader to comprehend these theories. In quantum mechanics, the "smearing process" typically refers to the spreading out or dispersion of a wavefunction over space or time. This phenomenon arises due to the inherent uncertainty principle in quantum mechanics. When we talk about the position or momentum of a particle in quantum mechanics, we cannot specify both with arbitrary precision simultaneously. This is encapsulated in Heisenberg's uncertainty principle, which states that there is a fundamental limit to the precision with which certain pairs of physical properties of a particle, such as position and momentum, can be simultaneously known.

As a result, when a particle's wavefunction is initially localized, meaning it is concentrated in a small region of space, its momentum becomes more spread out. Conversely, if the particle's wavefunction is initially spread out in space, its momentum becomes more localized.

This spreading out or smearing of the wavefunction is a fundamental aspect of quantum mechanics and underlies various phenomena, such as wave-particle duality and the behavior of quantum particles in different potential wells. It reflects the intrinsic probabilistic nature of

quantum systems and plays a crucial role in understanding the behavior of particles at the quantum level.

Smearing therefore becomes the central concern for the characters in the novel, Nick voices this concern about the smearing process enabled by the Ensemble Mod, when he imagines the worst case scenario, "Ensemble in the hands of gangsters – or, worse, Ensemble in the hands of the intelligence agencies of the PRC, or the USA. And even if they, too, understood the risks and exercised enough restraint to keep the planet from runaway smearing ... *reality shaped by Beijing, or Washington?* Life wouldn't be worth living." (Egan 217). The biggest fear if by evaluation and comparison to him losing his wife Karen, we see that Nick losing to the Ensemble Mod, where there could be a world of multiple Smears which could lead ultimately to the end of the times, seems to shudder him more. His panic stricken behaviour after knowing that technology which might undermine the nature of reality has fallen into unsafe hands, is a sceptical fear that science fiction writers like Egan instils in us which in turn can help us direct our attention to such future dangers.

4.2. The Philosophical Aspect of an Artificial Life in *Permutation City*

In his writing, Kevin Robins critiques the notion of cyberspace as a "virtual laboratory" (Robins 140) for examining the post-human condition, particularly the interplay between mental space and the physical body. He suggests that this characterization of cyberspace as a realm for such analysis may be questionable or dubious in nature. Too often, the concept of the "bodily other" becomes obscured, either by assimilating the body into the abstract spaces of Cartesian or Kantian transcendence, driven by humanist desires. This tendency results in a failure of literal or fictional cyber-spaces to authentically engage with posthuman realms of identity and ontology. Greg Egan's novel *Permutation City* addresses this deficiency by melding elements of "hard" and "metaphysical" science fiction, constructing narrative worlds that invite

exploration of social, cultural, and individual subjectivities. These constructed universes challenge fundamental humanist assumptions regarding objectivity, the body, identity, life, and even the very nature of cosmology itself, offering avenues for nuanced inquiry into the complexities of existence.

Egan intricately weaves together multiple digital topologies and cosmologies, creating a narrative rich in complexity through the juxtaposition of contrasting paraspaces and multilayered ontological levels. Engaging with cybernetics' competing paradigms of digital "life"—the symbolic Al hypothesis and the enactive model of A-Life—Egan initiates a thoughtful dialogue with scientific, philosophical, and metaphysical discourses surrounding "life," identity, ontology, and the post-human condition, all while maintaining a compelling fictional narrative. Situating quests for immortality within a framework of "subjective cosmology," Egan emphasizes the interconnectedness between our perception of the universe and the structure of our own bodies and minds. This recontextualization and deconstruction of spatio-temporal parameters, coupled with the subjective fragmentation of digital topologies and the object/subject "bodies" within them, significantly impacts notions of identity and prompts reflection on what it means to be "human" and "alive."

In *Permutation City*, these diverse paraspaces and sub-paraspaces serve as frame narratives, exploring themes such as corporeal and virtual body images and boundaries, virtual immortality, the ontological status of digital "Copies," creationist mythologies, and the relationship between bodies, subjects, and digital topologies. The narrative oscillates between a corporeal present and multiple diegetic spaces, where different permutations of characters exist in alternative forms, including digital Copies and clones running in various environments. This proliferation of ontological indeterminacies not only underscores the complexities of the

metaphysical science fiction tradition but also integrates seamlessly with Egan's "hard science" portrayal of near-future technologies.

Permutation City expands upon the earlier novelette "Dust," leveraging the subjective "experiences" of a digital Copy to exemplify the hypothesis that an infinite number of parallel universes already contain all possible permutations. In these self-contained worlds, the "realities" hinge upon the presence of an observer to "join up the dots," reshaping perception "solely by virtue of the potential redefinition of the coordinates of space-time." (Egan 105)

This cybernetic simulacrum has assembled itself and its world from the cosmic dust, a "universe completely without structure, without topology. No space, no time; just a set of random events" (Egan 107).

Egan literalizes these permutation theories by scattering dust-like cut-up fragments of his original story throughout the expanded novel and utilizing anagram rearrangements of the novel's title as chapter headings. *Permutation City* also presents an epigraph in the form of a twenty-line poem comprised entirely of anagrams of ‘Permutation City’, further illustrating the subjective rearrangement of random particles into alternative universes and meanings. The novel self-reflexively refers to this theory with the analogy of a cosmic anagram.

The cosmological theory presented in *Permutation City* draws heavily on the anthropic principle, which posits that the universe's origin is influenced by the existence of individual humans, thereby placing humanity at the centre of our particular realities. However, the novel's conclusion undermines this anthropocentric notion. Instead, the posthuman is decentred by the alternative paradigm-shaping subjectivity of an A-Life alien ‘Other’. While the cosmological principle remains distinctly subjective, it shifts away from anthropocentrism. To grasp the intricate implications of the metaphysical debates interwoven in the hard science extrapolation of *Permutation City,* it is imperative to first delve into contemporary scientific and

philosophical discussions surrounding Artificial Intelligence and Artificial Life. Subsequently, an examination of how Egan's narrative grapples with the issues emerging from this discourse, particularly concerning digital permutations and the quest for immortality, sheds light on the novel's complexities.

The definition of ‘cybernetic life’ is subject to intense debate. A robust humanist stance against digital life in silico vehemently opposes any blurring of the perceived "essential difference between people and machines" (Boden 420). Contrary to the apprehension of ‘dehumanization,’ there exists a prevalent but arguably flawed cyberneticist viewpoint that frames evolution as mere information processing. This simplistic computational analogy overlooks the nuanced understanding that information is not an independent entity. Instead, it is generated and manipulated by bodies, which need not be organic, in interaction with their environments and specific socio-cultural contexts. Alternatively, A-Life pioneer Chris Langton defines life as "a property of the organization of matter, rather than a property of the matter which is organized" (Levy 118).

The recent surge in interest in chaos theories and non-linear dynamic systems has coincided with a growing fascination with the concept of increasing complexity as a metric for evolution and life. Complex systems give rise to emergent behaviour, and their inherent unpredictability has become a central focus in the study of techno-biologic systems. This emergent behaviour is vividly demonstrated in the A-Life depicted in *Permutation City*. However, the philosophical "definition of life" remains as subjective as Egan's cosmology itself. Indeed, many A-Life researchers argue that it is only through the act of "making life" that we may ultimately come to understand what life truly is.

The definition of cognition is equally contentious among proponents of digital "being." Both the top-down "symbolic" and parallel processing "connectionist" models of AI are

predominantly grounded in the materialist assumption that the "mind" is a product of the brain. Consequently, replicating brain activity is posited as a means to achieve cognition. However, such simulation is inherently constrained, as the determination of "cognition" ultimately relies on subjective human interpretation (Franklin 141, 146).

Furthermore, akin to any fictional "digitally uploaded" cybernetic entity, AI "entities" also grapple with a lack of embodied knowledge. In Egan's portrayal, this predicament becomes central to the problematic ontological displacement experienced by his Copies. A distinct field from AI is the realm of A-Life, exemplified in Egan's novel by the Lambertians. Egan juxtaposes their foundational principles with those of the AI-like Copies, facilitating an exploration of each competing paradigm of potentially immortal life. A-Life adopts a "bottom-up" approach, where cybernetic environments are "seeded" with the digital equivalent of DNA, in the form of cellular automata. These systems evolve and exhibit lifelike behaviour, demonstrating "deep complexity" and self-organization (Levy 70, 80). This illustrates, as Langton argues, that rule-based structures possess the capability to "hold the keys to reproducing beings and to entire universes" (Levy 102). A-Life's swarm-type, non-hierarchical digital vivisystems are predominantly uncontrollable and unpredictable, characterized as out of control swarmware. This aligns precisely with the model of A-Life seeded into a boundless environment as depicted in *Permutation City.*

Unlike AI models, A-Life systems operate autonomously within their environments, manifesting a tangible world and eliminating the subjective interpretation of humans (Franklin 380-81, 187). Danish physicist Steen Rasmussen emphasizes this autonomy, suggesting that an artificial organism perceives a reality, denoted as R2, which is as legitimate to it as our own

'real' reality, R, is to us Although R2 is materially embedded within RI, it maintains its independence and possesses "the same ontological status." (Levy 145).

Cellular automata, therefore, constitute their own reality, governed by a logic-based structure that exists beyond human-centric parameters. Lefebvre contends that every living body "produces itself in space and ... also produces that space" (170). The "living" and "enactive bodies" of A-Life entities are not only generated within their coded environments but also actively engage with and potentially shape these spaces. The cognition of A-Life agents lies not in representation but in embodied action (Varela 16, 20). This distinction from mere imitative AI "copies" poses a central "subjective cosmological" dilemma in Permutation City. Egan's A-Life entities evolve not only their representational forms but also the underlying rules governing their spatial existence. This has significant ramifications for the AI agents coexisting but lacking the ability to fundamentally influence their environment.

The novel posits a non-anthropic subjective cosmology, where various agents—human, posthuman AI, and non-human in silico—can inhabit alternative "worlds" of equal validity. Al, A-Life, and the posthuman. If we accept that enactive A-Life agents qualify as "alive," A-Life can serve to decentralize the human, shifting the focus to the "new agent" and its purpose, environment, realities, and moral considerations, previously centred around the human. Nigel Clark argues that A-life bodies "constitute a new form of-truly autonomous-signifying object," with "no obligation to perform for the gaze of an outside observer" (Clark130). Instead, synthetic organisms may eventually invert the gaze, effectively transforming our perceiving bodies into the objects of perception. Clark's reordering of signifying objects and semiotic systems not only offers a theoretical framework for Egan's fictional portrayal of this reversal of the digitally embodied gaze but also challenges the humanist focus on reproducing the image

of the "obsolete," antiquated, and discarded corporeal body. While artificial "life in the machine" exists, the concept of the "(post)human" residing within the machine remains fraught with complexities. The reductionist rhetoric of neuro-cyber symbiosis harkens back to the Cartesian AI notion of "mind as computation." As Hans Moravec acknowledges, this perspective primarily concerns "minds that aspire to immortality," aiming for a transcendence into the machine that disregards the phenomenological model of mind, body, and world. Meaningful transformation of the "human" into a digital AI form largely remains a science fiction trope or a hopeful desire for immortality within humanist circles.

Although A-Life agents are more accurately categorized as "other than human" rather than "posthuman," their independent evolution and techno-biological behaviors and realities prompt reflection on our own corporeal, socio-cultural, and spatio-temporal evolutionary conditions. They challenge our anthropocentric assumptions and reverse the once-dominant human gaze onto our own presumptions regarding the nature of "life" itself. A-Life bodies are also the bodies of the alien Other we will perhaps meet in future cybernetic environments, "bodies capable of reconfiguring themselves into more permutations than we could ever conjure up for our virtual selves" (Clark 130). As a result, they may offer valuable insights into our own transitional state of ‘becoming-posthuman’. Thomas Ray contends that A-Life represents a genuinely comparative biology capable of expanding our Earth-bound understandings of biology, evolution, and complexity. Therefore, Egan's thoughtful exploration of A-Life and the digital posthuman condition yields a remarkably original and insightful example of contemporary science fiction.

Permutation City delves into the realms of immortal copies and digital ontologies. Structurally, the novel can be divided into two halves, each corresponding to a different paraspace. These

paraspaces establish unique subjective cosmologies, featuring distinct topologies, embodiments, and ontologies. Thus, it's most effective to approach them in the linear logic presented within the novel: from the vulnerability of VR copies, to the negentropic immortality of the TVC universe, and finally to the grounded, 'mortal' A-Life paradigms of the Autoverse, which challenge the notion of 'living forever.' The "Copies" are "whole-body architectural simulations" that give the "illusion" of a VR (re)embodiment along with "uploaded" consciousness. Approximations of their visceral counterparts, Copies are "cheats" with no "underlying logic," "ad hoc ... software mongrel[s]" that lack any basic foundation in physics or biology. (Egan 101)

These Copies bear a direct resemblance to sophisticated "top-down" AI. Their primary objective is the pursuit of a highly specific, free-market version of immortality. Originating from an elite digital gerontocracy, the existence of Copies is inherently tied to a late-capitalist data framework, reliant on the infrastructure of the free market. The transcendence of a Copy is both commodified and compromised by the computational costs required to sustain their scan. While the wealthiest Copies may operate at a relatively faster rate, poorer Copies are relegated to the "slow clubs," where subjective time passes even more slowly. Consequently, financial transactions form the foundation of a Copy's existence, resulting in an economics of ontology with profound implications for the subjective experiences of these digital duplicates.

Despite their susceptibility to technological limitations, processing demands, and human agency, the potential for genuine existence is not discounted. Despite their exploitable insecurities, Egan contends that AI Copies and A-Life entities are capable of perceiving their own reality, denoted as R2. As the Copy "Durham2" recognizes, "For any human, absolute proof of a Copy's sentience was impossible. For any Copy, the truth was self-evident: Cogito ergo sum" (Egan 40-41).

Durham2 represents the first instance of a Copy of a living individual successfully navigating the ontological contradiction of existing concurrently in both visceral and digital forms. Emerging electronically and devoid of physical form, Durham2, akin to a digital Adam or Golem, now occupies the precarious border zones between different "metaphysical planes," where two universes function with altered subjective temporal rates. Without the option of a bailout, Durham2 finds himself seduced by digital existence, leading to the development of a visceral sense of identity.

However, "Permutation City" casts doubt on the precise nature of the Copies' subjectivities: are they truly the same person as their original counterparts? As the epigraph of this article suggests, if the Copy and its original are not considered identical, then the "immortality" promised by copying becomes a hollow illusion, with simulation replaced by non-identical substitution. Once conscious, the Copy begins to evolve independently, diverging in experiences, thoughts, bodies, forms, and spatio-temporal dimensions. Both entities become irreversibly different from their former selves, leading to the fragmentation and loss of the original corporeal subject's identity to a multitude of disconnected and irreconcilable identities. Consequently, the substitution of Durham for Durham, while both still exist, blurs conventional distinctions between "artificial and real" by engendering two simultaneous realities. By constructing their subjective experience, "Every Copy proves the dust theory to itself a million times a day" (Egan168). The ramifications of this "subjective cosmology" permeate every aspect of existence: time, space, identity, form, image, site, body, emotions, memories, pasts, and potential futures.

Egan cleverly utilizes his subjective premise to create a Dickian metaphysical quandary that blurs the lines between delusional paranoia, reality, and various virtual realities. Consequently, through a series of repeated copying, "Durham" not only acquires multiple futures but also

multiple pasts. Durham perceives these numerous copied, cloned, virtual, and visceral selves as an "inseparable" collective, yet he remains uncertain about the ontological status of this retro futuristic and seemingly infinite "us." "Do you think I'm alive? If a Copy's not human, what am I? Twenty-three times removed?" (Egan 191)

Peer, a Copy consigned to the "virtual slums," similarly embraces the subjectivity of the "cosmic anagram," thus rendering his higher relative rate of temporal slowdown meaningless. By abandoning any contact with the "real" world, the rate at which one's scan is computed becomes irrelevant: "One instruction per millennium-it makes no difference" (Egan 296). Peer's final act is to completely let go of the "illusion of still being this imaginary thing called 'me'... Why go on pretending there's one 'real' person, enduring through all those arbitrary changes?" By opting for a collective state of being, Peer not only crosses the threshold between radical self-transformation and death, abandoning any illusion of Hawthorne's "immortality," but also rejects "the last vestige of his delusion of humanity. The last big lie." By dissolving the unifying thread between his multiple, fragmentary selves, Peer rejects the Western notion of unitary wholeness, stripping away the humanist heritage from any notion of the posthuman (or "human" under erasure), and ultimately transcends into a non-human state within his own "Solipsist Nation."

Peer amplifies his rejection of and estrangement from the human condition by emphasizing his altered ontological, temporal, and spatial states of being. Unlike Durham2, Peer-as-Copy now assumes the role of the original One. He embraces the infinite permutations of boundless time and space to become an entity for whom illusion, delusion, simulation, and substitution hold no meaning—all are subjective realities, as true or false as each other (denoted as Rx).

In his endeavour to create a Solipsist Nation solely from fragments of himself, Peer's self-centred actions of self-begetting seek to fill the emotional void in his eternal existence through

a narcissistic intimacy with the self-as-Other and the many. By refusing to acknowledge the independent reality of others, such virtual empowerment perpetuates cyberspace's isolationism.

Permutation City explicitly draws a connection between the visceral and the real, referred to as the "viscer(e)al." Maria serves as the novel's corporeal anchor in "reality," a steadfast presence whose body is unequivocally linked to her house, symbolizing the site of the self. This solid physio-psychical foundation stands in stark contrast to the shifting sands underlying the digital cosmologies and identities explored throughout the novel. Egan's portrayal of Maria reflects essentialist correlations between the female, the body, and matriarchy. While the male protagonist, Durham, embraces the AI association of identity with the mind, Maria resists the virtual life, associating her identity with her body—a tradition that often links women to bodies and men to minds. Female characters like Francesca and Maria2 cling to the integrity of their bodies and their body's image, while male characters willingly abandon them for more fluid, "transparent" representations.

Maria's identification with her womb-like house extends to her figurative role as "mother" and creator of a new species, the Lambertians, and their "planet." This maternal role is reinforced by imagery of birth and blood, which are inherently tied to specific, physical, maternal bodies. Egan establishes a metonymic association between the visceral necessity of excrement and corporeal reality, a motif that accompanies Maria from her first appearance to her last. The novel's references to the stench from a burst sewer serve as a reminder of bodily functions that define life and mortality.

Durham's suicide underscores the intrinsic connection between the visceral and the real. By choosing to end his visceral life in exchange for a purported rebirth into immortal digital existence, his death by disembowelment, accompanied by the "sickly sweet" odour of

excrement and vomit, symbolizes the inevitable relationship between life and death in the corporeal world. In their quest to avoid the mortality of their physical bodies by embracing life in virtuality, the Copies reject true birth and the essence of "living being."

Philosophical aspect of the Artificial life and Immortality

Egan delves into the intricate philosophical implications of pain, suffering, and the virtual realm, particularly through the character Riemann2, who embodies a paradox that challenges Lyotard's thesis. Riemann2 is marked with a scar that symbolizes not only his predecessor's guilt but also serves as the sole identifier of his identity. Despite being a digital entity, Riemann2 strongly identifies with his former physical self, refusing to see himself as anything but a continuation of the deceased Thomas Riemann. This attachment to corporeal existence underscores the idea that pain and suffering are fundamental aspects of the self. In a Kafkaesque twist, Riemann2 inflicts self-mutilating scars as a form of punishment, engraving the number of times he has "re-lived" his crime. However, his attempts to impose corporeal consequences on his digital existence ultimately fail, highlighting the inherent limitations of rendering the virtual world tangible. Unlike Peer, another character in the narrative, Riemann2's suffering is rooted more in cognitive guilt than in physical punishment. Comparing Riemann2's self-mutilation to that of the human character Durham emphasizes the distinction between virtual and physical suffering. Both Riemann2 and Peer exist in isolated subjective spaces, devoid of interactions with other bodies or environments that could shape their experiences of time and space. This existential isolation mirrors the structural challenges inherent in their digital existence and cognitive architecture.

In Permutation City, Egan portrays the Copies' existence in a virtual world full of contradictions and illusions. This digital environment, described as "three-dimensional wallpaper," is static

and doesn't interact with the Copies themselves. Instead of being a space where bodies and environments shape each other, it's more like a fixed backdrop. The Copies, being digital programs without physical output, are confined to this symbolic and imaginary space, lacking the richness of real-life social interactions. This limitation prevents them from fully engaging with other bodies or spaces. The novel compares this virtual world to an illusionary mural in a dead-end street, which, once revealed, loses its appeal and exposes its lack of substance. This analogy highlights how the Copies' digital spaces lack the depth and authenticity of real-life experiences.

Durham's "cosmological dust" hypothesis lays the groundwork for Durhamx's proposal to construct a self-contained and autonomous universe rooted in theories of observation. This paraspace, removed twice from reality, emerges as a virtuality independent of our known universe—a self-replicating cellular automaton dubbed the six-dimensional TVC (Turing, von Neumann, and Chiang) universe. The TVC universe operates within a Riemannian space, a spherical geometry facilitating theorization of spaces with multiple dimensions. Crucially, this universe diverges from the Kantian a priori notion of space in the original Copies' virtual reality (VR) environments, relying entirely on the observations of the Copies for its existence.

This Schrödinger-esque cosmological existence generates an ever-expanding, limitless space, drawing upon the internal logic to accrue building blocks from the chaos of non-space-time through the act of defining space and time itself. The Copies' intangible non-bodies are supplanted by prioritized patchwork bodies functioning as creators, fashioning an abstract, fetishized, eternal spectral space from dust—a realm coined "Permutation City." The primary aim of this universe is to offer a "true" form of immortality purportedly capable of circumventing cosmological entropy. By transcending to a negentropic space divorced from physical matter and linear time, this digital ark promises not "emortality" but subjective

immortality—an eternal state of "not dying, period." Appropriately dubbed "Elysium," this "Extropian" Other-space aligns with traditional conceptions of a heavenly afterlife, echoing the religious undertones prevalent in many science fiction depictions of immortality.

Inhabitants of the TVC are ensconced in a universe characterized by an independent scale of space, time, and dimension, existing as digital progeny generated by ontogenesis software. These "Elysians" relinquish concerns for the continued existence of Earth, shedding the shackles of human atavism and embracing the freedom to redefine their identities and forms. Maria2, however, rejects this subjective elasticity, clinging to the illusion of human physiology to ground her identity within the familial context. Conversely, the Elysians adopt increasingly elaborate forms, yet they too retain a semblance of connection to their antecedents.

In a merging of object and subject, certain Elysians assume the spatial material form of their technological predecessors. This morphological mimicry of artifacts from cybernetic history reflects their struggle to situate themselves within the infinite n-dimensionality of their boundless TVC universe. Their technological pantomime can be interpreted as a psychasthenic "depersonalization by assimilation to space," illustrating the overwhelming and captivating nature of borderless space. In a collapse of the distinctions between self and environment, the Elysians exhibit a form of "appersonization," a process identified by Schilder wherein individuals incorporate parts of others' bodies into their own body-image. This dislocation to virtual spaces often manifests through the appropriation of other technological bodies into the image of avatar bodies.

Through their sympathetic digital identification with architectural elements, the Elysians mimic retro-futuristic spaces, graphically illustrating the challenges of existing within Manuel Castells' "space of flows," a realm where identity is subsumed by the timeless and placeless

expanse of space. The TVC engenders a spatial-social landscape characterized by "eternal ephemerality," where individuals grapple with a "condition of structural schizophrenia," striving to reclaim their identities in novel forms.

This manifestation of "panic bodies" encapsulates Lefebvre's notion of the "besetting terror" induced by the trial of space. The TVC universe compresses digitalized time into an already boundaryless space, transforming this supposed transcendent sanctuary into a "space of terror," exacerbating the Elysians' crisis of location through further abstraction of space, time, and energy from social to mental realms. Thus, as often observed, the science fiction narrative of immortality delves into the realm of Faustian bargains, hubris, and inevitable nemesis.
Immortality, a perennial theme within the science fiction genre, is depicted as both a tantalizing prospect and a nightmarish curse. Oscillating between utopian visions of boundless opportunity and dystopian portrayals of longevity as a burden, science fiction narratives have delved into various hypotheses and their potential ramifications. Permutation City grapples with such issues, including the pervasive "Death Ethic" ingrained in society, which dictates that dying is the responsible and moral course of action (Egan 34).

Maria's figurative Faustian bargain with Durham-as-"devil," wherein she accepts gold pieces to "save" her mother's life through copying, is portrayed as a transaction for her "soul" (172, 199). Maria's digital resurrection exacts a profound toll, stripping her of her connection to the human race—past, present, and future—both physically and emotionally. Memories, family, and friends lose their significance, reduced to meaningless static. She compares her utter isolation to being "buried alive" (Egan 225), a metaphor akin to the eternal suffocation described by Baudrillard in relation to such "prophylactic utopias," wherein the living are embalmed alive in a state of perpetual survival (Ansell-Pearson 149-50). Similarly, Riemann

portrays his own fate as an eternity of self-loathing, likening it to being cast into Hell without a glimpse of Heaven (246). The TVC universe, depicted as a "ship of fools" (188), descends into the fiery depths of Hades rather than ascending to the glory of Elysium.

The TVC universe presents a tailor-made utopia of boundless potential but devoid of consequence; there exists no death, no challenges, and no divine presence. Each Copy is effectively sentenced to perpetual solitary confinement. In a futile attempt to fill the void of this "abyss of immortality," Peer resorts to randomly programming "prosthetic interests" and alternative identities, yet the infinite expanse ultimately renders these endeavours futile, as "eventually you're going to come full circle and find that you've done it all before" (Egan 230-32). While the TVC's perpetual expansion promises "eternal growth," it merely perpetuates a feedback loop of repetition, casting doubt upon the value of immortality. The very boundlessness of the TVC's infinite spacetime breeds the "terror" that manifests in the panic-bodies of both Copies and Elysians.

The contradictions inherent in existing across multiple permutations and subjective temporal and spatial frameworks create a phenomenological crisis that leads Durhamx to reject immortality: "I've had enough. Twenty-five lives ... I want one life, one history. One explanation. Even if it has to come to an end" (Egan 306). Following the example of the flesh-and-blood Durham, this distant digital descendant finally confronts the futility of eternal life: "What is there left for me to do?" he questions, "Onwards and upwards? In search of higher order?" (Egan 307-08). His final "death" is achieved through simultaneous destruction and self-recreation, giving "birth" to a "software child who'd merely inherited its father's memories" (Egan 309). Durham crosses the threshold between self-transformation and death. For Peer, Riemann, and Durham, the only true choice in life is the death that immortality has denied them. Their acts of self-mutilation, fragmentation, and self-substitution seem to confirm that

only the finite is bearable. The apparent absurdity of the desire for eternal life is underscored by a fundamental challenge to the Elysians' paradigm of immortal existence, originating from the A-Life inhabitants of Permutation City's third paraspace—the Autoverse-based Planet Lambert.

The Autoverse, Egan's third narrative frame, represents a digital cellular automata environment situated between the intricate complexity of real-world biochemistry and the "architectural simulation" of the Copies. Unlike the Copies' improvised programs, the Autoverse operates on a simplified yet steadfast set of principles, establishing a new physics that grounds its emergent A-Life entities in logical foundations: "Everything was driven from the bottom up ... just as it was in the real world" (Egan 24). Maria's achievement in creating conditions within the Autoverse enables the mutation, adaptation, and self-replication of A. lamberti, fostering the evolution of independent A-Life entities that are as "real" as their own distinct universe. While the subjectivity of the TVC universe assumes, the Autoverse consumes, becoming a locus for computational ethology, metaphysics, and philosophy.

Durham introduces an Autoverse of planetary scale, "seeded with the potential for developing ... genuine aliens," into the TVC universe (Egan 137). This biosphere seed is intended to alleviate the TVC's claustrophobic isolation by offering the Elysians the opportunity to confront the Other. Just as science posits, the evolution of A-Life as autonomous life forms in other universe holds the promise of encountering true alterity.

Through A-Life, Egan's science fiction explores a potentially more accessible form of alien encounter than traditional Bug-Eyed Monster narratives, as Durham suggests: "what could be more alien than Autoverse life?" (Egan 168) A-Life presents a "profound departure" from the anthropic semiotic systems and recursive corporeal representations prevalent in the digital realm, opening avenues for encountering an Otherness that transcends limiting reflections of

the Same. True alienness may be discovered through a journey across digital space-time into an alternative universe, rather than traversing physical space within our galaxy. Planet Lambert exists as a "sub-paraspace" within the TVC universe, characterized by distinct physical and metaphysical laws and assumptions, which engender a fundamental clash of paradigms between the virtual world of the Copies and the A-Life entities known as the "Lambertians." Different spaces give rise to different bodies, cultivating a diversity of Otherness.

Permutation City adopts non-hierarchical and non-linear swarm-type vivisystems as the blueprint for its digital aliens. The dominant life-form on Planet Lambert evolves into an insect-like, intelligent species with self-awareness and deep complexity, engaging in parallel computing within swarms. This hive-as-organism paradigm, reminiscent of analog biological systems, shapes the Lambertians' digital incarnation through organic behavioral models.
The Lambertians' swarm paradigm blurs the distinctions between technology and nature, as well as between communal and individual entities. Importantly, Egan emphasizes that attempting to interpret the Lambertians' thoughts and behavior through anthropomorphic standards would be misguided. The Elysians' failure to heed this warning leads to a fatal clash of paradigms.

The autonomy of Planet Lambert's structural laws and the inherently alien nature of cognition arising from the swarm logic, combined with the productive bodies of the Lambertians themselves, engender a reality independent of both the TVC and its Elysian inhabitants. The enactive nature of the Lambertians allows them to evolve unpredictably, surpassing the limitations of the Elysians and their TVC universe. Durham's initiative to encounter the Other results in a Faustian pact fraught with unforeseeable consequences, as Kelly notes.

The Lambertians' uncompromised bodies give rise to their own reality, R3, contrasting with the Copies' representations-in-crisis simulated in an abstract empirical R2. The rule-based structure of R3 asserts dominance over the Schrödinger-based cosmology and existence of the Elysians, culminating in their downfall. The Lambertians' gradual "becoming-hegemonic" in the Autoverse's underlying rules constitutes the revenge effect of this neo-natural system, as Levy argues.

In a twist of irony, the Elysians themselves become misguided emissaries of the Alien, believers in a false immortal universe. The Lambertians invert the logocentric gaze, relegating the posthuman from the center to the margin, exposing the anthropocentric conceit of the Copies as a baseless assumption of cosmological superiority, akin to a digital "Orientalism." By seeking to explain themselves as creators, the Elysians allow their subjective cosmology to be rejected rather than reinforced. The virtual world constructed by the Lambertians supersedes the TVC fantasy, with sub-space asserting dominance over virtual space in a triumph of the embodied over the disembodied. The Lambertians' embodied enaction reinstates the phenomenological body in the digital realm.

In *Permutation City*, the narrative of the Copies revolves around a theme reminiscent of hubristic creationism. DurhamX emerges as the central figure, embodying a digital version of the Prometheus archetype—a creator figure who takes on the role of "God" within the TVC universe, aptly named "The Garden-of-Eden Configuration." Maria, however, sees Durham's plans as the paranoid prophecies of a misguided Messiah who will bring about a "virtual Jonestown massacre" a repeated denotation to mass suicide which supports the notion of bodies in crisis (Egan 170)

Maria, however, remains cautious about her role as the "mother" of the Lambertians, recognizing that Planet Lambert exists independently. She questions the assumption of the Elysians that the Lambertians will accept them as their creators. Permutation City challenges the merging of creation mythologies with digital spaces, highlighting the Lambertians' perspective that creators are irrelevant. Their collective behavior offers alternatives to traditional human narratives, rejecting the notion of creators altogether. According to Egan, the cosmology of Permutation City renders the idea of a creator logically impossible. Wiener's cautionary tale in God & Golem, Inc. warns against the hubris of creating autonomous beings, which Durham disregards in his creation of swarmware. The narrative demonstrates the fallibility of the (post)human-as-Creator, as seen in the eventual collapse of Permutation City and the rejection of creators by the Lambertians, revealing the absurdity of the infinite and eternal.

The Lambertians reject the idea of immortality as impossible, forcing the Elysians, who are accustomed to a universe without limits or death, to confront the prospect of becoming mortal again. By challenging the flawed logic of the Elysians' worldview, the Lambertians not only cause the collapse of this specific "Garden-of-Eden configuration" but also cast doubt on the possibility of it ever being recreated. This parallels the analogy of the cul-de-sac's illusionary mural, which once exposed, cannot be replicated.

In the epilogue of Permutation City, the narrative shifts back to Maria's embodied reality. Her rejection of the mural's false promises symbolizes a choice for physical embodiment over digital existence. Choosing to commemorate Durham's death rather than his supposed eternal life emphasizes the phantasmic nature of digital architectures. Maria2's transition to a second Garden-of-Eden is depicted as moving from three-dimensional reality to the two-dimensional digital space, echoing the theme of subjective delusion regarding immortality. Egan suggests

that the victory in the debate between Al (artificial life) and A-Life (artificial intelligence) belongs to the Lambertians, who prevail over the uploaded Copies and their aspirations for immortality. Perhaps it's time for everyone to confront the inevitability of a dead end, where death becomes the only path forward. Perhaps the Lambertians were onto something, suggesting that "infinity" holds no true meaning, and that "immortality" is merely a tantalizing illusion no human should pursue—no human at all. (Egan 308)

Maria's closing reflection lingers with the weighty implication, "No human." Even the posthuman, it seems, struggles to embrace the daunting prospect of eternal life. Peer, Riemann, and Durham in his various "permutations" all come to terms with their finitude. It's ironic—given their vehement rejection of the infinite—that only the Lambertians seem to harbor any hope of achieving "immortality." While the cybernetic posthuman grapples with the existential challenges of immortal transformation, the non-human paradigms of alien A-Life appear better equipped to navigate the demands of eternal existence. The "swarm ontology" of the Lambertians, unencumbered by traditional Western epistemologies, embodies an inherent otherness that allows both the individual and the collective (social) to become a sort of Deleuzean haecceity, with limitless possibilities and capabilities. Unlike the fragmented identities and bodies in crisis of the "posthuman" protagonists—Maria/Maria2, Durham/Durhamx, Riemann/Murderer, and Hawthorne/Peer—the embodied enactment of the Lambertians generates digital yet analog provisional bodies, fostering a symbiotic "embodiment" that promises greater adaptability to shifts in information and transformational dynamics.

A-Life's comparative biologies not only broaden our limited understandings of evolution and life but also hold the potential to forge a "new way of doing philosophy" that breaks free from Western metaphysical traditions (Dennett 291), thus enhancing its value as a reflection on both

the human and posthuman condition. Similarly, A-Life enables science fiction to articulate alterity detached from the "familiar." The challenge posed by A-Life to prevailing hegemonic models may find its match in the non-anthropic perspective that works of science fiction like Egan's can offer.

Permutation City's recurring references to the "immortal abyss" underscore the myriad challenges associated with immortality. The trial of boundless bodies navigating placeless space becomes an endurance test of timeless time endured endlessly by "eternal" entities. Life, it seems, is not always "too short," with all things eventually demanding closure. When time stretches into eternity, its passage loses all meaning. Given Permutation City's apparent aversion to immortality, one might argue that the novel belongs to the realm of cautionary tales within science fiction. Yet, the ultimate fate of the Copies remains ambiguous. We cannot definitively assert that the infinite is no longer attainable, nor can we rule out the potential success of new Garden-of-Eden configurations. However, what we can ascertain is that the Copies are no longer infallible creators of their subjective universe. The fate of the "triumphant" Planet Lambert also remains shrouded in uncertainty. Similarly, there is no mention of the potential ramifications stemming from their R becoming hegemonic for our R. While the antagonist in Permutation City is confined to the digital realm, there are genuine concerns that the advancement of A-Life represents a trespass into the "rightfully forbidden," potentially leading to Frankensteinian repercussions for human existence, ultimately pushing us towards "reluctant extinction" (Levy 346-47). On this particular matter, Egan maintains a remarkably ambivalent stance. He offers scant indication as to whether we should view A-Life as our future, successor, surrogate, extra-terrestrial envoy, cohabitational counterpart, or mortal adversary. Egan's work aligns with the tradition of science fiction that presents alternative technological future scenarios with a deliberate sense of ambivalence.

Conclusion

Expanding upon science fiction's conventional narratives of the relentless pursuit of eternal life, Egan enriches the genre's pivotal role as a primary platform for exploration and reflection. Permutation City amalgamates philosophy, theology, science, technology, fantasy, and contemporary theories of body, identity, space, and time, all under the comprehensive umbrella of the (post)human quest for immortality. The novel serves as a cautionary tale, offering a discerning glimpse into the extensive potential consequences of eternal existence for humanity, society, culture, and the individual alike.

CHAPTER FIVE

Postmodern and Posthuman elements in the works of Bruce Sterling and Greg Egan's Science Fictions.

In this chapter, we will delve into one of the most significant literary movements in history, Postmodernism, and examine its influence on the works of Posthuman writers Bruce Sterling and Greg Egan. Posthumanism, as a new theoretical framework, is deeply relevant to our present-day scenario and offers a window into our future. Through an analysis of select novels by Sterling and Egan, we will explore the characteristics of Posthumanism, including advancements in technology, unique locales, and the interplay between consciousness and simulation embedded within the texts, which will be analysed in comparison to Postmodern texts having similar elements.

My argument in this chapter is that Posthumanism represents an evolution from the ideals of the Enlightenment era, marking a turning point from previous literary movements and signalling a desire for expansion and exploration. By examining how Sterling and Egan engage with Postmodernist themes and techniques while also incorporating elements of Posthumanism, we can gain insights into the ways in which literature reflects and responds to contemporary technological and cultural shifts. Throughout the chapter, we will analyse how Sterling and Egan navigate themes such as identity, embodiment, and the boundaries between human and machine. We will also consider how their works challenge traditional notions of narrative structure and reality, reflecting the fragmented and increasingly mediated nature of contemporary existence. By examining the intersection of Postmodernism and Posthumanism in the novels of Sterling and Egan, we aim to uncover the ways in which literature both shapes and responds to the complex relationship between humanity and technology in the twenty-first century. Through close readings of these texts, we will illuminate the ways in which

Posthumanism serves as a bridge between past and future literary movements, offering new perspectives on the human condition and the possibilities of technological advancement.

Introduction

Jean Francoise Lyotard's *The Postmodern Condition: A Report on knowledge* was a breakthrough Postmodern work published in 1979, where he establishes the idea of the replacement of Metanarratives to Mini narratives. Lyotard here questioned the grand narratives that modernism so frequently employed. Similarly, Postmodernism stepped into a mature recognition of what its movement have evolved into and analysed what the Postmodern culture reflected in the contemporary works of art and literature. Postmodernism as Tim Woods believed was defined by "an identity, consciousness, or ego which is deferred, displaced, fragmented or marginalised within a structure." (Woods 11)

In many respects, self-consciousness is one of the central tenets of Postmodernism. Simply put, self-consciousness is the process by which a Postmodernist work, whether it's a short story or novel, shows the reader that it is aware that it is a work of fiction. This differs from conventional works of fiction, which are generally meant to be read as if they were actually real, though the reader knows that it is make-believe. For instance, if we take episode fifteen of *Ulysses* by James Joyce, which exhibits several postmodernist characteristics in this sequence, we learn about how it is written in the style of a play script. Leopold Bloom wanders through the red light district of Dublin and experiences a great deal of hallucinations involving characters encountered previously in the book. These experiences are excessively outlandish, as they involve impossible events, such as Bloom's establishment of a fictional city called Bloomusalem, talking soap, and an encounter with the End of the World, which is personified as a two-headed octopus with a Scottish accent. The absurdity of these visions, along with the overly artificial style of the form of the text, brings attention to the fact that you are, in fact,

reading a work of fiction. Moreover, many scholars take these hallucinations not to be the product of Bloom, but rather of the book itself. The novel's self-consciousness is most evident in this chapter because all of the themes, characters, and ideas it has wrestled with come to the surface, bringing attention to the book's artificial consciousness. This is a prime example of Postmodernism's concept of self-consciousness.

Another major theorist of Postmodernism is the contemporary French writer Jean Baudrillard, whose book *Simulations* marks his entry into this field. Baudrillard is associated with what is usually known as 'the loss of the real', which is the view that in contemporary life the pervasive influence of images from film, TV, and advertising has led to a loss of the distinction between real and imagined, reality and illusion, surface and depth. The result is the culture of 'hyperrealists', in which distinctions between these are eroded. According to Baudrillard, in the Postmodern society there are no originals, only copies or what he calls 'Simulacra'. By the 1970's his work moves entirely away from the analysis of political economy to a concern with the culture of 'hyperreality' where models replace the real and determine the real. For example, Disneyland becomes America, this shows that hyperreality is everyday reality. Here according to Simulacra, media messages saturate the cultural and social field so entirely that the masses are reduced through this overload of information to an inert and silent majority. Reality was not what it always meant; in fact there were too many narratives and perspectives that the essence of realness had succumbed to a surreal and ambiguous nature.

Now, the human locale and psyche has gone through a transformation with movements like Modernism and Postmodernism in history. Patricia Waugh in her book *Practising Postmodernism, Reading Modernism* asserts that "the sense of transition is Powerful, but inevitably accompanied by the spectre of decadence: the feeling that we are at the end of an era. Postmodernism is apocalyptic" (Waugh 9). Concurring from Patricia Waugh's assertion,

we see a section of authors and critical thinkers who argue that the Postmodernist discourse has stepped into another realm almost shedding its original qualities and embodying a new type of culture that depicts the Posthumanist characteristics. There are also a few others who have incorporated and channelled the Postmodern elements in the Posthuman discourse but with the influences of advancement in technology and the urge for expansion which is pivotal to Posthumanism. We learn from Manuel Castells that "In the last quarter of the twentieth century, a technological revolution, centred around information, transformed the way we think, we produce, we consume, we trade, we manage, we communicate, we live, we die, we make war, and we make love." (Castells 1)

The term 'Posthumanism' has previously been applied within the field of Philosophy to describe a collection of arguments against the conception of humanity in a humanist tradition, but also to describe the effects on humans caused by a massive development within the fields of genetics and (medical) technology. It is with Literature that Posthumanism which has always been attached to, paved the way for its innovation and creativity. Now, one questions what exactly Posthumanism is. Are we fully equipped to comprehend or be aware of its meanings in terms of time and space? Interestingly, here again the answer lies in Literature to enlighten or practice this very discourse.

Mary Shelley's *Frankenstein*, which has been viewed through myriad perspectives in the literary field, also contributes as one of the first texts that claim to be a novel with Posthuman elements. For many readers, analyzing the text with a critical mind shed light on its Posthuman perspectives and while coming across with the word 'Posthumanism', this novel is an example that has been attached to and remembered ever since. In literature we attribute the theory of Posthumanism to the genre of Science Fiction and its subgenre's such as cyberpunk, Dystopian SF, Robot SF. Authors such as Greg Egan, H.G. wells, Isaac Asimov, Bruce Sterling, Frederik

Pohl, Greg Bear, Peter Watts and Ken MacLeod have experimented with culture, society and evolution and established a Posthuman future in their literary works and fictions.

With one of the earliest glimpses into Posthumanism, H.G. Wells, who had studied for a while at the Normal School of Science under Darwin's disciple, T.H. Huxley, recognized that evolution was an unending process, and in his first novel, *The Time Machine*, introduced a future humanity that had divided into two separate and antagonistic species, the Morlocks and the Eloi. For the first time, science fiction raised the question of what might come after humanity, as we know it today. In the Twenty first century we are beginning to realise that, far from being a mere tool, technology is at the centre of critical thought about culture and about nature. With Posthumanism, technology and the artificial intelligence almost becomes a synonym. Almost like a prediction with what the future of Modernism would hold, Albert Borgman in his book *Crossing the Postmodern divide* says that "various sections of Modernist appealed to the image of rationality incorporated in the machine, the power of contemporary technology, or the City as 'living machines' The acceptance of rationality was reflected in the use of technology and machine production. These modernists believed that technological progress would ensure human emancipation." (Borgmann 31)

In defining Posthumanism we have understood that it is a historical phenomenon where advances in technology or discoveries about animals are leading to fundamental changes in the human species and its relationship with the world. Francis Fukuyama in his book *Our Posthuman Future* dwells upon this similar idea about the consequences of the Biotechnology Revolution. He says that "the most significant threat posed by contemporary biotechnology is the possibility that it will alter human nature and thereby move us into a "Posthuman" stage of history." (Fukuyama 7)

Postmodern and Posthuman elements in Bruce Sterling and Greg Egan's novels.

The fictional works by Bruce Sterling and Greg Egan, two of the renowned Posthuman authors, is pregnant with narratives that fall into the Posthuman genre dominated by features like technology and augmented mechanisms which claim to take over the world and humanity in the future. In this paper we will attempt to trace the influences of Postmodernism, with references to elements like the Consciousness, Simulation and locale through Bruce Sterling's science fiction novel *Schismatrix* and Greg Egan's *Permutation City.*

Simulation

Schismatrix is a Science Fiction novel by Bruce Sterling, originally published in 1985. Sterling's writings have been very influential in the cyberpunk movement in literature where he was one of the progenitors. *Schismatrix* gives us a glimpse of what the future might hold for Earth and its inhabitants and the novel begins when Earth is dividing. There's a war on the battlefields of ideology, one must choose between humanity's numerous factions, the most important being the Shapers—those who alter their bodies through genetic modification and mental training—and the Mechanists—those who modify their bodies through computer software and external prosthetics (e.g., cyberware). In this balkanized future, countless schisms continue to divide Posthumans into branching splinter groups based on technology and philosophy. Abelard Lindsay is the protagonist in the novel who is an exiled Shaper diplomat turned outlaw sundog. Betrayed by his friend and colleague Phillip Constantine, Lindsay begins his own grand tour of known space, falling back on his kinesics and genetic training as he crosses paths with the numerous factions that spring up over hundreds of years of Posthumanity's history.

As far as the postmodernist elements present in the text depict. Baudrillard's Postmodern life as consumer lifestyle resonates to a certain degree with the Posthuman lifestyle in *Schismatrix.* The circumlunar colonies in the novel which belongs to the various factions and the plight of

how planet Earth has been portrayed gives us enough evidences of a Postmodern element present in a Posthuman novel. The solar system has been colonized. Most colonists live on space stations or asteroids, each operating as an independent government, some consisting of a handful of people. These imitations or a new version of different colonies with government replicate the one we have in planet earth with nations and the government. Essentially, this particular aspect of the plot voices Baudrillard's Postmodern theory where his focus has been largely technologically determinist, developing earlier theories of modernity as a 'society of the spectacle' into the notion of a culture of the 'Simulacrum'. Therefore, the circumlunar colonies are seen as a copy or models of what Sterling has seen on planet earth with our human species. Similarly, the same Postmodern theory runs in the other select novel, where Baudrillard's theory of Simulacra is incorporated to the mechanisms of the plot and theme. As the book Interdisciplinary perspectives on modernity talks about how the employment of an:

> increasing emphasis on the instrument of reason and disciplinary ordering of society which gradually resulted in the creation of a technocratic culture which anticipated today's "virtual Reality" characterized by the increasing "digitalization" of the world threatening the privacy of the individual. In the hyper- reality of the cyber age everything that we experience around us becomes a veritable simulation of the real that has permanently disappeared. (Pandhya and Kar 10)

This aspect of simulation is exactly what Greg Egan captures through his novel *Permutation City.* Greg Egan is an important writer in the tradition of Azimov, Verne and Wells. Like them, he explores the feasible technologies of his era and expands their scope and implications for individuals and civilization. *Permutation City* addresses immortality, cloning and the utility of life in unique ways and in depth.

Permutation City also examines both corporeal and virtual body images and boundaries, (virtual) immortality, the ontological status of digital "Copies," creationist mythologies and,

the relationship between bodies, subjects, and digital topologies, various evolutionary models, and the desire to meet the “alien Other.” Here, different permutations of the same characters exist in alternative forms, that is, digital Copies and clones of Copies “running” in various “environments.”

Consciousness

In literature works that defined Postmodernism as an important movement, exuberated with new forms of poems like that of T.S Eliot’s “The Love Song of J. Alfred Prufrock” and “The Waste Land”, plays like “Waiting for G odot” by Samuel Beckett and novels like *Mrs. Dalloway* by Virginia Woolf, which significantly portrays the fragmented setting and narrative coupled with the characters having a different mental state. The evolution in the human kind can be reflected by these characters with a huge resonance to the change in society and the surroundings that they were located in.

The term Consciousness is a recurring element in both these two concepts, like the Stream of Consciousness that permeates in Postmodernist technique of writing in contrast with the entity of Consciousness that has been applied as a corporeal experiment in the Posthuman world.

In “The Love Song of J. Alfred Prufrock” Eliot's primary aim was an exploration of consciousness. The poem presents the contents and processes of its protagonist's mind, with its private associative network revealed but not explained. We are conscious as readers that our presence is not taken into account by Prufrock. And the monologue does express varying levels of consciousness: for example, the opening line -- "Let us go then, you and I" …shows operation of the will, and is consequently an example of thought near the surface of consciousness; while the line "I have heard the mermaids singing, each to each" discloses a private symbol, and is thus making use of an archetype in the 'collective unconscious'. Interior

monologue presents consciousness directly to the reader with negligible author interference; that is, there is either a complete or near-complete disappearance of the author from the page. Subsequently, Self Consciousness in Posthumanism is encapsulated in the novel *Schimatrix,* Shapers like Lindsay have been psychologically trained to become the ultimate diplomats who are not only able to manipulate other people but also able to control their own bodies. As Sterling described it, "...for ten years the Psychotechs has poured training into him," (Sterling, 9) the use of words such as "Psychotech" and "poured" evoke imagery of intense mental conditioning along with tempering the Lindsay's self-consciousness rather than physical modification.

Locale / Setting

Another element that is traced in both Postmodernist and Posthuman works is the Setting or the Locale of a text. They might vary in terms of the evolution and transformation of the surroundings, but we do see the journey and influence of technology which has transcended from the period of Modernism to Postmodernism and on to Posthumanism. T.S Eliot's famous poem "The Waste Land" is rich in evocation detail:

> What are the roots that clutch, what branches grow
> Out of this stony rubbish? Son of man,
> You cannot say, or guess, for you know only
> A heap of broken images, where the sun beats,
> And the dead tree gives no shelter, the cricket no relief,
> And the dry stone no sound of water. (Eliot 19- 24)

Through this poem we imagine a picture of the setting which as the poet depicts is a barren land, useless and almost reflecting the existential angst present after the two world wars. As far

as the Posthuman theory goes novels such as Greg Egan's Permutation City is a perfect example of how this journey from Postmodernism to Posthumanism has evolved. Through the element of the setting in the novels we can study the transcendental power of evolution. Virtual reality which was a much talked about phenomenon among the Postmodern critical thinkers when predicting the future of our living conditions, we see a similarity in how Posthuman novels have incorporated this same perspective. In *Permutation City* the human mind can be scanned and downloaded into virtual environments. Paul Durham is the protagonist in the novel and through the "Autoverse" which is an artificial life simulator he not only makes copies of himself and many other wealthy people but his ultimate goal in the novel is to create a virtual Garden -of - Eden for the copies to reside.

Depiction of Morality, Religion and the Church: From Postmodernism to Posthumanism

In the Postmodern age, moral values have undergone a significant shift, reflecting the complexities and uncertainties of contemporary society. Traditional notions of morality rooted in religious or cultural norms have been challenged by a more pluralistic and relativistic worldview. Postmodernism's skepticism towards grand narratives and absolute truths has led to a reevaluation of moral principles, with an emphasis on individual autonomy, diversity, and tolerance. This era has witnessed a growing recognition of the diversity of human experience and an acknowledgment of the subjective nature of moral judgments. While this pluralism has fostered greater acceptance and inclusivity, it has also raised questions about the foundation of moral authority and the possibility of achieving consensus on ethical issues. In the postmodern age, moral values are often seen as fluid and context-dependent, shaped by personal beliefs, cultural influences, and historical contexts rather than universal truths. This dynamic landscape of morality presents both challenges and opportunities for navigating ethical dilemmas and fostering a more inclusive and compassionate society.

Morality in Posthumanism presents a complex terrain where traditional ethical frameworks intersect with emerging technological advancements and evolving understandings of identity and agency. As humanity grapples with the implications of biotechnological enhancements, artificial intelligence, and genetic engineering, questions regarding the ethical treatment of non-human entities and the boundaries of personhood come to the forefront. Posthumanism challenges conventional notions of morality by blurring the distinctions between human and non-human, organic and artificial, raising profound questions about the ethical implications of these transformations. Concepts such as empathy, compassion, and responsibility extend beyond the human realm to encompass sentient machines, genetically modified organisms, and AI systems. Posthuman ethics thus demand a nuanced understanding of the interconnectedness of all beings and the ethical responsibilities that accompany technological progress. This calls for ethical frameworks that are flexible, adaptive, and capable of addressing the complex moral dilemmas posed by the Posthuman condition while upholding principles of justice, autonomy, and respect for all forms of life.

The Moral values are an element depicted by the characters in novel's like *Schismatrix* by Bruce Sterling, the moral compass considered once upon a time to protect mankind is demolished when we analyse Sterling's characters like Constantine who challenges this notion, when he forces Lindsay saying, "Vera chose you, not me. I'm going to live forever, and to hell with you and your cant about humanities. Mankind's a dead issue now, cousin. There are no more souls. Only states of mind. If you think you can deny that, then here." as he hands Lindsay a dissection scalpel. "Prove yourself. Prove your words weren't empty. Prove you're better dead and human." (Sterling 61) We witness here the grim possibilities of no remorse and morality for an individual like Constantine who is willing to risk everything for power and survival unhinged by the moral compass that once governed human beings.

With the element of Religion, many of the Science Fiction novels portray a Posthuman world devoid of any Religion or God. There is a greater being for the Posthumans and that as we have encountered in the novel *Schismatrix* is not the almighty God in heaven but the Aliens regarded as the Greater being. A “Presence” is felt by Abelard Lindsay towards the end of the novel and that presence for him is the greater being. As he comes in contact with the greater being. It is described as an Alien:

> Then he sensed it. "You're here," he said. "Show yourself."
>
> The Presence flowed down from the tilted, sea-green membrane of the wall. A puddle of mirrors trickled across the floor, seeping into shape.
>
> Lindsay watched it in wonder. The Presence had its own gravity; it clung to the floor as if pulled there. It warped and rippled, taking form to please him. It became a small, fleet thing, poised on four legs, crouching like an animal. Like a weasel, he thought. Like a fox. (Sterling 242)

Religion, with its profound influence on human societies throughout history, notably finds limited representation in Posthuman novels. This absence can be attributed to several factors inherent to the Posthumanist worldview. Firstly, Posthumanism often emphasizes the primacy of science and technology as agents of change and progress, relegating religious beliefs and practices to the background. The focus on advancing human capabilities through technological means tends to overshadow traditional religious narratives and institutions. Secondly, the themes explored in Posthuman literature, such as artificial intelligence, genetic engineering, and transhumanism, often center on human agency and the reshaping of identity and consciousness. These themes may not align with traditional religious doctrines, leading to a divergence in focus between Posthuman narratives and religious ideologies.

Additionally, Posthumanism challenges anthropocentric perspectives by blurring the boundaries between human and non-human entities, which can undermine traditional religious notions of human exceptionalism and divine providence. However, it's essential to note that while explicit references to religion may be scarce in Posthuman novels, themes of spirituality, existential questioning, and moral reflection still pervade many narratives. Authors may explore philosophical and ethical dimensions of the Posthuman condition that resonate with religious or spiritual themes, albeit in a secular or speculative context.

If religion is ever projected into these Science fiction or Posthuman novels, it is narrated in a preposterous way attaching religion to a cult like faction in the Posthuman world. In novels like Greg Egan's *Quarantine,* as the world is panicking and drawing answers to the reasoning of the Bubble that has mysteriously appeared and embraced the future planet earth we have a section of the religious community who had their own opinion of the Bubble, "At the other extreme, most religious sects had no trouble plucking glib answers from their own ludicrous mythology. Fundamentalists of several faiths refused to acknowledge that The Bubble even existed; all proclaimed that the vanished stars were a sign of divine disfavour, foretold – with varying degrees of prophetic license – in their own sacred writings." (Egan 19)

The Protagonist' narration about his childhood and his affiliation to religion in connection to the world view and the status of religion depicted in the Posthuman world is imperative to be noted here:

> My parents were resolute atheists, my education was secular, my childhood friends were either irreligious, or the marginally Buddhist grandchildren of Indochinese refugees – but the English-language media, worldwide, was swamped with the views of Christian fundamentalists, so theirs was the lunacy I grew up knowing the best, and

> despising the most. *The stars had gone out!* If that didn't spell Apocalypse, what did? (In fact, *The Revelation to John* has stars "falling to the earth" – but one mustn't be *too* literal-minded.) Even those fanatics with small-M millennial fetishes could take heart; the years 2000 and 2001 might have been frustratingly devoid of cosmic portents, but, given the uncertainties of the historical record, 2034 (it was claimed) could easily be exactly the two-thousandth anniversary, not of Christ's birth, but of his death and resurrection. (November 15th as Easter? Obscure explanations were concocted for this – including something called "Passover Drift" – but I was never quite masochistic enough to try to follow them.) (Egan 19)

Religion as once regarded with such reverence and faith is seen devoid in characters like Nick Stavrianos in *Quarantine,* instead of churches and religious institutions, the posthuman world is depicted with the birth of multiple cults and corrupted churches. As Nick points out:

> It was Judgment Day rewritten by some Bible Belt Chamber of Commerce. TV still worked, and nobody needed the mark of the beast to buy and sell, let alone to give and receive tax-deductible donations. Mainstream churches issued cautious statements which said, in so many words, that the scientists were probably right, but their pews emptied, and the salvation-for-money trade boomed.
>
> Apart from post-Bubble splinter groups of established religions, thousands of brand new cults appeared – most of them organized on the sound commercial lines pioneered by twentieth-century religious entrepreneurs. But while the opportunists prospered, the real psychotics were festering. It took twenty years for The Children of the Abyss to make themselves known, but then, being born *of the Abyss* – on or after Bubble Day – was a prerequisite of membership. They started out, in 2054, by poisoning the water supply of a small town in Maine, killing more than three thousand people. Today, they're active in forty-seven countries, and they've claimed almost a hundred thousand

> lives. Marcus Duprey, their founder and chief self-fulfilling prophet, spews out an incoherent stream of half-digested cabalistic gibberish and comic-book eschatology, but there are, apparently, thousands of people brain-fucked in just the right way to find his every word resonant with truth. (Egan 19-20)

In *Quarantine*, the arrival of the Bubble fundamentally alters humanity's understanding of existence: it confirms the presence of extraterrestrial beings possessing god-like abilities. These aliens, however, remain distant and uncommunicative, leaving humanity to grapple with the abrupt disruption of its perceived destiny in the cosmos. Despite this monumental revelation, life on Earth continues unabated; the sun still shines, crops flourish, and the planet's ecosystems persist. While the stars may hold significance for some, their distant allure is rendered inconsequential in the face of immediate human needs. In the early 1950s, widespread anticipation of contact with the Bubble Makers fueled the rise of alien-centric cults and fueled numerous UFO hoaxes. However, as decades passed without any meaningful interaction or explanation from the extraterrestrial entities, hopes for understanding or reconciliation waned. The narrator reflects on the diminishing significance of speculation surrounding the aliens' intentions, having grown weary of decades of baseless conjecture.

Upon pondering on the topic of Religion, the Church in Posthuman Fiction is also a direction that we naturally look into. In Postmodern literature, the portrayal of the church often reflects broader themes of scepticism, disillusionment, and fragmentation characteristic of the era. Unlike in traditional narratives where the church may serve as a symbol of moral authority or spiritual refuge, Postmodern depictions tend to subvert or challenge these conventions. The church in Postmodern literature is often depicted as an institution struggling to maintain relevance in an increasingly secular and pluralistic society. It may be portrayed as hypocritical,

bureaucratic, or even corrupt, with characters questioning its moral authority and integrity. This scepticism towards organized religion reflects broader cultural shifts away from traditional sources of authority and towards individual autonomy and skepticism.

Furthermore, Postmodern literature frequently explores the tension between faith and reason, belief and doubt. Characters grapple with existential questions and spiritual crises, often finding themselves disillusioned with the dogma and certainties of institutional religion. The church may be portrayed as unable to provide satisfactory answers to these questions, leading characters to seek meaning and purpose elsewhere. In some Postmodern works, the church may also be depicted as a site of cultural conflict or negotiation, particularly in multicultural or postcolonial contexts. Different religious traditions and belief systems may intersect and clash within the church, reflecting the complexities of contemporary religious identity and practice.

Overall, the portrayal of the church in Postmodern literature reflects broader cultural anxieties and uncertainties surrounding religion, spirituality, and meaning in the modern world. It serves as a lens through which authors explore themes of identity, belief, and the search for meaning in an increasingly fragmented and uncertain world. In Posthuman literature, the portrayal of the church undergoes significant transformation, reflecting the evolving relationship between humanity, technology, and spirituality. Unlike traditional narratives where the church often represents established religious authority and moral guidance, Posthuman literature explores how advancements in technology and shifts in human consciousness challenge traditional religious frameworks and redefine spiritual experiences. In Posthuman literature, the church may be depicted as grappling with the implications of technological progress and the emergence of new forms of consciousness. Characters may question traditional religious beliefs in light of scientific discoveries, artificial intelligence, and transhumanist ideals. The

church may struggle to adapt to these changes, facing challenges to its authority and relevance in a world increasingly shaped by technology. We see this struggle of the dichotomies between Religion and science come to play, in Novels like Bruce Sterling's *Holy Fire*:

> In 2065, Innocent XIV had become the rst pope to undergo life extension. The exact nature of the pope's treatment was shrouded in mystery, a rare and very diplomatic exception to the usual political practice of full medical disclosure. The pope's decision, with its profound violation of the natural God-given life span and its grave challenge to the normal processes of papal succession, had caused a crisis in the Church.
>
> (Sterling 209)

Furthermore, Posthuman literature explores how technology blurs the boundaries between the physical and spiritual realms, challenging traditional notions of spirituality and religious experience. Characters may seek transcendent experiences through virtual realities, cybernetic enhancements, or digital communities, prompting revaluations of traditional religious practices and beliefs. As depicted in *Holy Fire* wherein:

> The College of Cardinals, meeting in council to discuss the implications of the pope's action, had experienced an episode of divine possession. Their frenzied spiritual exaltation, ecstatic dancing, and babbling in tongues had looked to skeptics like chemically propelled hallucination. But those who had directly experienced the descent of holy re had no doubt of its sacred origin. The Church had always survived the uncharitable speculations of skeptics.
>
> After this divine intervention, formal Church approval of certain processes of posthumanization had swiftly followed. The Church now recommended its own designated series of life-extension techniques. These approved medical procedures,

> along with modern entheogenic tincture communions and various spiritual disciplines, were formally known as the "New Emulation of Christ."
>
> The humble and metabolically tireless Holy Father, with his long white beard now grown out black for half its length, had become a central, iconic figure of European modernity. Many had once considered Innocent a mere careerist, the genial caretaker of an ancient faith in decline. After the holy re, it became clear to all that the reborn pope possessed genuinely superhuman qualities. The pope's astonishing eloquence, his sincerity and his manifest goodwill, shook even the most cynical. (Sterling 210)

Additionally, Posthuman literature may interrogate the role of religion in shaping ethical and moral frameworks in a technologically advanced society. Characters may grapple with questions of morality, consciousness, and the nature of existence in the context of emerging technologies such as artificial intelligence, genetic engineering, and virtual reality. The church may find itself navigating complex ethical dilemmas and competing worldviews as it seeks to address these new challenges, as elaborated in *Holy Fire*:

> He could also prophesy—in detail, and often rather accurately. Many people believed that the pope could read minds. This paranormal claim was attested not merely by credulous Catholics, but by diplomats and states people, scientists and lawyers. His uncanny insight into the souls of others had often been demonstrated on the world political stage. Hardened warlords and career criminals, brought into private audience with the pontiff, had emerged as shattered men, confessing their sins to the world in an agony of regret.
>
> Pope Innocent had succoured the poor, sheltered the homeless, shamed recalcitrant governments into new and more humane social policies. He had founded mighty hospitals and teaching orders, libraries, net sites, museums, and universities. He had

> dotted Europe with shelters and amenities for the mendicant and pilgrim. He had rebuilt the Vatican, and had turned ancient cathedrals and churches worldwide into ecstatic centres of Christian spirituality, vibrant with the awesome celestial virtuosities of the modern Mass. He was certainly the greatest pope of the twenty-first century, probably the greatest pope of the last ten centuries, perhaps the greatest pope of all time. His sainthood was a certainty, if he could ever nd the time and opportunity to die.

Overall, the portrayal of the church in Posthuman literature reflects broader themes of technological advancement, existential inquiry, and the redefinition of spirituality in a rapidly changing world. It serves as a lens through which authors explore the intersections of technology, consciousness, and religion, inviting readers to reconsider traditional notions of faith, identity, and meaning in the Posthuman age.

Comparison on the Fictional works of Greg Egan and Bruce Sterling

This section of the chapter will concentrate on some of the distinctive features that have characterized the previously examined texts from the earlier chapters, as illuminated by the selected fictional works of the two authors. The concept of “Smearing” being the first one, in Greg Egan's novel *Quarantine,* it refers to a speculative technological phenomenon that has reshaped the nature of reality within the narrative. In the novel, Smearing is a process that alters the behavior of particles at the quantum level, effectively blurring the distinction between classical physics and quantum mechanics. This smearing effect has profound implications for the characters and the world they inhabit, leading to a redefinition of causality, identity, and perception. As a central element of the novel's speculative framework, smearing serves as a lens through which Egan explores themes related to consciousness, reality, and the nature of existence in a technologically advanced society.

We see characters like the Protagonist Nick Stavrianos, Po kwai, Laura Andrews and many citizens smearing themselves in the novel. The fear of a whole population on earth smearing is the biggest fear factor in the novel, with its implications of death and chaos. As Nick, the protagonist in the epilogue of the novel points out:

> Maybe smeared humanity reached the edge of The Bubble – and didn't recoil, after all. Maybe the planet is still smeared. One consciousness per eigenstate, branching out endlessly; the many-worlds model come true. Blood still rains between the skyscrapers of New Hong Kong. Children still conjure up dancing flowers. Every dream, every vision, has been brought to life: Heaven and Hell on Earth. (Egan 251)

Similarly, we can include the same concept of smearing and its importance to Science fiction characteristics, through Bruce Sterling's novel *Schismatrix,* here in this novel Abelard Lindsay is seen as smeared in the end when he follows the "Presence" that guides him to the world of wonderful:

> He saw his clothes floating within the hallway. His arms drifted out of the sleeves, prosthetics trailing leashes of expensive circuitry. Atop its clean white ladder of vertebrae, his empty skull sank grinning into the collar of his coat.
>
> An Investor appeared at the end of the hall, bounding along in free-fall. Re-flexively, Lindsay smeared himself out of sight against the wall. The Investor's frill lifted; it pawed with magpie attraction through the tangle of bones, stuffing items of interest into a swollen bag. (Sterling 244)

Another crucial element that facilitates a nation and its people is the importance of currency and monetary value run in the nations. In the posthuman world, currency and money as depicted through Science Fiction novels undergo significant transformations due to advancements in

technology, changes in economic systems, and shifts in societal values. Some potential developments are, Digital Currency: With the rise of advanced digital technologies, traditional forms of currency may become obsolete, replaced by digital currencies like cryptocurrencies. Biometric Payments: Posthuman societies may adopt biometric payment systems that utilize unique biological identifiers such as fingerprints, retina scans, or DNA to authorize transactions. Reputation-Based Economies: In a posthuman world where individuals may have augmented abilities or enhanced attributes, reputation-based economies could emerge. Resource-Based Economy: Posthuman societies may shift towards resource-based economies where goods and services are exchanged based on the availability and sustainability of natural resources. Blockchain Technology: The widespread adoption of blockchain technology could revolutionize financial systems in the posthuman era. Universal Basic Income (UBI): As automation and artificial intelligence increasingly replace human labor, posthuman societies may implement UBI programs to ensure basic financial security for all citizens. Tokenized Assets: Posthuman economies may see the tokenization of physical and digital assets, allowing for fractional ownership and transferability of assets such as real estate, intellectual property, or digital collectibles. Overall, currency and money in the posthuman world are likely to reflect the evolving needs, values, and technological capabilities of advanced societies, paving the way for innovative financial systems and economic models.

In Greg Egan and Bruce Sterling's novels currency is portrayed in ways unimaginable to the present world. Posthuman elements are highlighted by the two authors in their novels in regards to currency and the economy in different creative ways. For example, in Holy Fire the concept of Cash cards and certified funds, or grown up money is discussed in a conversation with Mia Ziemann and Brett. Brett asked if she could receive some grown up money for it, clarifying that she meant real money from a long-term investment account. She explains that certified

funds were what she was referring to, mentioning that they were usually reserved for special transactions like life extension or stock ownership. However, she argues that certified money represented genuine currency for the real economy, something inaccessible to kids like Griff and herself. Brett's young-girl eyes, with their warm amber hue and remarkably clear sclera, narrowed thoughtfully as she expresses that even a small amount of certified grown-up money would make her very happy. Here Mia replies saying that:

> I'd like to give you some, Mia said, but I don't have any way to do that. Of course I do have certified funds in my own name, but they're all tied up in long-term capital investments, like they're supposed to be. Nobody uses that kind of financial instrument for little everyday transactions like clothes or food. What's wrong with a nice cashcard?
>
> You can't start a real business without certified funds, Brett said. There's all kinds of awful tax problems and insurance problems and liability problems. It's all just part of the big conspiracy to hold young people back. (Sterling 45)

By creating this scenario, Egan Postulates a world where economic inequality can persist even in one's virtual afterlife.

In the world of *Schismatrix,* it is a different scenario altogether with the language of currency and its monetary values. The "Mechanist and Shapers use Kilowatts as currency", while "credit card registered in hours" (Sterling 21) meant the hours they could spend in the Geisha bank for sexual pleasures. In the novel currency and money play significant roles in shaping the socio-economic landscape of the posthuman world. The novel explores a future where humanity has evolved beyond its traditional forms, resulting in a fragmented society where various factions vie for power and influence.

Currency in "Schismatrix" serves as a symbol of status, power, and control. Different factions within the posthuman society utilize currency as a means of asserting dominance and achieving

their goals. Wealth and resources are often concentrated in the hands of powerful individuals and organizations, leading to disparities in economic power. Moreover, the concept of money extends beyond traditional forms of currency to include various forms of capital, such as technological expertise, political influence, and social connections. In the posthuman world depicted in *Schismatrix,* individuals and groups leverage their unique skills and resources to gain advantage in the competitive landscape.

The novel also explores the impact of currency and money on social relationships and interactions. Economic considerations often drive characters' decisions and actions, influencing alliances, betrayals, and conflicts. As characters navigate the complex web of power dynamics, money serves as both a means of exchange and a tool for manipulation. In conclusion, currency and money in "Schismatrix" reflect the broader themes of power, control, and identity in a posthuman society. They highlight the complexities of economic systems in a world where traditional notions of value and wealth have been redefined by technological advancement and social evolution.

Another Posthuman motif that Bruce Sterling uses for his drama is the futuristic habit of putting clothes and shoes inside the microwave for sanitization, in a future where it has become impossible to live without sanitation and has viruses and bacteria have impacted the living conditions of every human. In science fiction narratives, the concept of microwaving for sanitation purposes often takes on futuristic or exaggerated forms, reflecting both the potential benefits and risks associated with this technology. There are a few ways in which microwaving for sanitation is depicted in science fiction, for instance:

Advanced Sanitization Devices: Science fiction stories often feature advanced household appliances or devices capable of rapidly sanitizing items using microwaves. These devices may

be portrayed as highly efficient and convenient, offering a quick and effective way to disinfect objects in a futuristic setting.

Sanitization Pods or Chambers: Some science fiction narratives depict large-scale sanitization systems, such as pods or chambers, where entire rooms or buildings can be disinfected using microwave technology. These futuristic facilities may play a role in maintaining hygiene and preventing the spread of disease in a dystopian or post-apocalyptic world.

Biological Decontamination: In settings where characters encounter alien or unknown biological threats, microwaving may be portrayed as a method of decontamination to remove harmful pathogens or alien organisms. This use of microwaves for biological disinfection underscores their versatility and potential in combating infectious diseases in extreme circumstances.

Weaponized Microwaves: In more speculative or military-themed science fiction, microwaves may be depicted as weapons capable of sanitizing or neutralizing enemy targets by heating them from a distance. While this concept is more fantastical, it reflects the potential dual-use nature of microwave technology and its implications for warfare and security.

Overall, the depiction of microwaving for sanitation purposes in science fiction narratives serves to explore themes of technology, hygiene, and societal norms, while also reflecting on the broader implications of using microwaves for disinfection in different contexts. Measures such as microwaving someone's belongings after he or she has been in contact outside their homes, are depicted as daily normal chores by Sterling in both the novels *Schismatrix* and *Holy Fire*. In the novel *Holy Fire*, one instance where microwaving is depicted is when Mia Ziemann allows the young stranger Brett to rest in her house. Brett willing agrees to stay over at Mia's and "While Brett was bathing, Mia picked up Brett's shed clothes, micro waved them thoroughly for hygienic purposes, then washed and dried them." (Sterling 52) There is this

extra care that is needed, this responsibility that one has to incorporate into their daily lives in the Posthuman world if they wanted to extent their lives and live a healthy longevity. Everything comes with a price and hence for Mia in the story she stands as a conflicted character, who has opportunity of this lure for longevity presented at her feet for being a Gerontocrat and this desire only magnifies and the novel portrays a radical Mia who not only extends her life but transforms it to enjoy the youthfulness of a young women, to further live a longer life and almost reach immortality with the treatment done to her body.

In Sterling's *Schismatrix* he uses the same motif and depicts in the initial stages of the novel this particular use of the Microwave for sanitization purposes, with the scenario in *Schismatrix* Sterling pours emphasis on this step of sanitization because with places like Sundog Zones Zaibatsu, where rebels, traitors, and all kinds of people in exile visited the colony, the environment could be hazardous, considering the fact that Sterling portrays this novel as far out into the future, we can only imagine the sensitivity and cautiousness of each and every existence in the Posthuman world. As the protagonist Lindsay encounters Ryumin in Zaibatsu, Ryumin welcomes him into his makeshift shed cum home, and as Lindsay removes his shoes; "Ryumin rose slowly to his feet. He bent to pick up Lindsay's shoes, and his spine popped loudly. I'll put these in the microwave, he said. When you live here, you must never trust the mud." (Sterling 19)

Conclusion

The chapter, with its comparisons to the postmodern era and back to highlighting similarities from the selected fictions, serves as an ongoing proof of the world we are witnessing today, the phenomenon that is occurring in today's world. As this thesis aims to locate the nature of Posthumanism and its relevance to currency in todays world, words such as 'Quarantine' ring

a bell when we recall the covid-19 pandemic that struck the planet earth. Quarantine had become a household name, the whole population being in a lockdown and quarantining themselves brought to light the narratives that have been mentioned in these science fiction novels. The act of Microwaving things from clothes to utensils, in order to sanitize is also a phenomenon that is analysed closely because the future world as depicted in the novels have now started to take place especially in the Covid-19 scenario.

It is important in today's world to constantly remind ourselves that the political, economic and social system that has accompanied us since the end of the Second World War is no longer sustainable. We have to dwell more on the realms of theories like Posthumanism in order to foresee our future and follow the lines of this journey from the days of enlightenment till this present day and the future. As we are constantly augmenting and expanding our knowledge for a lure for longevity on one hand and debating about what our future might hold for us on the other. Reflections on these changes through these Posthuman novels are crucial.

As Rossi Braidotti rightfully points out in her book *The Posthuman* she says that "The Posthuman condition urges us to think critically and creatively about who and what we are actually in the process of becoming." (Braidotti 12) Therefore, it truly is a concept or theory which establishes the profound question on our existence and the future of our humanity and what we are becoming.

The evolution of these movements throughout history underscores their profound impact on humanity. From the gradual transition from the Modern to the Postmodern world, we are now witnessing the emergence of the Posthumanist stage. Through the research presented in this chapter, we can discern numerous similarities between Posthumanism and Postmodernism. This journey reflects a rapid growth across all aspects of life, leading to myriad advancements in humanity. However, without careful monitoring in the coming decades, this trajectory could potentially propel the human race towards a dystopian future.

CHAPTER SIX

Conclusion

This study has been guided by a thematic focus, drawing insights from an extensive review of relevant literature, including books, journals, and related publications, to achieve a comprehensive synthesis. Through the meticulous examination of diverse perspectives and the employment of both subjective and objective analyses of literary dynamics, a wide range of interpretations and potential implications have emerged from the ensuing discussions. This chapter represents the culmination of the research endeavor, as it delves into the examination of Posthuman fictions by Bruce Sterling and Greg Egan through the theoretical lens of Posthumanism. This analysis encapsulates the culmination of the research journey, offering a nuanced exploration of the themes and ideas explored throughout the study.

Chapter One Provided an introduction to the research topic and lays down the research problem of the Thesis. The chapter focused on providing an orientation towards the study of Posthumanism and its meaning. By establishing the idea that the discourse of Posthumanism can be traced in literary form through a certain genre of Fiction or rather the discourse of Posthumanism lies embedded in the characteristics of Science Fiction. The Chapter henceforth has researched on the different tenets of Science Fiction and the myriad themes that it encompasses.

The introduction chapter of this thesis serves as a foundational exploration of the research topic, laying out the central research problem that will be addressed throughout the study. The primary focus of this chapter has been to provide an orientation to the study of Posthumanism and elucidate its significance within the context of contemporary discourse. It posits the notion that Posthumanism, a complex theoretical framework encompassing diverse philosophical and

cultural perspectives, can be discerned in literary form, particularly within the genre of Science Fiction.

Furthermore, the chapter delves into an examination of the various facets of Science Fiction, highlighting its role as a vehicle for exploring speculative futures and grappling with the implications of technological advancements on society. Within this framework, the writings of two selected authors, Bruce Sterling and Greg Egan, are discussed in depth. These authors are noted for their adept exploration of themes such as the advancement of technology, artificial intelligence, and scientific modifications, all of which are integral to the conceptualization of a Posthuman world.

By analyzing the works of Sterling and Egan, this chapter has elucidated how Science Fiction serves as a platform for envisioning and interrogating the complexities of Posthumanism. Through an examination of their narratives and thematic motifs, insights are gleaned into the ways in which these authors engage with and contribute to the discourse surrounding Posthumanism. Ultimately, this chapter sets the stage for the subsequent chapters of the thesis, which will delve deeper into the exploration of Posthumanism through the lens of Science Fiction literature. The research findings presented in this chapter underscore the profound inquiry into the existence of what contemporary society defines as the Posthuman world. Through the examination of the works of both authors, Bruce Sterling and Greg Egan, it becomes evident that they have emerged as influential voices within the literary sphere for engaging with the discourse of Posthumanism. Their narratives, rooted in the realm of pure science fiction, serve as compelling explorations of the possibilities and implications of a Posthuman future.

Of particular significance is the authors' expertise in fields such as quantum physics and artificial intelligence, which serves as the bedrock for their narrative constructions. Their adept handling of these complex scientific concepts amplifies the depth of their exploration of Posthumanism, offering readers a nuanced understanding of the intersections between technology, humanity, and consciousness.

One notable aspect of their contributions to science fiction is the vivid portrayal of characters that qualify as cyborgs and Posthumans. These characters, often imbued with enhanced abilities and augmented capabilities, serve as conduits for probing philosophical inquiries and existential questions surrounding immortality and the nature of identity. Through their narratives, Sterling and Egan provide a fertile ground for contemplating the ethical, social, and existential implications of technological advancements and the blurring boundaries between human and machine. As the thesis progresses, these themes will be further examined and unpacked, offering deeper insights into the philosophical underpinnings of Posthumanism and its resonance within contemporary society. By delving into the philosophical implications of immortality and the nature of identity within the context of Posthuman narratives, the subsequent chapters will enrich our understanding of the multifaceted discourse surrounding Posthumanism in literature.

Chapter Two Provided a thorough exploration of Posthumanism, endeavoring to unravel its intricate layers and historical roots. Through an extensive review of critical essays, scholarly works, and seminal texts, we have sought to delineate the essence of Posthumanism and elucidate its significance within contemporary discourse. By tracing the evolution of Posthumanist thought and examining its various conceptual frameworks, we have endeavored to shed light on the diverse perspectives and interpretations that underpin this multifaceted

discourse. Moreover, our inquiry has not been confined solely to theoretical abstractions; rather, we have endeavored to ground our exploration in concrete examples and real-world manifestations of Posthumanist principles. From analyses of literature and cultural artifacts to insights gleaned from scientific advancements and technological innovations, we have sought to capture the breadth and depth of Posthumanism's impact on contemporary society.

Furthermore, our investigation has underscored the growing recognition of Posthumanism as a pivotal intellectual framework that transcends traditional disciplinary boundaries. Indeed, scholars from diverse fields, spanning the humanities, social sciences, and natural sciences, have increasingly turned their attention to the study of Posthumanism, recognizing its potential to catalyze interdisciplinary dialogue and foster novel insights into the human condition.
Looking ahead, the insights gleaned from this chapter provide a solid foundation for further exploration into the myriad dimensions of Posthumanism. As we delve deeper into the complexities of this discourse in subsequent chapters, we will continue to interrogate its implications for our understanding of identity, agency, ethics, and the future trajectory of humanity. Through our sustained engagement with Posthumanist thought, we aim to contribute to the ongoing dialogue surrounding this transformative intellectual paradigm and its profound ramifications for contemporary society.

The chapter delves into the works of prominent theorists who have made significant contributions to the field of Posthumanism. Among these scholars are Donna Haraway, Stefan Herbrechter, Bruce Clarke, Cary Wolfe, and Katherine Hayles, whose theories serve as foundational pillars for understanding the complexities of Posthuman thought. In particular, Donna Haraway's seminal essay, *The Cyborg Manifesto,* occupies a central position in this research analysis, as it offers groundbreaking insights into the concept of the Cyborg as a

quintessential figure of Posthumanism. Through a meticulous examination of Haraway's ideas, the chapter has unpacked the multifaceted implications of the Cyborg as a hybrid entity that blurs the boundaries between human and machine, nature and technology. By engaging with the theoretical frameworks put forth by these scholars, this chapter has deepened the understanding of Posthumanism and its implications for contemporary culture and society.

In conclusion this chapter on the study of Posthumanism theories marks a significant departure from traditional anthropocentric perspectives that have long dominated intellectual discourse. The study has proved how Scholars have increasingly turned their attention to the Posthuman and Cyborgs, and are regarded thus far, as subjects that have garnered significant attention in recent years. This chapter also highlights the rigorous theoretical analysis, that researchers have uncovered, which represents a shifting landscape where the boundaries between humans, animals, and machines are becoming increasingly fluid and ambiguous.

The chapter analyzes the distinctions that challenges conventional notions of identity and prompts a reevaluation of the relationship between humanity and technology. As discussions around Posthumanism continue to evolve, it becomes clear that these concepts have profound implications for our understanding of existence and the future trajectory of human society.

Chapter Three Provided an in-depth exploration of the complex interplay between humanity and the notion of being human, which is undertaken, especially within the framework of Posthumanism. By delving into the theory of humanism, the chapter sheds light on its psychological and philosophical dimensions and juxtaposes them with the principles of Posthumanism, which challenge or reject conventional humanistic ideals in a Posthuman context. Through an analysis of Bruce Sterling's novel *Schismatrix,* the narrative unfolds, revealing a rich tapestry of science fiction where characters undergo profound transformations,

whether through medical interventions or technological enhancements, leading to a divergence from traditional human behaviors and cognitive patterns. Moreover, the chapter delves into the theme of immortality as portrayed in Sterling's work *Holy Fire.* This futuristic narrative portrays a society where life-extending treatments have become ubiquitous, resulting in a stratified social order governed by an elite class of Gerontocrats who wield power and influence. Within this societal framework, questions abound regarding the ethical implications of longevity, the distribution of wealth and resources, and the tensions that arise between different generations. By immersing into these narratives, the chapter navigates through complex moral and existential dilemmas, offering insights into the evolving nature of humanity and the profound impacts of technological advancements on society.

In the novel, published in 1996, the narrative unfolds in a near-future setting, delving into themes of biotechnology, transhumanism, and the intricate interplay between technology and human consciousness. At its core, one of the central themes explored is the concept of "self-actualization" facilitated by technological advancements. The protagonist, Mia Ziemann, a medical economist, grapples with the dissatisfaction stemming from her aging body and embarks on a quest to transcend its limitations through the utilization of biotechnology. Through cutting-edge medical procedures, Mia undergoes a transformation, extending her lifespan and augmenting her physical capabilities, ultimately evolving into a "neo-human" entity liberated from the constraints of her biological form. As Mia navigates her newfound existence, the novel delves into the notion of the "Posthuman" and the profound implications of advanced technology on human consciousness. Mia's metamorphosis prompts profound introspection regarding her identity and place in the world, blurring the boundaries between humanity and machinery. The narrative serves as a poignant exploration of the increasingly blurred lines between human and machine, prompting readers to ponder ethical and

philosophical inquiries about the essence of humanity in an age of rapid technological evolution.

The chapter has focused on providing a brief biography about the author Bruce sterling. It provides a brief intel into the works and achievements of the Author, in introductory section of the chapter, it is being established that Bruce Sterling is a prominent figure in American literature, particularly known for his contributions to cyberpunk science fiction. His career began in the 1970s with "Involution Ocean," a novel reminiscent of Herman Melville's "Moby-Dick." Sterling's works often explore themes like computer-based technologies and genetic engineering, notably in his "Schismatrix" series set in the Shaper/Mechanist universe. His extensive literary portfolio includes numerous awards, such as the John W. Campbell Award and Hugo Awards, alongside critical acclaim for his novels and short story collections.

3.1. The Collapse of Humanity in the Novel *Schismatrix*

The chapter begins by forming a picture of the Locations and setting in by Bruce Sterling's *Schismatrix*, which is the first selected novel for the thesis. The novel offers a fascinating exploration of a future where humanity has expanded beyond Earth into various colonies and habitats, reflecting a departure from the familiar present-day norms. The novel's setting introduces readers to a diverse array of environments, from circumlunar colonies to states formed outside of Earth, presenting a vision of a future where the boundaries of human existence have expanded far beyond the confines of the home planet. Sterling's portrayal of this distant future challenges conventional notions of human identity and society, inviting readers to contemplate the evolution of humanity over centuries. Through the lens of posthumanism, the novel explores the idea that humanity is no longer solely defined by its anthropocentric

perspective. Instead, it suggests a future where humans coexist with, and are perhaps even surpassed by, entities that have transcended traditional human limitations.

By setting the story in a distant future and presenting a world vastly different from our own, *Schismatrix* encourages readers to question the nature of humanity and its place in the universe. It invites us to consider how advancements in technology, society, and culture might reshape the very essence of what it means to be human. Through this exploration, the novel prompts us to reflect on our present condition and contemplate the potential trajectories of human evolution. The importance of locations and new colonies is integral to the Novel, Sterling employs a vision into hundred years of future with locations unimaginable to the human mind. According to Sterling, Earth is already an exhausted planet, and all earthlings have been shifted to other planets and asteroids or artificial satellites for their habitat.

Sundog zones are such places where citizens who were considered as traitors were banished or exiled into these zones. In the novel these zones were initially considered as lunar alliances because their civilization depended on the lunar craters and mares that provided raw materials for their survival, and there were as many as ten such circumlunar colonies, Zaibatsu being one. But because of technical decline in these colonies and deeper space explorations that emerged, the republics left the neighboring lunar colonies into other planets and solar spaces leaving the lunar colonies as barren and exile zones only for the unwanted citizens or Sundogs. Sundogs were considered as people who were traitors, defectors, outlaws and exiles. Zaibatsu is where Lindsay Abelard is shipped to on his exile, where he would be called a Sundog, and therefore the plot on the fight for survival in the novel commences for Lindsay from this very place.

The question of Survival, just like on planet earth is also seen as a crucial desire for a Posthuman far out into the future. Death and Survival are themes that surpasses any other distinctive composition inhabiting the world of *Schismatrix.* In the present world we consider our civils rights the most important trope to our existence, it is what makes us feel like citizens living on this planet earth. It is what gives us security and protection. Sterling in the novel showcases a future wherein, he denounces all human traits like justice, ethical values, religion and morality.

The question of Humanity is revisited on every turning point of the novel, because if life on earth have been exhausted as projected by Sterling in the novel, and the human race; now heavily altered by genetic modification, mechanist technologies and mind training were considered a Posthumans in the Schismatrix world were left without any humanistic traits, these Posthumans would no longer see a grain of humanity. Therefore the collapse of humanity in this chapter 3.1 has been interrogated and studied closely through the actions of the characters and the activities of the republic and the myriad circumlunar, circumsolar colonies and their governments.

3.2. Lure for Longevity in the Novel *Holy Fire*

The chapter also focuses on a close reading of Bruce Sterling's *Holy Fire*, the novel is a rich exploration of several compelling themes that resonate deeply with the trajectory of technological progress and its implications for humanity. At its core, the novel delves into the concept of self-actualization through the lens of technological enhancement. Mia Ziemann, the protagonist, embodies the human desire to transcend the limitations of the flesh, particularly the inevitability of aging. As a medical economist dissatisfied with her aging body, Mia embarks on a journey to redefine herself through cutting-edge biotechnological interventions.

Through Mia's transformation into a "neo-human," Sterling presents a vision of a future where individuals can reshape their physical form and extend their capabilities beyond the constraints of biology. Mia's journey raises profound questions about identity, agency, and the nature of humanity itself. As she sheds her biological limitations, Mia grapples with existential questions about her sense of self and her place in a world where the boundaries between human and machine become increasingly blurred.

The chapter also delves into the concept of the Posthuman, exploring the implications of advanced technology on human consciousness and societal structures. As characters like Mia undergo radical transformations, the novel interrogates what it means to be human in a world where the distinction between organic and artificial beings becomes increasingly ambiguous. Sterling paints a nuanced portrait of a society grappling with the ethical and philosophical implications of technological progress, raising questions about the nature of identity, agency, and the very essence of what it means to be human.

Throughout the narrative, Sterling's descriptive prose brings to life a vivid and immersive vision of the future, populated by complex and relatable characters. His exploration of themes such as self-actualization, the posthuman condition, and technological determinism is thought-provoking and multi-faceted, inviting readers to contemplate the profound implications of humanity's ongoing dance with technology. *Holy Fire* stands as a compelling work of posthuman fiction, challenging readers to confront the possibilities and pitfalls of a future shaped by the convergence of human ambition and technological ingenuity. In the opening chapter of the novel, Sterling places significant emphasis on the themes that will drive the narrative forward, while also introducing key plot elements that will shape the protagonist's journey. Alongside highlighting central themes, such as the quest for self-actualization through

technology, Sterling introduces a pivotal gift left by Martin for Mia: the Memory Palace. This virtual fortress, represented as a castle in virtual sand, becomes Mia's refuge and lifeline during her convalescence, serving as the focal point of her escapes and survival in the tumultuous events that follow.

In delving into the fictional works examined in this chapter, we are confronted with a sobering glimpse of a future marred by the collapse of humanity, potentially spiraling into a dystopian reality. The relentless pursuit of technology, showcased vividly within these narratives, underscores the perilous trajectory humanity finds itself on. While technology has long been heralded as a boon to human progress, this chapter serves as a stark reminder that in the wrong hands, it can swiftly transform into a catalyst for the downfall of society. The narratives presented compel us to confront the unsettling notion that the very advancements intended to enhance human existence may ultimately sow the seeds of its demise, leading to profound shifts in societal structures and human behavior.

Central to the allure of the Posthuman world is the tantalizing prospect of longevity. With remarkable strides in medical sciences, biotechnology, and prosthetic technologies, the promise of an extended lifespan looms tantalizingly on the horizon. Through the lens of Bruce Sterling's writings, the ramifications of this pursuit are laid bare, illuminating the potential pitfalls and perilous compromises that accompany the quest for immortality. While the prospect of prolonged existence may initially appear enticing, Sterling's narratives serve as cautionary tales, warning of the deadly consequences that may unfold when humanity tampers with the delicate balance of time and mortality. As readers are drawn into these speculative worlds, they are compelled to grapple with profound ethical and existential questions, pondering the true cost of an extended lifespan in a world reshaped by Posthuman ambitions.

Chapter Four Provided an exploration of Greg Egan's knowledge on quantum mechanics and delves into the Posthuman world envisioned by Greg Egan, exploring the potential cataclysms that could befall humanity in the face of extraterrestrial threats. Drawing upon his expertise in Quantum Mechanics, Egan crafts a vivid portrayal of a future where highly advanced software and technologies enable individuals to manipulate their emotions, consciousness, and even their very essence through Mods and sophisticated computer systems. Within these narratives, the boundaries between reality and virtuality blur, offering a glimpse into a world where the human experience is profoundly transformed by technological innovation.

Central to Egan's exploration is the exhaustion of our planet, a theme that looms large throughout his works. As Earth teeters on the brink of collapse, Egan presents a compelling vision of escape through the exploration of outer space and the solar system. Through his novels Quarantine and Permutation City, Egan constructs alternate universes and virtual realities where humanity can seek refuge from the ravages of a deteriorating planet. These speculative realms serve as both a testament to human ingenuity and a stark reminder of the fragility of our existence in the face of cosmic forces beyond our control. As readers are drawn into Egan's intricate worlds, they are invited to contemplate the profound implications of humanity's quest for transcendence and the inherent risks that accompany the pursuit of Posthuman ideals.

4.1. The Posthuman Future explored in *Quarantine*

In this chapter the novel Quarantine by Greg Egan is closely studied to form an enquiry into the Posthuman world. The setting of this posthuman fiction revolves around the phenomenon known as the Bubble, a catastrophic event that engenders panic and uncertainty about the future. Citizens grapple with questions that yield unpredictable answers, adding to the sense of

unpredictability and uncertainty inherent in such futuristic scenarios. The sudden appearance of the Bubble, which engulfs the solar system, catches scientists and citizens off guard, highlighting the theme of unpredictability central to the narrative of *Quarantine.*

Egan's projection extends a mere forty years into the future, or seventy from the time of his writing, imbuing the depicted advancements with a sense of plausibility. His proximity to the forefront of scientific exploration suggests a skill for forecasting future developments. In his crafted society, individuals have the capability to easily download modifications, depicting a world where even police officers enhance themselves to sustain composure in challenging situations.

Egan intricately crafts the plot of the novel by introducing the character of Nick Stavrianos, who is tasked with locating kidnapped Laura Andrews. As Nick embarks on his journey to find Laura, who has escaped from a mental asylum, he gradually uncovers the secrets surrounding the origins of the bubble phenomenon. Alongside this quest, he also stumbles upon the key to achieving immortal life through a specially designed and discovered modification. The protagonist, Nick, is depicted as a heavily altered posthuman, with multiple Priming mods integrated into his skull to enhance the functionality of his brain and facilitate his daily activities. Through Nick's perspective, the reader is immersed in a world where technological modifications are commonplace, blurring the lines between human and machine, and raising questions about identity, agency, and the pursuit of immortality. As Nick delves deeper into the mysteries surrounding Laura's disappearance and the bubble phenomenon, he grapples with his own humanity and the ethical implications of technological advancement.

This chapter delves into the pervasive use of Pods in the posthuman future, offering individuals the ability to easily prime themselves for altering emotions, gestures, suppressing hunger, and controlling various aspects of the body's chemistry and metabolism. These Pods enable

individuals to modify their traits, making life easier and allowing them to shed unwanted pre-existing human characteristics. Through the lens of Nick, a heavily altered posthuman, readers witness the immense value of Pods and advanced technological alterations, including nano computers, which have become accessible to humans.

However, alongside the advantages afforded by these technological advancements, the chapter also hints at the potential dangers and ethical concerns they pose. While enhancing human capabilities and offering unprecedented opportunities, the misuse of such technologies could have nefarious consequences. The ease with which individuals can alter their own biology raises questions about the integrity of the human mind and the potential for exploitation by those with malicious intent. In this posthuman future, the line between enhancement and manipulation becomes increasingly blurred, highlighting the complex interplay between technological progress and ethical responsibility. The conversation between Po Kwai and Nick serves as a platform for exploring significant aspects of the posthuman condition prevalent in this future setting. One of the prominent features highlighted is the artificial nature of human life, a theme that has been examined in previous chapters. Egan portrays a vision of the future where the artificial state of mind is considered just as valid and logical as that of a normal human being, as evidenced by Nick's actions and reactions throughout the plot.

Egan advocates for this future by showcasing Nick's heavily Primed posthuman state, which enables him to operate without the typical flaws and limitations that might hinder him during his missions or daily life. Nick's flawless performance is attributed to his artificial state of mind, demonstrating the potential of advanced technological enhancements to transcend the boundaries of traditional human capabilities. Through Nick's character, Egan invites readers to contemplate the implications of a posthuman future where individuals can manipulate their

own biology to achieve optimal performance and efficiency. However, this portrayal also raises questions about the consequences of such advancements, including the blurring of lines between natural and artificial, and the ethical implications of altering the fundamental aspects of human nature.

4.2. The Philosophical Aspect of an Artificial Life in *Permutation City*

In *Permutation City*, Egan masterfully intertwines various digital topologies and cosmologies, constructing a narrative brimming with intricacy by juxtaposing contrasting paraspaces and ontological levels. Through this rich tapestry, he engages with the competing paradigms of digital "life" within cybernetics—the symbolic Al hypothesis and the enactive model of A-Life—initiating a profound dialogue with scientific, philosophical, and metaphysical discourses concerning "life," identity, ontology, and the post-human condition. Despite delving into complex theoretical realms, Egan skillfully maintains a captivating fictional narrative.

By framing quests for immortality within the concept of "subjective cosmology," Egan highlights the interconnectedness between our perceptions of the universe and the structures of our own bodies and minds. This approach underscores the notion that our understanding of reality is intimately tied to our subjective experiences and perspectives. Through the recontextualization and deconstruction of spatio-temporal parameters, coupled with the subjective fragmentation of digital topologies and the entities within them, Egan challenges conventional notions of identity and prompts readers to reflect deeply on what it truly means to be "human" and "alive." In essence, Egan's narrative invites readers on a journey through a labyrinth of philosophical inquiry and speculative exploration, ultimately urging them to reconsider fundamental aspects of existence in the context of an increasingly digitized and interconnected world.

Egan employs a unique literary technique in *Permutation City* by incorporating literal permutations into the narrative structure. Fragments of the original story are scattered throughout the expanded novel, resembling dust-like particles, while anagram rearrangements of the novel's title serve as chapter headings. Additionally, the novel features an epigraph composed of anagrams of 'Permutation City,' demonstrating the subjective rearrangement of elements into alternative universes and meanings. This self-reflexive approach to storytelling underscores the novel's exploration of permutation theories and the notion of cosmic anagrams.

At its core, *Permutation City* delves into cosmological theories rooted in the anthropic principle, which suggests that the universe's origin is influenced by the existence of individual humans, positioning humanity at the center of their particular realities. However, the novel's conclusion challenges this anthropocentric perspective by introducing the idea of an A-Life alien 'Other' whose subjectivity shapes alternative paradigms. While the cosmological principle remains subjective, it shifts away from anthropocentrism, decentring the posthuman experience.

In Conclusion, by exploring the trajectory of AI's advancement and its pervasive influence across various facets of life, a compelling narrative of the emergence of a Posthuman world governed by artificial intelligence and supercomputers unfolds. This chapter illuminates the potential ramifications of such a reality, wherein humanity finds itself beholden to the very creations it once heralded as tools for its advancement. As AI continues to permeate every aspect of existence, from industry to entertainment, the specter of a future in which humans coexist with, or perhaps even serve, their machine counterparts looms ever larger.

Through the lens of this research, we are confronted with the tantalizing prospect of a future where individuals inhabit an artificial existence within an Autoverse, a virtual realm shaped by

advanced technology. In this envisioned future, the boundaries between reality and simulation blur, leading to a distorted perception of the world and its natural habitat. Gone are the days when nature and the environment served as the cornerstone of human existence, replaced instead by a manufactured reality crafted by algorithms and data streams.

This profound shift raises existential and philosophical questions about the essence of humanity and the nature of reality itself. As humans navigate this brave new world, they are forced to grapple with the erosion of traditional beliefs and the redefinition of what it means to be human in an increasingly artificial landscape. In confronting these profound challenges, individuals are compelled to reevaluate their place in the universe and their relationship to the technologies that shape their lives.

Chapter Five serves as a critical exploration of the intersection between Postmodernism and the works of Posthuman writers, Bruce Sterling and Greg Egan. With Posthumanism emerging as a prominent theory reflective of our contemporary reality and a harbinger of future possibilities, this examination offers invaluable insights into the evolving landscape of literature and philosophy. Through a deep dive into the selected fictional works, I have meticulously dissected the Posthuman characteristics embedded within the narratives, ranging from technological advancements to the intricacies of consciousness and the dynamics of simulation.

At its core, this chapter underscores the transformative nature of Posthumanism, positioning it as a pivotal movement that transcends the boundaries of previous ideological frameworks. By tracing its evolution from the Enlightenment era to the present day, we gain a profound understanding of its significance as a catalyst for societal and cultural change. Indeed, the

journey from Modernism to Postmodernism and finally to Posthumanism can be viewed as a continuum, reflecting humanity's ongoing quest for advancement and self-discovery.

Through the lens of literature, we are presented with a nuanced portrayal of the human condition in an era defined by rapid technological progress and existential uncertainty. As we navigate the intricate landscapes crafted by Sterling and Egan, we are confronted with profound questions about identity, agency, and the very essence of what it means to be human. In this regard, the exploration of Posthumanism through fiction serves as both a mirror reflecting our present realities and a window into the boundless possibilities of the future.

The postmodernist elements present in *Schismatrix* and the incorporation of Baudrillard's theories resonate with the posthuman lifestyle depicted in the novel. The circumlunar colonies in *Schismatrix,* which are divided among various factions, reflect a postmodern sensibility in their replication of Earth's governmental structures. These colonies function as independent governments, similar to nations on Earth, showcasing a technologically determinist society where human life extends beyond the confines of the home planet.

In *Schismatrix,* the colonization of the solar system represents a form of technological expansion that parallels Baudrillard's concept of the 'Simulacrum.' These colonies, with their imitations of Earth's governmental systems, can be seen as replicas or models of human society, echoing Baudrillard's notion of a culture of the simulacrum where reality is replaced by simulations and copies. Similarly, in other select novels, the incorporation of Baudrillard's theory of Simulacra adds depth to the plot and themes. The posthuman lifestyle depicted in these novels reflects the postmodern condition, where technological advancements and societal structures blur the lines between reality and simulation. Overall, the incorporation of Baudrillard's theories into the narratives of these novels has seen to enhance the exploration of

posthumanism and postmodernism, offering readers a deeper understanding of the complexities of contemporary society and the human condition in an increasingly technologically mediated world.

In Greg Egan's novel *Quarantine,* the concept of "Smearing" emerges as a speculative technological phenomenon that fundamentally alters the nature of reality within the narrative. Smearing is depicted as a process that manipulates particles at the quantum level, blurring the boundaries between classical physics and quantum mechanics. This transformative effect has profound implications for the characters and the world they inhabit, leading to a reevaluation of causality, identity, and perception. As a central element of the novel's speculative framework, smearing serves as a powerful tool through which Egan delves into themes related to consciousness, reality, and the essence of existence in a society marked by advanced technology. Characters such as the protagonist Nick Stavrianos, Po Kwai, and Laura Andrews are depicted as engaging in smearing, highlighting its pervasive influence on the narrative.

The fear of mass smearing among the population of Earth emerges as a significant source of tension in the novel, evoking fear, chaos, and the spectre of death. This fear underscores the profound implications of smearing, not only on an individual level but also on a global scale, as it threatens to upend the very fabric of society and the perceived stability of reality.Through the exploration of smearing, Egan crafts a thought-provoking narrative that challenges readers to contemplate the nature of reality, the limits of human understanding, and the potential consequences of technological advancement. The concept of smearing serves as a potent metaphor for the fragility of existence and the complexities of navigating a world shaped by cutting-edge science and innovation.

The historical evolution of philosophical movements underscores their profound impact on humanity's trajectory. From the transition from the Modern to the Postmodern world, we now find ourselves on the cusp of a new paradigm shift: the emergence of Posthumanism. Through the research conducted in this chapter, striking parallels between Posthumanism and Postmodernism have been unearthed, highlighting a continuum of ideas that shape our understanding of existence. This journey represents a period of rapid growth across all aspects of life, with implications that extend far beyond the realms of philosophy and literature. However, it is imperative to recognize the potential risks inherent in this progression. Without careful monitoring and reflection, the unchecked advancement of Posthumanist ideals could inadvertently propel humanity towards a dystopian future. Thus, while acknowledging the remarkable strides made in our collective evolution, it is essential to approach the transition to a Posthumanist stage with cautious optimism and a commitment to ethical stewardship.

Conclusion

In conclusion, the exploration of Posthumanism has unveiled a complex and multifaceted landscape that challenges traditional notions of humanity, identity, and existence. Through an interdisciplinary lens, we have delved into the philosophical, cultural, and literary dimensions of Posthumanism, uncovering its implications for society, ethics, and the future of humanity. From Donna Haraway's pioneering cyborg manifesto to contemporary science fiction narratives, we have encountered diverse perspectives that invite us to reimagine our relationship with technology, nature, and the cosmos. While Posthumanism offers promising avenues for transcendence and transformation, it also raises profound questions about power, agency, and the ethical dimensions of technological advancement. As we navigate this ever-evolving terrain, it becomes increasingly imperative to critically engage with the ethical, social, and political implications of Posthumanism to ensure a future that is both ethically grounded and socially just.

As this thesis delved into the exploration of various recurring questions and curiosities about the future, particularly within the context of an ongoing AI revolution, it became evident that Posthumanism encompasses two distinct perceptions. On one hand, there exists a pervasive sense of grave fear and skepticism regarding the implications of Posthumanism, while on the other hand, there is a prevailing sense of great optimism and hope. Through the analysis of fictional works studied in this research, these contrasting viewpoints are elucidated, shedding light on the multifaceted nature of Posthumanism and its potential ramifications for humanity. By meticulously examining and juxtaposing these two schools of thought, this research underscores the complexities inherent in contemplating the future of the human race amidst rapid technological advancements. The findings of this study not only contribute to a deeper understanding of Posthumanism but also offer valuable insights into its relevance to contemporary events and developments. Moreover, this research serves as a significant contribution to the body of literature dedicated to exploring the nature of Posthumanism and its implications for society.

Hüsing suggests that delving into the realm of the posthuman enables us to redefine our understanding of humanity amidst the backdrop of evolving developments, whether those involve advancements in artificial intelligence, cataclysmic events such as mass extinctions, or any phenomena in between. As an educator who teaches a class on AI and science fiction, Hüsing utilizes various media, such as HBO's Westworld and Netflix's Black Mirror, to explore themes of the posthuman and dystopian futures. While acknowledging that any form of media can be interpreted through a posthuman lens, Hüsing finds science fiction particularly effective in the communication classroom, as it not only addresses concerns about the posthuman condition but also captivates students, including those in STEM fields.

According to Hüsing, engaging with science fiction and dystopian narratives can evoke fear, but it can also inspire action. By presenting these texts as calls to action, Hüsing aims to encourage critical thinking and reflection among students. For instance, the examination of AI in science fiction can prompt ethical considerations in the development of real-world technologies. By challenging engineers and scientists to consider inclusivity and social impact, these narratives contribute to more thoughtful and responsible technological advancements.
Furthermore, science fiction can function as a cautionary tale, as evidenced by Octavia Butler's novel Parable of the Sower. Through its portrayal of the consequences of human-induced pollution and climate change, the book underscores the importance of sustainable practices. However, it also instills a sense of hope by motivating readers to invest in research and innovation for a better future. Ultimately, exploring authors like Butler serves as a reminder of our collective responsibility to work towards creating a more sustainable and equitable world.

As this research has embarked on exploration of many aspects of various fields that are attached to Posthumanism, through this thesis myriad future directions have been highlighted that can take its roots of the study of Posthumanism. The study of posthumanism in academia is poised for continued growth and exploration in various directions. Some future directions for research in posthumanism may include; Interdisciplinary Approaches: Posthumanism intersects with numerous academic disciplines, including philosophy, cultural studies, literature, anthropology, sociology, and science and technology studies. Future research is likely to continue embracing interdisciplinary approaches, fostering collaboration across diverse fields to deepen our understanding of the posthuman condition. Ethical and Moral Implications: As advancements in technology raise complex ethical and moral questions, future research in posthumanism may focus on examining the ethical implications of human enhancement, artificial intelligence, biotechnology, and other emerging technologies. Scholars may explore

how Posthumanist perspectives can inform ethical decision-making and policy development in areas such as healthcare, environmental sustainability, and social justice. Embodiment and Identity: Posthumanism challenges traditional notions of embodiment, identity, and subjectivity. Future research may delve into how technological interventions, virtual realities, and hybrid forms of existence shape our understanding of selfhood and agency. Scholars may also investigate the implications of Posthumanist theories for issues related to gender, race, sexuality, and disability studies. Environmental Humanities: With growing concerns about climate change, ecological degradation, and the Anthropocene, Posthumanism offers insights into humanity's relationship with the natural world. Future research may explore how Posthumanist perspectives can inform environmental ethics, conservation efforts, and responses to ecological crises. Scholars may investigate concepts such as multispecies relationships, non-human agency, and the interconnectedness of human and non-human ecosystems. Postcolonial and Global Perspectives: Posthumanism has the potential to offer new frameworks for understanding colonialism, globalization, and cultural exchange. Future research may examine how Posthumanist theories intersect with postcolonial studies, indigenous knowledges, and global perspectives on technology and society. Scholars may explore how different cultural contexts shape understandings of the posthuman and inform resistance to technocratic power structures. Literary and Cultural Studies: Posthumanism has had a significant impact on literary and cultural studies, inspiring new interpretations of literature, film, art, and popular culture. Future research may continue to analyze representations of the posthuman in media and literature, tracing the evolution of Posthumanist themes across different cultural contexts and historical periods. Scholars may also explore how Posthumanist theories intersect with other literary and cultural movements, such as speculative fiction, cyberpunk, and transhumanism.

Overall, the study of posthumanism in academia is likely to remain dynamic and multifaceted, as scholars grapple with the complexities of technological, social, and environmental change in the 21st century. By embracing interdisciplinary perspectives and engaging with pressing ethical, cultural, and existential questions, future research in posthumanism has the potential to shape our understanding of what it means to be human in an ever-evolving world.

Many Futurists have said that computers actually double in processing power roughly every year, which means that computers in 30 years will evolve exponentially, almost a billion times. By that time technology now being at our finger tips will be rapidly evolved to being in our brains. Like the scenario that Greg Egan has painted for us in *Quarantine* and *Permutation City,* it is only a matter of time that we will witness ourselves being Primed with Mods connected to our brains. As technology is always a double-edged sword, this rapid evolution can cause a negative impact as depicted by Egan in *Quarantine* or it can as many scientists suggest bring an impressive revolution and cure to HIV and Cancer, as nano machines can be created to fit inside ones body, which can patent recognize HIV and Cancer cells, find them and target them in matter of seconds. This advanced nano technology when created can help the medical field intensively on a positive note too. Therefore, this thesis highlights and brings to the surface both the negative and positive impacts that will foster the future of our planet.
As such, this study not only expands our knowledge of Posthumanism but also fosters greater awareness and understanding of the profound transformations shaping the future of humanity. It underscores the importance of critically engaging with emerging technologies and ideologies, while also highlighting the need for informed discourse and ethical considerations in navigating the complexities of a rapidly evolving world. In doing so, this research opens up new avenues for further inquiry and exploration into the intricate interplay between humanity, technology, and the future.

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