

Envisioning the Anthropocene and Posthumanism in Science
Fiction and Fantasy Works: A Study of the novels *The Windup
Girl*, *The Fifth Season*, and Short Story “Vaster Than Empires and
More Slow”

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Bachelor of Arts in English

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Declaration

It is hereby declared that

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2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

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Abstract

This research addresses the notion of the Anthropocene – a term originally denoted a geological era where human activities are the predominant force in altering nature’s progress. The age of the Anthropocene as a mode of thought goes beyond its scientific definition and considerations of environmental impacts. The humanities importantly shed light on and contribute various theories related to the Anthropocene ranging from critical scrutiny of the techno-scientific enterprise, to displacement and identity politics to ethical dilemma and question of subjectivity in a posthuman society following the Anthropocene era.

For the purpose of my research, I will analyze three science fiction and fantasy works, including the novels *The Windup Girl* and *The Fifth Season* and the short story “Vaster Than Empires and More Slow”. *The Windup Girl* depicts a near future global catastrophe where food and crop have become extinct and recurrent pandemics threaten near extinction of humans. “Vaster Than Empires and More Slow” depicts an alternate universe where space exploration and galactic colonization by humanoid species has been made possible. Sentience however is still a strictly humanoid category and when a group of explorers discover the presence of sentience in plant life in a faraway planet, they are rendered nearly on the verge of insanity as they try to project humanist epistemology onto them. Finally, *The Fifth Season* explores a vengeful planet and every “fifth season” marks an epochal period where the world comes close to ending. These work of fiction are not only a product of our present material state, but they also go beyond the “textual surface [and] into the signifying processes that constitute theme and character” (Hayles 1999, 39).

Keywords: Anthropocene; Posthumanism; Science Fiction; Earth System; Extinction

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Chapter 1

Introduction

In human history, literature has been both the product of civilization as well as one that shapes culture and society. Starting from religious and mythological records, to factual accounts of history, to sharing of knowledge and ideas and to political discourses, the power of literature remains an integral part to humanities continuation, fiction gives shape to the creative faculty of imagination, which furnishes actual discoveries and inventions. This creative drive of fiction can be traced as far back as to the epics and fables of Ancient Greek Literature (Kerslake 2007, 105), to the later Anglophone fiction on themes of allegorical and fantasy tales borrowing from religious narratives and mythology, to themes of voyage, exploration and utopian fantasies. The Romantic canon of literature too with its emphasis on the imaginative faculty and “willing suspension of disbelief” was both a continuation of the creative legacy of literature and fiction as well as paved the way for vast modes of writing and experimentation within the purview of fiction (Morton 42-43). Voyage and travel literature of the sixteenth through eighteenth century – most notably the prototypical works *Utopia* (1516) by Sir Thomas More and *Gulliver’s Tale* (1726) by Jonathan Swift – incorporated the utopian dream of discovering vast expanses of the new world and contacting the lost race (Rieder 34). Such speculative and imaginative writing was further buttressed by the recent Romantic canon of literature which resulted in the mode of writing incorporating lyrical devices, Gothic elements and fantasy tales to voyage narratives. These modes of writing would evolve to form the much later science fiction and speculative fiction writing of contemporary time, which will form the subject of my focus.

Science fiction prominently emerged in literary circulation at the end of the eighteenth century coinciding with the technological and industrial revolution. Edgar Allen Poe’s work

is deemed as a strong precursor shaping of science fiction as he is one of the first authors who deliberately attempted to fashion a mode of writing to incorporate science and technology with fictional narratives – story “intermingled with scientific fact and prophetic vision” (Attebery 2003, 33). The age of Enlightenment with its unprecedented discoveries in sciences, medicine and so on provided the breeding ground for creativity and imagination pertaining to science fiction. The legacy of the age of Enlightenment and humans as forming the rational beings have prevailed western thoughts for more than 200 years now, heralding the modern and postmodern period. Physical invention and scientific theories of Newton and Einstein have revolutionized human progressed and ushered ideas of modernity (Davies 5). These inventions were also inherently a humanist project for the betterment of humankind. Science fiction had been a mode of treating such humanist leaps in narratives of scientific progresses. Even back in the seventeenth century, writers had produced “speculative fiction about new discoveries and technologies” which was being “accommodated [...] within [the then] existing genres and narrative framework” (Stableford 15). In the context of Europe, science fiction imaginations coincide with European exploration of the other world and these “classical and European marvelous journeys to other worlds” formed an “important part of the genealogy” (e.g., Philmus 37-55; Aldiss 67-89; Stableford 18-23. cited in Rieder 1). Just as anthropological study of human evolution was taking shape as a scientific discipline concurrent with the imperial expansion – the social Darwinian ideologies – in the same way future of humankind and their relationship with technology became a matter of study and literary speculation (Rieder, 2). In fact, as already mentioned, fantasy genre can be seen as the major precursor to science fiction where fantasy encompasses the breath of imagination and science fiction explores the possibilities through rational engagement of imaginations (Stableford 15). These fantasy tales took the form of “imaginary voyage” and Francis Bacon, “a foremost champion of the scientific method” wrote *New Atlantis* (published in 1672)

which is a seminal work in this tradition of travelers' tales (Stableford 15). This exploration theme is still manifest in science fiction works long after the imperial colonial period, now taking the form of vision of colonization of outer space in space opera fictions. Stableford states how "[t]he gradual removal of terra incognita from maps of the Earth's surface helped to force utopian and satirical images out into space" (17). Moral fables comprising of mostly allegorical tales and what the writer describes as "dream stories", lost its force after the Protestant Reformation in Britain, and so was supplanted by scientific and futuristic tales – which again featured phantasmagorical elements pertinent more to fantasy literature (Stableford 16).

Science fiction narrative, therefore, strives to be visionary and exhibits a preoccupation with the future. However, Etienne Augé in a TED talk titled, "Why our world needs science fiction" opines that science fiction is not about predicting the future, because, according to him "the future does not exist". Rather, he says that science fiction is about the invention and prevention of what the future holds for us. I have therefore taken up the project of analyzing works of science fiction to map how, as Katherine Hayles mentions, "[l]iterary texts are not, of course, merely passive conduits, [but they] actively shape what the technologies mean and what the scientific theories signify in cultural contexts" (21). Speculative science fiction, which features thought experiments and the questions of "what if" have mostly preoccupied itself with speculation of the future and this launched the generation of British future war fictions featuring military technology in the late 19th nineteenth century (Suvin 63). These stories were popularized through periodical serializing rather than book format and even featured stories of an impending great war as well as weapon like the nuclear weapon before it existed (in George Griffith's story *Lord of Labour*) (Stableford 22). The main purpose of my discussion above is to illustrate the potency of science fiction genre which delves into subjects ranging from technological revolution to the

colonial expansions of both earth and beyond at our time of the Anthropocene. Science fiction works however do not afford cold and neutral stance to such technological imperialism. In fact, many works have afforded trenchant criticism of techno-science, especially in the dystopian subgenres. The works I will examine in my paper are *The Windup Girl* by Paolo Bacigalupi, short story “Vaster Than Empires and More Slow” by Ursula K. Le Guin and *The Fifth Season* by N.K. Jemisin. *The Windup Girl* portrays a dystopian world set in Thailand which features a global energy collapse – called the ‘Contraction’. Biotech companies now control the world -wide food production after this event. This is a world where racial tension and prejudices exists despite such advancements in technology. The story also depicts the country’s attempt to penetrate the global economy which brings about unexpected detrimental effects to their social and economic stability. Bacigalupi in this book invokes the negative effects of globalization and the techno scientific supremacy that the world may possibly see in the near future. “Vaster Than Empires and More Slow” depicts an alternate universe where space exploration and galaxy colonization by humanoid species has been made possible. Sentience is still a strictly humanoid category and when a group of explorers discover the presence of sentience in plant life in a faraway planet, they are rendered nearly on the verge of insanity as they try to project humanist epistemology onto them. Finally, *The Fifth Season* explores a vengeful planet and every “fifth season” marks epochal period where the world comes close to ending.

Chapter 2

Science Fiction and Fantasy: A Genre Mapping

Anglophone science fiction as a genre had very literary beginnings. Many critics have pointed out that science fiction's taking on a definitive shape as a genre coincides with the "heyday of empire" in the end of 19th century (Seed 10). The earliest science fiction writing – as per the modern understanding of science fiction – can be categorized as those which delved with the themes of exploration and venture into the unknown. The earliest development of the genre predominantly began in Britain prior to and during the days of early imperialism. In the 20th century, though Britain was at its height of imperial might, the US was ahead in conceptualizing military and techno scientific advances and even space exploration through the mode of science fiction (Seed 20-35). Imperial expansion is founded on and driven by such ideas of exploration which is reflected in literatures and travel narratives. For the purpose of this research, I am going to briefly revisit the formative period of science fiction literature writing in English.

Earliest writing in science fiction had a more literary origin that bordered on the fantastical narrative. These writings also did incorporate the then relevant themes and style of religious ideas and science or scientific knowledge often featured in the form of blasphemous knowledge or a path to man's downfall. Especially with the advent of the Copernican theory and the later theory of Darwinism, literature had been a means by which these scientific ideas were incorporated, albeit to warn against such pursuit. However, it is also important to note that science fiction themes such as interplanetary exploration have dated as far back as the second century, and it was only the backdrop against the later phenomena of Geocentrism and religious puritanism which made such forms of writings as science fiction highly contentious (Seed 3).

Many notable works arose during the Renaissance period and the industrial revolution (Seed 3). Much later, science fiction evolved into mainstream form of fiction with the advent of the print media, and it is also the time when the term “scientifiction” was coined by Hugo Gernsback in 1926 (Delany 26). Science fiction now comprised of the “paraliterary texts” and had their own publishing outlets such as serialized magazines (Dealany 27). As the magazine era progressed, science-fiction writing experienced its “golden age” during the era of Campbell’s *Astounding Fictions*. Isaac Asimov, one of the greatest science fiction authors wrote his *Foundation* series at the time, and coined his famous “Laws of Robotics”. Following World War II however, science fiction has experienced a bit of a slump due the mass’ disillusionment and skepticism towards science and technology especially due to the Nuclear age. Nevertheless, New Wave science fiction during the 60s and 70s reinvigorated the field with its more literary, artistic and critical focus and many. During this time, many subgenres of science fiction emerged, most notably Space Opera fictions, first contact with extraterrestrial beings, and last but not the least, the Cyberpunk genre of the 80s with the inception of Gibson’s *Necromancer*. Writers like Samuel R. Delany, Octavia Butler and Ursula K. Le Guin also incorporated environmental themes into their works of science fiction.

20th century represents the canonical might of the science fiction genre. The 21st century has not been as prolific in terms of producing classics as the 20th century. However, it is perhaps too soon to give that verdict since a classic refers to a work that endures the test of time, and is a title acquired when its impact is timeless. Moreover, coming to the 21st century, the science fiction genre mostly figures in films and animation through incorporating visual effects and graphics technologies. Nevertheless, science fiction works were also produced through cinematic medium in the 20th century, the notable works being *2001: A space*

Odyssey (1968) by Kim Stanley Robinson as well as the space opera *Star Wars* franchise starting in 1977.

Chapter 3

The Anthropocene: Critical Theories and Conception of the Planet

Mapping Anthropocene Concerns

The term ‘science-fiction’ now stands for something more than a literary genre. Sci-fi imagination now is a “mode of response” and is even an epistemological category (Csicsery-Ronay Jr 2008, 2). Techno-scientific advances are being imagined and mediated via science fiction inspired models and oftentimes it is not long for the models to take the form of reality. One such relevant consideration would be in the field of biomedicine and biotech. Lars Schmeink refers to the famed genetic professor J.B.S. Haldane who prophesied in 1923 that it is in the development of the biological sciences, at the center of which scientific interests lay (26, mentioned in Schmeink 2016, 1). Nanotechnology, for a long time, has been conceptualized in science fiction, with the initial fantastical narrative of miniaturizing of animals and even human. Numerous such plots exist usually subsumed within the predominant thriller genre. One primary figure to redirect the focus of sci-fi narratives from expansionist fantasies of outer space colonization to the life on this planet was J.G. Ballard. During the heyday of the space race between USA and the Soviet Union, treatment of space program and planetary exploration in especially hard science fiction – ‘hard’ denoting the subgenre of sci-fi that mimics situations as scientifically accurate as possible – was not only widespread, but there were also little works that was critical of such ambitious, extravagant and possibly destructive feats, taking attention away from the present concerns of humans on the planet. Ballard proposal brought about a new series of exploration of “inner spaces” in fiction, which introduced concepts such as visual mapping of virtual media, internal microscopic imagery etc., which led to the emergence of the more definitive concept of the cyberspace (Seed 22). Ballard’s concept of the “inner space” was not, however, about a

psychological exploration of the mind. Rather it was an effort in re-orienting the science-fiction genre where writers establish a relationship with their works through “using one’s imagination to construct a paradoxical universe where dream and reality become fused together each retaining its own distinctive quality and yet in some way assuming the role of its opposite” (1969). Such notion of science fiction’s role towards imaginative universes further gives rise to the concept of cyberspace which refers to the simultaneous existence of space and non-space. Abstractions of cyberspace and virtual-reality were the precursor to developments of computer-generated simulation, as well as the World Wide Web - with which cyberspace has often been identified with (Seed 25).

In the past couple centuries, i.e. within living memory, the world has undergone massive changes. Advancements in medicine, advent of industrial work and harnessing of energy have enabled these newly derived wealth and luxury to be enjoyed by the global population. More people are now employed since the advent of factories and mechanized labor, and medical advances have prolonged life. It is often argued that science has endowed these blessings upon people, thereby drastically improving our quality of living. However, it begs the question that whether we are really living better off in this modern world as opposed to the traditional pastoral form of living, and what is the cost entailed in the gains. There now exists a growing suspicion towards the very notion of progress, as these are very much within the domain of the knowledge creation that has its root in imperialism. The narratives or rather the meta-narrative of progress are a distinctly Western concept of human development and progress. If we detach ourselves from the modern timeline of progress and analyze human development from a period beyond this apparent progress, we find a human history “marked by crises, regime shifts, disasters, and constantly changing patterns of adjustment to limits and confines” (Steffen et. al 2015, 94). Environmental historians – who engage in mapping the techno-scientific progress and how that fares with nature – depend entirely on

“knowledge regimes” and scientific production of facts to derive policies, without the incorporation of social and political theory with the environmental concerns and techno-scientific progress (Sorlin 2007, 124). Sverker Sörlin and Paul Warde, in their paper discussing the field of environmental history, mentions how such “science-based meta-narratives” fare better in this regard, providing scenarios on climate, natural resources, or demography” instead of a focus on “the historical timescale such as the production of scientific knowledge, colonization, trade, and imperial agricultural improvement that provide the analytical focus and explain changes in human-environmental relationships” (2007, 122). Indeed, this formed the motivation of expansion during the industrial and colonial era where biological and geographical confines could finally be overcome and the rest of the world was now the “extremely lively and interactive stages” for expansion (122). It was only until last several decades that ecological and social limits to growth had been acknowledged through efforts such as the Brundtland Report to the UN 1987, the Rio Summit 1992 and the Kyoto Protocol 1998. However, the predominant economic tendency is still vastly negligent of this “ecological cost of growth”, and the concerns are now being replaced by complex, multi-faceted discourses of “ecological modernization” that views present environmental concerns for economic gain but fails to view the intrinsic value of environment (123-124).

From colonial rule, to two world wars and its aftermath, to globalization and its hyper-capitalist reach, the systems of inequality and exploitation of resources at present is so entrenched that it actually presents an antithesis to the narrative of progress of science. We often engage in a cultural celebration of the bounty of techno-scientific enterprises and become forgetful of the pressing issues including consideration for sustainability, impact on climate and the subsequent rising inequality. On the other hand, the potential dystopian future wrought by climate catastrophe, global famine or even man-made apocalyptic events like nuclear holocaust prompts scientists and business personages like Stephen Hawking (who

passed away in March of 2018), Elon Musk, Bill Gates and many to promote the science fiction like future of space colonization (Selk 2017). In foreseeing the future of science, clean energy considerations such as hydrogen power exists, which however, is seen as radical view in the coal and petroleum dominant industry. Clean energy is not exploitative of nature and at the same time it shows human capacity to make use of nature to its fullest advantage. This is important to consider since humans' relationship with the natural world is constantly associated with the categories of human over nature, human over technology, technology over humans and so on. Tim Morten in his book *The Ecological Thought* addresses just such concern where he traces the ecological ethos in Romantic Literature and connects it with evolutionary theory of Darwinism as well as philosophical account of Derrida. Drawing reference from Samuel Taylor Coleridge's poem *Rime of the Ancient Mariner*, the theme of the "uncanny", which is typified in Romantic Literature, represents nature as an entity beyond our grasp. At the same time however, technological and scientific means of understanding and mediating between the forces of nature is not the cause of ultimate doom. Rather he proposes that the Humanities have a significant role in the field of Sciences which includes "responsibility to examine, participate in, support, and criticize scientific experiments" (13). This takes into account the question of the nonhuman animals and whether they have cognitive and aesthetic capacity, as well as "cyborgs, artificial intelligence, and the irreducible uncertainty over what counts as a person" (8-13). Echoing similar ideas, McKenzie Wark turns to works of literature as well as various existing social and philosophical theories of Marxism and Posthumanism.

It can be asked for the field of biological innovation that is seeing a boom at present. Biological science and the field of genetics now see the most breakthrough inventions. To quote Michael Reiss, "Genetic engineering raises issues about the nature of life itself, about what it is to be human, about the future of the human race, and about our rights to knowledge and privacy" (13).

Many science fiction subgenres or themes have argued to be taking off from or entertaining what is dubbed as “apocalyptic fantasies” (David Seed both the books, Clare Colebrook). The fear of imminent threat and apocalyptic possibilities have set off the escapist narratives of space opera and near future possibilities of space ark and space colonization, leaving a hostile planet Earth which was once our nurturing home. Such narratives also coincide with postwar anxieties where, once every land has been laid claim on, space domination therefore become the new penultimate marker of supremacy, hence launching the space race as well as the multitude of literature stemming from it.

One of the reasons why science fiction writing, therefore, had been deemed as being of less critical value is because of how it evolved into being a very mainstream literature (Freedman 2005, 405). However, with climate taking a catastrophic turn and for the most part, human actions impacting the ecology more than ever before, science fiction literature has now become a very potent tool for conveying this message, not only through dystopian and post-apocalyptic settings, or the utopian view of the other extreme where technology saves the day, but by evoking the very fundamental questions of the evolution of humans’ relationship with nature, which leads to the present age of the Anthropocene. It is important to revisit the common but often forgotten knowledge that technology is as simple as the invention of the wheel dating back to the Neolithic period and humans have always relied on and fashioned various technologies throughout the human history to adapt to and live in harmony with nature.

In present, such writings that fall under the genre science fiction have played a crucial role in affording a literary and humanitarian lens to the era of the Anthropocene.

Anthropocene, the term, encompasses the phenomena of how humanity has progressed far enough to initially, terraforming the planet earth to make it livable, to making nature subservient to our needs. Here humanity emerges as a “geological force capable of affecting

all life on this planet” with the aid of technology (Crutzen and Stoermer 2000, 18; mentioned in Braidotti 2013, 5; Chakrabarty 2009, 206-2011). Our species have become a “catalyst and accelerator of capricious geological and meteorological forces (Clarke 149). On the planetary scale, this has also affected the non-human and abiotic compositions of our ecology.

The Science of the Anthropocene: The three epochs

The term “Anthropocene” at present unofficially denotes a geological epoch which is believed to soon follow, or already have, following the present accepted epoch of the Holocene. Geological epochs refer to a period of relative stability, assigned by geologists in the study of the planet’s natural history. Will Steffen propose the “Earth System” perspective to examine the Anthropocene, starting from Earth’s historical geological record, to mapping the present and future geological tendencies and the implications, from our very physical existence to the economic, social, political and environmental challenges and steps that are immediately vital. The human dimension here is part and parcel of the Earth System approach, where the fully evolved modern human enter the scene some 250 thousand years ago, while the earth was still undergoing the cycles of the longer glacial periods - the “ice age” - with brief warmer periods, also known as the interglacial stage. Within the 200-250 thousand years that modern human has existed, it was only recently, around 10 thousand years ago when the earth had entered the longer, relatively warmer period named the Holocene, that allowed for agriculture to developed for the first time and human being transitioned from hunter-gatherers to settled communities. This correlation immediately manifests how the dynamics of the Earth System is integral to human development from the very beginning. Dipesh Chakrabarty draws on the concept of “deep history” which goes beyond the recorded history to study the planetary factors and cultural and socio-economic changes it entails (2009, 160). Moreover, just as the present is key to the past and opens

concepts of species extinction and enduring geological impacts, similarly the present activities will affect the distant future. Elizabeth Kolbert points out that the present, unprecedented extinction events will remain in the fossil evidence “at the distance of a hundred million years or so” and testify to the “extraordinary happened at the moment in time that counts for us as today” (105).

The period of the Holocene and the Earth System perspective thus forms a reference point to the hypothesis of the epoch (or rather era) of the Anthropocene because there already exist strong indicators, as gathered from enormous data, that there in fact is a shift underway of our geological phase. These indicators counter any uncertainty about the new direction of the Anthropocene at the same time also addresses the common argument of “what’s new about the Anthropocene” (Steffen 91)? Such a view is not uncommon given our celebration of and complacency towards the age characterized by the “human enterprise”, thus taking the “Anthropocene” as not a new concern but rather a given (Steffen 92). Secondly, the question calls to attention as to why Anthropocene is in fact a new concern, departing from the theoretical debate of the origin of the Anthropocene.

In contemplating the Anthropocene as an epistemological category, scholars differ in the origin of this phenomenon. The agricultural revolution is argued by some as the point of reference of an Anthropocentric revolution, as the imprint of human activity was already put in place, whether in the atmospheric composition through greenhouse gas emission from the agricultural activities, or in the sedimentary record resulting from erosion and terraforming of land (Zalasiewicz et al. 2010, 2229; Steffen et al. 2015, 93). The 1700s industrial revolution was a decisive point with the invention of the steam engine and harnessing the energy in fossil fuels. The 18th century and the one that followed saw global imperial rules and a steady increase, originally in Europe, within the trajectories of the human enterprise, starting from the economy driven by steam engine industries, to rapid increase in transport and

communication leading to global mobility, and finally to a steady rise in urban population. By the 1800s, England and other European countries were almost completely transformed, before similar patterns followed to other parts of the world – namely North America (Steffen et al. 2011). These trajectories however took an especially sharp turn in the 20th century. While the world was still experiencing the aftermath of the two world wars and with a possible nuclear age still looming over the globe, the 1950s period nevertheless displays the dramatic phenomena that scholars term “The Great Acceleration”.

The Great Acceleration

The period of the Great Acceleration is termed so because of the remarkable and the unprecedented trends it set in, both in terms of human impact on the environment as well as the coinciding rapid socioeconomic transformation on a global scale. Environmental consciousness similarly arose at around the same time of the mid twentieth century and was being adopted in the field of humanities. Brian Stableford (2005) maps themes of ecological narratives in literature and fiction of the 1800s starting from the perils of industrial smog at its catastrophic potential preceding Ecocriticism’s emergence as a field in the Humanities in the 1960s (128). Charles Dickens as well as William Blake has made frequent use of the references and imagery of the industrial smog and of pollution, and in the mid-20th century, a full-fledged genre of ecocatastrophe had emerged especially in science fiction literature. Greg Garrard elaborates on these “apocalyptic narratives” in the environmental and radical ecological discourses of the mid-20th century (2004, 85-107). It is a noteworthy exposition of how the period of The Great Acceleration also saw equal impetus within the humanities field, whose involvement goes beyond the dataset and graphical representation that is used to quantify the period. The datasets, which dates back to the 1700s and was compiled in 2000 as part of the IGBP (International Geosphere-Biosphere Programme) research project includes

various trajectories of the human enterprise ranging from GDP, population growth, CO₂ and methane emission, percentage of land terraforming, fossil fuel consumption, energy use, development in transportation, and many more. These data helped in identifying of key sets of indicators that allowed for a quantitative mapping of the Earth System and thus arriving at some scientific conclusion regarding the state of the Anthropocene. In light of such scientific endeavors and the act of quantifying – which now has become almost an indispensable task in the field of academic research, alongside complying with the scientific validity – it is important to ask the questions that always gnaws the fields of humanities, i.e. with regard to the ethical and moral dilemma which includes the universal consequences of our actions and our consciousness as a collective species. Gisli Palsson and others mention that concepts like ‘Anthropocene’, ‘the great acceleration,’ ‘thresholds,’ and ‘tipping points’ along with endowing us an epochal consciousness, also manifests the “increasing need for concepts and narratives from the humanities and social sciences”, which can address “the process, the driving forces, and the social consequences of the changes they imply”, as well as bringing an ethical, historical and philosophical lens (2012, 7).

Even though, the “system” concepts of ‘Anthropocene’, ‘the great acceleration,’ ‘thresholds,’ and ‘tipping points’ forms a basis for collective concern, there however has been unequal division in terms of consumption and emission which has to be addressed before we can sufficiently address the earth system. Bestselling author Naomi Klein’s book *This Changes Everything* addresses the challenges of climate crisis in an era of “single global economy based on the rules of free market fundamentalism” (78). The single motive of capitalist driven economy is expansion and which has created a deep-seated conflict between industrial expansion and climate concerns. To quote Klein,

our economic system and our planetary system are now at war. Or, more accurately, our economy is at war with many forms of life on earth, including human life. What

the climate needs to avoid collapse is a contraction in humanity's use of resources; what our economic model demands to avoid collapse is unfettered expansion. (35)

Unrestrained capitalism is one of the causes behind the inherent system of inequality that dominates the complex systems of our world. Critique of unrestrained capitalism has been proposed in the World-systems theory, which offers a critical approach to globalization and the resulting systems of inequality that goes beyond the nation-state entity (Hite, 2000). The theory, and its establishment in the late 1970s by sociologist Immanuel Wallerstein, is a sociological appraisal of the systems of development and its history. In offering a macrosocial inquiry in the modern world, the theory argues that for an appropriate analysis it is “neither class, nor state/society, or country, but the larger historical system in which these categories are located” (Robinson 2011, 5). The predominant focus of the theory is thus “historical sociology” mapping the capitalist development from the past 500 years. However, the theory also importantly maps the notions of development that predominantly originated in the 20th century. Offering criticisms of international relation model and of transregional division of labor, the theory introduces concepts of core countries, peripheral countries and the semi peripheral countries. The core countries comprise of the high income nations in the world economy. They are also the countries where the resources accumulate and is transformed into wealth and technology enjoyed by the Western world today. The periphery countries comprise of the low-income countries, predominantly providing the labor and raw materials for the core countries. While this system from 19th to 20th century was through colonization, today this system is referred to as neocolonialism sustained through multinational corporations. The semi-peripheries are the middle-income countries that enjoy close ties with the core countries. Such a system works through the poor nations being economically dependent on the wealthier countries, which is capable through corporations to extract the natural resources for cheaper price. The wealthier nations turn the resources into

final products which are sold to richer countries, resulting in poorer countries not only deprived of the profits, but also depending on the richer nations for goods and services.

World-systems theory had received significant criticisms because of its failure to address the distinctive ways capitalism and globalization functions in the present era – mostly starting from the 20th century – which is qualitatively different from the past, which the William Robinson proposes as not being the case (20). Even departing from a strictly theoretical-hypothetical framework, socio-economic trends as visualized by GDP and Human Development Index (HDI) graphs makes evident that there are intrinsic discrepancies in countries that are the primary consumers and the countries that are producers in context of their population growths. Going back to discussion on Anthropocene, these data, which reveal qualitative and quantitative analysis of human development, also reveal discrepancies in terms of impact on the environment. And hence the issue of equity arises, i.e. even though the geological impact is attributed to humanity as a species, the inherent system inequality eventually vests power and capacity of a geological force only to certain nations. Moreover, the impact of the slight shifts in earth's system is felt unevenly across the globe where countries which are less technologically endowed, or with disaster prone geographical locations, or are dependent on foreign aids bear the greatest cost. Therefore, such views that a techno scientific capabilities can help combat climate catastrophe, or sustain the species even at the event of a cataclysmic shift of the Holocene with its drastic consequences to the natural variability, is a highly contested and criticized view, as is evident in the existing system of inequality where coping and survival capabilities is not to accessed by all.

The pressing concern however is to save the planet and move towards a sustainable trajectory as a techno utopian vision is far from being realistic and techno-scientific capacities nevertheless pale in comparison to force of the irreversible and an unstable geological state. Techno-scientific optimism at present is appropriately a wishful thinking,

because every data, research and hypothesis sustaining such optimism is based on the stable conditions up until now. Before consideration of the planet as a combination of distinct geopolitical entities, the planet needs to be viewed in terms of the Earth system - a system where every natural variabilities are interconnected. The real concern is not regional environmental problem, but about a systems problem where the planetary tipping-points need to be averted. The absence of an Earth System framework has for long resulted in the wave of offshore industries, which is sustained by the neoliberal free market scheme to cut costs, and which has recently also turned into offshoring of pollution.

Turn Towards Posthumanism

Rosi Braidotti points out the potentiality of lethal consequences of “technologically mediated power” in the age of the Anthropocene (66). Furthermore, humans have already developed concepts of outer space colonization and even hypothesized concepts of human extinction and posthumanity. Here either the earth’s atmosphere will become radically altered that technology will become integral to our survival, or humans need to find a new home with more or less the same preconditions of technologically enhanced environment. This also gives rise to fictions and factual predictions of genetic altering and changing of the natural make-up of our biology either for us to adapt to harsh conditions in our own planet, or in outer space. Science fiction tropes of human and machine hybrid, or human and creature hybrid fulfills this need. Such human-machine hybrids figure in the image of Cyborgs in science fiction narratives, where these cyborgs are optimized to survive and thrive in harsh conditions of the outer space (Seed, 62). Present imagination goes even further from the “cybernetic conceptions” of machine and human hybrid to “biological body enhancement conceit” which is being treated in narratives about genetic engineering (Schmeink, 24).

Such contemplation of extinction and posthumanity is radically altering our conception of history and time, as argued by Dipesh Chakrabarty. The discipline of history marks progress and continuity, aspects which is now under threat of discontinuation by human brought climate change. This calls for a spatial and temporal shift in our historical understanding and indicators of progress. Evolution and history of the earth, i.e. the natural history, has for the most part followed a course independent of human influence. As per evolutionary science, human beings came as a species as a product of evolution. Artificial history – i.e. man made history – on the other hand, maps how civilization has emerged and progressed leading to the modern world, where nature constitutes the backdrop but is nevertheless a crucial force in the course of civilization. Dipesh Chakrabarty, a leading historian with works on postcolonial studies, globalization as well as contribution to the literary criticism centered on climate and the Anthropocene, states that the institution of the human history has its origin in the modernist and humanist endeavors of the 19th and 20th century which was made separate from natural history. Early modern theories of the 19th century including the universalist ideologies of Marxism and liberalism, and later theories and analytic strategies of postcolonialism, postmodernism, poststructuralism and globalization had further sustained the discipline of human history (Dipesh 2009, 198). These theories form the analytic tools within the discipline of economy, anthropology and cultural studies which is essentially dedicated to the cause of humanity, where humans take the central stage and is a subjective being. Natural histories, on the other hand, was the interest of natural sciences, a field long been treated as distinctly separate from the humanities and social sciences. In the present age of the Anthropocene however, artificial and the natural histories not only come together, but it has become an imperative that they be considered in conjunction so that the urgency of human impact on the environment do not get swept under the carpet in the expense of selfish pursuit of power and geopolitical interests.

The way in which the above reference to humanity emerging as a catalyst and accelerator of geological changes is relevant to discussion of the spatio-temporal domain of current human history is due to the exponential nature in which human actions and behavior evolve and adapt in comparison to that of the natural environment. Timothy Clark in his book titled, *Ecocriticism on the Edge* draws on the theory of Darwinian evolution in explaining cultural and social changes as well as adaptation which occurs on an unprecedented scale, or in other words instantaneously. The example he provides is of the invention of hand axes and spears which in itself was so revolutionary that it is associated with the beginning of civilization by majority of the historians. Escalating humans into deadly predators, Clark argues that these changes were instantaneous and did not occur through “millions of years evolving a physiology of deadly claws and teeth” (150). Nick Bostrom, a Swedish philosopher at the Future of Humanity Institute, Oxford University with area of interest and contribution on ‘superintelligence risks’, ‘anthropic principles’, ‘human enhancement ethics’ amongst other things maps the sequence of growth modes - “each much more rapid than its predecessors” (2017, 16). In a scale of time, if the earth were only a year old, our species would have been here since the last ten minutes. In that scale, the evolutionary change from great ape to *Homo Sapiens* was swift. And within our growth mode itself, there have been the ‘turning points’ with distinct change in rate of growth that resulted in increase in efficiency, rate of economic productivity, and technological capacity. The Agricultural Revolution and the Industrial Revolution mark the two big turning points in the growth period. A third turning point is being predicted by many scholars, and “futurists” to be imminent. This hypothetical future, often called “The Singularity” is believed to be soon approaching, if not already here (Roden 47).

In his book titled *Superintelligence* (2017), Bostrom graphs the GDP of the past thousand years and through extrapolation of the data derives at what the future is like with

this accelerated rate of things. A critical view, however, is in order. While such hypothesis does offer a very techno-utopian view – the credibility of which is highly debatable especially given the destructive record of the existing technologies – the hypothesis also begs the question of whether extrapolation from past economic growth is reliable to begin with (or even needed) given that there are other variables. The questions asked are: are we hypothesizing based on calculations or are we calculating based on our hypothesis? Are we just focusing on arriving at the numbers without consideration for the ecology and other life forms? Because human growth, whether in terms of GDP, intellectual, or technological may have doubled, but discoveries, inventions, breakthroughs – without which the next stage of the singularity is not possible – has actually slowed. Meaning that, discoveries by any individual are less frequent because the larger part of the work is always carried out by multiple others in this era of connectivity. Moreover, majority of the population, those who do not comprise the clique of innovators, scientists, researchers, are only following, as ironic as it is, pre-existing rules, hence the apparent increase in productivity. In reality, there is little room for creativity and discovery. Brain implant might be cool, but it is highly likely that only a very small elite class will enjoy these inventions. It seems that as the rate of growth of our species increase, so does the inequality gap as well as the race for survival rather than progress.

At a Glimpse

This chapter opens multiple areas of discussion pertaining to the Anthropocene, starting from its scientific basis, to the consideration of planet as part of a holistic system. From there we move to the sociological and political imperative of addressing the inequality underlying the enterprise of techno-scientific progress. In our meditation of progress, we arrive at the Humanist discipline of history and how the concept of history is undergoing a

radical shift given the foresight of a possible extinction which is more real and pressing than ever before in the age of the Anthropocene. Such extinction ideas lead us to arriving at a posthumanist conjunction following the Anthropocene. For instance, for the novel *The Windup Girl*, I refer to the astrophysical and astrological hypothesis of the *Fermi Paradox* and the *Doomsday Argument* which deals with both the concepts of intelligent life surpassing humans as well as addresses a probabilistic human extinction event. Furthermore, posthumanism begins with the questioning of human exceptionalism, and views life, ethical and moral faculty, subjectivity, reason and empathy as transcending humanist categories. It goes beyond a nature-culture dualistic worldview where humans are not in charge of projecting their ontological and epistemological constructs onto every other life. These are the concerns that flesh out in the novels that will be discussed in the subsequent chapters.

Chapter 4

The Windup Girl: A Study on the Posthuman Predicament following Global Collapse

In this section, I am going to discuss the novel *Windup Girl* by Paolo Bacigalupi in terms of two broad focuses. The first part focuses on the social structure and instruments in place within the world of the novel. This will highlight the socio-economic dynamics of the novel where capitalism has morphed into the very fabric of the society. Here I will draw from Rob Nixon's concept of "slow violence" and "structural violence" to shed light into the characteristic of the society. The next aspect is the race relations as depicted in the novel. Here the accompanying themes of nationalism, neocolonialism and globalization too are relevant. Questions of ethics and moral values make a significant appearance in the novel, as characters try to mediate their values and ideas of wrong and right amidst the chaotic state of things that, not just the country, but also the planet as a whole is experiencing for a while. Taking from the above threads, the second part will offer the critical lenses of the concepts of Anthropocene and posthumanism as it unravels within the world of the novel. These highlight the novel ways of imagination and reconciliation with the changing times.

Human Anxieties and Destructive Motives

In the novel, we see the challenges that unearth in the wake of an environmental catastrophe. Though our discussion here is with the forms of catastrophe and cataclysms that are man-made, but the anxiety also runs deep in us about a potential external source of destruction, a doomsday that is beyond the capacity of man. Such irreconcilable anxiety in times of uncertainty drives some to extreme of steps. Even more so, these primal anxieties about survival and death manifest itself in the most bizarre of manners despite the existence

of technology yielding endless possibilities for mankind. At times, these manifestations wield within itself destructive power of planetary proportion. Nuclear energy contains within it just such an apocalyptic potential. A massive eruption of a super volcano can be triggered through drilling or opening vents, whether through accidental or a deliberate attempt. Sometimes these human induced hazards are not forethought, and are usually attributed to some technical shortcomings, for instance during massive oil spills which harms marine life for thousands of square miles with a lasting effect. In other cases, prevailing human activities are contributing factors to disasters including landslides, flooding, acid rain, and sea level rise. Some of these disasters are also deliberate actions driven by motives of terror. Similarly, in the novel, the particular apocalyptic event that we encounter is that of man-made food extinction through genetic engineering of crops, as well as near extinction of humans through engineered diseases.

An important point to make is that narratives in fictions, whether in novels or films have redirected their shift from the previous focus on exogenous events; for example, widespread narratives about alien invasion, to narratives of climate change and viral disease, as they take the center stage (Colebrook 2014, 87). These narratives evoke apocalyptic consciousness, which is often criticized as being a far-fetched reality. Environmental consciousness therefore is at odds with the enterprise of technology and the advocating of innovations, because the latter is more rational than the former. This also makes foreseeing of possible refugee crisis brought about by climatic instability a remote concern. These refugees form the contradictory and paradoxical body of the techno-scientific and developmental undertakings. Rob Nixon in his book titled, *Slow Violence and the Environmentalism of the Poor* elaborates on what he calls the “developmental refugees” which arises from orchestrated displacement of population for infrastructure development purposes by the state itself, or by state, funded by the World Bank to serve foreign interests. Developmental goals

are also one of the primary motives behind the present Rohingya crisis. The state of Rakhine, which used to be home for the Rohingya community, is undergoing an infrastructural development project of transnational oil and gas pipeline installation, where China and India has a direct interest (Forino, et al. 2017). Moreover, these refugees also are revoked of their refugee status – as in the case of the Rohingyas who are considered as invaders rather than refugees by Myanmar – and thus making them a non-existent and invisible population. This scenario also takes place in the novel where the “Malayan” population – people of Chinese ethnicity coming from the split China – who fled genocide to different countries is not recognized as refugees and forms an underclass of illegal immigrants.

Another concern in the novel takes a different form, of that of population.

Environmental groups and human rights advocates have for long fought towards a common goal. However, when we arrive at the issue of population, things take a different and contrary course. Environmental groups are concerned about overpopulation, whereas human rights focus on rights for all people regardless of demographic trends (Clark, 83). Moreover, increase in population poses the risk to smooth and predictable practice to human rights as it “erode the possibility of acceptable, practicable or moral choices for the human future” (80). In the novel, we encounter the aftermath of prolonged population control on the one hand, and overpopulation on the other hand and thus we see the contrasting situation of human rights practice in these regions. The Japanese as depicted in the novel dealt with their population crisis of elderly outnumbering the youth. This lack of abled working human resource was solved by a new generation of genetically enhanced test tube humans. These new breed of humans are called “New People” with exceptional capabilities in terms of strength and speed which sometimes also came with altered anatomy (such as multiple limbs). New People would be programmed thus to serve in the military or in the economy’s much needed labor force which is perpetually in short supply. Sometimes one could also

custom make a New People with special attributes – as illustrated in the engineering of submissive trait in Emiko – to suit the owners’ purposes.

Posthumanism and The Discourse on Extinction

One posthuman concept that we see here is that of the replacing of the human species with a better species that is able to outlive the harsh and threatening conditions of deteriorating climate. Emiko, one of the protagonists in the novel, who is also a New People, has been genetically coded to stop her from aging and catching any disease. Where deadly pandemics like “Cibiscosis”, “Blister rust” and “Genehack weevil” resurges every now and then, affecting humans and plants alike, only the New People remain resistant to all the fast mutating strains of diseases. Posthuman imagination has also allowed for the envisioning of extinction of the human species. This involves both hypothesizing the possible contributing factors or threats that could set off such extinction event, as well as what such a world would be like in postannihilation. Though the latter is an imagination more far-fetched, but there are nonetheless narratives about human population dwindling sharply after some apocalyptic event, either natural or human induced – i.e. the sixth extinctions that scientists predict, or through external agent like alien invasion and takeover, or even takeover by AI. Natural extinction threats also include emergence of deadly disease with the potential to spread rapidly, thanks to our global interconnectedness possible through transportation systems and close-knit living from overpopulation. However, many deadly diseases, also termed as ‘ancient’ diseases, are making comebacks recently after being released from deep permafrost as a result of glaciers melting due to anthropogenic global warming. Moreover, the present state of wars and the resulting poverty and displacement, all contribute to weakened immune systems and malnourishment which eventually results in majority of the deaths in war-torn regions than the war itself.

The bottom-line is that humans are contributing to their own extinction events. This may go against the theme of impending artificial superintelligence, perhaps even a space travelling super civilization, but theories such as the *Doomsday Argument* and the *Fermi Paradox* establishes that intelligent life do not exceed everlastingly, and at a certain point intelligent civilizations tend to self-destruct. The *Fermi Paradox* states the hypothesis that our existence on the grand scale of the existence of the Universe is in either the initial stage or the final stage of its timeline. The reason being that it can either be because we are in the initial stage of the universe which is why other extraterrestrial civilization has still not flourished (including us) to the extent to make any extraterrestrial contact. The other possibility being we are approaching the final “filter” where civilization does not advance – in this case, beyond the planet (Tegmark 316). If we occupy the beginning 0.1 percent of the timeline of the universe, that means there are 99.9 percent of the timeline is remaining for a possibly super intelligent life forms in the future. However, if we are near the end, or even somewhere midway of the lifetime of the Universe, then either that intelligent civilizations across the universe has not been able to cross a threshold point and made their mark across the galaxy, or the contrary can be the case that we are the only intelligent being alone on the universe. Whereas *Fermi paradox* introduces the concept of threshold as a limiting factor, *Doomsday Argument* on the other hand talks about civilizations’ self-destruction (Stevens et al. 2016, 333. *Doomsday-argument* can especially hold plausible given that the more intelligent a being is and the wider the margin of free will, the greater is the destructive capacity of the intelligent being which ultimately threatens its own existence.

Through the lens of Emiko, we learn that the New People do not desire any different from survival and thriving of their kind. They have a better chance at living and are more powerful due to them being genetically coded with superhuman military strength. Gibbons, also known as Gi Bu Sen – the scientist that endowed the immense favor to Thailand of

restoring their seed bank, but is also later revealed to be a renegade AgriGen scientist – allures Emiko by instilling in her the hopes of a future where genetic hybrid species like her – the New People – inherit the world by being able to breed and multiply. He goes on to say, “[s]omeday, perhaps, all people will be New People and you will look back on us as we now look back at the poor Neanderthals”, suggesting that such an act is nothing less in significance than annihilation of an entire species (339). Scientists even speculate that the Neanderthals perished because their inability to defend themselves against the mass onslaught from the anatomically modern humans (Hortolà 2013, 69-72).

Posthuman life and posthuman existence forms a major theme of these science-fiction narratives. In the novel, these themes also importantly highlight the concepts of autonomy and self-determination and contrast them with the destructive potentials that come with power. Moreover, it importantly highlights the religious curbing of free will, which is implemented in a society through cultural models of religious and moral conducts. In the novel, religious beliefs have a significant presence in the public sphere, and even the city of Bangkok where the story unfolds is referred to as the “City of Divine Beings”. This also highlights a post-secular turn in the society that scholars like Saba Mahmood (2005) talk about. The post-secular turn is not entirely as a form of counter movement to liberal-secularism of modern times, but is also important in shaping subjectivity and political consciousness that is based on morality and ethics and thus contributing to the “agency of the state” (5; 78). Such conflicts show in the novel in the form of Thai people’s aversion to the “Grahamite” faith – a faith based on Evangelical Christianity, as well as an account of genocide by a radical Islamist group referred to as the “Green Headbands”.

Going back to the discussion on autonomy, there, however, is also the catch in the posthuman advanced form of life as hypothesized in the novel, where the New People, more than employing their capacity towards progress and advancement, are in fact combating the

wreck brought about by their contemporary human civilization. In some ways, the very posthuman beings of the novel – the New People – that came to existence as a result of the wreck, can be considered a version of the wreck itself. These are why theorists like Braidotti and others argue that posthumanism is not a concept of rectifying of the human actions and human shortcomings, and thus not a way to make amends or justify it. Posthumanism is not an escape route, nor is it a continuation of the humanist legacy. The social theory of posthumanism, as avowed by Braidotti, essentially proposes for a radical break from humanism. But this posthumanism nevertheless draws its critical framework from the humanist tenet, the reason, as Braidotti mentions, being that the “[h]umanism’s restricted notion of what counts as the human is one of the keys to understand how we got to a post-human turn at all” (16). It deconstructs every humanist derived ideas and epistemology – such as human exceptionalism and ultimate triumph of man - and advocates for a *zoe*-centric approach. Here the concept of *Zoe* denotes a dynamic, life generating system comprised of all form of animal life and not just the anthropos life, also termed *bios*. This *zoe* centric approach is a response to the sole anthropocentric view of life which is, as Braidotti notes, “codified as the exclusive property or the unalienable right of one species, the human, over all others or of being sacralized as a pre-established given” (60). Here Braidotti presents the anthropocentric view where life itself is regarded in terms of property – specifically individualistic property – and is “invested with financial value and capitalized” through the form of novel individualistic innovations, through expression of individualistic identities, or even through the accessing of biomedical and biotechnological tools (126). Alternative to this consumerist individualism is *zoe*, or the animating life force, which is “generic and not only individual”, and is a property not of an individual or species, but rather of the monolithic universe of matter (123). She states

vitalist approach to living matter [which] displaces the boundary between the portion of life – both organic and discursive – that has traditionally been reserved for anthropos, that is to say bios, and the wider scope of animal and non-human life, also known as zoe. Zoe as the dynamic, self-organizing structure of life itself (Braidotti 2006, 2011b) stands for generative vitality.

In such an argument, the very idea of humanity being a civilization that leaves its mark in the universe itself is a futile vision and ambition. In such a vision, a posthuman species being superior to humans in that it replaces humans and becomes the exceptional superior civilization too is not supported. Moreover, the argument thus far is essentially not an argument about ‘posthumanism’ but rather about the notion of ‘transhumanism’.

Transhumanism takes on from humanist principles and values and couples it with technical and biologically enhanced capacity which ensures humanities’ survival and success. In that sense, Transhuman presents the very antithesis to the posthumanism advocated by Braidotti and Dipesh Chakrabart.

Nevertheless, concepts and epistemology like posthumanism for us need to have a concrete basis and frame of reference. If we are not essentially different from any other species, then we need not worry about a posthumanist approach to begin with. Moreover, posthumanism could be argued as an ideology justifies humans to discard them of their humanitarian duties and obligation. Similar criticism exists of the never-ending debate for the cultural relativist argument against universal human rights. Whether cultural relativism or posthumanism, every theory essentially needs to take stock of existing social theories, political principles and cultural practice. Moreover, one cannot shake off the argument that the more a concept avows to be all encompassing and universalizing, the more it tends to be restricting and enforcing. Posthumanism in principle avows for a universalized approach to all living and nonliving elements. However, universalism itself is a highly contested notion as

it is argued as not being an essential truth, but rather a human-derived ideological construct. Therefore, to do a balanced critical analysis of posthumanism, it is important to look into the ethical and moral principles derived in the theory and look into how it compares, in this case, to the ethical and moral aspects within the novel.

One such ethical consideration is that of individualism. In the novel, there are constant references to different religious ideologies of the people, the dominant one being what survives of Buddhism amongst the people of Thailand. Buddhism doctrine emphasizes on the soul and good souls are reincarnated to a soul of higher order whereas evil souls are demoted to lower order. The reference from the novel includes when the characters constantly blame their deeds from an imagined previous life which caused them to be in the decadence engulfing their nation and the world at large. In that way, their belief in Buddhism can be argued to be a zoe-centric doctrine, as, even if it does not rid souls of its hierarchical categorization, it nevertheless does not treat the humans as exceptional on the basis of soul. However, in terms of consideration of the collective, humans still occupy the top tier of civilization. Therefore, even though on the level of soul, there is the recompense of one's deeds are individualistic, but on the species and collective level, being of the human civilization is the highest level. Moreover, some living being are divested of the very existence of a soul. As depicted in the Buddhist belief in the novel, the 'wind-ups' - artificial creatures like the New People and Cheshires - do not have souls.

Chapter 5

“Vaster Than Empires and More Slow”: A Critical Allegory of the Nature-Culture Binary

Ursula K. Le Guin’s short story “Vaster Than Empire and More Slow” closely compares to the novel *The Fifth Season* which is the subject of the following chapter share strong similarity in several key aspects. Published in 1971, the short story is in many ways the perfect predecessor to the novel and opens up the opportunity for inter-textual analysis where key themes of the novel can be contrasted with a preceding work by seminal science fiction author Ursula K. Le Guin.

The story is set in a futuristic world/ alternate universe where science has enabled interplanetary exploration on a galactic scale. The setting here is specifically part of the Hainish Universe on which numerous of Le Guin’s novels and short stories known collectively as the *Hainish Cycle* are based in and which features a rich and complex history of interstellar colonization by intelligent humanoid species. Even though the Hainish Universe is the defining setting for many of her works, Le Guin does not intend the novels to be considered as part of a coherent uniform historical process. In her introduction to her new anthology, she says the following: “I’d rather admit its inconsistencies than pretend it’s a respectable Future History” (2017)¹. What is especially intriguing about her fictional worlds is that it explores in depth the intricacies of the social and political structures in a highly technologically mediated advanced civilization. Themes of power, identity, language, hierarchy, environmental concerns, sentient consciousness and much more pervade her

¹ The full quote includes,

In many of my science fiction stories, the peoples on the various worlds all descend from long-ago colonists from a world called Hain. So these fictions came to be called “Hainish.” But I flinch when they’re called “The Hainish Cycle” or any such term that implies they are set in a coherent fictional universe with a well-planned history, because they aren’t, it isn’t, it hasn’t. I’d rather admit its inconsistencies than pretend it’s a respectable Future History.

fictional narratives. As Donna Haraway, referring to Le Guin's fictions, puts it, "[s]o much of earth history has been told in the thrall of the fantasy" (2016, 39).

The story opens with the League of All Worlds - an early federation of planets formed following the Hainish colonization - sending out long interstellar voyage ships as per the bidding of scientists to explore different planets in faraway stars to "find somebody new" (1975, 167). These scientists and explorer "wanted to get away from the family" in pursuit of "worlds which had not been seeded or settled by the Founders on Hain, truly alien worlds", a desire that also stemmed from their intrinsic resentment of being colonized and "salvaged" themselves (167). To their demands, the Hainish, "like tiresomely understanding parents, supported their explorations, and contributed ships and volunteers, as did several other worlds of the League" (167). This journey is supposed to take them centuries into the future with their respective planetary times, where the journey itself takes few hours (10 hours, 29 minutes) in their personal time but 250 years elapses in Earth's time due to relativistic time dilation. The team members who volunteered to join this "Extreme Survey" crew are mentioned to be of "unsound mind", "escapists, misfits (. . .) [and] nuts" due to their eagerness to "go out to collect information that would not be received for five or ten centuries" and where "[no] normal human being who had experienced time-slippage of even a few decades between League worlds would volunteer for a round trip" (167). The crew then lands on a planet named World 4470 which houses a very strange ecosystem across its continents comprising only of plants. There is yet an underlying strangeness that is not immediately apparent to them but they all get a sense of some form of foreboding. This is largely due to one of the members aboard by the name Osden who has a special capacity of feeling every emotions and reflecting back the same emotion. His condition has a scientific/ medical term in the story called Render's Syndrome, also commonly referred to as autism which causes him to be bio-receptive of supernormal empathy.

Osdan not only receives emotions but also projects them back the same way. Because the crew itself is comprised of “nine other neurotic” reactionaries besides Osdan, the tension on board is perpetually high and it is not helped by the already existing hostility towards Osdan as well as skepticism regarding his purpose in this expedition. Various speculations exist amongst the members form his presence being a “deliberate experiment in non-compatibility, planned by the Authority”, to him being the most valued member of the team sent for his singular gift of empathy reception and therefore the inevitable success to discover sentient life abroad, where the others only accompanying to aid him (168-169). This hostility keeps being reinforced in a cyclic manner as it is received and projected via the same route with Osdan being withdrawn from the rest.

As the team go on with their mission of surveying the continent they are placed at, Osdan embarks on a solo mission out in the forest to survey and do species count in solitude in order to avoid noise interferences from the “nine other neurotic personalities at close quarters” which hampers his usefulness (189). During this quest however, he meets an accident where he is discovered by other members as lying unconscious and bleeding in places in the middle of the forest. The two members who find him too experience a very inexplicable and sudden blow of emotion as they look into Osdan’s eyes while picking him up - an emotion they can only identify as an irrationally “deathly fear” and “terror” (214). In fact, not long ago prior to this incident, another one of the scientists had an encounter where he thought he was being attacked by something within the trees, “something self-moving”, to which the others reasoned that it could probably be hallucination as the “arboriformes” (trees) has a strange quality to them resulting especially in this case “from their the helically-arranged ones; and the spore-throwers grow so regularly spaced that it seems unnatural” (178-179). Eventually however it is discovered that the emotions that all of them have been receiving to some degree were indeed being emitted from the presence of a sentient being,

where previously none were thought to have existed in the planet other than the crew members. Even more intriguing is the revelation that this sentient being is none other than the planet spanning plant ecosystem, connected via extensive underground roots as well as air borne spores, ultimately comprising a single superorganism. As one of the scientists puts it, “You're not seeing the forest for the trees, as they say on Earth”. Even though it is hard to conceive that there is some sentient activity emanating from the ecosystem, beyond the already far-fetched possibility of the plants possessing an interconnected nervous system which makes possible the transmission of electrochemical impulses and mechanical response to stimulus - but what perturbs the scientists most in that moment was the very notion of sentience itself. The scientists become wholly engrossed in contemplation about brain activity, and if sentience is a result of the said brain activity as conveyed in the quote, "It doesn't think. It isn't thinking," (...) "It's merely a network of processes”; or whether sentience even is a concrete “thing” becomes hard to grasp, especially given that for the first time they experienced consciousness emanating from a being far removed and “Other” to the humans. To quote one of the scientists who identifies with and agrees with Osden,

I'm merely pointing out that they are all interconnected, both by the root-node linkage and by your green epiphytes in the branches. A linkage of incredible complexity and physical extent. (...) I know that sentience or intelligence isn't a thing, you can't find it in, or analyze it out from, the cells of a brain. It's a function of the connected cells. It is, in a sense, the connection: the connectedness. It doesn't exist. I'm not trying to say it exists. (190)

To this Osden adds

"Sentience without senses. Blind, deaf, nerveless, moveless. Some irritability, response to touch. Response to sun, to light, to water, and chemicals in the earth around the roots. Nothing comprehensible to an animal mind. Presence without mind.

Awareness of being, without object or subject. Nirvana." Then why do you receive fear?" Tomiko asked in a low voice. "I don't know. I can't see how awareness of objects, of others, could arise: an unperceiving response ... But there was an uneasiness, for days. And then when I lay between the two trees and my blood was on their roots—" (...) "It became fear," he said shrilly, "only fear." (191)

Eventually however, the protagonist empath accepts this Other and immerses himself into it by leaving behind the crew and walking into the forest. The final resolution comes down to the realization that the surveyors are the “other” to this isolated biospheric network, which it encounters for the first time in its solitary eternity. This encounter with the “other” elicits the inexplicable fear from this planet spanning species. Osden accepts this “other” because he has all his life felt the others’ fear as it had been projected towards him. When the other members express their desperation in wanting to leave, Osden mocks them saying “it isn't pleasant, is it—the other's fear”, which after all caused the ecosystem to reflect back and amplify the fears. Moreover, it is impossible to send false empathetic message - one “can't send something that doesn't exist”- which is also the reason why no matter how civilized others attempt to be, Osden never could deflect their “instinctive antipathy” towards him because of his inherent condition of a “cripple”. In his final words regarding the forest, Osden says “it's message is rejection [, but] my salvation is rejection”, implying that his salvation throughout rested on him being able to reject the emotions and hostility he kept receiving from others. Thus by this rejection of others, he can free himself from being “helplessly obedient to the demands of their emotions, reactions, moods”.

The major theme of the story is the symbiotic relationship between the living beings and the environment. This theme reflects the environmental concerns which were emerging as a discourse at the time when Le Guin wrote the story. Moreover, many of Le Guin’s works engage in a critical philosophical insight into the then emerging environment related

concerns. Le Guin's works apply a critical environmentalist perspective, or eco-criticism that goes beyond a unitary, homogenous, metropolitan, wholesome notion of merely saving the environment, or as Buell puts it. Followed from the largely socio-political movement of environmentalism, Eco-criticism was taking shape especially in the literary circles as a new sub-discipline of literary and cultural studies. Le Guin, being a master storyteller, employed her narrative power to convey important criticisms as well as shortcomings within the environmentalism movement. This particular story for instance can be contrasted to James Lovelock's seminal theory, the Gaia hypothesis which is one of the foundational creeds of the environmental philosophies and ecological awareness. The Gaia hypothesis postulates that the Earth is a single holistic microorganism and that humans need to merge and return to this holism in order to save their own selves. On the face value, such an idea is intriguing and the short story too seems to be in line with the notion of emergence with nature and return to holism. However, the inherent flaw with the theory is a dualistic construction of nature and culture which is portrayed to work in a binary nexus. In the story, we find the abstraction of this binary in its extreme allegorical narrative form. The dualities of nature vis-à-vis culture, science vis-à-vis mystical and rational vis-à-vis "insanity" permeate the narrative ever so seamlessly that one would not read it as a deliberate injection of the narrative with critical theories. When the scientists are overwhelmed by the revelation of the ecosystem's sentience quality, they begin to imagine what it is that the trees perceive as threat to themselves: "we might appear as forest fires. Hurricanes. Dangers. What moves quickly is dangerous, to a plant. The rootless would be alien, terrible." This line demonstrates how the scientists both project their humanist and personified understanding of fear and defense mechanism employing their empirical logic and observation on other species in their attempt to understand them. Moreover, the very notion that the planet ecosystem had assumed it had been invaded by an Other in a way can be argued to stem from the group's own resistance

and apprehension towards the sentient vegetation. This is evident in the line referring to the group realizing that Osden's resistance was in fact their own resistance,

they had seen that the trap itself, his crass and cruel egotism, was their own construction, not his. They had built the cage and locked him in it, and like a caged ape he threw filth out through the bars. If, meeting him, they had offered trust, if they had been strong enough to offer him love, how might he have appeared to them? None of them could have done so, and it was too late now. (192-193)

Similarly, the fear and foreboding emanating from the forest is also construction of the group's own fear of the other. This allegorical story however not only aims to demonstrate the nature-man duality both in an act of reinforcing the duality as well as critically scrutinizing it, but the story also importantly highlights the symbiotic relationship amongst the living beings in an ecosystem. This symbiotic relationship is emphasized strongly in discourses of Posthumanism, which theorizes on a "trans species solidarity on the basis of our being environmentally based" (Braidotti), as well as favoring "co-evolution, symbiosis, feedback and responses as determining conditions rather than autonomy, competition and self-contained isolation of the human" (Nayar 2013, 20). Critical Posthumanism goes even further from the cosmopolitan entropic system based conception – that is an ecosystem – to an understanding of continuous and vitalist material notion of the zoe where the life-generating forces and relationality extends beyond a system and is open to "cosmic energies". Braidotti borrows these ideas from Monism philosophy which rejects the notions of dualism, but Braidotti also emphasizes on the pragmatic and ethical implication of such theories, especially at a time when humans as a species are "transitioning inexorably into a new state of being" (Orbaugh 2009, 120). Science fiction and speculative fictions opens up the arena for such an ethical and pragmatic treatment of the state of the Posthuman.

Chapter 6

The Fifth Season: Planet's Wrath, Superpowers, and the Societal

Others

Adapting to the Planetary Vengeance

The Fifth Season depicts a world that is either thousands of years into the future or a world that could have existed far into the past. It depicts a time when the world comes very close to ending in every passing of a geological phenomenon, known as the “Fifth Season”. The story doesn’t only present an alternate world which is far different from our own, but it also conveys how our earth too is very close to the tipping point of exiting the present stable geological state and enter into a new unstable state where a decade long fifth season of darkness and various forms of cataclysm will no longer be a science fiction horror.

The story unfolds in the continent of the Stillness, the only continent on earth and is thus a supercontinent. The inhabitants of this continent are different species of animals, plants as well as humans of different races and class (and caste). Yumenes is the largest city in the continent of the Stillness. The continent had been ruled under an Imperial system, known as the Sanzed empire for centuries, which had, since the last season, become diffused, as community leadership works better in time of a season. Nonetheless, the continent follows the ways of the imperial time, from governance, finance, education, trade and more. There however are also present Orogenes and Stone Eaters, two different sentient humanoid species, apart from the rest of the “normal” human species. What sets them apart is that these two groups have superpowers which are of an alchemical nature, i.e. manipulating of matter as well as energy transference. For Orogenes, they can interact and manipulate with the mantle and tectonic plates beneath the Earth’s crust and have the power to both quell as well as set off massive earthquakes. In this manipulation of matter, there is also the process of

“kinetic transference” which involves manipulating the energy of the mantle, as well as shifting fault lines and magma chambers thus quelling earthquakes and volcanoes. Orogenes however are also vulnerable to ‘steal’ heat from their surroundings by mistake either when they are angered or if they are unaware of their power. This can result in freezing other around them coming under the influence of their power. Orogenes are therefore widely feared and shunned members of the society as depicted in the novel, and if one is discovered to live amongst them, they along with their family live in the risk of being killed.

Orogenes however are indispensable to the continuation and progress of the civilization in the story because of their superpower to quell earthquakes and check volcanic eruption, where such, as well as other disasters are very common events in the world of the novel. To quote “Elsewhere in the world villages rarely grow into towns, and towns rarely become cities, because all such polities are hard to keep alive when the earth keeps trying to eat them... but Yumenes has been stable for most of its twenty-seven centuries” (7).

Therefore, there is a system in place in the society where the Orogenes are trained to practice their “otherwise-illegal craft of orogeny”. These fulcrum trained Orogenes then serve the empire and follow professions requiring orogeny from node-maintainers, which involves stations placed in various locations with Orogenes assigned in each station to monitor and quell micro-seismic activities, to moving massive objects, and thus be in service to the comms (communities). Orogenes have the capacity to sess – which stands for detecting the movements of the Earth. The organ responsible is the sessapinae, which is located in the brain stem.

As for the plot, in the novel we follow three main protagonists by the names Essun, Damaya and Syenite. As their stories unfold, we get three distinct trajectories which are however interrelated. Each of their stories also follows three different point-of-view, which is second person, third person limited and third person omniscient respectively. Essun, an

Orogene's story begins with her discovering that her infant son had been beaten to death by her husband which she suspects happened after he discovered about the child's powers (since orogeny is something instinctive and even newborns can exhibit it and so often gets exposed). The husband flees with their daughter and Essun, enraged and stricken with grief, sets off in hot pursuit to retrieve their daughter and to end the husband's life.

Just as Essun's world falls apart with her losing her child, one to murder and another to abduction by the killer, the world literally also rips apart as a giant rift opens up on the Earth's mantle setting off a massive earthquake. Essun in her range ends up diverting the earthquake from their town Tiromo, which leaved a distinct mark where "several miles in every direction forming a near-perfect circle—was unscathed", whereas everything had been ruined where the ripples had passed. This alerts the townspeople of an Orogene within the town. As these events unfold for Essun, the two other protagonist's events which unfold in subsequent chapters seem to taking place in a different location. It is only near the conclusion we learn that all the three are in fact one person and the three different stories are in fact of a single person currently by the name Essun, taking place in different timelines.

Societal Others, Super-human Capacity and History

An important theme of this novel linking back to the Anthropocene mode of thought is that of that of time and our conception of history. In the novel, history and its conception plays a key role within the society which not only marks their survival and progress in a world that has, for tens and thousands of years been entertaining an epochal phase -" the fifth season" - of near obliteration almost every millennium, but is also an important aspect of their culture, literature and language. This is evident in the tradition of "Stonelore", which stands for folklore and "lost history", and are practiced by "lorists". They make a living through expending their wide breadth of knowledge, from medicine to metallurgy - which draws the common people to them- as well as through their knowledge and practice of oral

literature which are often seemed by people valuable as secret knowledge and possessing some degree of truth. There is also the recurrent notion of “lost” and “missing” history and that the “known history” only extends until a specific period in the past and even speculations that important part of history which explains Sanze Empire was formed and the capital of Yumens and the Yumenescene civilization here was established.

An important notion being developed in the Anthropocene mode of thinking is that of history. History in a way marks continuation and progress and this history – at least for the human civilization for the past couple thousand years- is markedly distinct from the geological and environmental, in other words, natural history. Dipesh Chakrabarty in multiple writings addressing the Anthropocene era engages this idea of human extinction and therefore the discontinuation of the distinct artificial history of the humanist enterprise.

[T]he current crisis can precipitate a sense of the present that disconnects the future from the past by putting such a future beyond the grasp of historical sensibility. The discipline of history exists on the assumption that our past, present, and future are connected by a certain continuity of human experience. We normally envisage the future with the help of the same faculty that allows us to picture the past. (2009, 197)

There are two ways of relationship that can be traced with this specific thought process of Chakrabarty and the novel’s own treatment of history. The period of the Holocene marked by the present geological period began around 10-15 thousand years ago. This also coincides with the time of the Neolithic revolution which was the time when the first tools began to appear, sowing the seed of civilization. The novel too applies such a timeline where the known history featuring both natural and human civilization, social structures, and governance extends back to around 10 thousand years – a period that is roughly the lifetime of a geological state. The novel thus incorporating ideas and facts from our very enterprise of

history creates a fictional narrative that projects these questions backwards from a vantage point of post-discontinuation of human history. The novel importantly opens the pragmatic purview of how this abrupt discontinuation of thousands of centuries of legacy looks like.

Chapter 7

Conclusion

The drive for this research has been some underlying interest and curiosity which includes the relevance of scientific and technological considerations in the field of humanities in the present state of the Anthropocene. Literature and fictions engages in the framework of praxis by borrowing from the theories and philosophies of Humanities. which had nonetheless, been important in depicting the, in the words of science fiction writer Stanislaw Lem, “unfathomable futility of human life”, whether through weapons of mass destruction or through supervolcanic eruptions (Bellow 1984, 12). That is to say that the field of techno-science is not a homogenous absolutist enterprise with the vision of progress alone. Rob Nixon elaborates on the concept of “slow violence” which is “a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all” (2011, 2). This perfectly sums up the techno-scientific enterprise and the flawed rhetoric of developments which Nixon elaborately discusses, taking reference from the modern state of “precision warfares” and the petro-capitalist imperialism with its strong rooted “structural violence” (200-232). Nixon also links these structural violence and inequality to the impending displacement resulting from the surge of climate refugees in the Maldives. Moreover, the book refers to numerous writers such as the Nigerian writer-activist Ken Saro-Wiwa who was killed by the state for speaking against the state, as well as works including *Animal’s People* (2007) by Indra Sinha – an allegorical story based on the Bhopal gas tragedy; and *Cities of Salt* (1989) by Abdelrahman Munif – which elaborates on the volatile history of petroleum encounters in the countries of the middle-east. Such writer-activists according to Nixon plays the crucial role of providing a narrative and imaginative space to forms of violence that are “insidious, yet unseen” (15). Imaginative writings of fiction instill dramatic urgencies, give

definition as well as public visibility to such forms of slow violence and in doing so, “make the unapparent appear, making it accessible and tangible by humanizing drawn-out threats inaccessible to the immediate senses” (15). Finally, Nixon through elaborating on the concept of the “environmentalism of the poor” which involves activism of the marginalized as well as fiction and non-fiction writers, presents a sharp contrast to the Western environmentalist rhetoric which is a form of “global resource wars” with the purpose of “planetary management” of resources by the rich (5; 234-243).

Rosi Bradotti in her book *The Posthuman* identifies these inherent discrepancies in the fields of science and progress and links it to the hypercapitalist state of the present. This hypercapitalist state commodifies life at a biological molecular level. She argues that it is not a state of the Anthropocene, but rather of the post-Anthropocene where species distinction no longer exists and there is a misleading overtone of equality and egalitarianism. Rather it is the “sort of unity tends to be of the negative kind, as a shared form of vulnerability, that is to say a global sense of inter-connection between the human and the non-human environment in the face of common threats” (50).

In sharing these vulnerabilities, we are confronted with dilemmas of history, identity, sense of place and sense of planet (Heyse, Ursula K, 2008). We learn that the planet we reside is not eternally ours. In *The Fifth Season* we come across a vengeful planet that due to its destructiveness, the planet is hostile to its inhabitants. However, it has rendered a form of community based solidarity amongst its inhabitants. In *The Windup Girl* on the other hand, the planet has been rendered hostile by its inhabitants. For the innocents here who did not partake in ruining planet, it is more unfortunate for them because the planet was not their home from the beginning. To them, the idea of the planet as a place of endless expanse does not exist – an ethos we find in the story “Vaster Than Empires” where humanoid species seek more and more planets to start new colonies. These constitute the fundamental queries that

necessitates repeated revisiting of the Anthropocene as a mode of thought and the post humanism as a mode of ethical subjectivity.

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