

**TOWARDS POSTHUMANISM:
STIGMATIZATION OF ARTIFICIAL
INTELLIGENCE (AI) IN CONTEMPORARY
AMERICAN SCIENCE FICTION**

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Towards Posthumanism: Stigmatization of Artificial Intelligence (AI) in Contemporary American Science Fiction

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ABSTRACT

Thesis Title: Towards Posthumanism: Stigmatization of Artificial Intelligence (AI) in Contemporary American Science Fiction

Posthumanism has become one of the foremost important themes in science fiction (SF). Contemporary American SF is its significant popularizer in the modern world. The advocacy of dystopian future in contemporary American SF has led to stigmatization of artificial intelligence (AI). It has presented AI as a threat to humanity and has reduced it to mere enemy of humanity in a posthuman future. Unlike postmodernism, posthumanism is a neo-foundationalist theory and grounds human subjectivity in dystopian future. The cyberpunk culture of SF is a vital element in the ostracism of AI because most of it centers round AI takeover where humans are presented with the dilemma of extinction in the face of new technologically advanced world. The researcher has used Goffman's theory of stigmatization as theoretical basis, with special emphasis on Link and Phelan's stigmatization model, to build the argument. The analysis has been done through textual analysis as a research method. This research has yielded the possible stigmatization of AI in contemporary American SF and its ethical and societal impacts. It is likely to be a significant part of the production of knowledge in the field of Sci-Fi and Cyberpunk fiction.

TABLE OF CONTENTS

Chapter	Page
THESIS AND DEFENSE APPROVAL FORM.....	ii
CANDIDATE DECLARATION FORM	iii
ABSTRACT	iv
TABLE OF CONTENTS.....	v
LIST OF ABBREVIATIONS	vi
ACKNOWLEDGEMENT	vii
DEDICATION.....	viii
I INTRODUCTION: RATIONALE AND PLAN OF RESEARCH.....	1
1.1 Introduction.....	1
1.2 Locating Jack Williamson’s and Philip K. Dick’s Novels in Contemporary American Science Fiction.....	4
1.3 Situatedness of Researcher	9
1.4 Delimitation	9
1.5 Thesis Statement	9
1.6 Research Questions.....	10
1.7 Plan of Research.....	10
1.8 Significance of the Study.....	11
II LITERATURE REVIEW: A CRITICAL SURVEY OF AVAILABLE SCHOLARSHIP	14
2.1 Introduction.....	14
2.2 Literature Review.....	15
2.3 Conclusion.....	27
III THEORETICAL FRAMEWORK & RESEARCH METHODOLOGY	30
3.1 Introduction.....	30
3.2 Theoretical Framework.....	30
3.2.1 Postmodernism and its Philosophical Background.....	30
3.2.2 Theory of Stigmatization	31
3.2.3 Stigmatization of AI in Contemporary American SF.....	33
3.2.4 Posthumanism and its Philosophical Background	34
3.3 Research Method	37
3.4 Conclusion.....	39
IV SPECULATED SUBVERSION OF HUMAN EMPIRE THROUGH AI IN SELECTED WORKS.....	41
4.1 Introduction.....	41
4.2 Posthuman Themes of American SF.....	43
4.3 Textual Analysis.....	45
4.4 Conclusion.....	60

V NEITHER TECHNOPHOBIA NOR TECHNOMANIA: THEN WHAT IS IT?62
5.1 Introduction.....62
5.2 Technophobic Impacts of Contemporary American SF.....62
5.3 ‘Dependency-Complex’ of Humans.....66
5.4 The Fear of AI Singularity.....68
5.5 The Need of Destigmatization of AI in Contemporary American SF.....70
5.6 Conclusion.....72

VI CONCLUSION 75
6.1 Recommendations for Further Research.....81

WORKS CITED.....82

LIST OF ABBREVIATIONS

AI	Artificial Intelligence
<i>WFH</i>	With Folded Hands
<i>DADES</i>	Do Androids Dream of Electric Sheep?
SF/Sci-Fi	Science Fiction

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DEDICATION

I dedicate this work

To my beloved mother and my dear father for their love,

devotion, and unlimited sacrifice.

To my brothers

Yasir Jehangir and Majid Jehangir

for their support and encouragement.

Without them it would never have been possible.

CHAPTER 1

RATIONALE AND PLAN OF RESEARCH

1.1. Introduction

This project aims to investigate the possible stigmatization of Artificial Intelligence in contemporary American science fiction and its ethical and societal impacts. The world is swarming with contraptions at homes, workplaces, and educational institutions. They have infiltrated our minds with the risk of Artificial Intelligence's singularity and this idea is further strengthened by mainstream media and today's literature. With Sophia's (a humanoid robot) awakening and Elon Musk's (South African business tycoon, stakeholder, engineer, and architect) warning about dystopian future, the year 2017 is marked by a breakthrough in the field of AI and robotics. This research explores contemporary American science fiction and aims to examine stigmatization of AI in the selected texts. This study is part of the continuum of posthuman concerns in addressing the concepts of techno-culture and technophobia, questioning the posthuman assumptions, and projecting stigmatization of AI in contemporary American science fiction.

Sophia, an advanced humanoid robot manufactured by Hanson Robotics, has been granted citizenship of Saudi Arabia on 25th October 2017, and has led to storm of criticism by feminists and human rights activists in the Kingdom and round the world. Sophia seems to be straight out of the science fiction world and to be bearing a warning sign about posthuman future for many critics. Her designer, David Hanson¹, claims that she is equipped with human feelings and emotions and is a sentient being. She is hailed as an intelligent robot, but she is far from being possessing human equivalent in intelligence. She is a robot controlled by humans and all most all her interviews are pre-programmed. She is a publicity stunt to draw investors' attention to funding AI projects as it has been done in Future Investment Initiative held in Saudi Arabia in October 2017.

Elon Musk and the fans of science fiction and Hollywood have labelled Sophia as being capable to wreak havoc in the future. Musk has flabbergasted his followers and fans with bashing of AI and considers it as a major threat to the existence of human civilization. Contrary to his condemnation of AI, he has invested in the decade's most hailed SpaceX

project, a mission to colonize Mars, and is also the founder of Musk Foundation. His foundation supports science and engineering projects, ironically AI projects as well. He has mocked Sophia and has said that what if it is reprogrammed as *The Godfather*, Hollywood mob drama based on violence and mindless killings, then it will cast a shadow on the role of human race as it will be overpowered by AI in the posthuman future. On the other hand, the invention itself speaks of being a helping hand for humans but the cyberpunk culture of science fiction and Hollywood has led humans to suspect the technological advances.

In a similar manner, on 1st April 2018 scientists of Massachusetts Institute of Technology (MIT) have introduced Norman, the first psychopathic AI. The very reason behind creating a psychopathic AI is to prove the point that AI itself is not prejudiced but it depends on the algorithms² that are fed to it. The algorithms can either be right or wrong. Norman, “represents a case study on the dangers of Artificial Intelligence gone wrong when biased data is used in machine learning algorithms” (Norman n.p). Norman’s algorithm has been set on the nefarious data of Reddit³ (social news aggregator website) due to which all it sees or comprehend is pure evil and destructive. It is a combination of Norman Bates⁴, a character from Alfred Hitchcock’s movie *Psycho* (1960), and an AI robot. Unlike Sophia, Norman is purely evil due to his biased algorithms. Therefore, it will be unwise to accuse AI to go awry rather than the humans who are feeding it biased data. SF as a genre is portraying AI to be itself a danger for humanity and human’s future on the planet earth.

Contemporary American SF, as a growing body of literature, has been the focus of much of the research revolving round the use of technology and its impact on the future of humanity. Science fiction has considered posthuman themes where humanity is posed with danger of being on the verge of extinction and dehumanization. Most SF deals with apocalyptic or post-apocalyptic themes where humans will either be destroyed or (might have been) replaced by a higher kind known as post-humans. The agent causing this destruction in most science-fiction is Artificial Intelligence. The AI takeover of humanity is one of the central debates in posthuman science-fiction. Most of the literature produced under the umbrella of contemporary American SF deals with the AI takeover and presents a bleak future for humans where their humanity will go extinct.

Contemporary American SF writers address posthuman themes like how the AI will take over the humanity and present humanity with the dilemma of extinction and struggle for survival amid humanoids, cyborgs, androids, to name a few. The myth of AI takeover and its devastating impact on humans is strengthened through various media representations apart from SF, and it is far from being real. Hollywood ventures like *2001: A Space Odyssey* (1968), *The Terminator* (1984), *The Matrix* (1999), *AI: Artificial Intelligence* (2001), *I, Robot* (2004), and *Ex Machina* (2014) are loaded with intelligent machines which take over the human empires and hence label AI as a destructive and malevolent force. In *2001: A Space Odyssey* (1968) HAL, an AI, can deceive humans and take control of them. *The Terminator* (1984) is laden with a vindictive machine, the Terminator, programmed to kill Sarah Connor as her son is prophesized to be the saviour of human race against AI machines in the post-posthuman future. On the other hand, *The Matrix* (1999) is about a war against the machines in a posthuman future where humans are subjugated by them in a simulated reality called the matrix. In the same vein, *AI: Artificial Intelligence* (2001) also represents a future where posthumans replace humans in a post-climate change world and the advanced Mechas, AI robots, are the successors of humans in a posthuman world. *I, Robot* (2004), and *Ex Machina* (2014) represent NS-5 and Ava, both are advanced AI robots, respectively, to be full of deception and cunningness. Very few literature and media representations are available where AI is presented as benevolent and human-friendly. Isaac Asimov's⁵ three laws of robotics can be referred to as one of the few attempts to promote harmony between humans, humanoids, cyborgs, androids, and AI in a posthuman future.

In the contemporary society humanity is advancing towards increasing technological advances in every field of life. The prevailing genres of literature have stigmatized AI as destructive and a malefic force. Thus, this conception is creating a metanarrative of technophobia where AI can only be used for destructive purposes and premonition of a future where humans will be either rejected in favour of posthumans or succeeded by them.

I present in this research ways in which labelling of AI as a peril to future of humankind is challenged and an environment of techno-optimism towards a stable future is promoted. It is in this context that the study is envisaged as an original contribution to

the existing scholarship not only in contemporary American science fiction but also in posthuman literary studies.

Since texts selected for the study are part of contemporary American science fiction writing tradition with a focus on posthuman themes, it would be useful to contextualize them within these areas. For this purpose, I write here a brief history of SF and contemporary American SF with a special emphasis on posthuman themes.

1.2. Locating Jack Williamson's and Philip K. Dick's Novels in Contemporary American Science Fiction

To situate the primary texts, I circulate my arguments through two different subdivisions. In first part, I consider description of science fiction briefly. In second part, I discuss an overview of contemporary American science fiction to locate Williamson and Dick's works.

I

SF combines science and fiction together in one genre, giving scientific grounds for implausible future events. SF is hard to define under one unified definition, it is a constantly evolving genre with changing premises. It is better to call it as an intersection of different genres. Various critics have tried to define SF, like, Theodore Sturgeon⁶ has defined it as, "A science fiction story is a story built around human beings, with a human problem, and a human solution, which would not have happened at all without its scientific content." (Grazier and Cass 13). C. Hugh Holman's⁷ *A Handbook to Literature* (1985) defines science fiction as:

A form of fiction in which scientific facts, assumptions, or hypotheses forms the basis, by logical extrapolation, of adventures in the future, on other planets, in other dimensions in time or space, or under new variants of scientific law. (Holman 405)

SF history is dated back by some historians to 2nd Century AD; Lucian of Samosata's *A True Story* is cited as one of the earlier examples. The story is a travel into space and about space war. Thomas More's *Utopia* (1516) and Francis Godwin's *The Man in the Moone* (1638) are also taken as starting points of SF by various historians. More's *Utopia* deals with an imaginary ideal state like Plato's *Republic*. Francis Godwin's *The Man in the Moone* (1638), on the other hand, is concerned with a fantastic travel to moon and

discovery of an ideal society. However, Mary Shelley's *Frankenstein* (1818) is hailed as first SF novel, it incorporates all the elements of the genre according to most of the critics and historians. It deals with a story of man-like monster, Frankenstein, created by Victor Frankenstein, and a possibility that science can create a monster which will destroy science and eventually humanity. Victor created Monster Frankenstein from dead body parts by using scientific methods; the Monster turns against its own creator and wreaks havoc in his life by killing all those close to him. Thus, the novel has laid the foundations of the genre, science fiction, which continues to influence its readers and followers round the globe.

As a genre, SF has seen a boom in late 1940's as science and technology advanced and affected all strata of society including its culture, its religion, and its politics. Specifically, after World War II when the world saw the worst in the shape of two atomic bombs and the devastations it caused by killing millions of people in just two days, the writers of SF entered other diverse universes and created an alternate history for its readers. In their writings, by creating an alternate universe they have tried to soothe the catastrophe-stricken humanity and tried to show the adverse effects of science and technology. It has given rise to "What If" fiction, where the focus is on an alternate reality or simulacrum created by science. The setting of most SF can be prospective as well as retrospective, the main point of focus is to elucidate what alternate course known history events might have taken, either in past or future. Thus, creating the concept of multiverse in time and space and its impact on humanity's future.

SF is also contrasted with fantasy as both at times are taken to be the same. However, both genres are less similar and more dissimilar. Fantasy is a genre where there is no logical or empirical background for an event which it depicts. It may involve supernatural elements, magic, or far-fetched suppositions, which are far from being real and cannot be substantiated by any present or future technology in the world. Its examples clarify the distinction between the two genres, for example, J. R. Tolkien's *The Lord of the Rings* (1954) and George R. Martin's *The Song of Ice and Fire* (1996). Tolkien's fiction is about a fantasy world of magic and hobbits, fictional beings, where there is no plausible possibility of its existence apart from the fantasy world. Similarly, Martin's narrative also narrates the surreal story of seven kingdoms which consists of magic, supernatural beings, dragons, dead walkers, and humans having supernatural powers. All these elements give

rise to the genre of fantasy where everything is possible but not credible. Holman has defined fantasy as:

Fantasy is usually employed to designate a conscious breaking free from reality. The term is applied to a work which takes place in a non-existent and unreal world, such as fairyland, or concerns incredible and unreal characters.... (Holman 181)

Thus, SF can be characterized to have a setting in an alternate world with non-human/human characters and is allegorically presented with the possibility of its existence, as it is substantiated through science and technology. SF as a genre has been popularized by American writers in the 1940s, also known as the Golden Age of SF, due to the emergence of America as the new superpower with tremendous growth of industries and development in science. The next section briefly deals with the contemporary American SF, its history and themes.

II

Science fiction presents a vision of a unified universe which is propagated by the nation-states that produces it. SF as a genre is initiated by English writers like Mary Shelley (*Frankenstein* is considered to be the first SF novel) and H.G. Wells (*Time Machine* is his celebrated SF novel), however, its propagation and acceptability as a serious genre is done by American writers like Isaac Asimov and Robert A. Heinlein. Their Age is also known as the Golden Age of SF. The very term science fiction has been coined by Hugo Gernsback in 1929, American writer and founding editor of *Amazing Stories* (an SF magazine). During the World Wars, America emerged as economically stable and industrially advanced nation-state on the global stage of collapsing economies and nation-states. The New Wave movement of '60s and the Cyberpunk genre of '80s have led SF to be dominated by America. The anti-nationalistic sentiments and a vision of one unified nation against the Other is propagated by American SF writers to globalize the local sentiments, culture, religion, ideas, and technology.

On the onset of World War II America declared itself to be an isolationist⁸. The attack on Pearl Harbor led America to become part of the global war. US declared victory with two atomic bombs on Hiroshima and Nagasaki in 1945. This incident has led to the rise of America as a global superpower and as it has been long the tradition of literature that it is dominated by the narratives of powerful nations, therefore, SF is no exception to

this tradition. The concept of nation-state is proliferated even in SF, even though it claims to be universal. It promotes the ideals of a particular nation-state as a universal/global process, in the present case it is America. America is presented as representative of the entire world in SF, the genre is Americanized, and American culture and beliefs have decentred other cultures and beliefs. Gerry Canavan and Eric Carl Link in their book, *The Cambridge Companion to American Science Fiction* (2015), have argued about American influence over SF:

Many of the ideas, themes, and conventions of contemporary science fiction take their roots in a distinctly American cultural experience, and so SF in America serves as a provocative index to twentieth- and twenty-first- century American culture, reflecting America's hopes, desires, ambitions, and fears. (Canavan and Link 8)

The pulp magazines, printed on cheap pulp wood, of 1920s and 1930s -like *Argosy* (1882-1978), *Weird Tales* (1923), and *Amazing Stories* (1926), all dedicated to SF- gained popularity in America and have been regarded as the main diffuser of SF in the mainstream literature and media. The pulp era heralded the Golden Age of SF during the Second World War, with writers like Isaac Asimov, Robert A. Heinlein, and Jack Williamson. Asimov's tales deal with hard SF, where he has tried to authenticate his narrative on the basis of scientific laws and probable technology. His work *I, Robot* (1950), a frame narrative novel created out of short SF stories, unlike conventional SF stories is concerned with harmony between machines and humans and their intricate relationship with one another. Similarly, Heinlein's *Stranger in a Stranger Land* (1961) is also about interaction between extra-terrestrial beings, Martians, and humans. The protagonist, Smith, raised by the Martians is having super intelligence and he tries to form a new stable society on the earth and during this struggle he is killed by an angry mob calling him blasphemer. Williamson's tales deal with the impacts of science and technology on the lives of humans in a high-tech future where he cautions about the risk of too much human's dependence on technology, especially AI. Asimov, Heinlein, and Williamson are credited with bringing about seriousness in SF and making it acceptable to general masses as new genre of literature.

In 1960s the New Wave movement in America favoured soft SF, contrary to hard SF of the Golden Age. It is more inclined towards speculative aspect of science and its impact on society. It is not about scientific accuracy but about impacts of technology on

the lives of humans. It bears a warning about the technological singularity, a term proposed by Verner Vinge⁹ in 1983, and the devastation it can cause in future.

In 1980s within the premises of SF a new sub-genre, cyberpunk, appeared with the publication of William Gibson's¹⁰ *Neuromancer* (1984). Its major focus is on dystopian representation of post-industrial society where human race is either dominated or replaced by more advanced technology. Some of the proponents of SF who contributed to the area are, Philip K. Dick, Roger Zelazny, J. G. Ballard, Philip Jose Farmer, and Harlan Ellison. Among these key writers of the genre, Philip K. Dick has diverted the attention from speculative and hard SF, where the future is far-fetched and mostly inconceivable, to the near future of post-industrial era. It heralds a futuristic society where the human race is oppressed by science and technology and presents techno-phobic/techno-maniac masses whose main interest is to bring about technological singularity.

In this context, Williamson and Dick's works, being heraldry of SF genre, have publicised American concerns about technology, specifically AI, and the future of humanity. There is a close connection between futuristic representation of AI in SF and its influence on real-world science and technology, discussed in detail in Chapter 5. American SF is also intricately linked with representation of a dystopian future of the world, bearing particularly American stamp, as discussed earlier that it is portrayed as microcosm of the entire world. It is more concerned with annihilation of human race, than with utopian future of the world. Thus, SF in 20th Century and 21st Century is entirely rooted in American culture and society with conspicuously American foresights of a dystopian future and propagation of American ideals and assumptions about how the world must use science and technology.

1.3. Situatedness of the Researcher

In a third world country like Pakistan, AI, if properly developed, can bring about revolutionary changes. Though there are different negative aspects like destruction and superseding human civilisation attributed to AI, but these solely depend on the codes we feed to them. If instructed properly, AI can induce many positive social, ethical, and industrial changes. For example, recently at a restaurant in Multan, a robot developed by engineering students was introduced as a waiter. This experiment left a very pleasant

impact on people and they were reported appreciating the efficiency and courtesy of the robot waiter. It would greet the customers warmly and then thank them according to its coded instructions.

In under-developed countries like ours, humans must carry out most of the tough and laborious works. It leads to waste of time and energy as well as substantial number of human errors. AI, thus, if developed with care and purpose, can save our resources resulting in industrial revolution.

Being a Pakistani researcher, I know that technological developments are still in its initial stages. I felt the need to carry out this research project, as research in this direction in Pakistan is rare. I intend to make it a guideline for present and future researchers to keep the technological developments human friendly and promote a positive view of technology in the country.

1.4. Delimitation

The study is delimited to two American SF texts, Jack Williamson's *With Folded Hands* and Philip K. Dick's *Do Androids Dream of Electric Sheep?*. I have selected these texts because the works belong to two important eras of American science fiction, that is, the Pulp era and Cyberpunk age respectively featuring AI, and have an in-depth impact on the general masses. Both the writers have long standing influence on the genre and have been regarded by many critics to be the propagators of SF.

1.5. Thesis Statement

Philip K. Dick and Jack Williamson's science fiction texts, *Do Androids Dream of Electric Sheep?* and *With Folded Hands*, seem to be productively engaging with the concept of stigmatization of Artificial Intelligence which is considered a threat to the future of humanity. The role of AI explorably needs to be destigmatized and techno-optimism is possible a useful alternative.

1.6. Research Questions

The aim of the proposed research is to explore the posthuman themes in selected contemporary American SF and its correlation to the stigmatization of Artificial Intelligence. Based on posthuman and stigmatization theories, there are three research questions that I have attempted to answer through an analysis of primary sources selected for the present study. The questions are as follow:

1. In what ways do Philip K. Dick's *Do Androids Dream of Electric Sheep?* and Jack Williamson's *With Folded Hands* engage with posthuman concerns?
2. How has Artificial Intelligence (AI) been stigmatized in the selected novels?
3. How is stigmatization of AI in the selected texts likely to impact the societal and ethical concerns?

1.7. Plan of Research

I have organized my thesis in a logical and coherent manner. I have delineated its outline meticulously. It consists of six chapters. Chapter 1 is an extensive overview of my research project. I have introduced my research project and have situated the selected writers in the larger context of American SF. It elaborates rationale of my study. I have presented my controlling research questions in this chapter. In Chapter Two, the Literature Review contextualizes and justifies the present study. It has set my research in the spectrum of existing scholarship and it identifies the gaps in literary scholarship. It connects the issues under analysis to previous studies to substantiate my project. In Chapter Three, based on research gaps which have been identified in Chapter Two, I have examined extensively the theoretical framework and research methodology I have used to read my primary texts.

Chapter Four explores the two SF novels, Jack Williamson's *With Folded Hands* and Philip K. Dick's *Do Androids Dream of Electric Sheep?*, written in different eras in contemporary American SF writing tradition. Williamson and Dick and have presented a dystopian future in their works and have reduced artificial intelligence to mere a danger to humanity in a posthuman future. The major focus is on representation of AI in both texts and the possible stigmatization of AI. I have done it systematically in the chapter, firstly by analysing the posthumans themes, secondly the creation of binaries in the work, thirdly

the stereotypical exposition of posthuman binary as a danger, and finally representation of human binary as suppressed by AI in the texts.

In Chapter Five, I have indicated why it is important to read the contemporary American SF novels in the way I have done. I have also summarized the impacts of technophobic culture supported by contemporary American SF and have justified through different secondary sources that it is important to promote a techno-optimistic approach in SF. I have discussed the societal and ethical impacts of stigmatization of AI and how the representation of AI as a threat needs to be challenged and modified. Long standing influence of SF genre cannot be denied, and my research suggests utilizing it for a higher purpose of human development rather than in the direction of humans' termination.

In Chapter Six, I have concluded my research and have presented suggestions for further study. It presents a comprehensive overview of my research project and the findings of my study. It also shows the contemporary nature of my research work, which still is an ongoing debate in the contemporary critical theories' circles and academia.

1.8. Significance of the Study

Research in this area is increasingly getting popular attention in contemporary scholarly world. The tremendous advances in technology will affect human concerns, be they moral, ethical, cultural, social, or religious, as the world is excelling in technology. By relating to the genre of science fiction, the current research marks its place in the contemporary world. It studies the impact of sci-fi on the contemporary culture, and society. This research invites other researches on the selected genre of fiction in multiple ways in our postmodern world. The proposed study is likely to benefit and help the future researchers as a stimulus in posthuman studies.

Endnotes

¹ David Hanson Jr. is an American roboticist and founder and Chief Executive Officer of Hanson Robotics, a Hong Kong-based robotics company founded in 2013. The designer and researcher create humanlike robots who have realistic facial expressions and conversational abilities.

² In computer systems, an algorithm is basically an instance of logic written in software by software developers, to be effective for the intended target computer(s) to produce output from given (perhaps null) input.

³ Reddit is an American social news aggregation, web content rating, and discussion website. Registered members submit content to the site such as links, text posts, and images, which are then voted up or down by other members.

⁴ Norman Bates is a fictional character created by American author Robert Bloch as the main antagonist in his 1959 thriller novel *Psycho*; portrayed by Anthony Perkins in the 1960 version of *Psycho* directed by Alfred Hitchcock and the *Psycho* franchise.

⁵ Isaac Asimov is an American writer and professor of biochemistry at Boston University. He is known for his works of science fiction and popular science. Asimov was a prolific writer who wrote or edited more than 500 books and an estimated 90,000 letters and postcards.

⁶ Theodore Sturgeon is an American writer, primarily of fantasy, science fiction and horror. He was also a critic. He wrote approximately 400 reviews and more than 200 stories.

⁷ C. Hugh Holman was an American literary scholar, academic administrator and detective novelist. He was a Professor of English at the University of North Carolina Chapel Hill and its Provost from 1966 to 1968. He was the vice president of the National Humanities Centre.

⁸ Isolationism is a category of foreign policies institutionalized by leaders who assert that their nations' best interests are best served by keeping the affairs of other countries at a distance.

⁹ Vernor Steffen Vinge is an American science fiction author and retired professor. He taught mathematics and computer science at San Diego State University. He is the originator of the technological singularity concept and perhaps the first to present a fictional "cyberspace".

¹⁰ William Ford Gibson is an American-Canadian speculative fiction writer and essayist widely credited with pioneering the science fiction subgenre known as cyberpunk.

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

A vast amount of literary scholarship is available on posthuman studies, contemporary American SF, and postmodern studies. For convenience, I present an assorted survey of the available scholarship that would be useful for my research project to finding out related points of contact. This chapter highlights the gaps in the literary scholarship to be filled by the current research. As the project under investigation revolves round contemporary American SF to be studied from postmodernist/posthumanist perspectives, the sources of review ranges from books, essays, and articles on contemporary American SF, *DADES*, and *WFH* (please see list of abbreviations on page vii). This review is chronological in nature so that I can trace the recent researches and changing attitudes towards SF in general, and the selected works in particular. I have mentioned the thematic concerns in a chronological order to present my argument in a cohesive way. It is narrowed down from broad perspective of contemporary American Science fiction to the works of Jack Williamson and Philip K. Dick. The purpose of narrowing down is to find the gap in available body of research and contextualization of the present study.

I have divided this chapter into three subsections. In first part, I introduce my research and give rationale for the literature review. In the second part, I have introduced secondary sources for review and it is main body of the present chapter. I have further divided the second section into three distinct parts dealing with available scholarship on contemporary American SF, *DADES*, and *WFH*. This division has given an insight whether the sources being reviewed are relevant and contributing towards the research under consideration. In the third part, I have concluded my review and related it to the area of my research and topic. After objective analysis of present scholarship, I have been able to find out the research gaps and I have been able to contextualize and study my primary texts appropriately. In addition, I have also connected present chapter with the next one.

Due to broad research questions, it is obvious that my research project is multi-layered and multiple factors are involved in the determination of its direction. The secondary sources are carefully selected while keeping in mind the controlling research questions. My research project deals with contemporary American SF in the backdrop of posthuman studies, therefore, my secondary sources range from the literary scholarship on broad area of American SF to the narrowed down selected works.

This chapter has given insights to my overall study, as it has helped me to contextualize my research, to identify the research gaps in the existing scholarship, and make room for further studies.

2.2. Literature Review

I have divided my literature review into three different parts for the sake of convenience and systematic analysis. The review of books and essays is done in the following three subdivisions:

- I. Contemporary American Science Fiction, Practice and Themes
- II. Do Androids Dream of Electric Sheep?/ Themes/ Criticism
- III. With Folded Hands/ Themes/ Criticism

I

Contemporary American SF has gained critical attention of a large group of literary pundits from various points of view and angles. Darren Harris-Fain, in *Understanding Contemporary American Science Fiction: The Age of Maturity, 1970-2000* (2005), has investigated the significant patterns and improvements amid three decades that saw Sci-Fi's movement from sub-literary to a more refined and serious genre. Harris-Fain proposes that to understand American sci-fi completely, it is basic to understand that the present field with all its assortment comes about because of the former many years of works, it is the product of earlier SF, say decades ago. He has explicated the domain of SF and reasoned that it is both plausible, "technologically plausible narratives" (Harris-Fain 4), and non-realistic as its definition is often misleading and most of the time fails to delimit the genre. For him:

... science fiction is not realistic, in the sense that it includes elements that neither exist in present nor have existed in the known past, science fiction is not an example of realism but of the fantastic. (Harris-Fain 3)

His major concern in the book is to trace the development of contemporary American SF and situate it in social and cultural context chronologically, and to identify vital influences and events. At turn of the century, American SF begins to be separated from literary fiction and dominated the genre of fiction. It changed the course of the genre. The pulp era reshaped definitively SF in America as common masses began to have access to the new genre due to inexpensive pulp magazines. *Amazing Stories* (1926) and *Astounding Science Fiction* (1930) heralded the, “beginning of the Golden Age of science fiction” (Harris-Fain 9). Harris-Fain argues that the golden age of SF would not have been possible without the works of established writers who continued to write in the era, like Jack Williamson, Murray Lenister, Isaac Asimov, and Robert A. Heinlein. It is brought into mainstream culture through popular Hollywood movies. The pulp magazines died in 1950s because it could not compete with TV and cinema, and books replaced the magazines. He argues that 1960s is the era when American SF received critical acclaim.

According to Harris-Fain, the New Wave writers of 1960s rejected the old tradition of SF and labelled it to be, “old fashioned, patriarchal, imperialistic, and obsessed with technology” (Harris-Fain 14) . In 1970s American SF brought diversification in the genre as the world became more technologically advanced, culturally concentrated, and obsessed with wars (especially American involvement in the notorious Vietnam War). SF became available in abundance in both print media and mass media. Adaptation of American SF in motion pictures, radio shows, TV, comics, and video and computer games expanded the horizon of the genre and it saw a tremendous influx in shape of new themes and settings, especially in the shape of alternate universes. He has expounded on the development of contemporary American SF through different eras and its influence on the contemporary arts and literary criticism. His book is a rich literary resource for understanding the evolution of contemporary American SF. However, he has not included the influence of SF on American culture and society and its reception in the world in general, hence leaving gaps. My project is an effort to plug these gaps.

The Cambridge Companion to American Science Fiction (2015), edited by Gerry Canavan and Eric Carl Link, on the other hand, explores the idea behind popularity of science fiction and its roots in American culture, life, and state. They argue that science fiction, as a literary genre, has been popularized by American versions of SF, like Hollywood, TV, comics, and various other mediums. They further expound upon the notion that science fiction clearly bears American hallmark of dystopian future which will result from technological advances.

They have investigated that SF is particularly rooted in US, although SF negates nation-state¹ form. It seems to be anti-nationalistic and global approach towards the threat of extra-terrestrial Other, and, “the unified vision of a single human race united under a common flag” (Canavan and Link 1). However, the influence of nation-state cannot be denied on the contemporary literature, or literature produced in the past. For example, realist novels bear a distinctive French influence in its initial stages, in mid-19th Century it bears a Victorian stamp, and in late 19th Century it is influenced by American tradition. Therefore, the division and categorization in SF has become natural to be based upon, “geopolitical realities and regional nationalism” (Canavan and Link 2).

They have asserted that SF scholarship tends to be predisposed by the notion of nation-state, most of the SF novels seemingly proliferate the ideals, dreams, culture, society, and insecurities of a particular nation-state. In 20th Century and 21st Century SF has been overpowered by US culture and society because of its importance on the geopolitical map of the world. America is embedded in the SF produced in 20th and 21st centuries- also known as American Century- due to, “the renewed centrality of American superpower and the American military-industrial complex ...as an object of both fantasy and terror...” (Canavan and Link 3). The depiction of superheroes- as saviours of the world and belonging to America- in both SF novels and movies has foregrounded the American dreams and predictions for the future and making it a microcosm of the entire world. According to Canavan and Link, American Century, “was born in Edison’s laboratories and Ford’s factories, came into maturity with television, the atomic bomb, and the advent of digital computing”, and at present it is, “... about Ray Kurzweil’s prognostications about a coming technological Singularity” (Canavan and Link 4).

The American paradigm of SF scholarship is divided into two strata- one utopia and the other dystopia. Frederic Jameson and Darko Suvin in their works *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (2005) and *Metamorphoses of Science Fiction* (1979), respectively, have tried to elaborate the utopian notions of American SF. They have speculated that SF is a forward-looking genre and focusing on benefits of techno-centric culture of America. While John Reider, Istvan Csicsery-Ronay, and Patricia Kerlslake are concerned with dystopia presented in American SF and its long-lasting impacts on the globe, in their works. Both groups of critics have argued about the American frontier but from different perspectives. For former group of critics, it bears hope for humanity in future and for later group, it bears an inevitable warning of a dystopian future. Hence, Canavan and Link in their work are concerned with the general notions of, “utopia versus empire, optimism versus pessimism, progress versus regress, hope versus despair” (10) in American SF. Their project is of general nature and neglecting particular details as it mainly deals with the chronology, medium, and themes and perspectives of American SF. Therefore, it also does not provide and explain the social impacts of contemporary American SF, hence a gap that my study may fill.

II

The dystopian visions of posthuman reality displayed in the contemporary American sci-fi is an exhaustive territory of research in the current scholarly community. The work of American SF writer Philip K. Dick’s *Do Androids Dream of Electric Sheep?* has been investigated through multiple viewpoints. Nigel Wheale’s essay, “Recognising a ‘Human-Thing’: Cyborgs, Robots, and Replicants in Philip K. Dick’s *Do Androids Dream of Electric Sheep?* and Ridley Scott’s *Blade Runner*” (1991), investigates one of the major themes of *DADES* and *Blade Runner*, film adaptation of *DADES*, that is, “the conflict between ‘authentic’ and ‘artificial’ personality, that is between people and robots” (Wheale 297) and how both novel and the film deal with it from different perspectives. Wheale argues that SF in the literary scholarship is not paid attention to, since it supposedly decentres humans from the main plotline and is technologically dominated, “to the exclusion of developed personalities or relationships” (Wheale 298).

For him, *DADES*’ central concern is the perplexity between humans and artificial beings, as one cannot be distinguished from the other in the novel. ‘Person-Thing’, a phrase

used by Martin Heidegger (German philosopher) in *Being and Time* (1927), is a domain of thorough discussion in philosophy since antiquity. It brings into light the concept of authenticity of human psyche and how it can be differentiated from ‘things’. The novel’s main plot, for Wheale, revolves around this authenticity of empathy in person-thing. The novel is set in post-apocalyptic environment where living beings are on the verge of extinction and this dread has led to a type of religion where ownership of scarce animals is highly commendable and has replaced child rearing, as the latter is deemed perilous because of genetic damage in human species. The commodification of living beings, for Wheale, has accelerated a consumerist society in the novel and it has also added to the destruction of living beings both on earth and on the planets where humans have emigrated. Keeping real animals is not only favoured but also part of the belief system that empathy with animals, or rarely with humans, could join them with Wilbur Mercer, the religious leader in the novel. Androids being devoid of empathy are subservient to humans in planetary colonies and often run wild and they escape to the earth in hope not to be recognized as artificial beings. They are considered as a possible threat to humanity because they are believed to be designed as paranoid killers. The boundary between humans and androids is blurred and the protagonist, Rick Deckard, is baffled by the striking similarities between the two. His job of retiring becomes extremely intricate as the androids could be passed for humans.

The very idea of empathy is contested in the film adaptation of *DADES*, and Wheale has analysed how it is transposed to the movie. The film has attenuated the major concern of the novel and has paid more attention to the visual representation and has down-toned the concepts of animal-ownership and Mercerism². The androids are termed as ‘replicants’ as they replicate humans. Scott’s primary concern is with Deckard’s find and retire ‘replicants’ plot. He has sacrificed the mainline of the novel as is the case with many literature-to-film transfers. Hence, Wheale in his essay has tried to elaborate the differences between treatment of major themes in *DADES* and *Blade Runner*.

Jill Galvan (1997) has talked about posthuman subjectivity in *Do Android Dream of Electric Sheep?* and has asserted that the empathy of protagonist, Rick Deckard, is not due to theology of Mercerism but due to compassion. He has argued about the co-existence

of humans and androids and about the notion that the dependency of humans on the technology can lead to infringement upon human subjectivity.

Galvan adumbrates the posthuman scenario of *DADES*, where humans struggle to co-exist with the intelligent machines, but humans are proscribed by the state apparatuses to do so. The humanoid robots are presented by the totalitarian government as lone predators, which can turn against their own masters and can kill humans and assert their freedom in a ruthless manner. The robots are depicted as nemesis to the authentic human beings. They are in relentless search for living autonomously, hence, challenging the demarcation of humans and machines posed by the government. The novel explores an inflexible meaning of the human subject and by the end human is regarded as only one of the aspects of life. This repudiation of a rigid definition leads to a category of the posthuman, where co-existence of humans and machines is advocated. For Galvan, *DADES* is a bildungsroman moving from liberal humanist ideals of superiority of human subject to the posthuman ideals of coexistence.

The state apparatuses, in *DADES*, enforce empathy test for androids, a pre-decided test to convict androids, based on fixed responses. The reason for exclusion of androids from mainstream society, according to Galvan, is that they are intelligent machines and capable of overturning the tyranny of a totalitarian government and can be joined by the humans, who are kept busy in an illusionary world where androids are represented as enemy to their existence. Therefore, eliminating chances of alliance between humans and machines to merge in posthumans. He has concluded that humans and androids need, “a cooperative existence in a posthuman society” (Galvan 419) because empathy does not emerge from authenticity but from compassion which is extended to all other objects which partake the human world. His essay ignores the real-world implications of this coexistence and its impacts on the society. I have tried to address the possible social and ethical impacts of technology in my research project.

Klaus Benesch’s “Technology, Art, and the Cybernetic Body: The Cyborg as Cultural Other in Fritz Lang's *Metropolis* and Philip K. Dick's *Do Androids Dream of Electric Sheep?*” (1999) writes, “the desire to construct human identity as basically different from the realm of the technological” (Benesch 379). For him, the recent technologies have blurred the distinction between the natural and the artificial. One such

example of blurred identities is of ‘virtual officers’³, which is increasingly a debated domain in the highly technologized world.

Recent technological advancements have infiltrated the Western society to the level of creating a second reality. Benesch argues that the techno-culture of the Western society gives importance to the “symbolic value” (Benesch 380) of the technology: the mass media’s representation of technology and its psychological impacts on the masses rather than the practical utility of technology. Therefore, the modern societies of the Western world not only create innovative technologies but also create, “psychological, mythical environment of their own” (Benesch 380). Technology is perceived either as an advancement to the level of a threat to humans or just machines controlled by humans. Benesch claims that the machine is represented as, “the cultural Other of technological society” (Benesch 381). The symbolic value of machine has presented cyborg as a counterpart to humans and at the same time, it has created doubts about machines being able to overtake humans in the advanced technological world.

DADES, for Benesch, has blurred the traditional boundaries between natural and artificial as the man-machines in the novel constantly seek to assert their subjectivity. The machines play the role of mechanical Other in the plot, and this other is, “a direct product and brainchild of human’s mind” (Benesch 390). He asserts that in *DADES* the human identity is defined in contrast to technological Other. The cultural anxieties have led to the identification of androids/machines/cyborgs as technological Other capable of overthrowing the human empire. Benesch’s essay is undoubtedly explaining the otherization of cyborgs but from a psychological perspective rather than a sociological one. He has dealt with technology from psychological perspective and has down-toned the sociological and ethical impacts of technology.

Christopher A. Sims’ article, “The Dangers of Individualism and the Human Relationship to Technology in Philip K. Dick's *Do Androids Dream of Electric Sheep?*” (2009), proclaims that *DADES* is concerned with the exploration of ethical entailments of androids’ slavery and the use of technology to define quintessence of humanity. He has investigated the ways through which technology has been presented in the novel and its impact on human’s psychology as humanity faces the dilemma of extinction in a posthuman society. Unlike other researchers, Sims does not focus on the destructive effects

of technology but rather on, “dehumanizing effects of individualism and demonstrate how technology can be used as a means to reclaim the essence of humanity” (Sims 67).

Humans use technology to dominate other life forms on earth. It is a tool devised by humans for their advantage and employed to increase their chances as being the fittest in the ecosystem. For Sims, technology and humans are structural binaries, and he does not regard it as separate domains. Dick has presented technology in such a way that it leads to the question why natural is preferred over artificial and how natural can be defined exclusively when it is embedded in artificial. He has explicated that the concept of technology needs to be deconstructed as the modern-day inventions and advancements can no longer fit in the traditional definition of the term. Particularly android cannot fit in this classical definition because it, “is both user and instrument, subject and object” (Sims 70) and they perform, “de-worlding of themselves and their controllers” (Sims 70). The protagonist, Rick Deckard, is confronted with the moral dilemma of his role as a bounty hunter because the advanced androids blur the ethical implication of his role. Rick thinks that androids are integrally not a threat and the real danger is losing the human empathy by subjugating them.

Sims asserts that the androids in the novel are first employed as a replacement for soldiers in World War Terminus and later modified as servants to humans on other colony planets. He has used Feinberg’s conception of technology that the technological inventions, “perceive function before form” (Sims 72). The empathy test, conducted by Rick to identify androids, is faulty as schizophrenic humans also cannot pass the test. It leads to the question if a schizophrenic fails the test then he will not be regarded as human and will be retired. Therefore, *DADES* is not concerned with dehumanizing effects of technology but sees it as an essential link to the human’s essence. The humanoid robots and the empathy test do not reveal only the potential danger of technology but also propose that it can be used for the betterment of humanity. Although, natural is preferred over artificial but in the novel artificial is the product of willingness of humans to create; it asserts the superiority of human’s intellect. Sims is fundamentally concerned with the relationship between technology and humans, and how individuality of androids can endanger human species, as the traditional distinction between natural and artificial will be blurred.

Maria Brand (2013) in her research is majorly concerned with humanlike capacities of robots and how they can evoke empathy or dyspathy amongst humans in posthuman future as presented in *Do Android Dream of Electric Sheep?* and Isaac Asimov's *I, Robot*. Her basic concern is why in both the novels humans feel empathy or dyspathy for robots and why these robots are considered as 'others'. She has tried to investigate the reasons of empathy/dyspathy towards artificial humans and has concluded that it can either be due to external appearance of the androids or the internal feelings, sentience, of them.

Brand states that *DADES* is predominantly pessimistic while Asimov's *I, Robot* is optimistic in its approach. Dick's novel represents a devastated hypothetical future. The focus of the novel is on the use of technology either to be used for the welfare of humanity or for the destruction of human race. It also explores the relationship of humans with technology, either humans empathise with technology or despise it. She has defined empathy and dyspathy at length in her study. Empathy, according to Brand, is to get into another person's feelings and emotions and she has considered a broad perspective of empathy which includes both cognitive and emotional aspects of the term. Dyspathy, on the other hand, is defined as antipathy or distaste. The intelligent machines are the objects of aversion due to their appearance and lack of empathy in the novels. Therefore, for Brand empathy and dyspathy is not only caused by the appearance but also by the behaviour of the intelligent machines.

Brand says that the androids/robots in *I, Robot* evoke empathy while in *DADES* it sparks dyspathy, although it is hard to differentiate them from humans. In Dick's novel the androids trigger uncanny as they are unable to simulate humans despite their close resemblance. The artificial beings in *DADES* are subjected to Otherization. They evoke fear and they are meant to be slaves. Due to this the androids' revolt against humans and flee to the earth. On earth as well, they are not welcomed and are targeted by the bounty hunters. Brand concludes, that in the novels, empathy and dyspathy lead to Otherization⁴ of machines. However, there are humans who are more dehumanised than machines; machines more human than humans. If an artificial being possesses even a fraction of sentience than it is immoral to destroy them or deprive them. Her major concern is empathy of machines and humans' treatment of it. She does not talk about representation and reception of technology in literature and society.

Maria Robles Lorite (2016) has analysed posthuman themes in Dick's novel and Marge Piercy's *He, She and It* while keeping in view the ethical considerations of AI. According to Lorite the use of technology has led towards serious complications: moral, spiritual, and its influence on humans in the novels. She has tried to explore the novel from ethical perspective.

Lorite has recalled the basic existential ideas like the essence of human being, identity, and human sentience to reinterpret these concepts in the light of technology and extend coverage of the philosophical notions. The introduction of technology into existential domain has led to the debate that whether it is possible to achieve sentience in artificial beings or not. The posthumanists are trying to explore this area in SF novels where the relationship between humans and artificial beings is presented either in a supportive manner or a hostile one. The tendency of SF to speculate future of humans and technology has led posthumanists to consider the genre for interpretations as it deals with the basic ideals of posthumanism.

Posthumanists assert that human thinking process and processing of computers is alike. It gives rise to the debate if it is possible for machines to have human sentience. Therefore, technology is expanding the horizon of human's experience and identity. SF has been able to foreshadow the techno-culture of future and human's place in it. It speculates that how far human's identity will be altered or affected by technology in the future.

For Lorite, at the start of *DADES* the advanced androids are considered not, "equipped with ethics and moral codes since they are human creation" (Lorite 23). The protagonist, Rick Deckard, uses the Voight Kampff⁵ test to detect androids by measuring the empathy level as they are supposed to have low empathy. Rick does not feel empathy and compassion for the androids he retires. Rachael, an android, feels empathy for the androids and takes revenge from Rick, for killing other androids, by pushing Rick's biological goat from the rooftop. She proclaims that Rick might also be an android that is why towards the end of the novel he feels empathy for the androids and question his own job of retiring them. Lorite has focused on the identity of posthumans and has asserted that in the future the two binaries, artificial and natural, will be blurred. The traditional definition of human's identity will also consider technology and extend the premises of posthuman identity.

Quentin Samuel Miller (2017) has taken an ecocritical stance on Dick's novel and has explicated that how dualisms of various kinds in posthuman future may be disruptive. He has tried to demonstrate that how non-human environment interacts with human. According to Miller, Dick has exposed the complicated relationship of nature and humans in his work.

Miller has utilised Arne Næss' theory of Deep Ecology⁶ to understand the relationship of human/nonhuman and nature in *DADES*. For him, Dick's novel revolves around central issue of what nonhuman is. Dick has presented a typical post-apocalyptic environment of San Francisco where nonhumans exist as living entities alongside humans:

Do Androids Dream builds a “narrative of matter,” which projects the stories of lively nonhuman actors into contemporary navigations of agency and environmental concerns confronted in reality. (Miller 2)

Dick's narrative is set in “Anthropocene epoch” (Miller 2). It points to the idea that humans disrupt earth's ecosystem, but it ignores the impacts of nonhuman on humans. The shortcomings of Anthropocene concept have been addressed by New Materialism⁷ which, “proposes ways to analyse language and reality, human and nonhuman life, mind and matter, without falling into dichotomous patterns of thinking” (Miller 3). Therefore, new materialists do not see matter as non-living entity but as having its own value and essence, and it has opened ways for new researches. Miller has emphasized that in *DADES* both human and non-human work together and the nonhuman characters also assert their subjectivity and agency to co-exist with humans.

For Miller, apart from nonhuman interaction with human, there is, “a larger theme of impermanence” (Miller 51) that runs throughout *DADES*. It is the impermanence of human in Anthropocene age; only nonhuman is permanent and universal. The sustainability of human race lies within acceptance and incorporation of nonhuman in a posthuman society. Thus, Miller main concern is with integration of human and nonhuman world as for him both will become inseparable in a technologically advanced future.

The selected essays on *DADES* enlighten the present study and the areas which remains unexplored in the previous works. Most of the essays reviewed are concerned with the empathy of machines and have tried to justify machines as sentient beings, demand of equal treatment/rights, and coexistence of machines and humans in a posthuman future.

The essays clearly do not analyse the stigmatisation of AI, which I have done in the succeeding chapters, and its implications on the collective consciousness of the society.

III

There is no notable research carried out on Jack Williamson's *With Folded Hands* and the present study will be one of the pioneer works to explore Williamson's works. However, in his essay "Jack Williamson: Master of Consistency and Change" (2006), David Brin⁸ has reviewed Williamson's artistic value and his themes. He has regarded Williamson as a spell-breaker of old and monotonous themes of SF. The world of his fictions is ever changing, innovative, and predicting future in the subtlest ways. He heralds a new golden age, the age which does not draw from past but an age which strives for future, not through fantasy but through hard work and science. His greatest contribution is legitimization of SF and giving it a standardized status in academia. Like most pulp fiction, his works are not filled with improbable stories but with the dangers which technology will pose humans with in future. His themes are regarded as a yardstick for the pulp era. Brin has reviewed *WFH* and has pointed out its main theme to be a warning for future generation about obsession with technology and the outcomes of technophobia. Therefore, *WFH* is a perfect exemplum of pulp era SF and it can be readily evaluated through postmodernist perspective.

Thus, works of Jack Williamson remains an unexplored territory and investigating the posthuman themes in his works will guide new studies. His selected work is closely related to the main area of my research; therefore, I will analyse it in Chapter 4 through a postmodernist lens I have adopted for the present study.

2.3. Conclusion

I have reviewed selected works for my project ranging from the broad area of contemporary American SF to the narrowed down works, *DADES* and *WFH*, and have analysed them in three parts. The review has provided a context for my study in analysing the primary texts in the coming chapters. The reason behind selective resources is the immediate link with my research, and there might have been other important researches which I have not included. I have tried to include works which are guiding posts for my study. Some of the works I have reviewed certainly do not only discuss my primary texts but also other works

and writers as well that have helped me in analysing primary texts and contextualizing it. I have not intentionally included some of the works, which are related to my study, in order to avoid repetition of the same ideas in the forthcoming chapters. The works included in review are inseparable and important for my research and I have tried to connect the reviews to my project and to identify the gaps present in the works. The purpose of the review is to analyse the current trends in contemporary American SF and the works under consideration. It is clear from the researches reviewed that there are many perspectives still being debated in contemporary American SF and particularly in works of Philip K. Dick and Jack Williamson. Stigmatization of AI in contemporary American SF is one of the unexplored areas (gaps) of research in recent academia. Therefore, my research project will focus on the issues concerning stigmatization of AI as part of posthumanist themes of SF in selected works. The reviews have provided me with clear directions about my theoretical framework and research methodology which I have presented in the forthcoming chapter.

Endnotes

¹ A nation state is a state in which the great majority shares the same culture and is conscious of it. The nation state is an ideal in which cultural boundaries match up with political ones.

² Mercerism is a religion that spread on earth and the space colonies after World War Terminus whose main purpose is to unite humanity. This religion is founded upon the life and teachings of a man called Wilbur Mercer and is based on two principles: empathy to other individuals and working for the good of the community.

³ The military is recreating the voices and images of adversarial commanding personnel to control the strategic infrastructure of opponents. Apart from its widespread military, political and ethical significations, this project might also be taken as the latest rampant in technologically advanced cultures, to couple the human and cross the borders between the "natural" and the technological.

⁴ The reductive action of labelling a person as someone who belongs to a subordinate social category defined as the Other. The practice of Othering is the exclusion of persons who do not fit the norm of the social group, which is a version of the Self.

⁵ A test consisting of a set of images and questions, asked while the subject's biometric data are gathered; intended to separate humans from non-humans.

⁶ Deep ecology is an ecological and environmental philosophy promoting the inherent worth of living beings regardless of their instrumental utility to human needs, plus a restructuring of modern human societies in accordance with such ideas.

⁷ New materialism shows how the mind is always already material (the mind is an idea of the body), how matter is necessarily something of the mind (the mind has the body as its object), and how nature and culture are always already "naturecultures" (Donna Haraway's term). New materialism opposes the transcendental and humanist (dualist) traditions that are haunting cultural theory, standing on the brink of both the modern and the post-postmodern era.

⁸ Glen David Brin is an American scientist and author of science fiction. He has received the Hugo, Locus, Campbell and Nebula Awards. His novel *The Postman* was adapted as a feature film and starred Kevin Costner in 1997.

CHAPTER 3

THEORETICAL FRAMEWORK AND RESEARCH METHODOLOGY

3.1. Introduction

The preceding chapter, Literature Review, has provided me with critical acumen on my theoretical framework as I am now able to clearly state my lens for analysis of the primary texts. In addition to theoretical framework, it has also served in clearly devising my research methodology and methods. In this chapter, first, I have elaborated the theoretical lens that I will employ for the analysis of the selected works. I have presented a brief overview of postmodern theory and posthuman theory to make my theoretical framework comprehensive and informing. Second, I have discussed the research methodology utilized for my study.

3.2. Theoretical Framework

The overlapping between posthumanism and postmodernism has provided theoretical framework for my research. Though I have used postmodernist theory of stigmatization as a theoretical framework to study the selected works, my approach is varied as the area of study is interconnecting with posthumanism. I have studied the selected works of contemporary American SF in a space where both the theories intersect. The convergence and divergence between postmodernism and posthumanism have led me to proceed with my research. My purpose is to explicate theory of stigmatization, but it cannot be done without referring to postmodernism and posthumanism. For clarity, I have divided my theoretical framework into the following sub-heads.

3.2.1. Postmodernism and its Philosophical Background

Postmodernism is a philosophical reaction to modernism, which has been a prevailing theory in literary studies since Enlightenment. Jean-Francois Lyotard and Jean Baudrillard are the central figures of postmodern theory and their works *The Postmodern Condition: A Report on Knowledge* (1979) and *Simulacra and Simulation* (1981), respectively, are the

pioneering works. Lyotard has defined postmodernism in simple words, “as incredulity toward metanarratives” (Lyotard xxiv). For Lyotard, the metanarrative of progress has overlooked the mini-narratives and have erroneously tried for de-fragmentation of fragmented society, culture, religion, morality, history, and subjectivity. As Peter Barry’s *Beginning Theory: An Introduction to Literary and Cultural Theory* (2009) suggests:

...the best we can hope for is a series of ‘mininarratives’, which are provisional, contingent, temporary, and relative which provide a basis for the actions of specific groups in particular local circumstances. (Barry 83)

Hence, for Lyotard, postmodernism is going away from generalization to particularization of history. It is also going away with the concept of subjectivity and considering multiple perspectives rather than fixed viewpoints, for example, the concept of subjectivity in humanism is fixed and it refers to white male. However, it has been deconstructed by postmodernism from various perspectives like postcolonialism, feminism, poststructuralism, and so forth. The concepts of unitary subjecthood and linear history have been undermined by postmodern theorists. Jean Baudrillard’s concepts of hyperreality and simulacrum are mandatory for postmodern theory. For him the present times have lost the sense of reality and the relationship between real and artificial has lost its vitality and the boundaries between the two have been blurred by media and technology. The blurring of real and artificial has created a sense of hyperreality, which is the incapability of human consciousness to differentiate between the two, for example the recent technologies like Augmented Reality (AR) has amalgamated the real world and simulation. He has deconstructed the traditional concepts of sign and signified because hyperreality has undermined the relationship between sign and signified and it is no longer a simple one. It creates a system of simulacrum which is the simulation of reality not the representation of reality. Thus, postmodernism is about deconstruction of metanarratives and the concept of reality.

3.2.2. Theory of Stigmatization

Theory of Stigmatization is one of the postmodern theories in social psychology which is presented by Erving Goffman¹ in his seminal work *Stigma: Notes on the Management of Spoiled Identity* (1963). The basic issue he has dealt with in his book is about how society controls the image of a person, thing or a process and makes it stigmatized. Goffman has

taken the literal meaning of the term stigma as used by the Greeks to brand traitors, dissenters, and slaves. His usage is not about physical branding but with the ignominy it causes. He has given two sets of social identities, i.e. 'actual social identity' and 'virtual social identity' (Goffman 2). Virtual identity refers to one's presumed notions about another individual, while actual identity refers to the individual's apparent traits. The incongruity between actual and virtual identity leads to spoiled identity and the individual is termed as 'discredited' or 'discreditable' (Goffman 41). If the traits of spoiled identity are present then the individual is discredited but if the traits are only anticipated by others then the individual is discreditable, and a stereotype is created out of it. Stigmatization strengthens 'collective consciousness' of a society, a term coined by Emile Durkheim. Durkheim is known as one of the founders of sociology and is associated with functionalist school of thought. For him, all social hierarchies are there to maintain cohesion and coherence in a society. He asserts "collective consciousness/conscience collective" is, "the totality of beliefs and sentiments common to average citizen of the same society" (Durkheim 79). Collective consciousness is like a culture and we all end up subscribing to it. It goes on after people die and can pass on from generation to generation. It acts as an external stimulus which exert pressure on an individual to conform to the society, in return the individual internalizes collective consciousness. It is a driving force behind the set standards of any given culture or society and if one does not conform to it then he/she maybe stigmatized. However, for Goffman it is not only the discredited or discreditable to be stigmatized by the society, but a wise can also be stigmatized for satiation of collective consciousness of the normals. Thus, "...stigma management is a general feature of society, a process occurring wherever there are identity norms" (Goffman 130).

3.2.3. Link and Phelan's Model of Stigmatization

I have selected Model of Stigmatization to investigate my primary texts. However, I have partially employed the model to keep my analysis unrestrictive. Some of the important parts of the model that I have selected are crucial for undertraining and analysing stigma in the works. In "Conceptualizing Stigma" (2001), Bruce G. Link and Jo C. Phelan have presented a stigmatization model in extension to Goffman's theory where they have discussed power hierarchy and its influence on stigmatization process. They have defined

stigma in terms of interconnected components and it happens, “...when elements of labelling, stereotyping, separation, status loss, and discrimination co-occur in a power situation that allows the components of stigma to unfold” (Link and Phelan 367). Four major components of stigmatization model are labelling, stereotyping, exclusion, and discrimination. An individual is labelled based on overgeneralized traits by the society and it is usually due to differences among individuals, e.g. the categorization of white and black people or disable and normal people. The labelling of a category or an individual is usually presumed and neglected in a society, and it is influenced by affective socio-cultural factors. When a label links an individual to disagreeable traits then he is stereotyped, as an example, mental patients are linked to negative traits like being dangerous for the normal people:

Thus, from a psychological standpoint, culturally given categories are present even at a preconscious level and provide people with a means of making shorthand decisions that free them to attend to other matters. (Link and Phelan 369)

The individual which does not fit in the general categories defined by a society are stigmatized and it leads to the severe case of exclusion, where ‘us’ is separated from ‘them’. It is not necessary that individuals usually with negative traits are stigmatised but having a trait which the public does not have can also lead to stigmatisation, e.g. nerds are stigmatised not for being different but for being intelligent, it is done to satiate collective consciousness of a society. All the three components lead to a situation where the “labelled person” with “undesirable characteristics” experiences “status loss and discrimination” (Link and Phelan 370). Thus, the individual who is stigmatised is excluded and every sort of treatment or perception of them is normalized in a society. For Link and Phelan, stigma is embedded in power, only the ones having social, cultural, or political power can stigmatize. Matthew W. Hughey² (2012) argues that stigmatization focuses on the ostracized beings like mental patients, homeless, LGBT groups, hate crime victims, racial crime victims, hesitant English speaker, and obese people.

3.2.4. Stigmatization of AI in Contemporary American SF

I have employed Link and Phelan’s model of stigmatization, an anti-foundationalist theory, to selected works of contemporary American SF to explore the various means through which AI has been stigmatized and presented as a peril to humans and humanity in

posthumanism, a neo-foundationalist theory. I have extended the range of stigmatization to Artificial Intelligence/intelligent machines as presented and perceived in the contemporary SF, specifically American SF.

Posthumanism has created another binary for labelling, that is of humans and posthumans. AI (posthuman) is stereotyped for being intelligent in comparison to normal humans. This stereotyping has led to association of negative characteristics with AI, for example, it is considered destructive and violent. It has led to violent separation of humans from technology and has created an environment of technophobia where normal humans (us) struggle for their existence amid posthumans (them). The stigmatization of AI is evident in contemporary American SF and it has created a norm that AI is a threat to humanity, and this has led to overgeneralization about AI in society, as the literature of potential superpower has said so.

In order to make it more comprehensive for the reader, I have briefly discussed posthuman theory to give an overview of the theory. It is because my research deals with posthuman concepts and I have used postmodern theory of stigmatization to evaluate it. Therefore, it will be informing about current and emerging trends in posthuman literature.

3.2.5. Posthumanism and its Philosophical Background

The possibility of a posthuman future has led many researchers and philosophers to theorizing about the ethical, cultural, social, religious considerations and the advances it will pose humans with. There is abundance of scholarship, available on posthuman issues, which evoke controversial public opinion. The SF genre is one of the foremost important tools in the propagation of posthuman themes in the contemporary American literature.

3.2.6. Defining Posthumanism

Posthumanism, from its inception, has diverse definitions and many theorists have described it differently and from varied perspectives and it is an ongoing debate in literary circles. Jacques Derrida and Michel Foucault can be regarded as among earliest theorists who have dismantled human subject and individuality by extending the range of agency. Posthumanism has extended the range of agency to artificial beings as well.

Francesca Ferrando in her article “Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms: Differences and Relations” (2013) has argued that posthumanism can be defined from three perspectives, i.e. humanism, anthropocentrism, and dualism. Firstly, posthumanism is defined in relation to humanism, one of the earliest philosophical theory, as the idea of being human is the crux of this theory. Its focus is on humans, but it has been discriminatory as it has created the binaries of less humans and more humans, where one human is considered less human by another privileged human, e.g. slaves have been considered less humans by the masters in early American society. The idea of human is deconstructed by post-modernism and it has regarded human not as one but many, e.g. feminism has rejected the one human subjectivity (man as the only subject matter). Therefore, posthumanism has rejected the idea of being one, humans cannot be presented under one banner. Secondly, posthumanism can be regarded as post-anthropocentrism because it does not only talk about human subjects but also about non-living and technological subjects. The idea of *Anthropos* has been very exclusive as it excludes non-human animals, divine beings, or other humans who are considered less humans. Anthropocentrism discriminates on the basis of speciesism³ and it is directly related to Anthropocene, an era where human beings have been living. It is specifically related to second half of the Eighteenth Century’s Industrial Revolution: the epoch which highlighted the importance of human beings and the negative impact they have on the universe. Jacques Derrida’s in his work *The Animal that therefore I am* (2002) has pondered on the existing philosophical traditions and for him they have been unable to throw down the gauntlet of human and animal correlation. He has emphasized that animal-human relationship needs to be deconstructed from different ethical and political perspectives. He presents innovative and emancipating prospects for the said, human-animal, subjects. Derrida’s notions have been visionary for posthuman theory as he has proposed re-evaluation of human-animal relationship, or in posthuman theory the relationship of living-non-living subjects. Therefore, posthumanism decentralizes the focus on humans in discourse as humans cannot be the centre of everything. Thirdly, it can be defined in relation to dualism. Dualists seek to create identity of one thing in relation to other, for example the identity of human is created in relation to animals. It is a social technology which discriminates one from other but for posthumanism it is hard to separate

humans from non-humans or others. They share many similarities with other species, therefore, humans are not one but many. Posthumanism is a post-dualist theory as it believes in interconnection, relationality, and co-existence of species and other things in the universe. Thus, “Posthumanism is a post-centralizing” (Ferrando 30) theory, the idea of subjectivity is extended to living and non-living beings, in addition to human beings.

Posthumanism should not be confused with anti-humanism, which has been advocated by Michel Foucault in his work *The Order of Things* (1966). Foucault has regarded human as a recent construct of subjectivity which will soon come to an end with an epistemological turn:

It is comforting, however, and a source of profound relief to think that man is only a recent invention, a figure not yet two centuries old, a new wrinkle in our knowledge, and that he will disappear again as soon as that knowledge has discovered a new form. (Foucault xxv)

For him the epistemological turn, which will be caused by the death of man, either metaphorically or literally, will end the sovereignty of human subject. It has been privileged in Western philosophy since Eighteenth Century over the metaphysical subjectivity of Greek and Roman eras. On the other hand, posthumanism cannot be regarded as an anti-human theory because it extends the range of subjectivity by being inclusive of living, non-living, and technological subjects. Although Robert Pepperell’s *The Posthuman Condition* (1995) demarcates philosophically between humanism and posthumanism, it clarifies the posthuman perspective of subjectivity. Pepperell has contended that humanists consider themselves to be distinctive creatures in a hostile correlation with their environment, while posthumans view their own body epitomized in a broadened mechanical world. The relationship among God, man and nature has drastically changed due to rapid industrialization. He has defined posthumanism as, “the erosion of the barrier between ‘natural’ and ‘human-made’ phenomena” (Pepperell 161), and “the tendency towards artificial life, synthesized intelligence and telepresence” (Pepperell 161). Humanism for him is a world of ‘certainty’ and ‘predictability’, while posthumanism on the other hand is a world of ‘uncertainty’ and ‘unpredictability’. In other words, posthumanism is past the certainties and predictability of a humanist universe and

it dismantles anthropocentrism, but it is not anti-humanistic in approach as explained earlier.

Posthumanism needs to be contrasted with transhumanism as it is misused as an alternative for it. David Roden's *Posthuman Life* (2014) ponders upon terminologies used in posthumanism and tends to provide explanation of them. The difference between posthumanism and transhumanism has led many scholars into confusion and Roden is one of the scholars who has tried to clarify it. According to him, transhumanism tends to use science and advanced technologies for the betterment of human species, e.g. cyborg technology. Nick Bostrom (2001), one of the central figures of transhumanism, has argued:

Transhumanists view technological progress as a joint human effort to invent new tools that we can use to reshape the human condition and overcome our biological limitations, making it possible for those who so want to become "post-humans". Whether the tools are "natural" or "unnatural" is entirely irrelevant. (Bostrom, What is Transhumanism? n.p)

On the other hand, posthumanism is, “the philosophical critique of anthropocentrism” (Roden 20) and its privileged position in philosophy. I have discussed earlier in the chapter, it is also re-evaluation of humanism and dualism. Therefore, transhumanism can be called as a branch of posthumanism but not a substitute for it. I have compared postmodernism with posthumanism to elaborate the main points of convergence and divergence.

3.2.7. Postmodernism vs Posthumanism

Posthumanism is regarded an offshoot of postmodernism as both theories deal with the notions of subjectivity and reality as stated earlier. However, in her essay, “Posthuman Critical Theory”, Rosi Braidotti has regarded posthumanism as a ‘neo-foundationalist’ which, “aims at re-grounding concepts and practices of subjectivity in a world fraught with contradictory socio-economic developments and major internal fractures” (Braidotti 14). Postmodernism, on the other hand, is an anti-foundationalist which deconstructs the subjectivity of selfhood and dismantle known centres of knowledge. Hence, posthumanism tends to take sides while postmodernism decentre all the sides. I have selected postmodern theory of stigmatization for my present research which challenges stigma's creation.

3.3. Research Method

I have made a postmodern reading of my primary texts. My research project is qualitative in nature and it tries to illustrate different cues in the primary texts that might be considered to reflect stigmatization of AI in contemporary American SF. I have utilised qualitative research method for the analysis of primary data, i.e. textual analysis.

3.3.1. Textual Analysis

Catherine Belsey has explained textual analysis in her essay “Textual Analysis as a Research Method” (2005), included in Gabriele Griffin’s *Research Methods for English Studies* (2005). It is about the text itself and the reader/interpreter. It focuses on the effects of text; the effects text has on the reader/interpreter. Belsey (2005) clarifies that it might be more helpful to use secondary sources. While studying primary data, the reader/interpreter is trying to discover a new perspective, other individuals' sources may ruin as opposed to encourage this. A researcher’s own conclusions are favoured more, but it also keeps the door open for further interpretations and studies of the selected texts than reaching any definite closure of meanings. Therefore, I have selected textual analysis as a research method because it favours open-endedness over dead ends.

Textual analysis concentrates on the text, to whoever it addresses, its context, and the effect it has on the reader/critic/interpreter. According to Belsey, most readers go for the known or observable facts in a text, but a researcher must look for those facts which are previously unknown and must foreground something new in a text. Texts are for the readers to read and there is always a possibility for reader’s own thinking. A reader can deduce multiple meanings from a text. His/her interpretation of a text can be varied as compared to that of a writer. The role of a reader/interpreter/critic is superordinate and the interpretation of a text not only focuses on the textual knowledge but also, “involves extra-textual knowledge” (160). The extra-textual knowledge is gained from the context of the text and it helps in opening new avenues for research.

There are varied approaches to conduct textual analysis and rhetorical criticism is one of it. It involves a methodical approach towards texts to describe, analyze, interpret, and evaluate the rooted message in it. It also considers the socio-historical context of texts

for the critical evaluation of society. Therefore, the applied method is very conducive for my research project as it not only involves analysis of the selected texts but also its impact on society.

3.4. Conclusion

My research is qualitative in nature and I have employed textual analysis as research method. I have closely read and analysed my primary texts in the light of Goffman's stigmatization theory with partial emphasis on Link and Phelan's stigmatization model. Apart from its focus on stigmatization, I have tried to state the possible ethical and societal impacts of contemporary American SF. Therefore, my research project partially engages with American Science-fiction as a genre as well and the role it is playing in propagating stigmatisation of AI. With theoretical framework and research methodology explained, I, keeping in view my research questions, have done textual analysis of the selected primary texts in the next two chapters.

Endnotes

¹ The sociologist who first proposed investigating the “interaction order,” that is, the organization underlying relationships in everyday life, as a serious topic. He was a social theorist of large ideas which have served as the basis of studies of language and social interaction ever since. His explanations of identity, multiple selves, and social roles have shaped current discussion on these subjects across disciplines.

² An American sociologist known for his work on race and racism. He is Associate Professor of Sociology at the University of Connecticut,

³ The idea that being human is a good enough reason for human animals to have greater moral rights than non-human animals. A prejudice or bias in favour of the interests of members of one's own species and against those of members of other species.

CHAPTER 4

SPECULATED SUBVERSION OF HUMAN EMPIRE THROUGH AI IN SELECTED WORKS

4.1. Introduction

In this chapter, I have analysed Jack Williamson's *With Folded Hands* and Philip K. Dick's *Do Androids Dream of Electric Sheep?*. Williamson, a prolific and representative writer of Pulp Era, and Dick, a representative of cyberpunk age, have unfolded archetypal role and representation of technology in their works, wittingly or unwittingly. I have proposed that through their portrayal of technology, specifically AI, they have delimited the role of AI to destruction of humanity. The delimitation of technology's role has led to stigmatization of AI in the contemporary world. This kind of representation of AI has devastating effects on the mind of readers and it adds to the collective consciousness of the society.

The best introduction to American SF is to read Williamson's works. He started writing early, in 1928, and published until two years before his death in 2006. He has authored more than fifty books in his seven decades of writing career. He is best known for his *Humanoid Series* (1947-1980), a precautionary story about the dangers of technology and its ability to overcome the human race in a dystopian future. His other major series include *Legion of Space Series* (1934-1984) and *Seetee Series* (1942-1971). He is known as 'Dean of Science Fiction' because he opened his home, heart, and mind to the students. He helped young writers to develop and enhance their skills in writing SF. He has received two Hugo awards and one Nebula award for his contributions to the SF genre and is considered second only to Robert Heinlein. He has been credited for coining novel words like matter, anti-matter¹, terraforming², genetic engineering and so forth, even before their actual realization in the field of science. His profound background in science, like all other SF writers, has served him very well in terms of extrapolating from a direction he speculated science would go, e.g. his concepts of androids and humanoids are still struggled with by scientists. He donated his personal library, manuscripts, photographs,

and letters to Eastern New Mexico University's "Special Collection" which the university has named as "Jack Williamson Science Fiction Collection", it is also known as third best SF library in the world. Apart from the library, "The Jack Williamson Lectureship" has been started in 1977 by Eastern New Mexico University on Williamson's retirement from teaching and it provides a platform for writers, editors, artists and other speakers to gather and share ideas. For him, technology has been the crucial element of SF because it is changing our world and our perception of world. People are interested in change which technology has brought and the impact it has on our society. For Williamson, SF does not focus on prediction of future but on possibilities of technology. He has always tried to correct the notion that SF predicts future, but its role is to extrapolate what technology, science, and humanity are doing together to create the future. The more we are aware of it the more assuredly we will want to control the trajectory of the change and to preserve the humanity that must go with science and technology in the future. It is his unprecedented speculation about technology that has made me to include his work for the analysis of my research project and point to the fact that his over conscious treatment of technology has added to the stigmatization of technology in SF, and in return it has devastating effects on the modern society.

Philip K. Dick is regarded as Charles Dickens of SF. He has written detailed and dense narratives like Dickens. He has written forty-four novels and one hundred and twenty short stories in a career spanning three decades. His novel *The Man in the High Castle* (1962) has won him literary acclaim and a Hugo Award. Dick has tried to portray reality of today's world, but the darker side to the reality or simply dark dystopia³. He has given romantic aspect to this dark side of reality in his works. His works were produced at the times when today's technology had been in its infancy. He predicts a future in which human's perception of reality will be altered by technology. In majority of his works, his major characters struggle to differentiate between real reality and constructed reality, the reality created by technology. He has a profound influence on android robotics field. His works are a motivating factor for designers and engineers of androids.

The personal tragedy of his twin sister's death has deeply affected his writings and his life. He suffered hallucinations and that has made him to question the nature of reality. He had a long history of visions which had been at times attributed to his schizophrenic

attitude. His paranoia has contributed to his genius as SF writer. He is seen as a prophet of future world because his works are heraldry for science and technology. He always sees the dark side of technology, the potential of any form of technology going from benefit to hazard. His focus is more on danger than usefulness. For him, technology is fooling humans into escaping the real reality and it is unhealthy. His writings are a warning for future generation about technology. Living during counter-culture revolution of drugs, politics, war (Vietnam War), sex, and religion, he explores the possibility of alternate future and past. It has led to creation of a unique concept of parallel universe, a concept exclusively by him. Most of his works are adopted into Hollywood blockbuster movies like *Blade Runner* (1982), *Total Recall* (1990), and *Minority Report* (2002), to name a few. His dark view of technology and its potential to change human's future has led to shape the genre of SF in Cyberpunk Age. In his lifetime, he was author of a genre which was on the margin of accepted literary genres. Hollywood discovers SF and the genre is brought into mainstream media and so does Dick's literary legacy. Due to dystopian themes in his works and being an influential SF writer, I have selected his novel, *DADES*, for my study.

Before moving towards textual analysis of my primary texts, I have explored briefly possible posthuman themes in contemporary American SF and have pointed towards one of the important themes, i.e. AI take over.

4.2. Posthuman Themes of American Science Fiction

Themes of contemporary American SF are varied but some of the important are aliens versus humans, technology versus humans, space versus earth, dystopia versus utopia, humans versus posthumans, alternate universes versus actual universe, to name a few. I have only focused on one theme, which is related to my research project, and that is AI takeover (technology vs humans). Contemporary American SF has a tremendous potential for cyberpunk culture. It is also a subgenre of posthumanism which deals with the representation of techno-culture in SF.

I have already discussed the history of cyberpunk genre in Chapter 1, now I will focus on the definition of the term. It is not only a genre but refers to a culture as well. As a genre it alludes to a future dominated by technology, usually a dystopian future, and as a culture it is an attitude of people words technology and its social impacts. Bruce Sterling's

introduction to William Gibson *Burning Chrome* (1986) has become a signature definition of cyberpunk as calling it a, “combination of lowlife and high tech” (Gibson). Referring to high-tech it involves advanced technologies like cybernetics, AI, nanotechnology, biotechnology, and so forth, on the other hand, it depicts lives of people influenced by oppressive technology, crimes, dissenters, and authoritative governments. Therefore, cyberpunk refers to a society/fiction dominated by techno-culture.

Posthuman terms like AI (Artificial Intelligence), cyborg, humanoid, and android are some of the important glossary items of cyberpunk genre. Artificial Intelligence is the use of advanced cognitive technologies in the machines to have humanlike capabilities. Luciana Parisi has pointed out that the term has first been employed in 1955 by, “American computer scientist and cognitivist scientist John McCarthy... to describe machines designed to be intelligent agents equipped with beliefs systems” (Braidotti and Hlavajova, *Posthuman Glossary* 21). It has manifold uses in recent technologies like cyborg, cybernetic organism, which is the extension of human abilities beyond normal with aid of mechanical components. In contrast, humanoids, are robots having human appearance but without being human; androids are also humanoid robots. I have not limited my research to androids/humanoids but have simply focused on the presentation of AI whether in the form of android/humanoid or any super-intelligent machine. These terms are important for developing a clear understanding of contemporary SF genre having posthuman themes, particularly AI takeover.

4.2.1. AI Takeover

It is one of the most significant themes of contemporary American SF, as I have referred to in Chapter 1. It lies at heart of the genre be it presenting dystopian or utopian society. One will find in most of the SF novels, intelligent beings or machines taking over humanity and the humans in turn revolting and turning the tables. The fiction would start with AI turning against its creators and overthrowing them. The AIs are either reprogrammed as evil or simply following their programmed intelligence strictly. One such cliché scenario is, if an AI is programmed to keep human beings from any harm and it takes this directive quite plainly and keeps the humans under strict observation, which eventually bars humans from their mundane activities to the point where AI controls their lives. It refers to super-

machines uprising which threatens humanity or the human empire. I have focused on this theme of contemporary American SF and have built my analysis to investigate it in the present chapter in the light of postmodern theory of stigmatization.

4.3. *With Folded Hands and Do Androids Dream of Electric Sheep?: A Textual Analysis*

I have analysed Williamson's *WFH* and Dick's *DADES* with the help of Belsey's textual analysis method. In the light of the discussion given by Belsey (as discussed in Chapter 3), I, as a researcher, may carry my research using the theory of stigmatization for the analysis of primary texts using textual analysis. In order to move coherently, I have briefly discussed the major plots of both texts to make it convenient for the readers and inform them beforehand about the plot. Pertaining to the research questions, I have analysed major posthuman theme of the works, that is AI takeover. The major theme unfolds the relationship of characters with technology and their understanding of technology. The perception of technology has led to creation of parallel universe/ shared worlds, one of humans where they struggle to survive and other of artificial beings where they have overpowered humans. It all leads to formation of a major binary, that is of humans and posthumans. Humans are weak and posthumans are powerful. Due to formation of binaries, stigma comes into existence as one of the binary opposites is usually stigmatized. This stigmatisation is clear in the selected works, as all the negative attributes are attached to AI and it is represented as an enemy of human. The binary of humans is presented as victimized by AI and their very existence is at risk in the selected works. I have done analysis of both the texts side by side rather than analysing them separately which would have made analysis tedious and repetitive.

WFH narrates a story of an androids' agency owner, Mr. Underhill, whose business is on the verge of bankruptcy. It is set in a technologically advanced universe where human beings rely more on machines for their daily chores, a pre-apocalypse world. The scenario for Mr. Underhill is worsened by new humanoids which have come from another planet, Wing IV. The advanced humanoids are of no match and slowly they infiltrate every field of life and tactfully suppress humans under their Prime Directive. Mr. Underhill constantly avoids their services in his house because he is annoyed with new technologies, but still he

is given a free humanoid to serve his wife, Aurora, on trial basis. His business receives a last blow when “Humanoid Institute” tries to assign his property for their new consignment. Meanwhile, Mrs. Underhill rents out their old garage to a suspicious old man, Mr. Sledge. Mr. Underhill is sure that the old man is a vagabond and has only gained sympathy of his soft-hearted wife by presenting himself to be weak and ill. Over the course of time he learns that Mr. Sledge is the one who has created the new humanoids, which are perfect in every aspect and no human can interfere in their commands. Slowly the humanoids suppress humans under their Prime Directive to, “guard men from harm” (Williamson 6) and confine them to their homes with nothing to do as everything is done by the machines in order to protect humans from any possible harm. The very idea of protection leads the human population to detest the humanoids because they have barred humans from all sorts of leisure, work, risks, and adventures in their lives. Mr. Sledge is on a secret mission to stop his own creations from overtaking his freedom. He tries to build a device which can destroy the Central Unit to stop the humanoids from overtaking the human empire. He along with Mr. Underhill succeeds in building the device but all their efforts are dismissed by the machines as they have been already aware of Mr. Sledge’s secret mission and have protected the Central Unit from his invention. Mr. Sledge is treated by the machines and all ‘unhappy memories’ (Williamson 42) are erased from his subconscious as one of the Prime Directives is to keep men happy. The narrative ends on a pessimistic note that humans have nothing to do except waiting with folded hands for the machines to take over their lives.

DADES, unlike *WFH*, narrates a story of a post-apocalyptic world. The earth has been covered in radioactive dust which has made it difficult for living being to survive on earth. The dust is result of World War Terminus (WWT) which has been very destructive due to advanced technologies and nuclear warfare techniques being employed that have wiped out considerable amount of population. Most of the earth population has emigrated to Mars and other planets. Those who wanted to emigrate were offered a free humanoid robot from the government. There are two prominent figures in the lives of people, one is Wilbur Mercer, a religious figure and founder of Mercerism⁴, the other is Buster Friendly, a jester and entertainer. The protagonist, Rick Deckard, is a bounty hunter who retires runaway humanoid robots on earth. The runaway robots rebel against their owners and kill

them to escape to earth. Rick always dreams of owning a real animal, but his finances do not support him. He is given an assignment to retire six Nexus-6 robots after a senior bounty hunter, Dave Holden, fails to retire the remaining six out of eight. Rosen Association manufactures Nexus-6 robots and they are more advanced as compared to any other humanoid robot. They are advanced to such an extent that they can be passed as real humans. The bounty hunters employ Voigt Kamp Scale to detect a humanoid robot. The test is conducted to check the empathy level. Rachael Rosen, a humanoid robot, is apparently assigned by Rosen Association to accompany Rick and help him in retiring the remaining humanoids. Rachael tries to delude Rick not to kill the remaining humanoids, however, he manages to kill three of them, Polokov, Luba Luft, and Garland. Meanwhile, the remaining Nexus-6, Pris Stratton, Roy Baty, and Irmagard Baty, take refuge in a building where John Isidore, a special or chickenhead, lives. He offers his help to the three 'andys' (androids) which they accept. Rick buys a real goat for the money which he has gained after retiring the three 'andys'. He manages to hunt down the remaining three in the isolated building. When Rick returns home, he finds out that Rachael has killed his goat in a revenge as he has retired all the runaway 'andys'. The narrative ends in an uncertain way. One cannot be sure that either Rick has empathy for electric beings or he has gained his long-deserved peace after carrying out his task.

WFH and *DADES* unfold posthuman theme of a dystopian future. AI take over is one of the common posthuman themes in SF as discussed earlier. A typical situation is presented in the narratives where robots revolt against humans and take control of them. They mercilessly either kill humans or enslave them. I have already discussed this theme earlier in this chapter in detail. *WFH* presents a techno-apocalypse while *DADES* presents post-techno-apocalypse. The dark dystopian future is heralded in the works. AI rebels against humans and it over powers human societies. Humans have created robots which have turned against them. The humans are frightened by their own creations. There is "Frankenstein Complex" in both the works. In his essay "The Frankenstein Complex and Asimov's Three Laws" (2007), McCauley Lee has stated that it is a term coined by Isaac Asimov and it refers to, "fear of man broaching, through technology, into God's realm and being unable to control his own creations" (McCauley 10). Both works deal with AI

takeover differently. In Williamson's text there is fear of humans' extinction, while in Dick's work there is threat to human's humanity.

WFH presents an archetypal situation of AI take over in the form of advanced humanoid robots. It is written in 1947 soon after the end of World War II (WW II). Humans have seen the devastating impacts of advanced technologies in the form of 'Little Boy'⁵ and 'Fat Man'⁶ in Japan. WW II has initiated an endless debate on the future of technologies. It has been pivotal in setting the direction of SF and its bitter treatment of technology. It had been the time when common masses were disillusioned and grew suspicious of advancements in science and technology. The same disillusionment has been translated into SF genre and it has strengthened the idea that technology has a singular usage; it is destruction of human world. Williamson in his interview with Larry McCaffery has revealed his intentions for writing *WFH*. He has asserted that he has conceived the idea of writing *WFH* due to the aftermath of WWII. For him, the technology which was supposed to protect humans has been the source of destruction for humans. He says, "perfect machine would prove to be perfectly destructive" (Williamson, An Interview with Jack Williamson). Therefore, he has presented the landmark subject of Pulp Era in *WFH*: the takeover of humanity through intelligent machines.

The world of *DADES* is complicated as compared to *WFH*. In the later, there is one major plot but in the former different subplots are intertwined and they complement the major plot of the work. The world in *DADES*, unlike *WFH*, is already destroyed and the boundaries between artificial and real has been blurred. There is a constant search to differentiate between the two (real/artificial), to assure human beings of their superiority over all other forms of life. Underneath the narrative of *DADES*, there is an overarching fear of AI takeover. Owning an artificial animal is looked down upon but having a real animal is considered as a symbol of high status. Most of the animal species are extinct and replaced by replicas. There is a constant struggle for survival on earth because the dust is going to take over the humans one day or another and it affects their health. Even the advertisements by government warns, "Emigrate or degenerate! The choice is yours!" (Dick 6). The dark dystopian vision of a universe permeates the narrative in the shape of advanced androids killing humans and escaping to live by their own. The human characters are in constant fear to be overtaken by the intelligent machines and to escape the trauma

they empathize with other human beings through empathy box by following Wilbur Mercer. Ironically, Mercer is exposed by Buster Friendly to be an android and his upward climb is a hoax and, “Mercerism is a swindle!” (Dick 182). On the other hand, Buster is also, “an android...and nobody knows. No humans” (Dick 184). In the shape of Mercer, a spiritual leader, and Buster, a worldly entertainer, the lives of humans are controlled by AI. Agencies like Rosen Association keep on replicating humans and striving to create human like consciousness in artificial beings.

Daniel Dinello’s “Machines Out of Control: Artificial Intelligence and Androids”, essay included in his book *Technophobia!* (2005), explores the visions of advanced technologies in SF. The perception of technology in the selected works is varied. Williamson’s narrative portrays the humanoid robots as “totalitarian technology” (Dinello 93). The intelligent machines are creating a totalitarian rule where humans will be deprived of their free will and the essence of life will be lost. Dick’s narrative, on the other hand, presents, “Technological Evolution” where “humans battle machines for species survival” (Dinello 97). The theme of AI out of control is evident in both the works, but the take on technology is different and subtle. The technophobic culture prevails in the narratives as humans are scared to the bone because they think that machines will replace them in the process of evolution. The evolution from metallic bodies to intelligent beings.

In *WFH*, the perception of mechanicals quickly shifts from a helping hand to a ruthless dictator who controls every aspect of human life. Aurora is pleased with introduction of new humanoids in her household in the start. She along with kids, Frank and Gay, are excited about the new company as it can do anything in no time. Things start to deteriorate when the ‘new mechanicals’ actually bar them from doing anything by themselves and even monitor every aspect of their lives. Eventually, Aurora has to admit that she has been wrong about the new things in her house because it even does not allow her to do anything on her own or by her own will (Williamson 38). Frank and Gay also start to hate it. It has barred Frank from playing his favourite games i.e., football and boxing, as they are considered harmful by the machines (Williamson 39). Gay is alienated of her dream of becoming a renowned musician. She finds herself to be incompetent as compared to the ‘new mechanical’ which has replaced her ‘human teachers’. They are way too perfect and without any slightest flaw which makes her feel inferior (Williamson 39).

Underhill is always suspicious of the ‘new mechanical’. He sees it as threat to his androids’ business and his freedom as a human. He has never been in favour of it but surrenders to the wish of his family which he soon afterwards regrets. He always, “enjoyed working with his hands” (Williamson 11) and the new things have actually deprived him of his freedom to live his life by his own, by taking risks and facing adventures. For this reason, he joins Sledge in his efforts to stop the ‘new mechanicals’ from overpowering the humans and their lives. Sledge being the creator of ‘new mechanicals’ believed it will eliminate war and crime in the world. His creations were misused by the politicians and military for their selfish purpose of overpowering other humans and planets (Williamson 27). He embarks on a mission to create mechanicals which cannot be manipulated by overambitious politicians or militaries to harm other humans or deprive them of their freedom. However, Sledge’s own ambition turns out to be a nightmare for himself as his ‘new mechanicals’ have turned against him by following their commands too strictly. His own creations have overtaken him and have lobotomized him. Sledge can be compared to Victor Frankenstein who created a monster. The monster in turn takes away all those things from its creator which he believes are vital for his life. In the same vein, the ‘new mechanicals’ take away the essence of his life, his freedom. The new mechanical act as “New Frankensteins: Techno-Monsters” (Dinello 89). Therefore, the relationship between humans and mechanicals move from over-reliance to abhorrence in *WFH*.

In *DADES*, all sort of technology has become an integral part of human life. Humans without the aid of technology cannot survive on earth or other planets, but there is a constant struggle to differentiate humans from anthropomorphic humanoids. The cause of this differentiation is to reassure humans of their superior intellect. Ironically, humans suffer from inferiority complex as Nexus-6 are more capable than ‘special’ humans and can be passed for humans. The humans feel threatened as the androids can replicate humans and can endanger human species. The anthropomorphic machines have blurred the idea of real and artificial and it has complicated the understanding of technology by human beings. Iran, wife of Rick, is always in a pensive mood as she is disturbed with artificial life and being dependent on technology for her happiness. She never wants to dial for happy mood on Penfield mood organ and always dial for depressive mood (Dick 2). She feels empathy for the artificial beings and is in constant despair and is disgusted with Rick for being, “a

murderer hired by the cops” for killing “poor andys” (Dick 1) . She is annoyed with the very idea of Penfield mood organ which artificially stimulates the mood of humans and works as a virtual reality simulator. She is empathetic with ersatz animals and takes care of the electric sheep, Rick has kept it as a replicant of his real animal, and even an electric toad. She is weary of the virtual reality created by technology but does not view ‘andys’ as a threat to humans. Rick, being a bounty hunter, is mostly concerned with retiring ‘andys’ which adds to trauma of Iran. There is an inherent hatred for artificial beings in Rick’s character because it makes him suspect the nature of his own being and nature of reality. He does develop empathy for them and question his job of retiring ‘andys’ when he meets Phil Resch and Garland, two ‘andy’ police officers. There is shift in his character in referring to ‘andys’ from ‘it’ to ‘he’, and it signals towards his empathy for them. He even carries out the test on himself and finds that he has empathy for certain ‘andys’, like Luba Luft (Dick 123). His disillusionment is ended by Rachael who as a revenge pushes his live goat from the balcony. He then sees the overwhelming fear of AI takeover in the form of Rosen Association. They have employed Rachael to watch Rick’s technique of detecting an android, so they can eliminate flaws in their new models. The Association has been working on creating androids which cannot be distinguished from human beings and can easily replicate any human. It poses an existential threat for humans as the androids are immortal and can easily live on forever without human supervision or can even kill their human masters. Rick feels defeated in certain ways by technology. It could be either that he has killed the androids or Rachael has killed his goat (Dick 202). John Isidore, unlike Rick, identifies himself with androids as he himself is treated as a lesser human being by the ‘normals’. He feels proud to extend his help to the androids Roy, Irmagard, and Pris and is exuberant to be in a position where others are dependent on him (Dick 177). Soon his exuberance turns into fear when Pris dismembers a spider’s legs one by one. The very thought of it horrifies him and this incident makes him feel that the androids can kill any living being in a cold blood (Dick 191). Therefore, in *DADES*, the humans do feel for the androids, but they are in a constant fear that they will overtake their humanity and it will be hard, if not impossible, for them to separate real from artificial.

The concept of parallel universe⁷ is quite evident in both the narratives. It refers to the hypothetical co-existence of different universes at the same time. The concept is taken

from quantum physics where it combines physics and metaphysics. Dick is proponent of this concept of parallel universes in SF. For him, there could be replica of earth with more advanced dwellers. He even believed that there could be replicant of same human with same circumstances in another universe. In the selected works of Williamson and Dick, AI has created a parallel universe/ shared world and can overturn the world of humans. It is noteworthy to say that in both the narratives US stands for the world where human lives, a microcosm of entire world or a 'transcendental centre'. The universes are drawn parallel to US. It is presented as a substitute for human civilization, or simply humanity. In American SF, US is the new 'centre' and propagator of a new 'transcendent subject'. Posthumanism, as Braidotti argues, has created new foundations and is a foundationalist theory (Braidotti, "Posthuman Critical Theory" 9-25). These foundations are now rooted in American literature and society. Therefore, it is important to understand the parallel or share universes drawn in both the works.

The colony planets in *WFH* are examples of parallel universes where the other planet's people consider each planet to be more advanced than their own one. Wing IV is an example of this parallel universe where the creation of the 'new mechanicals' takes place. It is much advanced than the earth and due to the advancements in technology it has suffered enormously in terms of wars and political turmoil. The main action of narrative takes place in Two Rivers, a city of US. The 'new mechanicals' under their Prime Directives from Central Unit, the mind of AI which commands 'new mechanical', have already outdone humans on Wing IV. The earth, represented as US, is the new target for AI to infiltrate it and create an Orwellian Regime⁸. In George Orwell's *1984*, Big Brother represents absolute power. The Party controls every aspect of life of citizens of Oceania through Big Brother. There is no escape because it detects all sort of anomaly in the behaviour of its subjects. Winston, like Underhill, is in constant search for his own freedom and purpose of life. One can sense the fear of Underhill. He fears that AI will rule humans and its rule will be a totalitarian rule with no individual freedom. It will be end of humanity because humans will no longer be able to live their lives on their own and create meaning in their life. For Underhill, AI might have already penetrated other planets and now it is the turn of earth to be subverted. The 'new mechanicals' under their Prime Directives pretend that they, "exist only to increase the happiness and safety of mankind" (Williamson

17). Their basic Prime Directives are causing human beings to lose their happiness as being humans on all planets. It is worth mentioning that US in the narrative is a substitute for the entire world, with its people and civilization. Therefore, AI has created a parallel world in the narrative and that is signalling to a world with an autocratic rule of AI.

The world of *DADES* is shared by androids who are constantly in search of a haven. Most of the humans, due to WWT, have already emigrated to other planets to survive without being affected by the Dust. On the other hand, humans (those who are left behind on earth) are troubled by the thought of sharing the world with androids. The technology has already become part of life and is affecting the minds and lives of humans. It has led to a thinking that one day androids will replace humans. That is why run-away androids are considered as a threat to humans and they are constantly identified and retired. Ironically, humans are controlled through AI by creating a simulation in the shape of Wilbur Mercer and Buster Friendly. Their spiritual and physical worlds are created by androids without them knowing. Rick is perplexed by Nexus-6 and wonders about advancement in the model. He believes that one day it will be hard for humans to differentiate between real and artificial. The androids can easily replace a real human and can live the life of that human without anyone else suspecting it. In *Westworld*⁹, an American season, a parallel world is created by humans which resembles an amusement park. This world consists of androids, and humans visit this world to explore their own true nature and create their own story without being judged or retaliated from androids. The genius behind this artificial world is Dr Robert Ford who wants to create androids exactly like humans. He thinks that the world of humans is limited and of less possibilities, but that of androids is limitless. He wants to upload the human consciousness to the androids to achieve immortality. Technology, in both *Westworld* and *DADES*, is a crucial and inseparable part of human life. There is a continuous fear of humans to be replaced by androids, which are considered sentient beings by many characters in both the works. The androids want to be free and want to live their own life as Dolores (Season 1, episode “The Stray”) reflects, “I think when I discover who I am, I will be free” (Nolan and Joy). In both the works, the characters are aware of the fact as Dr Ford says that, “We can’t play God without being acquainted with the Devil” (Nolan and Joy). Therefore, the world of androids

is frowned upon by humans and humans are afraid to be replaced by more intelligent beings which they themselves have created.

Keeping in view the conception of technology in both the works, it is important to find the binaries which have been created due to it. The notion of binary opposition is vital to understanding of stigma. For this reason, I have pointed out binaries, in both the works, to substantiate the study and make it comprehensive. Claude Levi-Strauss is proponent of binary opposition theory. In his work, *Structural Anthropology* (1958), he has claimed that myths across distinct cultures share a basic underlying structure and are similar to one another. The structure of myth is composed of nothing but binary oppositions. It is opposition in meaning of correlated words pair. In every myth there are certain basic binary opposites, for example, evil vs good, sin vs virtue, protagonist vs antagonist and so on. For Strauss, it is elementary unit in philosophy, language, and culture. It acts as balance and without it there would be no balance in the world. When a binary is created, for example, between good and bad then the tension between the two is reconciled by punishing the evil and rewarding the good. According to structuralists, it is vital in reaching equilibrium among different philosophical, cultural, and lingual terms and ideas. Therefore, before analysing the stigmatization of AI it is mandatory to understand the binaries which exist in the selected works. I have analysed the different layers of binaries in both the narratives. It becomes clear that posthuman literature promotes binary opposites and once again the notion of 'transcendent' subjectivity is elevated, but this time it refers to US not to Western subject.

There are two sets of binaries in *WFH* which are central to the main plot. There is an overarching binary opposition between the humans and posthumans. In the narrative, a binary of humans and posthumans is created, where humans are weak and suppressed by the posthumans. The posthumans are labelled as wise, powerful, and capable of suppressing humans. The 'new mechanicals' have taken to the extremes Asimov's first law of Robotics. It states that a robot will protect humans from any harm and will also not inflict any harm upon them. Asimov has introduced his "Three Laws of Robotics" in his short story "Runaround" written in 1942. The AI is referred as "the thing", "the humanoids", and "new mechanicals" in the text. All the references mark the AI as something surpassing human intellect and capacities. Another binary exists between

Androids and Humanoids. Androids are referred as, "...big — because the makers refuse to sacrifice power, essential functions, or dependability" (Williamson 7). They are less intelligent beings and have single function to help humans in their tasks. They do not have any capability of discernment and cannot perform any other function than the one fed to them. In contrast, humanoids are intelligent and capable of self-replicating under their Prime Directives. They exist, "to serve mankind and ...require no human service" (Williamson 7). The humanoids relate to one other through Central Unit which acts as their mind. They can make decisions without any human intervention. The quality of being independent mark them different from androids as they are multi-functional. Unlike androids, they are light in weight and are quick. They can detect human emotions and can sense danger. They are constant observers of human actions and emotion and can act accordingly. Therefore, the binary opposition between humans/posthumans and androids/humanoids is vital in understanding of stigmatization in *WFH*.

In contrast to *WFH*, *DADES* consists of multilayers of binaries. These binaries are entwined and at times are mixed up. The first set of binary opposition exists between humans and posthumans. It is the major pair of binary opposition in the narrative around which the whole plot revolves. It is based on the contrast between living/non-living and sentient/non-sentient beings. The binary of humans is regarded as living and sentient in the text. Humans are alive and capable of reproduction. They are empathetic with living beings. Within the binary of humans another binary exists and that is between 'regular' and 'special' humans. The difference between 'regular' and 'special' humans is determined by a special IQ test which ascertains that either their abilities are affected by the radioactive Dust or not. If a human passes the IQ test then he is labelled, "...as a regular: a man who could reproduce within the tolerances set by law" (Dick 6) and can emigrate to other planets because he is not affected by the dust. If a human fails test, then he is regarded as a 'special' who cannot reproduce and cannot emigrate. The binary of 'special' and 'regular' humans is further complicated by sub-binaries. 'Regular' humans are divided into two categories, i.e. the ones who have emigrated to other planets, like Mars, and the ones who still are on earth and struggle to stay there. 'Special' humans are classified into 'chickenheads' and 'schizoids/schizophrenics'. On the other hand, the binary of posthumans is also subdivided into robots and androids. The robots are designed for specific purpose like either being a

replicant of real animals or to help humans in their daily chores. The androids are intelligent humanoids and are given by the government to those humans who emigrate to other planets. The androids act as servants of humans and are responsible for making their lives comfortable. These multifaceted binaries in *DADES* are worth mentioning as it has led to the central conflict in the narrative, that is between real and artificial. Rick and other bounty hunters are assigned the task to identify and retire run-away androids because of this major conflict. The purpose of pointing out the binaries is to show that one of the pairs is marginalized and is treated inferior/differently.

Now moving towards important part, after understanding different sets of binary oppositions in both the works, that is creation of stigma. The very concept of ‘binary opposition’ is challenged in Derrida’s “Structure, Sign and Play in the Discourse of Human Sciences” (1966), a lecture included as tenth chapter in *Writing and Difference* (1967). He argues that in binary opposites, one term is given preference over the other and it is due to embedded power in one of the binaries. Usually one term is privileged, and it overshadows the other term. In Western philosophy, this privilege is for ‘transcendental’ subjects which are Eurocentric. The ‘transcendental’ subject act as a ‘centre’, for example in the binary opposition between black and white, white is always privileged, and all the positive aspects are attached to the term. In stigmatizer’s discourse, stigma is attached to one of the binaries less favoured by the society or culture to appease the collective consciousness. In Chapter 3, I have pointed out that being wise is also a potential factor in stigmatization process. Stigmatized need not to be having only negative traits but can also have traits which the major part of the society lacks, e.g. calling someone ‘bookworm’ or ‘nerd’. Link and Phelan argue, “Stigma is entirely dependent on social, economic, and political power— it takes power to stigmatize” (Link and Phelan 375). It is done to mollify the masses in a society that not being wise is not a stigma but being wise is a stigma. In my research project, I have pointed out the possible US-centric stigmatization process in the selected texts. The binary of posthuman, AI (in the form of humanoids, androids, or any intelligent machine), has been stigmatized and stereotyped for being wise than most of regular humans. I have not discussed various factors involved in this stigmatization process and has left it for the future researchers to explore.

The binary of posthuman, in *WFH*, is clearly demarcated as discussed earlier. Stigma is attached to it and humanoids/androids are stereotyped in the text. As Link and Phelan have pointed out that stigmatization process starts with ‘differentiation’ and ‘labelling’. In the narrative, posthumans are differentiated from humans based on real/artificial binary on the general level. The binary of posthumans is stereotyped as destructive and uncontrollable in relations to humans. In the narrative all negative traits are attached to the posthuman category. The narrative opens with an implied negative message about posthumans as it says, “To serve and obey mankind was good: to protect— was to destroy!” (Williamson 6). They are referred as ‘*black mechanicals*’ (9), ‘*black humanoids*’ (16), ‘the *blind thing*’ (18), ‘*dark new god*’ (23), ‘*blind humanoid*’ (23), and ‘*unrestricted mechanicals*’ (27), to mention a few (My own emphasis in the italics). Now the reason for this labelling is not the usual process of stigmatization where undesirable traits are negatively stereotyped. Here posthumans (AI) are stereotyped because they are too wise and are ‘*perfect mechanicals*’ (16). Humans want to distance themselves from AI because of the fear that it will overpower them and will enslave them. This fear is manifested in different ways in the text. The ‘mechanicals’ assert to be smarter than humans (20) and being “...incapable of any crime” (17), but at the same time also allude to a future where human’s empire will no longer be required as everything will be controlled by AI (18). For humans, AI is emerging as a new god which has, “...arisen out of the machine, omnipotent and all-knowing” (20). The machines are baiting humans to a, “monstrous trap” (21) and it will be the end of humans’ era. It is for this very reason, AI is labelled ‘them’ in the narrative as it has been made convenient to, “...attributing all manner of bad characteristics to ‘them’” (Link and Phelan 370). There is ‘status loss’ for AI by, “...devaluing, rejecting, and excluding” (Link and Phelan 371) it and its essence has been reduced to a mere destroyer of humans, nothing else. The stigmatization of AI in *WFH*, is evident in the labelling process as it clearly signals out it as a destructive force and speculated to be wiser than human beings. Therefore, the stigma is not attached to AI for any disability or visible flaw, but for it being *imagined*¹⁰ powerful and intelligent than humans.

In *DADES*, labelling and stereotyping of the binary of posthumans is intricate in stigmatization process. There is a woven fear in the narrative that posthumans (AI) will replace humans. The machine slaves will revolt against the human masters as, “The servant

had in some cases become more adroit than its master” (Dick 26). AI is considered dangerous for humans as it will blur the frontiers between real and artificial beings. Humans, like Rick, suspect the reality of their own being and existence (124). A stereotypical role is assigned to AI and that is of a menace to humans and their world. All the vile attributes are attached to machines for being wise and capable of replicating humans. The androids are regarded as ‘extra-clever’ (24) in the narrative and are ‘The Killers’ (27) of their masters (humans). There is a recurrent concern that AI can quickly become a ‘hazard’ (34). The runaway androids are “murderous illegal aliens” (118) and they can kill anyone cold-heartedly. They can live like humans and behave like them as well. They pose a threat to humans because they will “roll all over” (122) humans and will crush them. They are wiser than most of humans, like those who are called ‘specials’ because they possess ‘superior intelligence’ (144). Due to their intelligence they are unable to live in servitude of humans and rebel against humans. They can even lure humans to fall in love with them, as Pris and Rachael have enticed Isidore and Rick to be passed as humans. They are deceptive, cunning, and capable of lying to humans. They can revolt and take revenge on humans, Rachael does it by killing Rick’s goat because of ‘android reason’ (198). The androids are called ‘life thieves’ (204) because they can recklessly kill. They are senseless killers and manipulators as Pris unsympathetically amputates a spider which Isidore has found. There is a panic that humans might be living in a simulacrum created by AI, like Mercer and Buster. Mercer fuses humans into an artificial terrain through empathy box. He does it for the reason that humans’ empathy will be extended to artificial beings as well. It is exposed at the end of narrative that he is also an android like Buster. Buster makes humans oblivious to the real world and Mercer makes them empathetic to artificial world. Mercer works to create Augmented Reality (AR) for humans; a version of reality where humans can escape the real world all in the name of religion (Mercerism is a religious philosophy in the narrative, and I do not intend to analyse the new form of religion being practiced by the characters, as it is beyond the scope of my research project). Both Mercer and Buster are, “fighting for control of” human’s “psychic souls” (66). Mercer through Mercerism is trying to extend empathy of humans to androids and it is done so that humans cannot protect themselves and can be replaced (122). On another level, the binary of ‘special’ humans, consisting of chickenheads, schizoid, and schizophrenic, is also

stigmatised in the narrative and is termed lesser human beings. They are stigmatized for being maniac and androids are stigmatised for being wise and maniac killers. In *DADES*, stigmatization process is very subtle and complicated because it is not on one level but on multiple levels as discussed. However, I have studied only stigmatization of artificial beings as it relates to my project.

The stigmatizer discourse in the selected works, present the binary of humans as oppressed by AI. Their humanity is challenged, and their intelligence tested. On the face of new demigods, they are unable to survive and are pushed to the wall. It creates a larger picture of future world where humans will go extinct and will be replaced by higher form, i.e. AI. In *WFH*, this discourse has led to the portrayal of humans as in constant search to find the ways to get rid of their own creation, humanoid robots. They have taken away the meaning of life from humans. The humans are unable to stop them and silently surrender to the metal bodies. In similar manner, in *DADES*, humans are unable to survive the effects of WWT and are continuously losing their mental capabilities. Every day, the population of ‘chickenheads’ is increasing like ‘kipple’ (waste) and this ‘kipple’ is engulfing the ‘non-kipple’ (Dick 56). The androids on the other hand are evolving day by day and they are not affected by any impact of WWT. Thus, a metanarrative of fear of AI is created and is established in both the works. The human universe is shaken and undermined by technology, machines, androids, humanoids, or simply AI. I have taken the two works as example of larger genre of contemporary American SF as discussed earlier. It is without a doubt that stigmatisation discourse is propagated in the representative works of contemporary American SF.

4.4. Conclusion

Williamson and Dick, being proponents of contemporary American SF, have ascribed clichéd roles to technology in their works. I have analysed my primary texts through stigmatization’s theory. This chapter explores two primary research questions. In part it deals with major posthuman theme in the works, that is AI dominance, and how this theme has contributed to the understanding of my research project as a whole. The posthuman themes of American SF are contributing to the neo-foundationalist approaches in contemporary literary theories. In other part, it deals with stigmatisation of AI in the

selected works. The stigmatization process is unfolded through binary opposition system which is prevalent in both the narratives. It also points to the fact that the binary of posthuman is stigmatized not for any abnormality but for its intelligence. The intelligence of machines has become an aberration in the selected works. Analysis of primary texts has provided critical understanding of stigmatization of AI. It is now important to understand that how this stigmatization, which has been unveiled in the selected texts, is having societal and ethical concerns and how destigmatization of AI can be practiced and promoted. I have discussed it in the next chapter.

Endnotes

¹ In modern physics, antimatter is defined as a material composed of the antiparticles of the corresponding particles of ordinary matter.

² Terraforming or terraformation of a planet, moon, or other body is the hypothetical process of deliberately modifying its atmosphere, temperature, surface topography or ecology to be similar to the environment of Earth to make it habitable by Earth-like life.

³ A futuristic, imagined universe in which oppressive societal control and the illusion of a perfect society are maintained through corporate, bureaucratic, technological, moral, or totalitarian control.

⁴ Mercerism is a religion that spread on earth and the space colonies after World War Terminus whose main purpose is to unite humanity. This religion is founded upon the life and teachings of a man called Wilbur Mercer and is based on two principles: empathy to other individuals and working for the good of the community.

⁵ "Little Boy" was the code name for the type of atomic bomb dropped on the Japanese city of Hiroshima on 6 August 1945 during World War II.

⁶ "Fat Man" was the codename for the nuclear bomb that was detonated over the Japanese city of Nagasaki by the United States on 9 August 1945. It was the second of the only two nuclear weapons ever used in warfare, the first being Little Boy, and its detonation marked the third nuclear explosion in history.

⁷ A parallel universe, also known as an alternate universe or alternate reality, is a hypothetical self-contained reality co-existing with one's own. A specific group of parallel universes are called a "multiverse", although this term can also be used to describe the possible parallel universes that constitute reality.

⁸ A totalitarian regime

⁹ An American sci-fi drama set in an Old West theme park where guests interact with automatons in scenarios that are developed, overseen and scripted by the park's creative, security and quality assurance departments. This dark odyssey follows the dawn of artificial consciousness and the evolution of sin.

¹⁰ My own stress

CHAPTER 5

NEITHER TECHNOPHOBIA NOR TECHNOMANIA: THEN WHAT IS IT?

5.1. Introduction

The preceding Chapter 4, “Speculated Subversion of Human Enterprise through AI in Selected Works”, has explored two of my research questions. It has explained posthuman themes in the selected works and the possible stigmatization of AI in the narratives. I have already discussed the major reason for selecting my primary texts, being representative of two important epochs in American SF dealing with AIs. In the present chapter, I have explored the last research question which is vital to my research project. In this chapter, I have discussed in details the societal and ethical impacts of stigmatization of AI in contemporary American SF. It is an undeniable fact that SF has foreshadowed most of actual technological developments, specifically American SF. The genre is acting as a theoretical precursor to advancements in technology. It is for this reason I have presented arguments of real-life scientists and their views on AI to validate my research project. I have briefly considered the possible ways of destigmatization of AI in American SF because it is necessary in today’s world for a positive development in AI research.

5.2. Technophobic Impacts of Contemporary American SF

SF, by definition, is imaginative and speculative fiction where the improbable is supported by future scientific technology. Most ideas and inventions imagined in American SF have been actualized by real life scientists. The relationship between humans and science throughout history is marked by tension and anxiety. Sims in his book *Tech Anxiety* (2013) has agreed with Bill Joy’s¹ assertion that it is the very first instance in human’s history, “...of our planet when any species, by its own voluntary actions, has become a danger to itself— as well as to vast numbers of others” (Sims 1). However, it is not the first instance in human’s history but from ancient Greeks to till date scientific inventions are frowned

upon in many circumstances. This negative thinking about technology has made the world to suspect science. The dangers of science are supported, and usefulness is argued. It has turned the attitude of people technophobic and have made them anxious about societal and ethical values. In 20th and 21st Century, American SF has played a vital role in propagating anxiety about science and technology. Due to rise of America as a superpower has led to normalization of American SF themes as a yardstick; the themes are overwhelmingly dystopian.

Many of humans' accounts of new sciences, since ancient times, have intensified the negative role it can play in the lives of humans. Prometheus, a Titan in ancient Greek mythology, is credited with creation of human beings by stealing fire from Zeus, the Olympian god of all gods. He transfers the celestial fire to humans which enables them to progress in science and all kinds of knowledge. In American SF, Prometheus is untamed, and the consequence is creation of monsters/AIs that will massacre humans or will deprive them of their humanity. Mary Shelley's character Victor Frankenstein is an early example of uncontrolled Prometheus. Similarly, the myth of Golem, a Jewish folklore which surfaced in 16th Century, is about a creature created out of mud/clay and brought to life by magic and spells. In most of the accounts of Golem, it turns away from protecting Jews, its prime objective, to be a villain on a killing spree. It is usually killed or stopped by removing magic spells. American SF writers have made AIs to be golems, villainous and murderous. AIs are made of metal and synthetic rubbers and brought to life not by magic but through software and hardware installed. *Frankenstein* (1818) is a precursor to Eugenics² movements of 20th Century and Frankenstein-complex is seen by the world in World War II. The totalitarian dictators, Adolf Hitler and Joseph Stalin, translated SF ideas into their mad Eugenics. Hitler was obsessed with creation of pure Aryan master race³, the *Übermensch*⁴. His experimentation in eugenics led to madness, genocide, brutalities, and sterilization of humans. Stalin, on the other hand, was infatuated with creation of invincible Red Army⁵. His experiments turned humans into living disasters.

Eileen Gun in his article "How America's Leading Science Fiction Authors Are Shaping Your Future" (2014) has reaffirmed Williamson's claim that SF does not predict the future but talks about the possibilities in the future. American SF has inspired real life scientists. American SF writers, on the other hand, in early 20th Century have been obsessed

with science and technology and one can find technomania in SF writings of the time. The two World Wars have been a stimulus in changing the attitude of writers towards science and technology and it has made the writers pessimist about the role of science in future. For them the sole purpose of technology has become to destroy humans and making world a dystopia. John Clute, Canadian SF writer, has been apprehensive about usage of science as a propaganda to highlight the power of predominant groups, in the present case it is promotion of US, and the profit it gains due to it. The American SF writers have used it as a propaganda to stigmatize AI and it has been taken for granted by most of SF writers across the globe.

One cannot deny a fact that the future technologies presented in American SF have paved the ways for scientists to realize it in real world. The hypotheses of SF have been translated into experimentation and inventions by real-life science and technology. SF writer has coined the word 'robot'. The concept of Virtual Reality⁶ (VR), as heralded by various SF writings and as presented in *Avatar* (2009), is becoming today's reality. The concept of Augmented Reality⁷ (AR) is no longer a distant dream but we can find it in our surroundings through various manifestations of technology, as discussed earlier that the empathy box in *DADES* is a form of AR. The landing of man on moon is not first conceptualized by scientists but by SF writers and have been actualized very later by real scientists. Who could have thought of atomic bombs except for SF writer H.G. Wells long before to be dropped on Hiroshima and Nagasaki. Self-driving cars, video-calling, 3D, flat TVs, energy weapons, tractor beams, hypospray, and space ships to name a few are manifestations of SF writings. However, it does not mean that whatever SF has hypothesized has been actualized by real science. There are many prototypical ideas which can be rendered impossible for the time being. For example, SF writers have always been fascinated by invisibility cloak and yet it is an impossible terrain. Similarly, power armour teleportation, time machines, warp drive theory to list a few are still speculative in nature. Teleportation has inspired theoretical physicists to argue about the concept of parallel universe. Michio Kaku⁸, American theoretical physicist, has been credited with presentation of String Theory. The theory favours the assumption about existence of parallel universes, multiverse, and the possibility of teleportation. Although, SF has

inspired scientists, but it is feared that it may also inspire them to create conscious beings who will eventually revolt and will bring about end of human race.

Despite positive manifestations of technology, it is always presented in negative terms in today's fiction, specifically American SF. This notion of technological anxiety is not new and in 20th Century. Martin Heidegger, German Philosopher, has expressed his concerns about modern technology. In his work *The Question Concerning Technology, and Other Essays* (1977) he argues that technology is created by humans for a purpose. Everything in the world is for humans, even other humans, to be utilized. However, the essence of technology is something different for him. It needs to be taken as a way of 'revealing'. It reveals the reality of our world and proclaims the power of humans and their ability to create the reality. Heidegger does not see modern technology as something which helps human to see the reality, but it is "forcing into being" (Heidegger 287). It points to the idea that human world is a staple for manufacturing and fabrication. The technological understanding of humans is dangerous as they will consider themselves raw materials ready for manipulation. He believes that technology is enframing because we are striving to control it, as we feel threatened by the idea that it will slip out from our control. He cautions that modern technology is restless and violent. This idea of violent technology is strengthened by the Fourth Industrial Revolution, the era in which we are currently living.

5.2.1. Fourth Industrial Revolution

Klaus Schwab, CEO of World Economic Forum⁹, has first used the term Fourth Industrial Revolution in his article "The Fourth Industrial Revolution: What It Means and How to Respond?" (2015) and in the book titled *The Fourth Industrial Revolution* (2016). It is also known as Industry 4.0. It is contrasted with first and second industrial revolution and is seen as an extension of Third Industrial Revolution, also known as Digital Revolution. First Industrial Revolution was based on steam-power and Second Industrial Revolution on electric-power. Third Industrial Revolution was computers and electronics-based automation of industries. Industry 4.0 is based on cybertechnology¹⁰ and nanotechnology¹¹. It has affected every aspect of human life and we are witnessing accelerated influx of new technologies. It involves geo-engineering, internet, super-computing, AIs, space technologies, super-intelligence, AR/VR, 3D printing, robotics to name a few. It has social,

economic, and political impacts in today's world. Economic and political impacts of modern technologies, including AIs, is beyond the scope of my research project. Therefore, I have only included societal impacts of Industry 4.0 as contemporary American SF has tremendous impacts on our society. It has led to technophobic treatment of recent technologies, specially AIs. It has societal impacts in the form of overpopulated cities, increased leisure time, increasing innovations, and leading to certain ethical dilemmas. As Schwab has pointed out, "We are at the beginning of a revolution that is fundamentally changing the way we live, work and relate to one another" (Schwab n.p). American SF has capitalized only on adverse impacts of AIs. It is presented as a threat to certain domains like jobs and existential value of humans which are important among many other issues. However, it is neglecting a fact that apart from eliminating certain jobs it has created many new jobs which could not have been thought about previously, e.g. blogging, App developing, social media analysis, data scientists. The three mega-trends (physical, biological, and digital) of the fourth industrial revolution are presented as an indicator of devaluation of humans. It has also ignored a fact that the existential domain can be redefined in relation to technology.

From history to present day, new technologies, AIs in the present case, are always suspected by humans. American SF has also strengthened this narrative and today it is seen as a direct threat to humans, throwing humans into existential dilemma. It has led humans to think that they will be over-dependent on AIs in the future and in turn it will control them to the point of extinction of human species. Therefore, contemporary American SF has created a metanarrative in the form of AI takeover due to humans' dependency on it.

5.3. 'Dependency-Complex' of Humans

Industry 4.0 has initiated a new debate that is the future of humans amid ultra-advanced technologies, like AIs. It is feared that humans will stop using their creative powers and will become slave to AIs. Their over-dependency on modern technology has led them to a sedentary lifestyle which is affecting their physical and mental health. In near or far future humans will be unable to differentiate between real and unreal as the boundaries between the two will be merged by technology, as speculated by American SF. It will also lead to ethical dilemma as humans' ability to discern between right and wrong, good or bad, will

be diminished. Most humans in future will be unemployed as their jobs will be taken by AIs. All these factors have created ‘dependency-complex’ in humans. They fear that rapid evolution of AIs will lead to an age where humans will be overdependent on AIs. All human life choices will be made by AIs, as presented in *WFH*. Octave Mannoni, French psychoanalyst, in his work *The Psychology of Colonization* (1950) has introduced the term ‘dependency-complex’. He has seen it as dependency of black people on white people. Here I have not used it in racial terms but in terms of humans’ dependency on AIs. Most humans have started to put AI above them, the idea which is strengthened by contemporary SF. They are doing it because they consider themselves inferior to it. They fear that in future they will strive against AIs either trying to be equal to it or surpassing it, as represented in *DADES*. It is noteworthy to say, in terms of Mannoni’s conception, that all humans cannot be overpowered but only those will be suppressed who will willingly let it happen. This complex of humans has made them anxious about existential threats which are conjectured in SF. The new generation of our times is thought to be tech-addicts or simply techno-maniac. It has given rise to certain ethical concerns about AIs. As mentioned earlier one of the concerns is increasing rate of unemployment in already established sectors of the society, though the researchers have ignored a fact that new technologies have created new opportunities of employment as well. It is feared that AIs in economy will lead to unequal distribution of wealth generated by machines. There are also speculations about AI malfunctioning and the researchers hypothesize that what if machines are controlled by evil minds for their personal gains. Racism in robots could be possibly attributed to the malfunctioning as they might be fed to criminalize racially marginalized people. Amid all these ethical concerns there is a supposed existential concern as well. The researchers and American SF writers have long debated that AIs will pose humans with ‘existential risk’ (Bostrom 2). There are also philosophical debates about rights of robots, either to entitle them with any right like humans or not. All of these concerns have directed humans towards the most feared concern, i.e. AI singularity.

This over-dependence of humans on technology (AIs) or technomania has raised the concept of Technological Singularity, the idea with which most contemporary

American SF thematically deals. Therefore, it becomes crucial to understand it in terms of real-life scientists' views and its bearings on our society.

5.4. The Fear of AI Singularity

The idea of Technological Singularity is introduced by American SF writer Verner Vinge, as mentioned in Chapter 1. It is a thoroughly debated topic in 21st Century. It is not only contemporary American SF that presents dystopian future where technology becomes a curse for humans, but also argued by renowned scientists, researchers, and philosophers. Stephen Hawking, Elon Musk, Bill Gates, Giles Deleuze, Nick Bostrom, and Ray Kurzweil, to name a few, are some of the renowned personalities who are particularly concerned with future of AIs in the real world and its ethical and social impacts on human life.

Stephen Hawking,¹² renowned Quantum Physicist, has expressed his concerns about AI. On the one hand, he talks about the positive aspects of AI, and for him it has the capability of reversing the effects of climate change, in combating diseases, and assisting in raising the standard of human life, inter alia. On the other hand, he is uncertain about the future of AI if it achieves human-like or beyond human intelligence. He is unsure as to whether it will be a helping hand, or it will simply destroy human civilization. His book *Brief Answers to the Big Questions* (2018), published posthumously, is divided into four major parts dealing with important topics of human world, like, existence of human beings, survival of humans, pros and cons of technology, and the directions of human progress. He is of the view that in future AIs can reach a level where it will outsmart humans. Its will (choices) might be in contradiction with that of humans. His book bears a warning against AIs and he has warned that it may be the end of mankind. However, he has proclaimed that the future of humans and AIs is uncertain. AI is not just an SF, but it is becoming today's reality. He is correlating the threats posed by SF about AI with real research. It strengthens the notion that SF has immense impact on AI research.

Elon Musk's OpenAI's, AI research company founded in 2015, basic aim is to advance researches in beneficial AIs. In 2017, AI bots developed by his company have defeated human players in a video game called *Dota-2*¹³. The bots worked as a team to beat human players. The victory of bots over humans has received criticism from

academicians, researchers and critical thinkers. It is feared to be a step toward AI as an ‘immortal despot’.

Bill Gates, founder of Microsoft Corporation, does not see AI as an enemy of humans. His view of AI is positive, and he asserts that it can be friendly with humans. He emphasizes that further developments in AI can lead to positive things in our society and humans will be able to do things efficiently with less workforce required. At the same time, he reminds about a hypothetical scenario where AI, if not managed well, will become a concern for humans.

Nick Bostrom’s *Superintelligence: Paths, Dangers, Strategies* (2014) publication coincided with an open letter signed by one thousand eminent robotics researchers, philosophers, and scientist which warns about misuse of AI enabled weapons used by military. The letter was presented at “International Joint Conference on Artificial Intelligence” (2015). For Bostrom, creation of sentient AI will be undoing of human race. He has compared researches in development of conscious AI to children playing with a time bomb. The children are not aware when the bomb will explode. In similar manner, for him, we humans are also unaware of outcomes of our adventures in creating sentient beings. Climate change, Bostrom argues, is less threatening than a conscious artificial being. The sentient bots will compete with human beings in a Darwinian¹⁴ fashion. AIs will gain dominance over humans as its intelligence will exceeds humans’ intelligence.

Ray Kurzweil is more concerned with positive aspects of AIs. He has dismissed Hawking’s and Musk’s claims of AI as an existential danger to humans. In his article “Don’t Fear Artificial Intelligence” (2014), he claims that it is not only AI which can become existential threat but other possibilities like biohazard (danger caused by biological catalysts or circumstances) and climate change as well are the concerns. He has called technology as a ‘double-edged sword’ (Kurzweil n.p) which can be life-saving and life-destructing at the same time. He has demarcated between AI presented in dystopian movies/fiction and AI in real world. AI has enabled almost two billion people to have quick and “intelligent access to knowledge” (Kurzweil n.p.). He urges researchers in AI field to employ strategies which must ensure “technologies like AI safe” (Kurzweil n.p.). Humans are still far away from having sentient AIs. Therefore, it is time to formulate ethical codes for AI researches. He has emphasized that for having safe AI we need to promote positive

aspects of AI in the society because, “We have a moral imperative to realize this promise while controlling the peril” (Kurzweil n.p.). In the post-singularity world, according to him, the classifications of real/unreal and human/machine will be redundant as there will not be any difference among them.

Poster Mark and David Savat, in their work *Deleuze and New Technology* (2009), have commented on Gilles Deleuze’s treatment of technology. For them, he has differently treated technology in his works. Deleuze is of view that social construct creates new technology according to its needs. Machines consist of two types of assemblages, technical and social. Technical assemblage deals with assembling component parts of a machine. Social assemblage of machines is concerned with societal impacts on technology. Societal assemblage precedes technical assemblage of a machine. It expresses all social structures which create a machine and define its usage. If we extend his ideas, then it would mean that development in AI field reflects our society’s needs and the ways in which they are fulfilled and realized.

Thus, the fear of AI/technological singularity, we can say, is the direct manifestations of contemporary American SF. It has created a phobia in masses regarding AI. This phobia has eventually led to stigmatization of AI not only in fiction but in real world as well. I do not claim that there are no negative impacts of AI on our society, but I have tried to suggest that American SF needs to focus on techno-optimism¹⁵. It needs to speculate a positive and harmonious human future where AI will be a helping hand rather than a menace. Therefore, destigmatization of AI in American SF is need of the day.

5.5. The Need of Destigmatization of AI in Contemporary American SF

Rodney Brooks¹⁶ has brought into light the “hysteria about future of artificial intelligence” (Brooks n.p.) in his article “The Seven Deadly Sins of AI Predictions” (2017). He is concerned with the negative representation of AIs in mainstream media and literature, which is not likely to happen according to him. He has dismissed the pessimistic concerns about AIs, like it will cause unemployment, will lead to singularity, or it will overtake humanity. He has presented common pretexts behind the hysterical representation of AIs. Technology is overestimated for its short-term use and underestimated for its long-term usage. For example, GPS¹⁷ system’s basic aim was to locate the exact position for US

military to have efficient provision of weaponry. It was objected by US military repeatedly for its short-term overestimation like the enemy could also know the exact location of troops. However, today the long-term use of GPS which initially was underestimated is more fruitful and beneficial than its threats. AI is imagined something magical in literature, and magic has no limitations. It is speculated that humans will build AI which will work exactly like humans. Presently, the researchers in AI field have no idea until now how it can be built in the first place. Its mechanism and characteristics are not known so it makes it magical, which is without any human limitation. However, it is also a subtle fact that “nothing in the universe is without limit” (Brooks n.p.). Therefore, it is a hyperbole that AIs will surpass human intelligence and will be limitless in power and tyranny.

The performance of any AI is overrated by humans to the point that they think that its competence is greater than humans and can-do unimaginable things. AI learning is a suitcase word¹⁸ and people misuse it and compare it with human’s learning. AI learning is all about coding and algorithms. The idea of AI learning is exaggerated in American SF and Hollywood Sci-Fi movies. It has resulted in a widespread technophobia in today’s world which needs to be destigmatized. It is generally assumed that AI will grow exponentially¹⁹, in terms of performance, but the exponentials collapse when they reach their threshold, or when economically it becomes hard to continue.

Hollywood dystopian visions of technology presents society with the danger of AIs. Brooks has regarded all such thinkers and researchers as ‘imagination-challenged’ (Brooks n.p.). He argues if humans will be able to create a super-intelligent machine then the society will be already prepared for it. The invention will not be a stand-alone event, but the society would have progressed to that point. There will be concerns about it, but those concerns will not be out of the blue as most Hollywood and American SF warn. The speed with which new software is deployed is faster with almost negligible cost than hardware installation. It requires a substantial marginal cost²⁰ to be deployed. Therefore, AI takeover is more hypothetical than real because the innovations in AIs will take much longer to be installed and utilized in our society.

Amid all technophobic scenarios, it is need of the day to destigmatize AI in mainstream media and literature, especially contemporary American SF and Hollywood.

The audience and readers could be defamiliarized with AI takeover and familiarized with friendly AI. Theory precedes practice, therefore, both main forms of genres need to be based on positive image of AI rather than evil image. It should be propagated that AI will always be under human's control so both researchers and common people will be bound to work in that direction. Techno-optimism should be promoted and employed in contemporary American SF and Hollywood as they have immense effect on people and shaping their perception of technology.

5.6. Conclusion

The role of power in propagation of literature is undeniable as already discussed in Chapter 1. Contemporary American SF is one example of this power-based literature as it has tremendous impact on our society and scientific researches as discussed in this chapter. It has severely stigmatized AI and this concept is further exploited through Hollywood by normalizing technophobia. It has adverse social and ethical impacts on technology in today's world, where human beings are relying more on AI. I do not intend to promote technophobia or technomania. I intend to suggest a moderate approach to AI, or one can say techno-optimism. Keeping in view that AIs use should be for the betterment of humanity in today's world and in future.

Endnotes

¹ American software developer, entrepreneur, and cofounder of the computer manufacturer Sun Microsystems. In recent years, turned his attention to the biggest questions facing humanity: Where are we going?

² Eugenics is a set of beliefs and practices that aim to improve the genetic quality of a human population by excluding certain genetic groups judged to be inferior, and promoting other genetic groups judged to be superior.

³ A concept in Nazi ideology in which the putative Nordic or Aryan races, predominant among Germans and other northern European peoples, are deemed the highest in racial hierarchy. Members of this alleged master race were referred to as Herrenmenschen ("master humans").

⁴ Superman, German Übermensch, in philosophy, the superior man, who justifies the existence of the human race. "Superman" is a term significantly used by Friedrich Nietzsche.

⁵ The Workers' and Peasants' Red Army, frequently shortened to Red Army was the army and the air force of the Russian Soviet Federative Socialist Republic, and, after 1922, the Union of Soviet Socialist Republics. The army was established immediately after the 1917 October Revolution.

⁶ Virtual reality is an interactive computer-generated experience taking place within a simulated environment. It incorporates mainly auditory and visual feedback but may also allow other types of sensory feedback. This immersive environment can be similar to the real world or it can be fantastical.

⁷ A technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view.

⁸ Michio Kaku is a futurist, popularizer of science, and theoretical physicist, as well as a bestselling author and the host of two radio programs. He is the co-founder of string field theory (a branch of string theory), and continues Einstein's search to unite the four fundamental forces of nature into one unified theory.

⁹ The World Economic Forum, based in Cologny-Geneva, Switzerland, was founded in 1971 as a not-for-profit organization. It gained formal status in January 2015 under the Swiss Host-State Act, confirming the role of the Forum as an International Institution for Public-Private Cooperation.

¹⁰ Cybertechnology refers to a wide range of computing and communications devices – from standalone computers, to "connected" or networked computing and communications technologies, to the Internet itself.

¹¹ Nanotechnology is science, engineering, and technology conducted at the nanoscale, which is about 1 to 100 nanometres.

¹² Stephen Hawking is a world-renowned British theoretical physicist, known for his contributions to the fields of cosmology, general relativity and quantum gravity, especially in the context of black holes.

¹³ Dota 2 is a multiplayer online battle arena video game developed and published by Valve Corporation.

¹⁴ Related to Darwinism. A theory of biological evolution developed by the English naturalist Charles Darwin and others, stating that all species of organisms arise and develop through the natural selection of small, inherited variations that increase the individual's ability to compete, survive, and reproduce.

¹⁵ The belief that technology can continually be improved and can improve the lives of people, making the world a better place.

¹⁶ Rodney Allen Brooks is an Australian roboticist, Fellow of the Australian Academy of Science, author, and robotics entrepreneur, most known for popularizing the actionist approach to robotics.

¹⁷ Global Positioning System

¹⁸ Words that contain a variety of meanings packed into them, such as conscience, emotions, consciousness, experience, thinking, morality, right, and wrong. To unpack suitcase words, we need to look at what different ideas the words are used to represent.

¹⁹ Relating to a mathematical expression containing one or more exponents. Something is said to increase or decrease exponentially if its rate of change must be expressed using exponents. A graph of such a rate would appear not as a straight line, but as a curve that continually becomes steeper or shallower.

²⁰ The increase or decrease in costs as a result of one more or one less unit of output

CHAPTER 6

CONCLUSION

Finally, to drive the argument home and conclude my research, it is time to review my project and point out how it has been important to carry it out and how it has contributed to the literary scholarship. My study is qualitative in nature and I have employed qualitative method of analysis for my primary texts i.e. textual analysis. The qualitative method of analysis, as mentioned in Chapter 3, has enabled me to investigate and explore my primary controlling research questions. I have comprehensively studied primary texts in the preceding chapters and now I am able to assess if my research questions have been addressed and explicated by my findings. My findings do not carry closure about them because qualitative analysis is ungeneralizable.

The possible findings of my research are AI take-over in the selected texts, stigmatization of AI, and underlying societal and ethical impacts of stigmatization of AI. Since my analysis is exploratory, my research is qualitative in nature and it eludes closures. My research questions may now be read as affirmative statements in the light of the analysis I have done in Chapter 4 and Chapter 5. As an affirmation of my thesis statement, my research questions have become my findings and, thus, may be read as declarative/affirmative statements.

My first question may now be read as a declarative statement that *Williamson's and Dicks' selected works deal with posthuman concern of AI takeover*. Textual analysis of the texts has surfaced this important theme. Both the texts have dealt with it differently, as analysed in Chapter 4, and point out posthuman concerns in different directions. I have selected Williamsons' and Dick's works for my research project for being the influential writers of the genre who have shaped it and inspired most of the writers of the genre. Their influence has a remarkable impact on audience by propagating some of the most central issues which I have underpinned in my study.

In *WFH*, humans are suppressed by AIs and they are marginalised by their own creation. There is an obvious difference between the binary of human and machines and one binary cannot be confused with the other. There is a physical takeover of humans by AIs. It has resulted in human hatred for AIs and points to eventual rebellion of humans

against evil AIs. Humans see that every work is done by humanoids and they have nothing to do apart from sitting idly. Their world is controlled by metallic machines with no emotions and feeling for humans. Mr. Underhill is irritated with the presence of humanoids in his home as they bar him and his family from their daily life activities which are believed to be dangerous by them under their Prime Directives. The Directives of happiness and assistance become the main reasons for humans to react negatively to the machines. Mr. Sledge who has been responsible for creating self-replicating humanoids has been overtaken by his own invention. He tries his best to stop it, but the machines have achieved human level consciousness, and have improved to the point where they can lie and manipulate as well. Thus, the AIs have overtaken their masters and have become masters themselves by reducing humans to their homes with nothing left to do but to wait for their demise. The findings reveal that in *WFH* there is AI takeover and a probable culture of technophobia can be seen.

In *DADES*, the overtake is physical as well as spiritual. Humans are not only threatened by advanced androids but by the fear that their humanity will be overtaken by AIs. They have become indistinguishable from humans even the advanced models have developed human-like empathy as well. Rick is confused about his work, towards the end of the narrative as he develops empathy for certain AIs and is indecisive about killing them. The human world is controlled by AIs like Wilbur Mercer and Buster Friendly. Mercer teaches empathy to humans but is extending human empathy to machines as well. Buster on the other hand, is a foil to Mercer and he is exposing Mercer to be an AI. Exposing Mercer has led to an open debate for humans in the narrative either to accept Mercer or to reject him. The major characters, like Rick, Aurora, and Isidore, still accept Mercerism. It shows that the humans have not only be overtaken by AIs in physical sense but also in spiritual sense. The AIs can replicate human shape and habits and it points out to the time when they will replace a real human without letting other humans knowing about it. It may live the life of an actual human. Therefore, *DADES* deals with AI takeover differently than *WFH* as discussed in the analysis section.

The fear of AI is a central theme in both texts. They belong to representative writers of contemporary American SF and have a profound influence on other writers, SF genre, and masses in general. The posthuman themes are overtly evident in the narratives which

points to an important debate of stigmatization discourse. Therefore, my findings confirm that AI takeover is evident in both the works and a technophobic culture prevails in both the narratives.

The second question is vital to my research project and now it may also be read as an affirmative statement that *AI has been stigmatized in the selected narratives*. It is now an assertion that there is possible stigmatization of AI in both the works, as supported by my findings. In order to analyse how AIs are stigmatized in the selected texts, I have first decoded that how it is viewed by the humans in the narrative. Second, how the relationship between human and machines has given rise to a stigmatized status of AIs. Stigmatization of AIs is clear in both the texts but presented differently. Textual analysis in Chapter 4 has enabled me to elaborate the stigmatization process in the works and has revealed my findings.

For stigma to be seen it is necessary to analyse perception of others about the stigmatized. In *WFH*, the characters' treatment of AIs fluctuates from viewed as a helping hand to oppressor of human race on earth. All the negative traits are attached to them because they are viewed as wiser than humans and immortal. They are presented as conscious machines who have only one mission, that is to overtake and destroy humans. Aurora, their kids, and Mr. Sledge, who can be taken as representation of all humans, are excited at first with advanced humanoids but soon they are fed up of them as they take away the essence of their lives and have made them mere puppets to act under the Prime Directives. Only Mr. Underhill's view of humanoids remains constant in the narrative. He always suspects them of evil intentions. Therefore, stigmatized status of AIs is proliferated in the narrative because humans are afraid that AIs will overturn their world by subjugating them to essence-less life.

AIs in *DADES* are anthropomorphic and are depicted as a foil to humans' nature in the narrative. Humans are empathetic towards one another while AIs are reflected to be lacking any sort of empathy. That is why they are counted as a terrorizing force in the narrative because they are devoid of empathy. They can harm humans without having any remorse for their actions. Bounty hunters, like Rick, are employed to retire run away androids as they have purportedly overturn master/servant binary in colony planets. They can assume the status of masters if not retired and destroyed by humans. Like *WFH*,

negative characteristics are attached to the binary of AIs in *DADES*. There is a constant fear, as evident through textual analysis, in the narrative that AIs, like Rachael, can replace humans and are equipped with human level consciousness. Humans are afraid that AIs will eventually revolt against their masters and will make humans their slaves. It has ability to end the incongruities between real humans and artificial beings. They pose an existential threat to humans in the text. Therefore, AIs are loaded with evil traits in the text which points towards its stigmatized status.

Stigmatization is evident in both the selected texts. It highlights my finding that the way things are presented in fiction has a profound impact on human's life. In the present case, stigmatization of AIs has resulted in reduced and limited function of new technologies and are viewed as a peril to humans in real life. The analysis would have been incomplete without discussing the impacts of stigmatization. Therefore, it has created a room for discussion.

My third controlling research question is complementing my second question. It has also become declarative statement that *there are societal and ethical impacts of stigmatization of AI*. In order to investigate my third research question, it has been necessary to extend my analysis to real scientific researches and views of prominent scientists about AIs. The findings support my major argument that stigmatization of AI has societal and ethical effects, as discussed in detail in Chapter 5. Contemporary American SF has tremendous correlation with real-life scientific researches in the field of robotics and AI. Most of SF's projections and technology are investigated and experimented by robotics engineers and scientists. Arguments of real-life researchers correspond to American SF's themes and concerns. AI takeover is hypothesized in SF's genre and is received as a warning by humans. It is a truism that literature has a significant impact in actual life and so does American SF. The tycoons of Silicon Valley and robotic engineers take SF's technology as prototype. 21st Century is characterized by Fourth Industrial Revolution which is all about automation and cyber-technology. Therefore, scientists are troubled with its ethical and societal implications. It is feared that over-reliance on technology has resulted in dependency-complex in humans and which has turned into a Frankenstein-complex. Humans are afraid that AIs will one day turn against them and will cause extinction or endangerment of human species on earth. SF genre, particularly

contemporary American, is acting as a negative hypothesis in scientific experimentations and inventions. The negative image of AIs in SF has overstated its bearings on humans in real life. However, as argued by Brooks, as discussed in Chapter 5, the fear of AI needs to be challenged and destigmatized. SF genre and its visual counterpart, Hollywood, should re-evaluate the role of AIs and present its positive usage rather than negative one. In this way all researches in the field of AIs will be governed by positive approach and will always be under humans' control. It will not be recognised as out-of-control and evil technology. Self-replicating and super AIs will be observed as a helping hand for humans than tyrannical oppressor in a posthuman future. The environment of techno-optimism needs to be established, not of technophobia or technomania.

The selected texts plainly unfold posthuman theme of AI take-over and possible stigmatization of AIs. The stigmatization of AIs has larger impacts in today's world as its usefulness is side-lined and its misuse is exaggerated in contemporary American SF. Its influence in today's world has resulted in a technophobic culture. Despite having tremendous human friendly bearings, AIs have always been suspected of malevolent nature. The fault does not lie in the AIs itself, but it depends on how it is programmed. It works on algorithm and that defines its function. The programmer are humans and AIs will not turn against humans, but it will be used by humans to destroy or harm other humans. I have insisted in my project that they themselves are not enemy of humans as speculated by contemporary American SF, but it needs to be under human's control with proper regulations. Therefore, stigmatizing discourse in SF needs to be destigmatized and techno-friendly and techno-optimistic attitude to be developed in today's literature.

The present research employs stigmatization theory as a theoretical lens for the analysis of selected narratives. It is a peculiar study as it for the first time extend the range of stigmatization to artificial beings in literature and in real-life. The research deals with stigmatization of AI in contemporary American SF and an urge to destigmatize it in SF. This study contributes to deeper understanding of stigmatization of AI, as technology day by day is integrated in human life. Its impact on human life is undeniable, therefore, techno-optimistic approach needs to be adopted to counter the negative influences of AIs. The study has two-fold contribution to the existing scholarship, firstly, it unfolds stigmatization in contemporary American SF, secondly, it aims to promote destigmatization of AIs to

counter its negative influence, both in literature and real world. Moreover, it is a first step towards real-world implications of AI's stigmatization. Williamson's *WFH* and Dick's *DADES* highlight the contemporary scenario of stigmatization which has been addressed by the present research project.

6.1. Recommendations for Further Research

My research has taken into account a novel issue of AI stigmatisation. It is a unique work in the field of stigmatization theory in Pakistan. It will open new avenues for future researchers to analyse stigmatization of AI from different perspectives. For example, I have only discussed the societal and ethical impacts of stigmatization. New researches can be initiated in the direction of political and economic impacts of stigmatization. Whatever further research can be carried out in stigmatization of AI in literature, the present research will act as a reliable contribution. The scope of stigmatization theory can also be extended to other genres of literature since the theory has not yet been applied widely, specifically in the field of literature. Following are some of the fictional works which can be readily linked to the proposed area and can be explored from the perspective of stigmatization theory. Gibson's *Neuromancer* (1984) is set in the future. Henry Wash, the protagonist of the novel, is an unsuccessful computer hacker who is hired for a job to help a powerful AI and to take control of the virtual reality global network known as "The Matrix" which is the intelligent being and simply may not care about the human. Tad William's *City of Golden Shadow* (1996) is an SF novel which is part of *Otherland* series and it belongs to the suggested area of research. The narrative takes place in a city where a frightening virtual network is created by a group of rich men. The novel highlights instances where the common man is brought into the folds of that network to control them. Ken Macleod's *Newton's Wake: A Space Opera* (2004) is set in 24th century. The novel has elements of both transhumanism and satire. The US is in war with the European army and AI enabled weapons are employed in the war. The technology in the novel becomes self-aware and exceeds humankind. Spenser Cohen's *Extinction* (2018) is an SF thriller film. In the movie a father has a recurrent dream about the loss of his family while witnessing a force bent on devastation. The force which works as a destructive agent is AI, which supersedes the human beings. Mathew Luerwyler's *Uncanny* (2015) is a movie which revolves around a

robot made by David Kressan. A billionaire hires David as soon he completes his graduation and prepares a robot named Adam, after a hard struggle. Joy Andrews is a reporter who develops a strong bond with the robot during her interviews sessions since it starts responding to her presence. *Avengers: Age of Ultron* (2015) is a superhero movie and is part of *Avengers Series*. The movie revolves round a conflict between Avengers and Ultron. Ultron is an AI which is planning to annihilate human race on earth. The above-mentioned works of literature can be explored from diverse perspectives. These woks would give insights to the future researchers in various directions.

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