



Cappadocia University
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**A Posthumanist Analysis of the Representations of
Climate Anxiety in James Graham Ballard's
Post-apocalyptic Climate Fiction Tetralogy**

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Master's Thesis

Nevşehir, 2023

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ABSTRACT

DOĞAN, Bekir Ercan. *A Posthumanist Analysis of the Representations of Climate Anxiety in James Graham Ballard's Post-apocalyptic Climate Fiction Tetralogy*, Master's Thesis, Nevşehir, 2023.

Global climate change is the greatest existential threat that the Anthropocene era has brought to humanity, and environmental disasters have caused great concerns about the future of our planet. This serious threat has had very important reflections in the field of literature as well as the scientific fields. Many authors have written works dealing with environmental problems in this context. As a result, climate fiction is born as a new genre in fiction. In addition, a new understanding has emerged for people to re-examine their relationship with nature today. Contrary to the traditional humanist understanding, posthumanism questions and discusses the superiority of the human being over nature and human agency. On the other hand, the negative consequences of environmental disasters caused by climate change have brought along some psychological problems. In this context, the concept of solastalgia (climate anxiety) was put forward by Glenn Albrecht. This study includes a comprehensive analysis of the representations of climate anxiety in James Graham Ballard's climate fiction tetralogy, published in the early 1960s, in terms of posthumanism. Four selected novels of J.G. Ballard, *The Wind from Nowhere* (1961), *The Drowned World* (1962), *The Burning World* (1964) and *The Crystal World* (1966) are analysed in this context. These four novels by the famous British author are considered to be among the main examples of climate fiction. In the four novels analysed in this thesis, it is emphasised that the bonds between humans and nature are vitally important and that deterioration of the natural balance by humans causes great problems and disasters both physically and spiritually. From the posthumanist stance, it is necessary for modern humans to revise their relationship with nature. In addition, Ballard vividly describes how vulnerable humans are and how human civilisation could be destroyed in the event of catastrophes.

Keywords

Science fiction, climate fiction, solastalgia, Anthropocene, posthumanism, James Graham Ballard

ÖZET

DOĞAN, Bekir Ercan. *J. G. Ballard'ın Kıyamet Sonrası İklim Kurgu Dörtlemesinde İklim Kaygısı Tasvirlerinin İnsanötesicilik Açısından Analizi*, Yüksek Lisans Tezi, Nevşehir, 2023.

Küresel iklim değişikliği, Antroposen çağının insanlığa getirmiş olduğu en büyük varoluşsal tehdit olmakla birlikte yaşanan çevresel felaketler de gezegenimizin geleceği hakkında büyük kaygılara sebep olmaktadır. Bu ciddi tehdidin bilimsel alanların yanı sıra edebiyat alanında da çok önemli yansımaları olmuştur. Pek çok yazar bu bağlamda çevresel sorunları ele alan eserler kaleme almıştır. Bunun sonucunda edebiyatta yeni bir soluk olarak iklim kurgu türü doğmuştur. Ayrıca insanın günümüzde doğayla ilişkisini yeniden sorgulamasına yönelik yeni bir anlayış ortaya çıkmıştır. Geleneksel hümanist anlayışını aksine, posthümanizm olarak adlandırılan bu yaklaşım insanın doğa üzerindeki üstünlüğünü ve eyleyciliğini yeniden sorgulamakta ve tartışmaktadır. Diğer taraftan iklim değişikliğinden kaynaklanan çevre felaketlerinin doğurduğu olumsuz sonuçlar insanlar üzerinde birtakım psikolojik sorunları da beraberinde getirmiştir. Bu bağlamda Glenn Albrecht tarafından söz konusu sorunları tanımlamak için solastalji (iklim kaygısı) kavramı öne sürülmüştür. Bu çalışmada James Graham Ballard'ın 1960'ların başında yayımlanmış olduğu iklim kurgu dörtlemesindeki iklim kaygısı tasvirlerini posthümanizm açısından ele alan kapsamlı bir analizi içermektedir. J.G. Ballard'ın seçilmiş dört romanı *The Wind from Nowhere* (1961), *The Drowned World* (1962), *The Burning World* (1964) ve *The Crystal World* (1966) bu bağlamda incelenmiştir. Bu dört roman, iklim kurgu türünün temel örnekleri arasında gösterilmektedir. Bu çalışmada incelenen dört romanda insan ve doğa arasındaki bağların hayati öneme sahip olduğu ve doğal dengenin insan eliyle bozulmasının hem fiziksel hem de ruhsal açıdan büyük sorunlara ve felakete neden olduğu ve posthumanist yaklaşıma göre modern insanın doğayla olan ilişkisini gözden geçirmesinin gerekli olduğu vurgulanmaktadır. Ayrıca Ballard, iklim değişikliğinden kaynaklanan doğal felaketler karşısında aciz kalan insanın ve medeniyetin nasıl yok olabileceğini açık bir şekilde dile getirmektedir.

Anahtar Sözcükler

Bilim kurgu, iklim kurgu, solastalji, Antroposen, posthümanizm, James Graham Ballard

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INTRODUCTION

Charles Dickens, one of the most influential British authors, described his century in the introduction of his famous novel *A Tale of Two Cities* (1859) in the following:

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us... (17)

As pinpointed by Dickens' fictional projection that divulges stark contrasts and dichotomies and substantial changes in timeline, modern human has been undergoing an unprecedented period of quite complex and multidimensional transformation. In this context, humankind's aspirations and incessant endeavours to explore both the whole globe and the universe and discover better ways of living on the Earth have accelerated the pace of civilisation, resulting in myriads of ground-breaking scientific discoveries and fascinating technological innovations. While this period has revolutionized our daily lives and contributed to multi-faceted development of the modern world, it has brought about many chaotic and dramatic consequences in ecosystems. Since the Industrial Revolution, humans have substantially transformed the Earth's planetary systems and exploited natural resources to a large extent, leading to many different environmental problems such as "droughts, tropical cyclones, heat waves, crop failures, forest diebacks ... fires, floods, and erosion ... inadequate water supplies, malnutrition, diarrheal diseases, and infectious diseases ... mass migration and regional conflicts" (Trexler 2). Moreover, the twenty-first century that is characterised by countless technoscientific advances, rapid industrialisation, and economic growth has rendered the human both a superior entity and a dominant agent on the Earth. However, human agency that supported the pillars of civilization is currently counterbalanced by the environmental challenges arising from disruption of the terratic systems and changing climatic conditions as a result of human activities. All in all, the environmental problems ravaging the Earth seem quite complicated to resolve and arouse a great deal of public anxiety and fears about the future.

As a matter of fact, the Earth is now on the brink of a huge global apocalypse and experiencing a severe climate crisis that ultimately threatens human survival. There is no single day passing without news of natural disasters that are accompanied by environmental losses and extinction of other species than human. Actually, the human

race seems to be marching rapidly towards complete annihilation unless immediate measures are taken. According to the report issued by IPCC (Intergovernmental Panel on Climate Change) in 2022, it is stated that climate change has adversely “altered terrestrial, freshwater and ocean ecosystems at global scale,” along with “diverse adverse impacts on human systems, including on water security and food production, health and well-being, and cities, settlements and infrastructure” (IPCC 10-11). This report underlines that the global climate change is a serious predicament that poses a lot of hazards, and can be deemed as an ominous harbinger of human erasure, requiring urgent action to deal with its negative consequences on an international level and becoming a significant issue on the public agenda. It is also emphasised in this report that humans are vulnerable to ecological disasters for the next two decades due to global climate change and all governments have to take immediate precautions to deal with these crises to overcome them and evade all kinds of loss (IPCC 13). What emerges with extreme lucidity from these ecological crises is that humans are predestined to pay the price of harming the environment and upsetting the ecological balance in this new epoch known as the Anthropocene. This new epoch is mainly characterised by rapid industrialisation, mechanisation of agriculture, population growth, modernisation of lifestyles, resulting in anthropogenic environmental degradation and catastrophes that simultaneously cause social unrest and corruption, moral collapse and chaos. Consequently, it can be argued that the Anthropocene has left an indelible mark on all aspects of human civilisation ranging from ecology to politics and is still influencing the modern human.

Being a multidimensional term, the Anthropocene can be viewed as an intersection of consolidated versions of human agency and human exceptionalism. In relation to the subject in question, Russell Blackford states the following:

We inhabit an incomprehensibly vast universe whose origins lie deep in time. Our own beginnings as a species are temporally remote, and our final destiny is unknown. We are ourselves the results of natural processes, much like other living things. From the new perspective, human exceptionalism is no longer tenable. All known social and cultural forms, and specifically those we have experienced in our individual lifetimes are significantly mutable. Even the relatively near future may turn out very strange by the standards of those now living. (4)

In this conceptual proposition, Blackford holds the opinion that human domination is not appreciated as a result of past experiences that changed the temporality of human beings and their relations with the non-human entities. Therefore, the Anthropocene can

be regarded as a period of time when the humanity is prone to social and cultural transformation on the way to construct a higher level of civilisation as it constantly shapes the surface and terratic systems of the planet.

On the other hand, the Anthropocene has led to an increased interest in depicting environmental concerns in literature and ignited scholars and authors to research and write about anthropogenic deterioration of nature. Moreover, the upsurge of environmental movements in the twentieth century has paved the way for ideological shifts in depicting natural elements in ideological and fictional texts. The concept of human exceptionalism has been replaced by a new ecological standpoint which abandons “anthropocentric conceptions of humanity’s privileged place within the ecosystem” (Soper 365). This approach posits that the natural world and humans are closely affiliated with and dependent on each other to survive. This remarkable change in viewing the interplay between the human and the non-human species has unfolded a distinctive philosophy known as posthumanism which was born as a reaction to humanism that favours the supremacy and dignity of the humans over the nonhuman and entails a cluster of alternative notions that stance the role of human in the wake of modernisation and human-nature interrelations. The paradigm of posthumanism includes diverse ideas such as critical posthumanism, transhumanism, philosophical posthumanism and anti-humanism to evaluate the position and forceful impact of humans on the environment. In this sense, James Graham Ballard’s climate fiction (also known as cli-fi) tetralogy, consisting of *The Wind from Nowhere* (1961), *The Drowned World* (1962), *The Burning World* (1964) and *The Crystal World* (1966), can be regarded as a major example, receiving international acclaim and drawing attention to apocalyptic and post-apocalyptic themes in the science fiction cannon. The novels in question reverberate through the adverse effects of climate change by presenting bleak futures and depressing environmental scenarios for humanity and analysing psychological reactions of the characters to the changing landscapes portrayed in the texts.

The main focus of this thesis is to provide an analysis of the representations of solastalgia (i.e., climate anxiety) in James Graham Ballard’s post-apocalyptic climate fiction novels written in the 1960s through the lens of posthumanism. The selected novels include representations of psychological and emotional responses to climate

change and environmental transformation. The novels will be investigated in order to demonstrate how humans are rendered vulnerable, isolated and mentally transformed by the nonhuman nature through catastrophes. This thesis also addresses how climatic concerns and anxieties are fictionally expressed, while exploring the complex interrelations between the humans and nonhuman nature in apocalyptic and post-apocalyptic ecospheres, and finally analysing how these narratives could be used as an instrument to build up general ecological consciousness among the public. In this respect, the major concepts including science fiction, climate fiction, Anthropocene, solastalgia, and posthumanism, and selected novels of James Graham Ballard will be reviewed and discussed with reference to relevant literature in subsequent chapters throughout the thesis. Given the relevant literature, it is seen that a wide range of studies have been carried out on Ballard's climate fiction novels. A dissertation focuses on artistic interpretations of the submerged landscapes described in the novel while others address how dystopian elements are used to discuss human corruption in the wake of catastrophes, and examine three of these novels through ecocritical, ecofeminist and social ecological perspectives. Consequently, this thesis is expected to contribute to climate fiction studies through discussion of posthumanist approaches to the representation of solastalgia since no study to date has examined Ballard's tetralogy from a posthumanist angle. However, Ayşe Şensoy examined the term solastalgia in *The Drowned World*, which will be discussed in the subsequent chapters in the thesis.

On the other hand, when humans confront the actual and multi-scalar effects of climate change, which is a disturbing factor that breaks the ordinary life of an individual apart, they frequently experience a blend of difficult emotions such as fear, surprise, sorrow, anxiety, anger, isolation, shame, and guilt. These feelings hinder individuals to lead a happy and healthy life. Solastalgia is a new term suggested by Glenn Albrecht to describe these feelings in the wake of environmental change. Ballard's selected novels incorporate solastalgic markers through the protagonists' quests and relations are investigated through representation of solastalgia that could be briefly defined as the distress arising from the loss of one's familiar environment or residential area due to climate change and ecological degradation (Albrecht 45). It can be affirmed that the selected novels of J.G. Ballard include abundant examples of this phenomenon, and are therefore of significance in literary studies.

THE ANTHROPOCENE

“We're at war with nature. If we win, we're lost.”

Hubert Reeves

As emphasised above by Hubert Reeves, humanity has waged a ruthless war against nature to cater for their interests and survival, exploiting nearly all the natural sources. The current geological period is distinctly marked by human-centred encroachment on the nonhuman nature and is labelled as ‘the Anthropocene.’ The term Anthropocene is derived from a combination of two Greek words: *Anthropos* meaning “human” and *kainos* (-cene) meaning “new” (Peters 265). Thus, it means “new human age” and refers to the last epoch in geological history (Schwagerl 10). Stratigraphically, several geological time scales such as Cambrian, Jurassic, Pleistocene and Holocene (11,700 years ago to the present) are used to describe geological periods with the major shifts on the planetary surface. Anthropocene is the most recent of these.

However, historically, the term Anthropocene was first proposed by Paul Crutzen at a meeting of geologists at the International Geosphere Biosphere Program (IGBP) in 2000. Crutzen explained this term in his article as “in many ways a human-dominated, geological epoch, supplementing the Holocene” (“Geology” 23). There are several scholars and researchers who studied the contextual scope of the Anthropocene as offered by Crutzen. For instance, Will Steffen et al. strengthen this definition by extrapolating that humankind “now rivals some of the great forces of nature in its impact on the functioning of the Earth system” and “has become a geological force in its own right” (843). Similarly, Seth Reno states that it is “the proposed name for the current geological epoch, beginning when human activities started to have a noticeable impact on Earth’s geology and ecosystems” (3). Briefly, these opinions emphasise the human dominance over the environment.

While discussing the Anthropocene in scientific fields, it is necessary to state that the term has already become well-received among the scholars in the fields of humanities and natural sciences. However, the problem of its definition has caused many debates, and even alternative names have been put forward. For example; Donna Haraway's proposition of the term “Chthulucene” refers to a period in which interchangeable processes intersect with each other and exposed to the same environmental threats (160). Another proposition by sociologist Jason W. Moore that

“signifies capitalism as a way of organizing nature as a multispecies, situated, capitalist world-ecology” has been made as “*Capitalocene*” due to the financial and social connections of the term with capitalism that is held responsible for environmental disasters (6). On the other hand, Jussi Parikka deliberately changes the word as “*Anthrobscene*” meaning an “era of rudeness, immorality” (6). There are several other wordplay examples that emphasise different aspects of the term in the following: *Econocene*: “an era where our economy has become the major driver of rapid global change” (Norgaard 1), *Technocene*: An age swarming with technological advances for humans (Hornborg 62), *Misanthropocene*: An age when humanity seem to destroy itself (Patel 21), and *Manthropocene*: A critical approach to emphasise the limited number of female scholars studying the Anthropocene (Raworth 1). Consequently, many more different perspectives exist to explicate this term.

Adam Trexler emphasises the role of human agency in altering the Earth’s surface by positing that “humanity has discovered itself to be implicated in a geological transformation of the Earth, with profound implications for nearly all our reference points in the world” (5). As highlighted by Trexler, this age incorporating salient impact on the Earth’s ecosystems and the chief culprit of this dire global situation come from the same origin: Anthropos (i.e., human). Likewise, this age is regarded “in its fullest sense as human-planetary transformation” (Simon and Thomas 396). However, Timothy Clark emphasises that the general incremental effects of ecological deterioration trespassed an incalculable and imponderable ecological threshold (*Ecocriticism* 2). This statement intends to convey that humans have approached to the end of the world in the axis of nature-human interrelations. However, Kalina Maleska claims that climate change is also interlinked to not only natural disturbances caused by human interference but also to cultural and political issues engulfing the humanity as a whole (317). Based on these considerations, it can be argued that there is a consensus that anthropogenic actions profoundly influence the Earth and its interrelated subsystems, and induce climatic changes to the biosphere as well as creating socio-political debates.

In parallel with aforementioned arguments, Jonathan Hay states that “whilst geological epochs typically last thousands of years, over the last three centuries our species has engineered a significant enough impact on the Earth to instigate an epoch geologically distinct from the Holocene” (130). Similarly, Noah Terrell states that

“humanity has changed so much of the biogeochemical makeup of the planet that we have transcended our position as biological subjects and become properly geological agents” (5). The drastic changes brought by the Anthropocene in the physical structure of the Earth have synchronously caused ecological deterioration while threatening human existence and survival. The echoes of these challenges encompass myriads of extreme meteorological events and natural disasters such as hurricanes, heatwaves, acidification of the oceans, meltdown of glaciers, rising sea levels, floods due to excessive precipitation, prolonged droughts, extinction of biodiversity, deforestation, desertification, overexploitation of the natural resources, and disruption of ecosystems. On the other hand, Margaret Atwood, a renowned Canadian novelist, states that “[t]here will be a bill: the cost will be high, not only in money but in human lives” (qtd. in Whiting). The term Anthropocene foregrounds “the central role of mankind in geology and ecology” and points out to adverse effects of human activities on the globe (Crutzen and Stoermer 17). Therefore, all these predicaments can be counted as consequences of destructive projections of colonialism and Western imperialism combined with modern capitalism and consumerism that deteriorated the planetary systems. This has given rise to increased levels of anxiety and fear due to loss of environmental elements among the general public.

Since its emergence as a new perspective on our modern era, the Anthropocene epoch we currently inhabit has always become an interesting issue and a controversial term both in the academia and mass media, at the same time lodging itself within cultural studies and the larger humanities. In a relatively short time, the term has been acclaimed and criticised by scholars who vehemently debate on the relationship between human and nature in both natural and human sciences. It has close associations with many natural and humanities fields such as geology, climatology, architecture, art, cinema and literature gathered under its conceptual framework. One of these fields is the literary tendency that concentrates on the problems of climate crisis we are facing today and depicts imaginary and futuristic effects of human activities on the whole planet and human civilisation.

Although there are different opinions about the beginning of this epoch, Crutzen claims that “the Anthropocene could be said to have started in the late eighteenth century, when analyses of air trapped in polar ice showed the beginning of growing global concentrations of carbon dioxide and methane” (“Geology” 23). This statement underpins the Age of Enlightenment that began in the seventeenth century, and the Industrial Revolution that started in the late eighteenth century and the atomic experiments that have left their mark on the middle of the twentieth century, global capitalism, neoliberal policies and the heavy pressure of technology over nature have brought to an irrevocable dimension.

On the other hand, the Anthropocene has caused serious debates on the concept of human identity in philosophy, culture and literature. In this context, Anastasia Kriman states that “the categories of historicity, sociality and subjectivity are no longer so anthropocentric” (132). The rise of climate fiction provides a firm basis to explore and reconfigure the new “human” concept and his indissoluble links with the nonhuman world.

Ballard’s early novels examined in this thesis are acknowledged as the first successful works of climate fiction by some critics. For instance, Michelle Delville notes that these novels are “now recognized as superlative work even outside the circles of SF aficionados” (2). These novels can be regarded as a literary response to the problems posed by the Anthropocene in a new imaginary realm (Terrell 5). Therefore, Ballard’s selected novels fit best to present a broad range of ideas, representations, motifs, themes and criticism in Anthropocene studies. In this regard, it is obvious that humanity is undergoing a tempestuous period of physically, emotionally and mentally destructive process as a result of the global climate change, causing a great deal of anxiety among the population. Ballard presciently depicts these phenomena in his early novels, making dim predictions about the future of the world as well as critiquing human-centred exploitation and transformation of the nonhuman nature.

While the Anthropocene can be regarded as a generic term for a vast diverse range of human-induced environmental changes, it also encompasses nonhuman aspects of climate change discourse and its relevant conceptualisations that articulate possible futures of human and nature interrelations. In this regard, deconstructing the Anthropocene and centralising on anthropogenic causes of terratic degradation can

provide valuable insight into how humans imagine and interact with the environment and respond to the changing natural landscape. At this point, Fatma Aykanat¹ emphasises that “there is an urgent need for versatile textual tools to elucidate the meaning and scope of the Anthropocene to the wider audiences with all its dimensions as well as to simplify this complex and abstract concept in an understandable fashion” (44). In line with Aykanat’s suggestion, literary works have a great potential to serve as major pathways to depict the reactions of humans against the detrimental effects of environmental changes as in other aspects of global and individual problems. Therefore, it can be argued that the literary response to these environmental issues in the Anthropocene age has given birth to a new literary conduit. It can be argued that this new type of literary tendency resonates well with science fiction genre to reach the masses and alert them to the impending global catastrophes by bringing the readers from the real world to the textual world. Moreover, witnessing the catastrophic conditions of the world, humans have started to speculate about their survival and are re-awakened by a quest for their meaning of existence in the universe. This meaning can be better unveiled through fictional narratives and elements of science fiction. Thus, it will be appropriate to review science fiction genre in relation to these subjects before discussing other concepts.

SCIENCE FICTION

Science fiction can be considered as a literary phenomenon pertaining to the twentieth century although its historical, philosophical and literary foundations precede its huge popularity. There is a plethora of artistic works produced in the earlier times in history embedded with science fiction elements. Humankind’s constant efforts starting from the dawn of civilisations to discover the cosmos and find new ways to inhabit the world have considerably contributed to humanity’s intellectual progress and immense imagination. The historic milestones such as the Age of Enlightenment and Industrial Revolution have laid foundations of science fiction as a literary genre and serving as infinite sources of inspiration.

¹ This quotation is originally written in Turkish and then translated into English.

Shortened as “sci-fi,” science fiction is quite an elusive and complex term. It brings different notions to mind and includes a vast array of topics interwoven together in a fictional crucible. In this context, it is often described as “fiction dealing principally with the impact of actual or imagined science on society or individuals or having a scientific factor as an essential orienting component” (“Science fiction,” *Merriam-Webster*). Another similar definition highlights the term as “a form of fiction that deals principally with the impact of actual or imagined science upon society or individuals” (Sterling). Isaac Asimov has explained that “science fiction can be defined as that branch of literature which deals with the reaction of human beings to changes in science and technology” (82). However, this definition is simply inadequate since it fails to describe other literary genres that deal with such responses to ongoing technoscientific changes in the process of modernisation.

On the other hand, science fiction is interchangeably used with fantasy, even though not all works of fantastic literature are accepted as works of science fiction. Abrams and Harpham argue that fantasy refers to an imaginary world that differs greatly from our real world of experience and narrates futuristic projections parallel to our world, or another planet while science fiction clearly and plausibly depicts a fictional world depending on current scientific data, sophisticated technology, or an altered society (356). In line with these different conceptualisations, it can be argued that science fiction consists of a huge collection of boundless imagination, creative and alternative thinking and scientific and technological developments portrayed in fictional narratives.

Despite diverse cultural interpretations of the term, Sheryl Vint highlights in her latest book *Science Fiction* (2021) that the science fiction works share at their core “a vision of the world made otherwise and the possibilities that might flow from such change” (9). In spite of being a significant component of speculative fiction that encompasses fantastical, supernatural, mythological and futuristic elements, the genre of science fiction, in contrast, seems to demonstrate further progress of humanity by portraying potentially diverse effects of scientific and technological advancements in a plausible fashion and predict about the future. Science fiction can be interlinked for many types of fiction including crime, romance, horror, cyberpunk, steampunk and scientific fantasy since it evolved into a substantial genre in the course of time due to

gigantic leaps of human towards a better civilisation. Sherryl Vint endeavours to elucidate the term in the following:

Although there may be no precise demarcation of what the term science fiction denotes, certain images or narratives immediately come to mind: enhanced mobility via rocket ships or flying cars; immersion in digitized environments, from virtual entertainments to perhaps digitally transferring one's consciousness to a new body; and the idea of the future, which may include radically different citizens such as self-conscious robots or genetically modified people, perhaps even aliens. (*Science Fiction* 9)

As it can be interpreted from Vint's statements, humanity has been undergoing a period of radical mutation in many aspects and may be metamorphosed into a new human form that is ruled by digital thinking machines or robots, and controlled by artificial intelligence. Therefore, science fiction works and movies seem to hint that this transformation will occur rapidly. These phenomena could engender sociocultural discussions on this new human identity, opening new paths to evaluate the human.

Historically, the term was first introduced and popularised as "scientification" by Hugo Gernsback, a leading advocate of the genre who published it in the first issue of *Amazing Stories* in 1926 ("Science fiction," *Britannica*). However, it failed to be widely used, acclaimed, and subsequently replaced by the term 'science fiction.' Since then, it has been used as a literary appellation for technoscientific stories, novels and films. On the other hand, science fiction is one of the most comprehensive forms of literary traditions in themes, subjects and characters. It excites readers by encapsulating a cornucopia of numerous protagonists and antagonists, diverse themes, suspenseful plots and interesting subjects including superhumans, huge scientific discoveries, sophisticated technologies, imaginary creatures, robots and cyborgs, weird machines with artificial intelligence, interplanetary and intergalactic voyages, time travels and extra-terrestrial life. Therefore, science fiction offers its readers great opportunities to speculate about both the present and the future worlds and provides manifold commentaries on the societies on a spatiotemporal level.

The deeply rooted genre of science fiction is partly affiliated with great scientific discoveries and tremendous technological advances, motivating and inspiring many literary figures to write about imaginary, utopic and dystopic, apocalyptic and postapocalyptic worlds throughout history. For instance, Francis Bacon wrote *New Atlantis* (1627) with a utopian vision for science and technology by focusing on development of humanity. Other major works of modern science fiction can be traced

back to Mary Shelley's *Frankenstein* (1818) which was set around an unorthodox scientific experiment to create a human-like creature in the early nineteenth century. However, it was not until later in the nineteenth century that explicit scientific elements were used to create fictional works on a well-established basis. In this respect, Edgar Allen Poe's gothic short stories, Jules Verne's *Journey to the Centre of the Earth* (1864) and H. G. Wells' *The War of the Worlds* (1897) could be conceived as precursors of contemporary science fiction. These leading authors have immensely contributed to modern science fiction with their novels and stories in view of themes, settings, narrative styles and future predictions, synchronously designing a new cluster of narrative techniques "intermingled with scientific fact and prophetic vision" (Attebery 33). Thus, science fiction has become highly popular and influential in both sociocultural domains and academia, turning out to be a promising field of cultural and literary research and criticism.

In addition, the worsening environmental projections that have been made in recent times, global climate change and public anxiety about the future of the Earth can be regarded as some major factors that influenced the rise of science fiction in the twentieth century, representing and dealing with the anxieties related to ecological disasters in fictional narratives. In contrast, Vint states that "even before the idea of climate change took hold, sci-fi began to think of the planet as something that preceded our species and could conceivably continue without us" (*Science Fiction* 76). Therefore, it can be commented that the sci-fi cannon embeds environmental issues and projects potential effects of climate change as well.

CLIMATE CHANGE AND SCIENCE FICTION

Throughout history, literature has always played both an instrumental and influential role in voicing humankind's emotions, ideals and thoughts, constructing new paradigms, values and philosophies and deconstructing established ideologies as well as communicating sociocultural heritage to future generations. Literature plays a role in raising climate awareness as well. In line with this, Scott Slovic states that "literature is a lens through which we're able to sharpen our understanding of the world's vital problems and literary criticism is the mechanism for articulating what we come to understand" (8). Besides providing plentiful inspiration and a broad range of tools for reflecting people's inner worlds and dreams, literary works have nourished public

imagination, arousing curiosity about the mysteries of the universe and imbuing both hopeful and desperate scenarios about the future.

These literary works also have served as tools to respond to problematic phenomena such as disasters, conflicts and turmoil throughout the time (Ghosh 16). For instance, the ecological crises have received great attention in both scientific and literary domains, prompting many writers and scientists such as Rachel Carson to focus on environmental issues in their narratives. She was a leading environmental scientist and activist who pioneered environmental movements with her sensational book *Silent Spring* (1962) in which she delineated environmental concerns pertaining to negative effects of extensive use of pesticides on American agriculture. She accentuated anthropogenic roots of the environmental issues and criticised exploitation of the Earth in this book. The book has left an indelible impression on the readers, and initiated grassroots environmental movements on a global scale, as well as serving as a milestone for ecologically-oriented narratives and raising awareness on such issues among the general public.

The impact of human subjectivity and agency on the environment in the Anthropocene has greatly influenced many aspects of our civilisation as well, initiating scholarly and cultural debates about human and nature interrelations. As for the literary domain, these debates have been escalated by the rise of environmentalist and ecological movements and considerations that focus on the prevalent role of humans in transforming the planetary systems into a mayhem, inspiring many authors to produce ecologically-oriented narratives. In this direction, there has been a growing interest especially in recent decades in representation of environmental issues in fiction. It can also be argued that this dynamic process has paved the way for new trajectories and interests in modern literature, resulting in the birth of a new type of fiction that could be named as environmental or ecological fiction.

Nevertheless, the reciprocal relationship between humans and the nonhuman nature is dismantled and deteriorated by capitalist human encroachment, causing outbreaks of many anthropogenic climatic and ecological calamities. Since many aspects of life and experiences are depicted in literary and cultural texts, it is clear that representation of environmental issues constitutes a remarkable part of many contemporary literary works in a rich gamut of subjects, themes and motifs. Since

1980s, climate change has been a substantial part of global agenda, coinciding with a period when humanity endeavours to prepare for interstellar navigation and explore extra-terrestrial life using sophisticated technology. However, this paradoxical situation has evolved into an impetus for many scientists and authors who are concerned with ecological issues, and its numerous undesirable outcomes. In relation to this subject, Kübra Baysal accentuates that “the popularity of ‘end of the world’ scenarios, has significantly expanded in works of both science and literature since researchers and writers increasingly began to voice their concerns regarding the jeopardized future of humankind along with the destruction of the nonhuman world” (7). As highlighted by Baysal, a new type of environmentally-focused fiction has emerged to portray apocalyptic events, describe ecological anxieties and warn individuals about the fragilities of the Earth as well as vulnerabilities of the human. The literary response to these environmental issues is embodied by the advent of climate fiction. Besides depicting multiple dimensions of environmental problems, this newly flourishing genre combines dystopian, apocalyptic and post-apocalyptic elements to alert the humanity to impending dangers in a fictional milieu that is constructed by an ecologically-driven inspiration and criticism of modern human civilisation that has colonised the planet.

THE RISE OF ECOCRITICISM AND SCIENCE FICTION

The depiction of environmental concerns in fictional works have championed the power of literary forms and broadened limits of literary criticism, resulting in ecocriticism in literary and cultural studies. Lawrence Buell expounds that ecocriticism “went viral across the human as well as natural sciences into the public sphere, as a ready-to-hand signifier and conduit of already widespread convictions that planetary change had become increasingly and perhaps irreversibly anthropogenic since industrial modernity” (“Anthropocene Panic” 1). Ecocriticism, an interdisciplinary branch of latest literary criticism and literary theories, attempts to investigate the continuum between the human and the nonhuman as well as foreshadowing potential hazards and threats to human civilization in narratives. It studies the relationship between literature and environment through an interdisciplinary point of view. Ecocriticism is a term coined and defined by William Rueckert as “the application of ecology and ecological concepts to the study of literature, because ecology (as a science, as a discipline, as the basis for human vision) has the greatest relevance to the present and future of the

world” (107). It originated in the mid-1990s with publication of two ground-breaking works: Lawrence Buell’s *The Environmental Imagination* (1995) and Cheryl Glotfelty and Harold Fromm’s *The Ecocriticism Reader* (1996). These pioneering works have influenced academia and literary community, sparking scholars’ interests in ecological concerns and contributing to widespread recognition of global climate crisis and its adverse impact on the whole planet. In line with this, suggesting a literary critical lens to this notion, Serpil Oppermann states that “ecocriticism aims to bring a transformation of literary studies by linking literary criticism and theory with the ecological issues at large” (29). All these considerations about ecocriticism tend to focus on building public awareness in relation to environmental problems and encouraging both individuals and nations to take action and undertake responsibility.

Greg Garrard points out that the ecocriticism embodies different ideological approaches explaining that

Ecocriticism is, then, an avowedly political mode of analysis, as the comparison with feminism and Marxism suggests. Ecocritics generally tie their cultural analyses explicitly to a ‘green’ moral and political agenda. In this respect, ecocriticism is closely related to environmentally oriented developments in philosophy and political theory. Developing the insights of earlier critical movements, ecofeminists, social ecologists and environmental justice advocates seek a synthesis of environmental and social concerns. (3)

Garrard’s explanation can be used to question the dominant role of human in shaping the environment and criticise human superiority in cultural and literary analysis as well as through different philosophical conceptions. Adding upon these views, Grazyna Gajewska notes that “ecocriticism studies the images of nature and human approaches to non-human life forms in various literary genres from distinct historical periods and cultural areas, employing a range of methodologies for that purpose” (83). In a nutshell, this new field of study analyses historically how the natural world is represented and structured across literary genres, providing insightful assessments into the modern human’s reaction to actual or imaginary environmental challenges by using fictive elements.

Ecocriticism has been defined differently by many scholars. For instance, Camilo Gomides describes the term as “[the] field of enquiry that analyses and promotes works of art which raise moral questions about human interactions with nature” (16). Serpil Oppermann states that “ecocriticism, attempts to find a common ground between the human and the nonhuman to show how they can coexist in various ways, because the

environmental issues have become an integral part of our existence” (2). On the other hand, Cheryl Glotfelty, a pioneer of ecocritical theory, points out that “ecocriticism is the study of the relationship between literature and the physical environment” (18). Agreeing with Glotfelty, Richard Kerridge explains ecocriticism in his book *Writing the Environment: Ecocriticism and Literature* below:

The ecocritic wants to track environmental ideas and representations wherever they appear, to see more clearly a debate which seems to be taking place, often part-concealed, in a great many cultural spaces. Most of all, ecocriticism seeks to evaluate texts and ideas in terms of their coherence and usefulness as responses to environmental crisis. (qtd. in Tan 23)

Extending the scope of ecocriticism, Pippa Marland states that “ecocriticism is an umbrella term for a range of critical approaches that explore the representation in literature (and other cultural forms) of the relationship between the human and the nonhuman, largely from the perspective of anxieties around humanity’s destructive impact on the biosphere” (846). Consequently, these different views note that the interrelations between the human and the nonhuman world require new paradigms to conduct a reconstructive critique of modern human and its debilitating actions on the planetary domain.

Moreover, ecocriticism has burgeoned new perspectives into the representation and interpretation of current ecological predicaments in literary texts with several titles. Therefore, it is sometimes called as green (cultural) studies, ecopoetic, environmental literary criticism, literary ecology, and nature writing. This new literary approach profoundly influenced scholars’ conventional viewpoints and attitudes towards the nature, at the same time opposing to anthropocentric and utilitarian paradigms that favour the human over the non-human. On the other hand, focusing on the connections between literature and environment, Pasi posits that “there exists a symbiotic relationship between literature and the natural world” (183). This notion emphasises that the humans are inseparable from the environment in which they live and need natural resources to survive. However, Simon Estok argues about ecocriticism in the following statement that

Ecocriticism is not simply the study of nature or natural things in literature; rather, it is any theory that is committed to effecting change by analysing the function –thematic, artistic, social, historical, ideological, theoretical, or otherwise– of the natural environment, or aspects of it, represented in documents (literary or other) that contribute to material practices in material worlds. (16)

Estok's interpretations can be recognised as a reconstruction of environmental fiction whose aim transcends beyond simply describing the natural challenges, rather encouraging readers to take action to preserve the natural resources and other nonhuman species. In this sense, it can be claimed that he has been influenced by more current views such as posthumanism and developed a new conception in the ecocritical domain.

Due to growing public and scholarly appeal and awareness about environmental challenges, destructive aspects of global climate change have created ecological anxieties related to anthropogenic transformation of the world and catastrophic future visions. These anxieties and concerns for the transformed global landscape seem to have set the stage for a brand-new literary approach that can be named as climate fiction. Supporting this statement, Rio Fernandes holds the opinion that climate fiction "often depicts a grim future of a changed world, portraying how humanity must deal with years of environmental neglect" (18). In this context, it can be articulated that the representation of potentially devastating effects of climate change and global warming in many contemporary novels, stories, and movies may serve as a warning for today's readers to be conscious of the imminent hazards and threats to humanity and mobilize them to take immediate action in real life. Therefore, a new type of fiction is needed to address these agenda. At this very point emerges climate fiction.

ORIGINS OF CLIMATE FICTION

Climate fiction is a relatively new type of literature that grapples with representation of major environmental problems such as climate change and global warming that are currently affecting the globe. Although it is not characterised as a separate category under speculative fiction, climate fiction delineates environmental problems in today's known world and ecological disasters that may occur in the near future. Frequently abbreviated as 'cli-fi,' it also explores human responses to the changing and extreme climatic conditions.

Although its roots are not exactly known, the term climate fiction was coined by Dan Bloom, an American journalist and environmental activist, on his website "*The Cli-Fi Report*" to refer to the literary and cinematic forms concentrating on the ecological issues induced by anthropogenic actions and their adverse impacts on the environment. Dan Bloom, who is a keen and independent researcher, proposed the term 'cli-fi' after reading a blog by Andrew C. Revkin in New York Times mentioning how the climatic

issues can be communicated to the masses, explaining the starting point of cli-fi in the following in an interview:

One day while I was doing some PR for a climate-themed book by Jim Laughter, a Tulsa, Oklahoma author, for his novel titled *Polar City Red* set in Alaska in 2075. I hit on the cli-fi term I had coined in 2008 to describe Hollywood movies focused on major environmental change like *The Day After Tomorrow*. I decided to inject the cli-fi term as part of my press release about Jim Laughter's Alaska novel. So I sent out some press releases to book reviewers and I called his novel a "cli-fi thriller" and slowly the term took on a life of its own. (Bloom, "A Chat")

Thus, the genre of climate fiction was born into the literary scene as result of environmental approaches and zealous activists like Dan Bloom. This phenomenon can be deemed as an indicator of the endeavours to stop climate change and global concomitant apocalypse through literary tools and inoculate new ecological notions into the minds of humans. Subsequently, the term was publicised by Margaret Atwood, one of the most renowned sci-fi authors, in a tweet in 2012: "Here's a new term: 'Cli-Fi' = SF about climate change. Coined by Dan Bloom" (Atwood). This tweet introduced the term to the literary agenda and cultural studies.

Despite its rise in popularity, this neologism has also instigated many scholarly debates pertaining to its literary origins, definition and thematic coverage since its debut. For example, Adam Trexler hails this new genre as "Anthropocene fiction" in his book, the first book written about climate fiction, with the same title, exploring its distinctive properties as a flourishing genre (7). On the other hand, by pointing out the shortcomings of its generic background, Adeline Johns-Putra argues below that

Cli-fi is not a genre in the scholarly sense: it lacks the plot formulas and stylistic conventions that characterize genres such as sci-fi and the western. However, borrowing from and often embracing elements of different existing genres, it provides a convenient term for an already significant body of narrative work broadly defined by its thematic focus on climate change and the political, social, psychological and ethical issues associated with it. (1-2)

Johns-Putra's arguments can be regarded as a critical interpretation of this new trend that is nourished by the multifocal subjects it addresses. Likewise, Antonia Mehnert explains that "[m]any climate change fictions published so far illustrate those hybridized forms of the novel (i.e., a blending of genre fiction and novel, quasi-documentaries, start and stop narratives) are employed and seemingly most suitable to deal with the representational challenges that climate change poses" (41). On the other hand, by highlighting depictions of the impact of severe climate changes on humans' daily life, Caren Irr stresses that "characterised most frequently by efforts to imagine the

impact of drastic climatological change on human life and perceptions, cli-fi narratives can be set in the past, present, or near future of the planet” (2). Moreover, Susanne Leikam and Julia Leyda point out that “the global landscape of cultural production has been teeming with a cornucopia of fictional texts, in print, in live performance, and on the screen, engaging with the local and global impact of advanced human-induced climate change” (109). All these aforementioned views share the common point that mainstream genres of literature such as science fiction and fantasy are deeply influenced and inspired by themes associated with climatic catastrophes experienced today.

CLIMATE FICTION AND SCIENCE FICTION

It can be assumed that various crises and challenges such as climate change and global warming have turned out to be rich sources for literature, providing imagination and inspiration for many authors along with a lot of themes, plots and scenarios. In line with that, it is emphasised that fiction has served as a productive vehicle to show reactions to serious conflicts, environmental disasters and chaotic situations, and climate change is notably one of these major issues to be dealt with (Ghosh 16). In this respect, it can be proposed that science fiction could have played a vital role in depicting multidimensional effects of these issues on human and nonhuman species as well as speculating about the future world. Thus, potential environmental challenges the humanity may encounter have been made part of the global agenda through literary works that critique the dominant role of humans in their relationship with nature.

It is claimed that ecological deterioration caused by the Anthropocene has tremendous multidimensional influences on non-human nature and other terratic systems. Additionally, this era indicates that human race may go extinct along with many species, leaving an uninhabitable world behind in the end. The literary response to the Anthropocene has paved the way for many environmental narratives that depict anthropogenic ecological catastrophes and help the readers to comprehend the potential hazards through fiction. This has fuelled many authors with ample inspiration to probe into the mutual connections between the human and non-human nature. As a result, many ecologically oriented literary works have been produced in the late twentieth century, drawing public and political attention to the environmental problems experienced all around the globe. Thus, it can be argued that climate fiction can play an auxiliary role in raising consciousness about the negative aspects of climate change and

environmental disasters among the general public.

In addition, speculating about the possible end of humanity, Eileen Crist contends that “the sixth extinction is a casualty of history, the grand finale of the mowing down of biological diversity over the course of many centuries and accelerated in the last two” (137). Similarly, referring to human encroachment on the environment, Adeline Johns-Putra argues that “with its potential for encouraging reflection and motivation, cli-fi might be seen as a vehicle for protest against climate inaction” (8). Schneider-Mayerson underscores that “an additional stimulus is the hope that these plays, novels, short stories, poems, and children’s stories might lead to a wider and deeper climate consciousness and thereby contribute to more progressive environmental policies and politics” (474). In this regard, it can be stated that climate crisis serves an impetus for building awareness of the ecological challenges encountered by humanity, contributing to “the growing popularity of climate fictions” (Bracke 1). The readers of such fiction are warned against the dangers of degraded nature in dystopic, apocalyptic and post-apocalyptic representations. Additionally, the potential impact of climate change has been widely demonstrated in many stories, novels and collections of novels throughout the nineteenth and twentieth centuries, promoting environmental movements and campaigns to effect social change.

The rise of climate fiction has occurred under the influence of global climate change represented in science fiction corpus of novels and stories and growing public awareness and interest in climate crisis. This has marked a new era for understanding our world through a dissimilar lens with which we can scrutinize ecological threats, devastation and cataclysmic incidents encountered on a daily basis. The climate-oriented fictional works have encouraged us to reconsider the interconnections between the human and nonhuman worlds as well as accentuating the importance of preserving the environment.

The climate fiction also explores and reveals the psychological responses and anxieties pertaining to ecological deterioration and catastrophes, speculating on what might come after such phenomena if one could occur through depicting a destroyed atmosphere and placing the plot in a post-apocalyptic ambience or drawing parallels between alternative universes. It also vacuums the readers into their inner world by attracting attention to the emotions relevant to their conceptions of environment. In this

regard, Ballard's early novels fits greatly with these conceptualisations.

The flourishing environmental humanities has received a great deal of tumultuous acclaim and literary criticism, giving rise to an increasing number of eco-fictional narratives in the twentieth century. In this context, climate fiction can be considered a productive genre to address environmental issues.

Since the mid-2000s, the corpus of climate fiction has been expanding rapidly and becoming gradually popular in by raising consciousness about environmental concerns. Adam Trexler underscores that more than 150 works have been produced on human-induced environmental catastrophes in the recent decade (7). However, in relation to the potential influence of climate fiction, Schneider-Mayerson underlines that "climate fiction is often assumed to have a positive ecopolitical influence by enabling readers to imagine potential climate futures and persuading them of the gravity and urgency of climate change" (473). Therefore, this new genre potentially encourages proponents of environmental movements and efforts to curb the anthropocentric deterioration of the nature.

Moreover, there are different views on the categorisation of climate fiction. For instance, Caren Irr asserts that contemporary authors "have brought distinctive types of speculative and science fiction, as well as satires of climate change activism and new hybrid realisms, under the cli-fi umbrella" (2). Conversely, it is claimed that modern climate fiction is a sub-genre of science fiction rather than an exclusive genre since its narratives and authors mainly conform to science fiction traditions and heavily concentrate on the climate science (Milner and Burgmann 25-26). It can be interpreted that this opposition emanates from the fact that climate fiction is a complex term and inherently affiliated with science fiction, fantasy and speculative elements centralised on the nature and human interrelations.

On the other hand, a new categorisation for examining climate fiction is presented as "pre- and early-scientific" periods with reference to various mythologies featuring themes of "punishment and redemption, apocalypse and end-of-days" (Clode and Stasiak 4). The mythologies of the pre-scientific period imply that humans' irresponsibility and disregarding the nonhuman may lead to disastrous outcomes due to divine retribution. However, in the early scientific period, which is characterised by the texts depicting calamitous climate change triggered by celestial objects and unusual

shifts in tectonic mechanisms, it is underpinned that “climate change, as a concept, was relatively rapidly accepted, but the causes of that climatic change took longer to establish” (Clode and Stasiak 5). In the mid-twentieth century, fictional narratives related to climate change fiction was few in number, often portraying fears like nuclear destruction (Clode and Stasiak 6). However, from 1960s to the present, a new period embodied by narratives of anthropogenic climate change has established an important position in modern fiction. Shelley Streeby states that “climate change fiction is best situated within the larger category of speculative fiction, an umbrella genre that includes science fiction and fantasy” (4). This argument emphasises that this genre addresses radically transformed landscapes in science fictional narratives.

Additionally, climate fiction can help people comprehend the severity of the climate crisis experienced through literary devices although the public is aware of the dire consequences of ecological collapse and apparently inactive to avert it. Climate fiction is able to create predictable and conceivable future worlds and survival challenges against the nature’s catastrophic counter-response to humans. All these opinions articulate that narrating the climate crisis is an inevitable phenomenon that has expanded the boundaries of science fiction, eventually resulting in a new literary sub-genre while refreshing environmental concerns on the agenda.

On the other hand, the extent of anthropogenic transformation of the environment beyond all recognition arouses a great deal of anxiety and fears about the future of the planet, which is reverberated by the rise of climate fiction. As discussed earlier, climate fiction covers the unmatched and irreversible influence of human activities on the tectonic systems and presents bleak future visions, as well as assuming a vital literary mission to alert modern readers to the impending apocalyptic situations. In line with this argument, Laurent Testot states that “fiction would accompany, or even precede, humanity’s awareness of the process,” and adds that “certain horror, suspense, or science-fiction stories would paint premonitory visions of the new world in the making” (307). Therefore, climate fiction assists the modern human to better understand the incalculable ecological harms induced by human encroachment. In addition, it is articulated that cli-fi is closely affiliated with the dystopian tradition which foretells a cautionary vision of humanity in the near or distant future based on various inclinations of modern society (Loock 6). In the light of these conceptions, it can be construed that

cli-fi novels show us the disastrous consequences of climate change and warn us about other environmental threats to human survival.

MAJOR THEMES, MOTIFS AND SUBJECTS IN CLIMATE FICTION

Since the late 1980s, serious environmental crises such as global warming and climate change have gradually drawn attention of a wider public, ranking as the greatest challenges facing humanity in the twenty-first century. These issues have also started debates about their progressive courses and political, social and cultural impact as well as taking measures to mitigate their adverse ecological outcomes. These debates have resulted in the emergence of climate fiction which has become the mainstream subject of a lot of online forums and discussions, and increased scholarly interest in the subject (Johns-Putra 1). It can be claimed that climate fiction has turned out to be a versatile vehicle for promoting environmental concerns and warning about the possible outcomes of anthropocentric domination over the nature. In support of this extrapolation, it is stated that “an emerging genre of writing known as climate fiction, or cli-fi, is teaching us about the world as we need to see it: a planet in the grip of a climate crisis that will shape our lives for as long as we inhabit Earth” (Sutcliffe). Based on all these data, it can be concluded that fictional narratives about climate change are conducive to increasing awareness about nature and effecting changes in our daily lives.

In the light of this historical background, the obvious manifestations of changing climatic conditions and their great impact have provided countless opportunities for imaginative writing, establishing a firm basis for describing ecological challenges in the present or in the future. In this respect, contemporary authors such as Margaret Atwood, Kim Stanley Robinson, Octavia Butler, and Paolo Bacigalupi have written dystopic, apocalyptic and postapocalyptic novels. For instance, Atwood’s *MaddAddam* trilogy envisions a world devastated by global warming, genetic engineering, and plague, and satirises the flaws of human nature. Likewise, James Graham Ballard’s novels *The Wind from Nowhere* (1961), *The Drowned World* (1962), *The Burning World* (1964) and *The Crystal World* (1966), which are scrutinised in this thesis, portray ecological disasters such as colossal hurricanes, rising temperatures, massive floods and unusual phenomenon of crystallisation. These novels also include Ballard’s critical views on Western civilisation and exploitation of the nature.

On the other hand, climate fiction has engendered a constellation of controversies in relation to its main themes, motifs and contextual elements as a new form of literature since its emergence. In this regard, it is emphasised by Follansbee that “climate fiction is like the protoplanetary disc of dust and gas surrounding a young star” and that “something’s happening, but the system of planets, moons, and comets has yet to emerge” (Follansbee). Thus, it is underpinned that there is a long path for this new fiction to be included in the literature as a separate genre. However, Axel Goodbody and Adeline Johns-Putra claim that “while climate fiction started by approaching the issue within the framework of existing popular genres such as science fiction, the thriller, and the disaster novel, authors have broadened the range of approaches in the past ten years, blending these and other genres” (229). It is clear that there is a lack of consensus on thematic boundaries of this new genre. In this context, Adeline Johns-Putra points out that “climate change has emerged as a dominant theme in literature and, its popularity in fiction has given rise to the term cli-fi, or climate change fiction, and speculation that this constitutes as distinctive literary genre” (266). This argument seems to limit climate fiction to a point where the climate change is the sole subject to be portrayed in the narratives. However, it can be argued that there are many other environmental disasters such as desertification, deforestation and extinction of non-human species to be addressed in the discourse of climate fiction.

The central themes in climate fiction include natural degradation and ecological collapse, global environmental crises and catastrophes occurring due to anthropogenic actions, and their destructive impact on humanity juxtaposed by the protagonists’ psychological responses to these nightmarish phenomena. Axel Goodbody and Adeline Johns-Putra enumerates the most commonly used motifs in climate fiction as “desertification, drought and water shortage, floods and violent storms, the spread of tropical diseases, climate refugeeism and the collapse of a society divided between rich and poor into lawlessness and armed conflict” (5). In relation to major plots, they also mention that “human dramas of hope and love, betrayal and despair play out in action-driven plots peopled by journalists and scientists, politicians and climate activists, and ordinary people struggling to live in the worsening circumstances” (5). In the light of these opinions, it can be concluded that climate fiction plots are laden with social and

ecological challenges and seem to promote environmental activism to cope with the actual predicament of climate change.

On the other hand, it can be argued that modernisation of humanity in all aspects of life has launched a metamorphosis that can be likened to Mary Shelley's *Frankenstein*. The characteristics of this 'transformed' human requires a new definition. Therefore, the concept of human in modern times has become a controversial issue in various disciplines. Furthermore, this new genre of science fiction inherently serves as a mediator of a new conception whose main aims are to reformulate the interrelations between the human and the nonhuman nature and to contribute to our understanding of the Anthropocene that has enkindled a curious blend of debates and appraisal in scholarly communities. As a result, new perspectives and philosophies that defy against conventional human-centred ideologies and sociocultural views are born out of these. Posthumanism is one of these significant considerations that deals with the concept of human through a different angle.

POSTHUMANISM

Contemporary humans are inhabitants of a planet whose natural systems have been constantly degraded, altered and interrupted from the beginning of the Industrial Revolution and the Age of Enlightenment onwards. In spite of being an intelligent and adaptable species, humans have undergone a vortex of sociocultural, economic, political as well as technological and ideological changes. These transformations contributed to hegemony of human on the earth, rendering it necessary to re-evaluate the identity of modern human in the midst of this progress of civilisation. Moreover, the spread and distribution of information on a global scale has facilitated new forms of production, synchronously changed the idea of time and space and built diverse social structures and cultures. These technological advances have led to dramatic changes in our understanding of nature and humanity, encouraging the formation of new conceptual frameworks and paradigms related to natural and planetary systems, multispecies interdependency, and human agency as well as precipitating academic studies.

Recently, approaches such as posthumanism that stand against human-centred ideologies based on the idea that human beings are a dominant and privileged entity have emerged, aiming to show that human lives are part of nature together with all other living things that are connected to both local and global dimensions. On the one hand, it is emphasized that human and non-human beings are under threat as a result of the processes such as climate change, environmental pollution and destruction of species that reach an undeniable level, while the pluralistic or structural approaches that question the homogeneity of concepts such as human, nature and culture come to the fore.

The term posthumanism is applied to a range of contemporary theoretical positions put forward by researchers with disciplinary backgrounds in philosophy, science and technology studies, literary studies, critical theory, theoretical sociology, and communication studies. For these groups, posthumanism designates a series of breaks with foundational assumptions of modern Western culture: in particular, a new way of understanding the human subject in relationship to the natural world in general. Posthumanist theory claims to offer a new epistemology that is not anthropocentric and therefore not rooted in Cartesian dualism. It seeks ways of overhauling human identity and undermining the traditional boundaries between the human, the animal, and the technological.

There have been several blossoming perspectives that attempt to dismantle the entanglements between the human and the nonhuman across the disciplines ranging from sociology to philosophy and economy to culture, offering future predictions on human and nonhuman nature. Posthumanism is one of these approaches which stepped forward as a consequence of developing technologies and changing social structures. The term is quite broad hosting different definitions. However, it basically suggests ideas about what it means to be a human or nature, how human or nature will be and how a human or nature should be. As an answer to these important questions, a new definition is actually required to describe this type of human living beyond conventional boundaries and can be labelled as 'post-human.' This term literally means an individual or entity existing in a state transcending being human since its affix 'post-' refers to something different or beyond. Although the prefix 'post' insinuates 'after,' this does not necessarily mean that posthumanism refers to situation of the human which

appeared after humanism, indicating that posthumanist thought system is in conflict with humanist principles.

The point of departure of the term post-human is to understand what it means to be human in the modern world, which is ravaged by serious issues such as climate crisis and global warming, along with other nonhuman species. The concept of posthuman can be traced back to modern artistic discourses, science fiction narratives, and philosophical discussions. On the other hand, seeds of posthumanism have been sown by recent technoscientific developments, which started discussions on definition of human identity and progress in our postmodern period. The increasing consciousness about the destructive impacts of the Anthropocene has led to the introduction of the 'posthuman' which constituted the focal point of modern interdisciplinary debates. Daniele Rugo attempts to provide a succinct explanation on the scope of this term in the following:

It is difficult to find a definition of the term that is shared by all the different approaches that use it, since "posthuman" seems to denote a very diverse group of phenomena, some ongoing and others only predicted or imagined. The "posthuman" is used to describe modes of being resulting from potential enhancements to human nature generated through applied science and technological developments. (1)

It can be inferred from Rugo's statements that the term posthuman is evasive and quite ambiguous. Due to this generic feature, the posthuman can be epitomised as a new type of human transformed by technoscientific progress. However, the unpredictable and inconceivable parameters of multi-layered human transformation can be fathomable and explicated through the tenets of posthumanism.

Historically, posthumanism was first coined in 1977 by Ihab Hassan, who offered a seminal definition of the term. Hassan emphasised that "[we] need first to understand that the human form ... may be changing radically, and thus must be re-visioned ... that five hundred years of humanism may be coming to an end, as humanism transforms itself into something that we must helplessly call posthumanism" (212). This statement underpins that there is need for a ground-breaking theoretical background to overhaul and study the new *Homo Sapiens*. Hassan's propositions have also created a number of relevant terms such as transhumanism and antihumanism.

An incorporating and multidisciplinary branch of critical discourse, posthumanism re-examines conventional principles of humanism that overtly centralise on human interests and values over the nonhuman, and critiques its political, material and ecological relations to deal with human subjects in our technoscientific age (Hausmann 9). It also concentrates on both the present concerns and ambitions and those in the future (Thomsen 224). On the other hand, the conceptualisation of posthumanism involves many discussions pertaining to human identity and subjectivity in the modern age juxtaposed by political, ethical and anti-humanist perspectives as well as ecological concerns. Therefore, it can be interpreted that posthumanism gives an opportunity to interrogate the role of humans in shaping the Earth and the interplay between the human and the nonhuman through many different lenses.

As discussed above, posthumanism has brought about several considerations pertaining to human and nonhuman interrelations, and thus can be labelled as a mainly ecological attempt to analyse the humanity within the axis of its interconnections with the natural elements. Therefore, one of its main aims involves anatomising the dual contrasts between the human and the nonhuman, conflicts between nature and culture, and discourse and matter. Since posthumanism strongly tries to unveil the ties between the human and the nonhuman, it is intrinsically against anthropocentric views and presuppositions.

Unlike humanism that views human at the centre of the universe and suggests that human is credited with a dominant power to make changes as an autonomous entity, posthumanist discourse attempts to restructure the conceptions and seeks answers to questions related to postmodern conceptualisation of being human. Moreover, it projects a new reconsideration of humanity by questioning the actual identities as well as caring about the non-human beings. According to posthumanist stance, the human is “physically, chemically, and biologically enmeshed and dependent on the environment; moved to action through interactions that generate affects, habits, and reason; and possessing no attribute that is uniquely human but is instead made up of a larger evolving ecosystem” (Keeling and Lehman). In addition, it is claimed that posthumanism entails humanity’s close relations with its own technological products and as human culture continues to evolve at the same time with connections to its technoscientific progress, we have never been purely “human” rather “posthuman”

considering the bonds between people and technology or nonhuman entities (Ağın 16). These perspectives lay stress on the inherent value of nonhuman beings and their affiliations with the human in a constantly changing world, opening debates on definition of modern human.

Posthumanism offers suggestions on how a balanced life can be ensured between human and nature although it deals with a new formulation of human identity, cultural roles and body plans discussed in recent years. One of the major discussions of posthumanism posits that modern lifestyle seems to prevent humans and nature from leading an equitably symbiotic life since humans are still deemed as privileged beings due to their wisdom and reason. This argument highlights that human is hierarchically distinguished from the nonhuman others, assigning the human a higher status in view of psychoanalytical and zoological notions (Haraway 141). On the other hand, this cultural conception of humanity is obviously anthropocentric and serves merely for glorifying human interests and human exceptionalism over the nonhuman. However, posthumanism repudiates those cultural constructs and stereotypical beliefs that are concisely expressed by the ancient Greek philosopher Protagoras' dictum that "human is the measure of all things" and claims that humans have vulnerabilities and failures to be tackled with. The posthumanist approach in turn puts forward that every species living on the Earth could be a distinct measure depending on the environmental conditions. As can be seen from these different viewpoints, redefining the human remains a rudimentary problem for studying the modern humanity and ecological urgencies of our age currently encountered, thereby anchoring the posthumanist discourse in scientific conduits. Moreover, Murray and Heumann argue that "human and non-human nature share an interdependent relationship based in both organismic and chaotic approaches to ecology that, once disrupted, may destroy them both" (183). In this regard, posthumanism can be seen as an alternative philosophy to delve into this spiral of entangled relationships between the human and the nonhuman.

The term posthumanism can be dubbed as an alternative to approaching today's human identity. In a broad sense, it is a philosophical amalgamation of ideas or theories emerging in the 1990s that opposes to the notion of human agency in moral terms, as well as questioning the relationship between the human and the nonhuman and strictly criticising the anthropocentrism. It is also a comprehensive way of thought

incorporating scientific, ideological and literary traits which are handled with different perspectives, comprising of differently related and mutually reinforcing fields of study (Ağın 3). Additionally, Francesca Ferrando focuses on the diverse characteristics of posthumanism in the following statement:

Posthuman has become an umbrella term to refer to a variety of different movements and schools of thought, including philosophical, cultural, and critical posthumanism; transhumanism (in its variations of extropianism, liberal and democratic transhumanism, among others); the feminist approach of new materialisms; the heterogeneous landscape of antihumanism, meta-humanism, meta-humanities, and post-humanities. (26)

Ferrando's extrapolations can be interpreted that posthumanism is a polysemous and ambiguous concept that is used to denote different notions and viewpoints. This indicates that posthumanism is quite complicated and should be dealt with from wider perspectives.

The scope and subjects of posthumanism are so broad and profound that it "is applied to a range of contemporary theoretical positions put forward by researchers with disciplinary backgrounds in philosophy, science and technology studies, literary studies, critical theory, theoretical sociology, and communication studies" (Bolter 1). Posthumanism postulates new ways of understanding human subjectivity in relation to the environment, opposing to fundamental conceptualisation of contemporary Western culture in this context. This philosophical lens rejects anthropocentrism and human-centred quests for transcending beyond conventional distinctions and boundaries between the human and the nonhuman.

One of the mainstream maxims of posthumanism is predicated upon the claim that human is inseparable from the natural environment and bears responsibility for preservation of the environment to survive. Therefore, the reverberations of the posthumanist paradigm are apparently observed in modern fictional narratives portraying environmental catastrophes and grim future scenarios. In the twentieth century, several influential authors of speculative fiction such as James Graham Ballard, Margaret Atwood, Ursula Le Guin and Kim Stanley Robinson have fostered a great interest in portraying ecological challenges arising from anthropogenic exploitation of the nature. They have contributed immeasurably to development of climate fiction with their anthologies of novels and stories.

Moreover, posthumanist stance stresses the importance of human factors, values and dignity rather than dealing with religious, divine, or spiritual matters. Humanist views suggest that individuals have an ethical responsibility to lead lives that are personally fulfilling while at the same time contributing to the greater good for all people. In contrast, humanist stance proposes that people have the capacity to resolve the problems through the use of science and reason. Rather than adhering to religious traditions, humanism focuses on helping people lead a happy life, achieve personal growth, and make the world a better place.

On the other hand, a number of innovations and enhancements such as artificial intelligence, implants attached to the body, pacemakers and wearable technologies have ontologically transformed human body and improved his physical and mental capabilities to larger extent, rendering him as a being beyond human. Thus, two major and contrasting streams of thought emerged to understand the human and came to the foreground: These are posthumanism and transhumanism. While transhumanism tries to improve human's capacity through science and technology, posthumanism basically regards human not as a single but a dependent and plural component of the nature and deconstructs the role of human instead of considering humans as the most important species at the centre of existence. Francesca Ferrando explains that "[t]he movement of transhumanism problematizes the current understanding of the human not necessarily through its past and present legacies, but through the possibilities inscribed within its possible biological and technological evolutions" (27). In his book *What is Posthumanism?* Cary Wolfe points out that posthumanism is "a commitment to the search for truth and morality through human means in support of human interests" through "universal human qualities -particularly rationality" (12). Thus, the human identity has begun to be criticised and reformulated with the advent of posthumanism in different scientific and cultural domains.

The major rudimentary argument of posthumanism anchors to the gradual erosion of the demarcations between the nonhuman world and the human, rejecting human exceptionalism over the nonhuman and reframing the concept of "human." Moreover, the term refers to a cluster of conceptualisations beyond humanist philosophy that focuses on hegemony of human over the nonhuman nature. In support of this notion, Ron Broglio states that "in posthumanism, the transcendental ladder by which we lift

ourselves apart from the muck of the world has been pulled out from under us” (37). On the other hand, posthumanism puts forward that human-centred ideology remains insufficient to discuss many problematic subjects of modern civilisation such as climate change and ecological degradation, thus recommending an alternative perspective to delve into such matters through a new lens. Hence, the posthumanist framework has a broader scope that draws attention of scholars from many academic fields.

Nonetheless, there is a growing scepticism about humankind's ability to create an ethical society. In fact, human reason and morality are some of the sources of violence and threaten life on earth. This widespread scepticism is the most important reason for the increasing popularity of posthumanism, which in fact, signals the end of human dominance. Therefore, posthumanism assumes moral responsibility towards the ‘nonhuman.’ It portends the possibility of evolution and extinction of human beings, and also attaches importance to endangered animals, artificial intelligence and other living entities in order to create literary and artistic works since those disciplines that deal with human and anthropocentric issues tend to offer a wide variety of narratives about posthumanist viewpoints. At this point, literature and posthumanism coincide with each other.

Moreover, posthumanism encompasses a number of different trajectories to understand the inherent aspects of existing as a human being and focusing on new quests of analysing the human subject, equipping us with necessary tools to re-inscribe the role, purpose and function of the human. In supporting this view, Braidotti opines that “humanism’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). In addition, McNeil elucidates that “human exceptionalism (the idea that humans are unique creatures) and human instrumentalism (that humans have a right to control the natural world)” are rejected by posthumanism (429). However, posthumanism has shattered pillars of humanism (i.e., human exceptionalism and human instrumentalism), bringing forth new insights into understanding the human identity and the relationships between human and nonhuman beings notably in arts, science and literature. In relation to this subject, Serpil Oppermann and Serenella Iovino argue that “...the world’s material phenomena are knots in a vast network of agencies, which can be ‘read’ and interpreted as forming

narratives, stories” (1). On the other hand, considering the definitions of posthumanism, Tom Idema proposes that

Most of them share a resistance to placing humanity at the centre of thought and the universe; a rejection of a strict opposition between human and nonhuman; a refusal to accept the human form as fixed; and a proclivity to speculate about a future in which humans, for better or for worse, have transformed into different beings. (2)

Idema’s ideas support the mainstream views that are advocated by posthumanists and emphasise the significance of the existential bond between the human and the nonhuman.

Additionally, there are multiple scholarly definitions of posthumanism such as anti-humanism, transhumanism, cultural and philosophical posthumanism. Therefore, there is no obvious consensus on the definition of the term in mainstream media and specialist sociocultural discourses. In relation to that, Judy Ehrentaut states that “the mainstream media tends to misconstrue it as a futuristic set of scenarios that merge humans with machines, thus implicating techno culture as a gateway to dystopian cyborgism” (26). This seems to hint that humanity as we know is superseded by sophisticated technology blended with dystopian imagery.

The representation of human agency and human-nature interrelations in literary texts has been investigated and critiqued by posthumanism and ecocriticism as well. While ecocriticism criticises the human’s relationship with and impact on the nonhuman nature in literary works, posthumanism tries to navigate on a path forward for finding the essence of humanity in these connections without disregarding the nonhuman in its discourse. According to David Roden, this type of critical posthumanism “is a broadly based attack on the supposed anthropocentrism of modern philosophy and intellectual life” (21). On the other hand, posthumanism was first used in late twentieth century, its critical analysis directed towards a variety of texts from the eighteenth and nineteenth century narratives. The movement, while being unhappy with the current state of humanist thought, is also able to provide evidence of potential directions humanity may move towards in texts of the twentieth century speculative fiction, generally by becoming posthuman. It is emphasised by Ferrando that “in postmodern literature, the terms ‘posthuman’ and ‘posthumanism’ first appeared in interests around similar topics” juxtaposed by “a common perception of the human as a non-fixed and mutable condition” (27). These views have had a great influence on contemporary authors,

encouraging them to write narratives focused on the interplay between human and nature and depict them in an ethically balanced style.

According to Rosi Braidotti, posthumanist thoughts can be divided into three main categories. Firstly, the reactionary posthumanism fundamentally opposes to the collapse of humanism and articulates that ideal of humanism provide models for global economy by depending on universal conception of the human, thus being restricted to the limits of conventional humanism (Braidotti 39). Secondly, analytic posthumanism is derived from scientific and technological research, procuring invaluable insights into “crucial ethical and conceptual questions about the status of the human” (Braidotti 42). Thirdly, critical posthumanism broadens the framework of understanding the modern human, aiming to “move beyond analytic posthumanism and develop affirmative perspectives on the posthuman subject” (Braidotti 45). According to Pramod Nayar, critical posthumanism considers the human as an element of non-human nature and emphasises that the human and the environment are interdependent on each other to survive (19). Nayar also develops the claim that posthumanism “as a philosophical approach involves a rethinking of the very idea of subjectivity because it sees human subjectivity as an assemblage, co-evolving with machines and animals” (137). In addition, posthumanism propounds an ethical approach respecting to other forms of life and criticises the superiority of the human over other living beings and the nature. This perspective is extensively represented and embodied in modern science fiction as well as climate fiction. In this context, Sian Bayne proposes in the following that:

Posthumanism is broadly concerned with the questioning of human exceptionalism and the foundational role of ‘humanity’ as it has been constructed in modernity. Rejecting any clarity of distinction between ‘nature’ and ‘culture’, it works against dualism and the binaries we have tended to draw on to define what it means to be human. (1)

Thus, it can be commented that Bayne tries to clarify that posthumanism deconstructs our beliefs and invites us to re-question the meaning of being a human in especially sociocultural, philosophical, ecological and ethical domains. In this regard, Tamar Sharon states that “in recent years, the discussion on the philosophical and ethical implications of emerging biotechnologies and their significance for what it means to be human has converged around the evocative terms ‘posthuman’ and ‘posthumanism’ (4). Sharon classifies the term as dystopic, liberal, mediated, methodological, and radical posthumanism. The dystopic posthumanism objects to possible use of technological tools to transform or improve human capabilities by violating natural and cultural limits.

However, liberal posthumanism endorses that technology can enable humans to develop themselves biologically and perform better than normal. On the other hand, radical posthumanism holds the view that technological advances deconstruct basic conceptions of the nonhuman nature and the humans. Methodological posthumanism attempts to weave an analytical projection towards the interconnectedness of the human and the non-human while mediated posthumanism endeavours to reconcile radical and methodological posthumanism.

Furthermore, posthumanism is a critical movement that deconstructs conventional or routinised ontological beliefs, and explicit anthropocentric discourses that cherish human as the autonomous master of the nonhuman world, instead advocating the ethical and inherent value of the nonhuman nature and dismissing human-centred confrontations. In parallel with that, Badmington argues that an “anthropocentric discourse relies upon a set of binary oppositions, such as human/inhuman, self/other, natural/cultural, inside/outside, subject/object, us/ them, here/there, active/passive, and wild/tame, antinomies that overlook the numerous entanglements and multi-directional relationalities that sustain our planet’s intersecting ecologies and life-systems” (1345). Hence, posthumanist philosophy provides an alternative and analytical frame to evaluate the components of a human being and the boundaries between human and nonhuman entities (Braun 269). For posthumanist thought, human ceases to be “the measure of all things” (Kriman 133). In this context, Ballard’s cli-fi novels can be declared to form a good example to examine the interactions between the nature and the human and gain insight into posthumanist views in narratives.

As a direct result of growing scholarly interest in the concept of posthuman over the past three decades, an expanding corpus of posthumanism has been established by many philosophers, critics and researchers. Some significant works include *Posthuman Bodies* (1995) by Judith Halberstam and Ira Livingston, *The Cyborg Handbook* (1995) by Chris Hables Gray, *Posthumanism* (2000) by Neil Badmington, *The Gendered Cyborg* (2000) by Fiona Hovenden, Linda Janes, Gill Kirkup, and Kathryn Woodward, *Representations of the Post/Human* (2002) by Elaine Graham, *Medical Enhancement and Posthumanity* (2008) by Bert Gordijn and Ruth Chadwick, *Human Enhancement* (2009) by Julian Savulescu and Nick Bostrom, *What is Posthumanism?* (2009) by Cary Wolfe, *The Posthuman* (2013) by Rosi Braidotti, and *Posthümanizm: Kavram, Kuram,*

Bilim Kurgu (2020) by Başak Ağın. All these works provide invaluable insights into how we can understand our existence as posthuman entities in the modern era and revise our relationships with the environment.

All in all, posthumanism can be read as a multitude of attempts to combine different responses to technological breakthroughs, climate change, and mass extinction encountered in the Anthropocene. It questions the meaning of being human in a gradually transforming world that has failed to fulfil the mission of humanism, synchronously providing alternative frameworks of thought and research to establish change in public opinions and deal with ecological concerns as well. In this regard, posthumanism seems to converge well with mental responses to anthropogenic climate change since it investigates the nexus between the human and the nonhuman natures through psychological aspects. At this very point emerged a new concept: Solastalgia, which will be explained in the subsequent chapters.

SOLASTALGIA

It is widely acknowledged that we have been experiencing numerous adverse effects of Anthropocene in which the human species has acquired an unprecedented power corresponding to that of the natural and terratic systems of the Earth. However, this prevailing power has substantially disrupted natural equilibrium and brought about climate change, causing irreversible and tremendous ecological damage, loss of habitats and ecosystems, mass extinction of flora and fauna and many natural catastrophes. This anthropogenic climate change is identified as a challenging issue of this century and has attracted attention of scholars and researchers from many different disciplines.

The undeniable adverse effects of global climate change and eco-catastrophes induced and aggravated by the Anthropocene epoch contribute to the end of human civilisation that is hurtling down a slope by passing through a defamiliarized landscape to an unspecified destination (Head 11). This situation has also paved the way for increased levels of anxiety among people due to catastrophic events and severe environmental destruction that start to threaten human residential areas as well as other species living on the planet. Thus, all the changes in climatic conditions are the most vital elements, serving as a control mechanism in order to provide a viable environment for all living beings including humans and other species (Alber et al 2). If there occurs any change disturbing the ecosystem and climate in general, it is accompanied by

detrimental consequences irrespective of all living species. As a direct result of this phenomenon, it can be commented that climate change leads to extensive physical, emotional and psychological problems associated with high levels of distress, depression, fear and anxiety due to the loss and disruption of ecosystems. The negative consequences of such phenomena can be frightening and overwhelming, profoundly affecting mental health and wellbeing of both individuals and the public. These concerns and fears that have emerged in relation to environmental loss provide a firm background to probe into the relationship between mental well-being and environmental conditions, garnering a great deal of attention in the Anthropocene, and can be categorised as climate anxiety.

If one is asked to appreciate the immense impact of global climate change in view of psychological and affective dimensions besides physical transformation of natural elements, it must be recognised that these phenomena are highly complex and denote multiple meanings, requiring a new taxonomy as well as positioning themselves within other sociocultural, technoscientific, and environmental contexts. In recent decades, it has been evident that the anthropogenic activities have exacerbated these abovementioned negative emotions and responses to changing landscapes to an extent that both individuals and communities have begun to suffer from mental disorders such as severe anxiety, depression, grief, trauma, and chronic distress. These emotional and psychological disturbances have been elaborately identified by Glenn Albrecht, an Australian philosopher, under the concept of 'solastalgia.' Albrecht coined and introduced the term at the Ecohealth Conference in Montreal in May 2003, and mentioned it in an article in 2005 in the journal of PAN by amalgamating the words 'solace' meaning (consolation or comfort) and 'nostalgia' (meaning homesickness) to describe the feelings of ecological distress, and to signify to the depressive emotions when one's familiar environment is totally transmuted. Albrecht initially aimed to define the psychological responses of Australian farmers in the Upper Hunter Valley, who suffered distress as a result of destruction of their natural environment by agricultural activity, energy production and mining.

In other words, as climate change have many impacts on mental health, conditions the term solastalgia can be situated in the psychological lexicon to refer to the discomfort due to loss of solace and a feeling of isolation or detachment from one's environment or household. Albrecht argues that "solastalgia is the existential and emplaced experience of the loss of the value of the present as manifest in a feeling of being dislocated within a home location that is undergoing chronic change" ("Solastalgia: A New Concept" 50). With regards to the effect of Anthropocene in solastalgia, he pinpoints that "[as] human impacts on the planet increase, it should come as no surprise that in addition to bio-physiological pathology induced by environmental pollution, there should be psychological illness linked to a negative relationship between humans and their support environment" ("Solastalgia: The Distress" 95). Moreover, he defines the term as "the pain or sickness caused by the loss or lack of solace and the sense of isolation connected to the present state of one's home and territory" ("Solastalgia: A New Concept" 45). In the light of these different descriptions, it can be argued that this new term consists of a miscellaneous set of psychological and emotional conditions arising from territorial loss of a beloved place or residence due to any destruction or transformation that may be triggered by either human activities or the drastic climate changes. Moreover, Albrecht broadens this definition in the following:

Solastalgia is not about looking back to some golden past, nor is it about seeking another place as 'home'. It is the 'lived experience' of the loss of the present as manifest in a feeling of dislocation; of being undermined by forces that destroy the potential for solace to be derived from the present. In short, solastalgia is a form of homesickness one gets when one is still at 'home.' (45)

As underlined by Albrecht above, the place and familiar environment where the individual lives and feels attached is imperilled by dramatic natural changes. As a result, the individual loses the sense of belonging and experiences psychological distress. Therefore, this term can also be considered as "a psychoterratic syndrome" emphasizing "the essence of the relationship between ecosystem health, human health and control (hopelessness and powerlessness) and negative psychological outcomes" (Albrecht 98). He also expatiated that "solastalgia is as relevant to individuals' loss of an endemic sense of place due to the negative impacts of global warming as it is to cities and their urban complexes as they are transformed by the forces of development" (10). On the other hand, solastalgia can be used to express individuals' memory of lost home in a

literal or figurative way. The individuals not only lose their home but also their past experiences interwoven with their familiar places, culminating in an entangled cluster of emotions such as grief, anxiety, depression, and distress. Consequently, they may also feel alienated, traumatised and even lose their attachment to their own home since their comfortable settings are alchemised into a hostile and strange place by ecological disasters. In his book *Earth Emotions*, Albrecht explains this emotional state as follows:

Solastalgia is characteristically a chronic condition, tied to the gradual erosion of identity created by the sense of belonging to a particular loved place and a feeling of distress, or psychological desolation, about its unwanted transformation. In direct contrast to the dislocated spatial dimensions of traditionally defined nostalgia, solastalgia is the homesickness you have when you are still located within your home environment. (39)

In this formulation, Albrecht emphasises that individuals are susceptible to suffer from this ecological malady even in their homes due to their gradually transformed mental responses to immediate changes surrounding them. This situation shows how fragile and vulnerable humans are if a serious ecological crisis occurs. In support of that, Albrecht et al. underpin that solastalgia is not only affiliated with the past experiences or longing for one's beloved residence, but also the perceived loss or transformation of the environment that causes unrest and discomfort (55). Based on these views, it can be concluded that solastalgia is an intriguing cocktail of anxious and fearful thoughts and emotions arising from extreme climatic changes and ecological collapses.

There are some other formulations to this relatively new mental condition which is diagnosed as "the distress experienced in the absence of the solace once provided by the environment in the aftermath of environmental destruction" (Luce 9). Warsini et al. state that solastalgia is used to define feelings that surface in the event of any environmental change negatively affecting one's living conditions (87). Similarly, it is used for referring to ecologically induced distress and a miscellaneous set of relevant negative emotions. Unlike nostalgia meaning homesickness experienced upon separation from home, this concept is used to describe the situations imbricated with anxious and stressful sentiments emerging from environmental change. This term is often confused with nostalgia, requiring a conceptual explanation. In the past century, nostalgia was regarded as a mental condition that could be easily diagnosed and described as a kind of melancholic emotion arising from homesickness (Connor et al. 55). However, Glenn Albrecht explains the concept of nostalgia and its relationship with solastalgia in the following:

The term 'nostalgia' has traditionally been used to refer to distress or melancholia connected to being absent from the homeland and a desire to return. However, a concept that relates to the present, to the lived experience of emplaced change within the home environment... To be homesick within a home environment is now a common experience as familiar home environments, under powerful change agents such as global warming, inexorably move away from their owners. (51)

Moreover, solastalgia seems to deal with a great lack of psychological terminology in popular, political, and scientific discourses. In this sense, Galway et al state that "although the physical health implications of climatic and environmental change are increasingly well documented, the emotional, mental, and spiritual health implications remain understudied" (2). On the other hand, the term solastalgia is mentioned alongside a set of health ramifications that refer to psychological responses to environmental and climatic changes. These new close notions include eco-anxiety and ecological grief. Solastalgia is frequently associated with such similar terms as ecological grief and eco-anxiety. According to Timothy Clark, the concept of ecological grief is used to explain the underlying causes for "the loss or threatened destruction of a specific landscape, place or species, as opposed to what might be called Anthropocene horror" (61). Likewise, Cunsolo and Ellis state that "ecological grief is associated with the physical disappearance, degradation and/or death of species, ecosystems and landscapes, and is driven by climate change" (276). However, Askland and Bunn claim that solastalgia may fail to include the whole spectrum of human health and nature relationships though it examines the intimate connection between ecological degradation and distress experienced by the humans (21). All these concepts tend to emphasize that the connections between human health and the nature are intermeshed.

Another important term to be reckoned in discussion is 'eco-anxiety' which has begun to occupy the public agenda around the world. Eco-anxiety has not been diagnosed as a mental disease yet, but the accumulated worries and fears about the climate emergency experienced may cause a number of psychological syndromes. This evasive term is described by American Psychology Association (APA) as "the chronic fear of environmental cataclysm that comes from observing the seemingly irrevocable impact of climate change and the associated concern for one's future and that of next generations" ("Eco-anxiety"). Clayton et al. defines the term as a "chronic fear of environmental doom" (68). A more comprehensive definition of the term with regards to climate change can be suggested that "eco-anxiety is worry (heightened concern),

which may encompass various types and degrees of distress (physical and/or psychological) about the present environment/climatic crisis, and the future state of the planet, namely the health of human and non-human life and ecosystems (Smith 19). However, despite its relative popularity in mass media, the term eco-anxiety has not been sufficiently understood, remaining unclear with various definitions. For instance, it is defined as mentally stressful or anxiety-induced condition affiliated with deteriorating ecological settings (Usher et al. 2023) or anxious reactions to the ecological chaos (Panu 2). The term eco-anxiety may be regarded as a combination of biological, psychological and social reaction to ecological degradation. Additionally, it promises an important area of research since it is a pervasive source of distress blended with various mental problems. There is a significant lack of studies in literature pertaining to its conceptual boundaries and the interventions to mitigate its lasting effects although it is often discussed online and mainstream media.

Consequently, Albrecht's explanations seem to reveal that solastalgia is a new condition with multiple dimensions and a promising subject of climate change research in the future. All these definitions also emphasise the fact that human health is closely interlinked to and deeply influenced by the natural processes and transformations like climate crises. The negative transformations in the environment are acknowledged to cause a lot of distress and anxiety and incapacitate individuals, offering new paths for fiction and literary criticism. Thus, climate fiction has a great potential to portray physical, emotional and psychological changes, challenges and responses to them in the ecosphere and their impact on humans. Moreover, the climate fiction can be said to provide ample room for authors and readers to engage with traumatic landscapes that showcase grim futures silhouetted with cataclysmic events and great devastation alongside a diminution of human exceptionalism and retaliation of the nonhuman nature. It can be anticipated that climate fiction works could help in building awareness in ecological predicaments.

A final commentary on solastalgia underscores that the term promises a great potential for future studies and convenience for studying the relations between environmental health and human wellbeing, while providing an insight into the cumulative impacts of climate change on individuals' spiritual, mental, and emotional health. Considering the pace of unbridled exploitation of planetary sources and climate

change, it is ineluctable that the number of people suffering from solastalgia will exponentially increase as a result of the transformed landscapes beyond recognition. James Graham Ballard vividly reflects these negative emotions with his exclusive narrative style and critical commentaries and analysis in his disaster novels.

JAMES GRAHAM BALLARD AND SCIENCE FICTION

James Graham Ballard was a British novelist, short story writer, satirist, and essayist who first became associated with the New Wave of science fiction for his post-apocalyptic novels. Ballard was born and brought up in Shanghai, China. When the Japanese invaded China, Ballard and his family were captivated in an internment camp. This can be marked as a milestone on his prospective career.

Throughout his literary career, Ballard has assumed a multiplicity of identities including a “science fiction (sf) writer, catastrophist, literary provocateur, war writer, and diagnostician of late-twentieth and early-twenty-first century consumer society” (Knowles 341). These varieties of his literary profile equipped with great imaginative faculties have distinguished him from his contemporaries, making him a marginal and influential literary figure, a forerunner of New Wave movement, and a valuable source of inspiration in British literature. In line with that, H. Bruce Franklin states in the following:

Along with other British and, somewhat later, American purveyors of literary gloom and doom, Ballard has been a symbol of the ascendancy of the "New Wave" in science fiction. And the "New Wave" has been a leading force in the broad and deep expansion of a doomsday mentality in our culture. (1)

As articulated by Franklin, Ballard blatantly depicted his forebodings and grim predictions about the future of humanity in his early novels that could be classified as works of climate fiction in terms of theme, motif and plot. He represented possible and devastating outcomes of environmental degradation by anthropogenic factors in his climate fiction novels. He also emphasised that environmental transformation has wiped out many nonhuman species and brought the humanity on the edge of extinction. In this regard, Ballard can be deemed as one of the forerunners of climate fiction that conveys the devastating effects of climate change to the masses.

On the other hand, Ballard is celebrated as one of the most prolific, idiosyncratic and respected sci-fi authors of the twentieth century. During his literary career, Ballard wrote an extensive catalogue of 100 short stories, essays, satires, twenty novels, and several anthologies, especially receiving acclaim and criticism for those with postapocalyptic themes. Furthermore, Ballard has influenced other contemporary authors and artists with his unique, provoking and distinctive literary style, intellectual and inspiring imagination. Ballard's immeasurable contributions to the science fiction have been glorified with coinage of a new eponymous title as an adjective: *Ballardian*. This neologism has been used to describe human-induced and often depressive situations in fiction. Jeannette Baxter and Rowland Wymer state that "James Graham Ballard has officially been accepted into the English language as an adjective is surely a measure of his enduring imaginative presence and significance within contemporary literary landscapes" (1). This word is defined by Collins English Dictionary as "resembling or suggestive of the conditions described in J. G. Ballard's novels and stories, especially dystopian modernity, bleak manmade landscapes and the psychological effects of technological, social or environmental developments" ("Ballardian"). Thus, it can be argued that the author has significant contributions to science fiction genre with his peerless style and transcendental imagination.

Given Ballard's fiction, it stands out that his narratives entail a broad range of themes such as climatic catastrophes, dystopic and bizarre settings, bleak landscapes, psychological impacts of advanced technology on human society, criticism of modernity, social issues and post-colonial stories. On the other hand, Ballard's novels attract the readers with their psychological interpretation of the transformed, dystopian and apocalyptic worlds. It is stated by Noah Terrell that those natural disasters have become major themes since the beginning of Ballard's literary career (5). Moreover, Ballard has written several other successful novels including *Crash* (1973), *High Rise* (1975) and *Empire of the Sun* (1984). *Crash* (1973) is a postmodern novel about a man fetishizing car crash. *High Rise* (1975) is teemed with satiric and dystopian representations of contemporary social class struggles embedded with violence and perturbation. On the other hand, *Empire of the Sun* (1984) is Ballard's most famous novel since it was adapted to cinema by Steven Spielberg in 1987, achieving enormous success and becoming a blockbuster classic. Although these three novels are important

examples of Ballard's literary success and unusual perspectives, he is especially renowned for his realistic and traumatic depictions of environmental disasters incorporated in an apocalyptic universe in his first novels published in the 1960s.

These novels focused on climatic catastrophes such as floods, droughts, hurricanes, and strange crystallisation, demonstrating his obsession with environmental concerns, hazards and possible aftershocks of natural disasters. In this regard, Gregory Stephenson notes that "Ballard's visions of disaster ... are portrayed in such a manner that these events are seen to represent the deepest, most secret desires of humankind" (1). Thus, Ballard problematises ecological concerns in his early fiction. Additionally, Ballard meticulously combines and conflicts reality and trauma with human-induced disasters in shockingly fantastic and striking settings, engaging the readers with chaotic and dystopic reality in these novels. Ballard has himself expounded his perspectives and inclinations about these cataclysms by stating that "each one of these fantasies represents an arraignment of the finite, an attempt to dismantle the formal structure of time and space which the universe wraps around us at the moment we first achieve consciousness" (Ballard 130). Therefore, it can be argued that Ballard has established an exclusive style in science fiction to criticise flaws and possible end of humanity in a realistic and holistic way.

JAMES GRAHAM BALLARD AND CLIMATE FICTION

Ballard's obsession with dystopian imagination and calamitous landscapes is not grounded upon the devastation, but venturing to transcend the capacity of human race. (Stephenson 41). Therefore, Ballard takes advantage of narrating disastrous events and their negative consequences to alert the public against serious threats as well as to make sharp critiques on human's psyche regarding his irresponsibility and immense hubris. Moreover, Don D'Amassa suggests that "his plots were unconventional and frequently set in the near future, rarely using such traditional themes as journeys through time or outer space or encounters with aliens" (22). Based on these views, it can be thought that Ballard's unparalleled literary style is revolutionary and reaches far beyond the limits of science fiction when compared to his time.

J.G. Ballard's eco-disaster tetralogy consists of *The Wind from Nowhere* (1961), *The Drowned World* (1962), *The Burning World (The Drought)* (1964), and *The Crystal World* (1966). These novels bear relevance to literary engagement with environmental

challenges, exhibiting distinctive representation of climate change and its disastrous consequences on the Earth. It is emphasised that “within the context of ecological apocalypse, J. G. Ballard’s post-apocalyptic novel series of the early 1960s constitute the forerunners of climate fiction” (Tan 57). Tan underpins that these novels could be prototypes of climate fiction since they address climate change and relevant issues in for the first time in science fiction at a time when global warming and climate change are not well understood and researched. This thesis study utilises posthumanist approach and solastalgia that is a relatively new concept to refer to fears and anxieties induced by climate change in order to evaluate these novels from a different perspective. However, it is maintained that “Ballard’s early dystopias are no longer seen solely as a symbolist or surrealist ‘elemental’ period within his own oeuvre, or more broadly as post-apocalyptic SF” (Clarke 8). Moreover, Ballard’s early novels can be deemed as attempts to criticise Western capitalism for colonialism and its destructive impact on the environment. Therefore, Ballardian style is sufficiently potent in conveying socio-political messages and implications for present day and even future.

What makes these novels a tetralogy lies in the fact that they include a repetitive narrative style, characterisation and plot frame. Each novel pivots around disruption of one of the four fundamental elements of nature (i.e., air, water, fire, and earth), eventually re-establishing equilibrium and the earth’s biosphere and psychologically and physically reconstituting the protagonists. *The Wind from Nowhere* talks about the fall of humanity against airborne disaster. *The Drowned World* depicts a submerged landscape. *The Burning World* presents a desiccated atmosphere incurred by extreme drought. *The Crystal World* narrates a bizarre phenomenon of crystallisation occurring in the environment. Similarly, it is argued that “they have been depicted as disaster dystopias, mediated through each of the four classical Aristotelian elements of air, water, fire and earth” (Clarke 8). The author emphasises in these novels that the bonds between human and nature are so strongly infused together that they could cease to exist if either of them is threatened or destroyed at any rate.

Given specific characteristics of climate fiction, Ballard’s tetralogy has several implications to consider. Julia Leyda labels these qualities of climate fiction as contemporary, controversial, trans-medial, transnational, didactic, generic and political (12). Firstly, Ballard’s novels correspond with these features and are contemporary in

that the events and disasters occur in the present or near future due to continuum of climate change as an ongoing challenge. These novels also reflect distinctive disastrous scenarios interwoven with basic natural and explore climatic catastrophes and their outcomes. On the other hand, climate change is a global issue without boundaries and the transformed settings in these novels are mainly located in the UK and Europe as well as many other countries across the globe, which reveals a transnational character. In addition, Ballard's novels are didactic in the manner that they are aimed to communicate moral and political messages to humanity and implicitly promote preservation of the environment. The generic quality of these novels renders them as dystopian and apocalyptic/post-apocalyptic fiction in view of their plots and themes. Additionally, these novels not only delineate challenges faced due to climate change but also reformulate public opinions regarding social issues that are relevant to them.

The costs of the ultimate domination of humanity over nature have been manifested by serious planetary deterioration, loss of ecosystems and numerous natural disasters, resulting in the breakdown of existential interconnections between human and non-human world. The literary response to these phenomena has engendered climate fiction, which is used as a versatile tool to spotlight environmental problems in fiction. In this context, J.G. Ballard was one of the forerunners of climate fiction with his distinctive style and post-apocalyptic imagination, portraying multiverses of bleak worlds and total terratic destruction. In addition to that, Sankhla argues that "Ballard's imaginative faculty creates the worst picture of the world by extending the contemporary problems to an extent that lead entire humanity towards the peculiar end" (150). It can be suggested that Ballard is a mastermind author who dismantles conventional stereotypical notions and grants to the modern human a new lens to criticise and question anthropocentrism and its adverse impact on the planet.

In his disaster quartet, J. G. Ballard depicts a tragedy of self-centred human civilisation destroyed by natural forces and catastrophes, as well as presenting how people could bond together in the event of such great predicaments, which is another frequent theme in Ballardian fiction. In this regard, Dominika Oramus states in the following:

J.G. Ballard is famous for his idiosyncratic style, created, among other things, by his obsessive repetition of motifs, themes, images and, primarily, landscapes. The iterative settings, the obsessive collage-making and the bizarre vehicles of his frequent similes give his fiction a surreal and lurid appeal. (553)

Briefly, it is obvious that Ballard's authentic style and transcendental imagination drives us to the heart of ecologically bleak worlds, conveying insightful messages to the modern human to ponder upon the possible end(s) of the world.

Recently, the Earth has been continuously struck by endless chains of natural catastrophes due to climate change which is undoubtedly one of the monstrous challenges humankind is facing. These environmental challenges triggered by extreme anthropogenic activity have been stratigraphically transforming the planet, and humans are destined to live in a devastated ecosphere. It is also obvious that these disasters provide ample opportunities for fictional representation of climate crises encountered by humans. In this regard, it is argued that "an imaginative repertoire is urgently needed by which the causes and consequences of climate change can be debated, sensed, and communicated" (Macfarlane). On the other hand, representation of climatic issues and their impact on humanity in science fiction precedes the rise of climate fiction. For instance, Jules Verne, who was a prolific and reputable French author, penned *The Purchase of the North Pole (Topsy-Turvy)* (1889) in which he satirically described that the tilt of the Earth's axis is attempted to be altered by the capitalist order so as to stabilise climatic conditions all year round and extract coal in the Arctic region. In this context, James Graham Ballard has become one of the leading figures with his unique narrative style and unusual analysis of modern society and its interrelations with the nature in his first novels. These early novels mainly deal with global catastrophes and gradual collapse of Western civilisation by juxtaposing dystopian elements, apocalyptic and postapocalyptic visions. They encapsulate significant messages for next generations laden with sharp criticism of human psyche and irresponsibility with regard to environmental protection, as well as questioning the mutual relationship between human and non-human entities.

Furthermore, it is emphasised by Jim Clarke that these novels were published when the term climate change had not been fully coined by scholars (7). Therefore, Ballard's novels can be deemed as prototypes of climate fiction, playing a vital role in the development of climate fiction. These novels are thematised on the four basic natural elements (i.e., air, water, fire and earth), with disruption of each ending up with a major catastrophe affecting the whole globe and civilised societies that exploit the environment extravagantly. These novels "can be read as a series of variations on the

global catastrophe novel” (Litt). All in all, Ballard endeavours to unveil flaws, vulnerabilities and fragilities of modern human civilisation and critique the anthropocentric mindsets while foreshadowing different doomsday scenarios in these novels.

BALLARDIAN FICTION AND APOCALYPSES

J.G. Ballard explores weaves a framework of apocalypses and their immense effects on both human race and ecosystems in his tetralogy of climate fiction. In his landmark book *The Environmental Imagination*, Lawrence Buell defines apocalypse as “the single most powerful master metaphor that the contemporary environmental imagination has at its disposal” (285). Moreover, Ballard uses his literary genius to project dystopian futures to warn people against the inevitable end, using basic elemental themes. His tetralogy can also be deemed as a hallmark in science fiction, opening new directions to delineate and analyse the mutual relationships between human and the nonhuman in view of many different perspectives.

Ballard fictionalises a curious vortex of environmental disasters in which he foregrounds scientists as the protagonists who attempt to save and restore human civilisation, while critiquing scientific tendency to ignore the catastrophic truths the humanity encounters. However, the author avoids charging explicitly or implicitly humans for the ecological crises, as well as exhibiting a distrustful attitude towards the scientists who are impotent and vulnerable against the predicaments depicted in his early novels (Clarke 10). The author also weaves a realm of ecological dystopias in which humans are vulnerable to the slightest changes in the environment and compelled to survive in inexorable and deplorable conditions while facing extinction.

Ballard explained about the anatomy of his tetralogy in an interview in the following:

I have written three novels – *The Drowned World*, *The Drought* and *The Crystal World* – which form a trilogy dealing with the topic of time. In *The Drowned World* I deal with the past, and employ water as the central metaphor. In *The Drought* I deal with the future, taking sand as the central image. [...] In my novel *The Drought*, I see the future as a world dominated by sand. It is the end of the planet, and the few people who survive on the planet are governed by perfectly abstract relations, through an entire geometry of space-time, of emotion and action. It is a completely abstract world, as abstract as the most abstract of painters or sculptors one can imagine. (Sellars and O’Hara 27-28)

In the selected novels, Ballard opts a natural disaster to highlight his views on the nexus between human and nonhuman in a harshly realist fashion. The author seems to assert that the science lags behind in finding a solution to the climatic cataclysms, only theorising about how they have occurred. Interestingly, the author does not provide a satisfying and detailed explanation on the causes of the catastrophes. Hence, he presents the main characters who are scientists as passive and impotent against the disasters. It is also implied by Jim Clarke that humanity is abandoned by science and scientists as they are unable to overcome the global environmental crises depicted in the novels (11). Finally, the fictional universe of J.G. Ballard has been mostly examined through postmodern criticism while his novels resonate well with main discourses of posthumanism. The deteriorating financial structures, social degeneration, and environmental chaos coalesce within industrialisation and urbanisation. The locations depicted in Ballard's tetralogy are inflicted with an ecological plight that ensnares humans in a psychological conundrum. These settings propagate anxiety and fear by synthesising inner conflicts with the transforming landscapes.

In addition, Ballard's climate fiction tetralogy teems with political assertions related to capitalism and colonialism. Ballard also repositions the destructive effects of the calamities from the outer Pacific to European countries and cities in order to incriminate capitalist ideologies dominant in the Western world and harshly criticises their colonialism (Clarke 14). Based on these extrapolations, it can be argued that Ballard is an excellent visionary whose ideas transcend well beyond his contemporaries and leave an indelible mark on our understanding of modernisation flourishing at the expense of destroying the planetary sources. He also does not neglect offering cautionary tales for modern humans in this tetralogy.

Ballard's imaginary realms are constructed and configured by dystopian elements and devastating catastrophes caused by human exploitation of the nonhuman. His works are laden with outrageous scenarios and vulnerabilities of human beings. Ballard's passion for compartmentalising flaws of Western civilisation and capitalism and their consequences on the environment are unfolded to the readers in his cli-fi novels. In these novels, Ballard boldly analyses humanism, materialism and technological evolution of humanity by deconstructing chaotic phenomena such as environmental

crises and their effects on human beings. In this sense, his cli-fi novels can be deemed interwoven with the posthumanist views and conceptions in an age of global capitalism.

JAMES GRAHAM BALLARD AND THE NEW WAVE

In a broad sense, the New Wave movement refers to a period in science fiction that is characterised by experimentation, social commentary and literary merits. (“The New Wave”). J. G. Ballard was one of the pioneers of this movement that was aimed to create a new type of contemporary mythical fiction with cultural and intellectual perspectives instead of literary analysis. Matthew Sterenberg claims that “the concept of myth was central to the work of Ballard and other New Wave writers and that their goal was to produce mythic science fiction which enabled readers to cope psychologically with the intense pressures of modern life” (97). Together with Michael Moorcock and Brian Aldiss, J. G. Ballard rose to prominence with the New Wave and used myths as a tool for meaning for modernity in post-war Britain culturally dominated by mythical thought and redirecting science fiction as genre unleashed of stereotypical conventions towards social critique. It is also argued that these authors held the belief that science fiction is the best form of literature attuned to understanding the modern world and addressing the problems of life in a society transformed by science, technology and mass media, abandoning classical principles of science fiction and superseding them by creating an experimental style (Sterenberg 99). In this regard, this movement can be considered as a big leap in the evolution of science fiction.

Historically, science fiction was profoundly influenced by the rise of industrial revolutions and technoscientific breakthroughs along with proliferation of book publications, thereby boasting a Golden Age predominated by such leading authors as Ray Bradbury, Robert Heinlein and Isaac Asimov from the late 1930s to the early 1960s. In this period, science fiction was regarded as a panacea to understanding and overcoming social issues by taking an optimistic attitude towards future (“Science Fiction”). However, the New Wave movement emerged and flourished in the 1960s and 1970s, opposing to hard science which blends accurate scientific data with speculative fiction and stereotypical adventures represented in the genre. On the other hand, the New Wave coinage was borrowed from *Nouvelle Vague* in French cinema, a movement that emerged in the 1950s as an experimental attempt in filmmaking to engage with socio-political events at the time. By the 1980s, the movement came to an end,

influencing other subgenres such as cyberpunk and slipstream fiction though. In 1964 Michael Moorcock undertook the editorship of "*New Worlds*," a periodical science fiction magazine, marking the birth of this movement. A group of significant authors such as James Tiptree Jr., Ursula K. Le Guin, Samuel Delany, J. G. Ballard, and Joanna Russ devoted themselves to defy against and deconstruct the core characteristics of science fiction and dealt with sociocultural, political and psychological issues, while exploring the complex status of the human in the modernising world. In relation to the subject, Janez Steble emphasises that "familiar tropes of the genre, such as robots, aliens, outer space, high technology, became irrelevant; utopian longing, dystopian pessimism and the clashes between them were apparently replaced by the obsessive pursuit of the formal experiments common to James Joyce and William Burroughs" (90). On the other hand, these New Wave writers possessed apocalyptic imagination and visions for the world and represented them in their narratives.

Accepted as one of the most important representatives of the New Wave, J. G. Ballard proliferated many narratives and received critical attention. His original style and imagination dissociated him from other contemporary authors. Highlighting multidimensional literary characteristics of J. G. Ballard, Duncan Bell labels him as an "avant-garde experimentalist, pioneering new wave science fiction writer, trenchant critic of capitalism, ingenious urbanist, visionary of environmental apocalypse, dystopian dream weaver, phenomenologist of the contemporary technoscape" (935). It can be concluded that Ballard's fiction explores various challenges caused by the modernisation, as well as offering a critical lens to question our existence on the planet.

Ballard's postapocalyptic tetralogy can be accepted as the first contemporary examples of climate fiction. These novels are laden with socio-political extrapolations and covert implications to diverse critical approaches such as posthumanism and ecocriticism. Hence, these novels can be examined through different literary perspectives ranging from structuralist and post-structuralist, feminist, psycho-analytic to existentialist perspectives. However, what makes this thesis different from other similar studies lies in the fact that it will analyse these novels through a posthumanist lens while considering ecocritical perspectives and other environmental paradigms. It can be assumed that this thesis is going to fill a gap in literary studies in general and

contribute to the study of J.G. Ballard's climate fiction from a posthumanist perspective and provide an insight into representation of solastalgia.

The first two novels in the tetralogy, *The Wind from Nowhere* (1961) and *The Drowned World* (1962), will be analysed in the first chapter of the thesis in order to reveal how the natural disasters affect humanity both physically and psychologically and critique human-nature interrelations. The other two novels, *The Burning World* (1964) and *The Crystal World* (1966), will be analysed in the second chapter of the thesis in order to argue how the human and the nonhuman natures are bonded and transformed together. All the novels will be investigated for representations of solastalgia from a posthumanist stance.

CHAPTER 1: HUMANITY VERSUS SUPER-HURRICANE AND HUGE DELUGE

I've always felt that people living in the cosy suburbia of Western Europe and America never appreciated just how vulnerable we were to climatic disasters.

J.G. Ballard, 1962.

J.G. Ballard has written many significant novels and short stories that predict major social, economic, political and ecological crises experienced today. In his early novels often dubbed as works of climate fiction, he focuses on a single terratic element and narrates a grave story about the fall of humanity in a catastrophic landscape. Ballard also dwells upon the effects of climatic changes on the characters' psychology and their emotional responses to these devastated worlds depicted in the novel.

The Wind from Nowhere (1961), as the title suggests, is related to an inexplicable and violent wind that sweeps away the surface of the Earth, resulting in an airborne disaster that forces humans to hide underground. Ballard uses the wind as a dominant agent throughout the novel to portray its destructive power against science and technology developed by humans. The novel is of prophetic vision that shows an ecological catastrophe caused by global climate change that makes the earth hostile and antagonistic for human survival. Ballard also criticises western anthropocentrism and exploitation of natural resources in the subtext, choosing the wind as a counterbalancing agent to challenge humanity. On the other hand, Ballard describes the loss of environment as a significant factor that arouses anxiety and fear about human survival by touching upon solastalgic feelings and reaction of the characters to the disaster in the novel. Finally, Ballard implies that humans are vulnerable and weak in the face of natural forces while they are an integral part of their environment in view of survival on the Earth, which complies well with posthumanist ideas.

As it can be inferred from the title, *The Drowned World* (1962) displays an inundated world in which a small group of people are exposed to high temperatures in a shrinking lagoon that is surrounded by many prehistoric species and exotic flora. The global warming causes great floods that submerge the cities around the world. The characters live in isolation and desolation while they have weird dreams that propagate emotional fluctuations. Nature is represented by flooding water that engulfs all the traces of human civilisation, leaving no room for restoring the situation for humans. This phenomenon is offered as an indicator of solastalgia manifested by the main

characters' ideas and behaviours transformed by the gradually changing environmental conditions.

Both novels convey the message that humans could be made incapable despite technoscientific progress and nature ultimately overthrows humans. Although air and water are vital natural elements for humans to survive, they can turn out to be highly destructive both physically and mentally for them. Both novels can be thought as explorations into the complex structure of Anthropocene's expanded spatiotemporal scale through representations of emotional responses to navigate through the catastrophes depicted. The disastrous phenomena are vividly portrayed to the readers to hint that humans are not exculpated due to their accumulation of scientific knowledge, rather warned seriously through great devastation to respect the natural laws and ecological integrity and establish a balanced order that shows sympathy for the nonhuman nature.

1.1. *THE WIND FROM NOWHERE: A PARABLE OF NATURE'S UNQUENCHABLE WRATH AND ENORMOUS GLOBAL HAVOC*

The Wind from Nowhere (WFN), Ballard's debut novel, was written in 1961. It is the first instalment of his well-known ecologically oriented natural disasters series. Written in a very short time, the novel is denoted and denigrated by the author as a "piece of hackwork" due to its poor characterisation and brevity (qtd. in Sellars and O'Hara 88). Although it looks like a work of a novice writer, it serves as a precursor of Ballard's upcoming climate fiction novels, enticing readers with eschatological scenarios about the future of the planet. It can also be accepted as Ballard's first literary foray into ecological narratives at a period when the causes and effects of global warming and climate change are not entirely understood and thoroughly investigated. The novel is considered apocalyptic unlike other post-apocalyptic novels in Ballard's tetralogy. Ballard also utilises the wind as a metaphor to illustrate how humans are demoted to bestiality and primitivity with a particular emphasis on the psychological effects of the transformed environment on the characters in the novel. The characters are entrapped and besieged by the ultimate force of the hurricanes in a demolished world.

The novel centralises on a devastating hurricane whose cause is obscure and not described by the author. The violent winds and hurricanes destroy whatever on their path, the catastrophe occurs synchronously with the plotline. The text recounts the adventures of Donald Maitland, a doctor who wants to flee the United Kingdom for a job in Canada, but actually tries to escape from a failing marriage with his wife Susan, but fails to do so due to the intensity of the winds. Maitland and other characters are forced to take shelter in a bunker to protect from the hurricane. They decide to go to the pyramidal structure built by a tycoon named Hardoon to hide from the catastrophe. However, the structure cannot resist the power of the wind and collapses. Fortunately, Maitland is evacuated and the winds subside, leaving a huge debris of human civilisation behind.

This apocalyptic novel also marks the emergence of a new inclination in science fiction, narrating an indescribable super-hurricane that flattens and tears down the Earth with an unparalleled force while sweeping down humankind from the surface. The characters in the novel serve as messengers to the readers with their reactions to the catastrophic changes occurring around themselves and in their inner worlds as well. Ballard uses numerous detailed descriptions to probe into mental states and emotional responses of the characters to the apocalyptic landscape throughout the novel, which are reminiscent of solastalgia.

The novel opens in media res into extremely violent winds that destroy everything on the way. Ballard exemplifies the great force of the winds and the extent of damage as follows:

Widespread havoc is reported from many parts of the world, particularly in the Far East and the Pacific, where tens of thousands are homeless. Winds of up to hurricane force have flattened entire towns and villages, causing heavy flooding and hampering the efforts of rescue workers. (*WFN* 19)

Ballard vividly portrays the effects of strong winds all around the world and underpins that the cause of the powerful winds is obscure to humans, creating anxiety, fear and panic as well as leading to immense devastation. In parallel with this, Stephenson states that “the nature of cataclysm is a global cyclone whose wind velocity ultimately reaches 550 mph, destroying nearly every surface structure on the face of the earth and inflicting untold millions of casualties” (42). In other words, from the outset, the novel unfolds that human is defenceless and fragile against the forces of nonhuman nature. Moreover, the size of the destruction due to hurricanes can be thought as a great source of anxiety

and fear, thereby playing a role in solastalgic feelings and responses as a result of dramatical transformation of the environment.

Another example of such emotional reactions to the changing environment is presented when Donald Maitland visits his close friend Andrew Symington as follows:

Well, as a matter of interest it's increasing by about five miles an hour each day. Of course, it won't go on increasing indefinitely at that rate or we'll all be blown off the face of the earth—quite literally—but one can't be certain it'll begin to subside just when our particular patience has been exhausted. (*WFN* 10)

Symington's statements reflect both human arrogance and helplessness in the face of nature. Although humans can predict and even calculate multiple effects of many natural phenomena scientifically, they are depicted as weak entities whose survival is merely connected to nonhuman factors. The characters thus express their anxious feelings about the disaster, signalling to solastalgic responses.

Ballard continues the novel by describing the devastating effects of strong winds on people's moods in vivid details. He also emphasises humans' desperate efforts to escape and survive in the event of a big minacious challenge and / or drastic change in their immediate environment. This can be clearly seen below:

It was absolutely terrifying. It's not as bad up here in town, but along the coast—the seas are coming right over the front, the beach road out to the villa isn't there anymore. That's why we couldn't get anyone to come and help us. There are pieces of concrete the size of this room moving in and out on the tide. (*WFN* 8)

However, Ballard tries to dwell on anthropocentric hubris and human dominance by means of science and technology over the natural systems in the following:

He smiled warmly at his wife. "Don't worry, though, it won't go on forever." ... "Well, as a matter of interest it's increasing by about five miles an hour each day. Of course, it won't go on increasing indefinitely at that rate or we'll all be blown off the face of the earth—quite literally—but one can't be certain it'll begin to subside just when our particular patience has been exhausted" ... London seemed massive and secure, a vast immovable citadel of brick and mortar compared with the flimsy bamboo cities of the Pacific seaboard. (*WFN* 10-11)

These statements seem to indicate that humans are overly self-confident and not worried about the natural changes by simply depending on their technoscientific equipment. Although feelings of solastalgia are not clearly described, Ballard implies that western countries and metropolitan cities like London remain immune, impenetrable and indestructible to the effects of natural forces as a result of their technological progress. However, the power of nature is presented as a possible source of anxiety and fear for humans since it can urge and transcend the limits of human civilisation.

On the other hand, the author makes several possible estimations about the actual cause of the disaster in scientific terms, rather than directly and openly focusing on anxious responses, speculations and thoughts about the airborne disaster. Ballard at the same time emphasises helplessness of people in the face of a huge catastrophe as described below:

Dickinson shook his head dourly. "I'd like to be optimistic, Sir Charles, but I've every suspicion that it's got some way to go yet before it spends itself. We're witnessing a meteorological phenomenon of unprecedented magnitude, a global cyclone accelerating at a uniform rate, exhibiting all the signs distinguishing highly stable aerodynamic systems. The wind mass now has tremendous momentum, and the inertial forces alone will prevent a sudden abatement... Recently our monitors have detected unusually high levels of cosmic radiation. All electromagnetic wave forms have mass—perhaps a vast tangential stream of cosmic radiation exploded from the sun during the solar eclipse a month ago, struck the earth on one exposed hemisphere, and its gravitational drag might have set in motion the huge cyclone revolving round the earth's axis at this moment. (*WFN* 34)

Ballard uses ambiguous words like ‘perhaps’ and ‘might have’ to draw attention to scientific procedures that fail to offer solutions to the problems. The scientists are unaware of the predicament and only invent speculative theories. The scientists who are trusted to save humans from the dangers and threats represent a big frustration and a futile effort to avert the disaster.

Ballard undertakes to highlight especially the westward direction of the wind to criticise the western world as follows:

Maitland looked up. "Do you mean they're having the same trouble?" Symington nodded. "Same trouble, same wind. That's another curious thing about it. As far as we can make out, the wind force is increasing at the same rate all over the world. It's at its highest—about sixty miles an hour—at the equator, and diminishing gradually with latitude. In other words, it's almost as if a complete shell of solid air, with its axis at the poles, were revolving around the globe. There may be one or two minor variations where local prevailing winds overlay the global system, but its direction is constantly westward. (*WFN* 11)

Furthermore, Ballard seems to imply that the catastrophic wind is a divine punishment since the Earth's natural sources are constantly exploited by capitalism for unlimited consumption while the nonhuman world is always disregarded. He intends to criticise human's avidity and arrogance that accounts for chaos and catastrophes and may be considered as sinful deeds in the subtext:

Dickinson looked around the table and smiled sombrely. "Or again, maybe it's the deliberate act of an outraged Providence, determined to sweep man and his pestilence from the surface of this once green earth. Who can say? (*WFN* 34)

The bleak image created by Ballard at the beginning of the novel is apparently a comparison of humans and nonhuman nature. This dual opposition presents nature as the dominant factor and humans who are the dominated party. Humanity has become victimised by an immense and uncontrollable natural force. It is almost as if humans are resembled to tiny insects, desperately running around to survive. By juxtaposing humans and nature, Ballard depicts the helpless condition of human beings. Ballard thoroughly describes the downfall of human civilisation suffering the consequences of human-induced natural degradation in the following:

There seemed to be a depressing uniformity about the reports. When he had heard one he had heard them all. The same picture emerged; the entire population of one of the world's most highly industrialized nations, equipped with an elaborate communications and transport system, huge stores of fuel and food, large armed services, yet caught completely unprepared by a comparatively slight increase in one of the oldest constants of its natural environment. (*WFN* 75-77)

The depictions of helpless and terrified humans seem to imply that they are totally ignorant and indifferent to the natural forces till the outbreak of the disaster although they have many interconnections with the nonhuman nature. It is also obvious that humans are terrorised and penalised by the natural judgment for their guilt. It can be interpreted that nonhuman nature thus keeps its equilibrium which is disrupted by the humans.

Besides exposing the duality and mutuality between nature and humanity, Ballard criticises Western anthropocentrism by prophesising a catastrophised landscape devastated by prolonged cyclonic winds and monstrous hurricanes worldwide. Therefore, Ballard obviously contrasts humans with nature at the beginning of the book. This conflict is then reversed into a situation where the humans once dominating the nature are now demoted to the position of being dominated. The human race is victimised by an insurmountable and indomitable natural force and described as desperate tiny beings striving for life. This is vividly delineated below:

The wind had reached 250 mph and the organized resistance left was more interested in securing the minimal survival necessities—food, warmth and 50 feet of concrete overhead—than in finding out what the rest of the world was doing, knowing full well that everywhere people were doing exactly the same thing. Civilization was hiding. The earth itself was being stripped to its seams, almost literally—six feet of topsoil were now traveling through the air. (*WFN* 75)

Nevertheless, Ballard presents a harsh criticism on human exceptionalism and human-centred ideology and demonstrates that human superiority over nature ceases to exist in the wake of a colossal disaster. Furthermore, he trivialises the existence of humans and their insignificant position on the Earth since the human race is being eradicated by the merciless and noxious force of the nonhuman nature. On the other hand, the novel instantiates numerous scenes of devastation and ultimate fall of western world challenged by nature's undeniably overpowering force, as well as designating a tragic parody of "lost" humanity. He draws a comparison of nature versus man and asserts that nature can easily overpower the human in the following:

On the whole, people had shown less resourcefulness and flexibility, less foresight, than a wild bird or animal would. Their basic survival instincts had been so dulled, so overlaid by mechanisms designed to serve secondary appetites, that they were totally unable to protect themselves. As Symington had implied, they were the helpless victims of a deep-rooted optimism about their right to survival, their dominance of the natural order which would guarantee them against everything but their own folly, that they had made gross assumptions about their own superiority. (*WFN* 77)

As can be inferred from the title of the novel that the cause of the disaster is mysterious and inexplicable, the novel arouses curiosity, fear and anxiety. In line with that, Ballard implicitly makes a general psychological dissection of humanity and anthropocentric notions through apocalyptic settings and the emotional and mental reactions of humans to climate change and extreme destruction. The novel also illustrates gloomy imageries and undertones of the disastrous setting, in which people are entrapped between life and death trying to survive deadly winds and storms.

Ballard thus begins describing psychological effects of the altered environment on the characters. In this regard, it can be argued that solastalgia is embedded and described in the characters' points of view throughout the novel. Here, Ballard outlines an infernal landscape teemed with colossal climatic changes. For example, Susan, who is Dr. Donald Maitland's wife feels upset and depressed as a result of what she is witnessing and is going to experience in the future, which prepares the readers for the plotline. In other words, it can be interpreted that humans are inseparable from their environment, and feel a psychological breakdown and trauma when this environment is transformed, altered or destroyed at any rate. Ballard thus undertones posthumanist views.

Despite not tracing a main character's adventures throughout the novel, Ballard oscillates between all the characters who are scattered in the plot and describe their responses to the disastrous events. Moreover, the novel overtly reveals the fragility of human in front of the nonhuman nature which behaves adversely towards human beings who are held responsible for the global ecological collapse. It can also be suggested that it is a prescient literary work that foreshadows climate change and concomitant catastrophes.

The uncanny setting constantly shifts from one place to another as the novel progresses to show that the globe is destroyed by the nature. The novel starts when Maitland intends to leave London, but his escape is intercepted by the intensifying wind. In the subsequent chapters, the focus is drifted towards an American commander Lanyon trying to get in touch with his general in France. It is implied in the novel that our planet has an indivisible structure although it is anatomised by anthropocentric ideology and there are several boundaries established in this regard. From a posthumanist perspective that outcasts these frontiers between nature and humans, it can be said that any change in one of these components of the Earth inevitably affects each other like a butterfly effect, culminating in irrevocable destruction. The author recounts this with an insistent manner as follows:

TOKYO: 174 mph. 99% of the city down. Explosive fires from Mitsubishi steelworks spreading over western suburbs. Casualties estimated at 15,000. Food and water adequate for three days. Government action confined to police patrols.

ROME: 176 mph. Municipal and office buildings still intact, but Vatican roofless, dome of St. Peter's destroyed. Casualties: 2,000. Suburbs largely derelict. Refugees from rural areas flooding into city, catacombs requisitioned by government for relief and dormitories.

NEW YORK: 175 mph. All skyscrapers in Manhattan windowless and abandoned. TV aerial and tower of Empire State Building down. Statue of Liberty minus head and torch. Torrential seas breaking inshore as far as Central Park. City at standstill. Casualties: 500. (*WFN* 32)

Ballard strikingly describes universality of the apocalypse claiming millions of deaths and great havoc by showcasing major cities around the world turning into rubble. In the third chapter, the most famous landmarks all around the world such as the Statue of Liberty and Eiffel Tower that have a great symbolic importance throughout the history of Western world and large metropolitan cities like London, Moscow, Tokyo and New York are swept out by the intensity of windstorms. The demolition of these major landmarks around the world indicates the rapid decline of anthropocentric philosophy and ideals. Moreover, Ballard hints that the humankind's colossal productions can be

exterminated easily, and humans have no other choice to surrender to the overwhelming power of nature (Lingras 74). This situation can be commented as a manifestation of posthumanist approach that human no longer occupies the central role of agency.

However, Ballard employs violent windstorms in depicting the nature's 'revenge' from humans who have indiscriminately exploited the planetary sources for the sake of their benefit and progress. This phenomenon can also be associated with divine justice that is described as "the deliberate act of an outraged Providence, determined to sweep man and his pestilence from the surface of this once green earth" (*WFN* 48). Thus, the author blames and criticises humanity for environmental degradation, arguing that humans deserve punishment for their faults they made for their progress and must feel anxious about the possible results of changes in the ecosystem. It can be inferred from these conceptions that humans are incriminated and obliged to suffer the adverse outcomes of their immoral actions and -perhaps unpardonable by the nature itself- ecological 'sins.' Moreover, Rob Boddice emphasises that humans have been in touch with the deities and gods since ancient times and tend to disregard nonhuman nature-animal (22). Therefore, it can be assumed that humans are expected to review their position within this planet and interrelations with the nonhuman nature.

Ballard's conjectures seem to show that humans are destined to fall against nature even if they possess sophisticated technology and scientific data, and should not interfere with the natural processes. To put it differently, it can be suggested that humans are no longer a privileged species on the Earth and ultimately suffer the bad consequences if the environmental balance is disrupted. Ironically, the wind placed in the central focus of the novel blows westward, destroying the remnants of humanity on the surface of the Earth at the beginning of the novel. Parkavi argues that "even the best towns of human civilization are left defenceless and are silently waiting for their destiny" (15). Based on these views, it can be said that humans cannot withstand nature's power in spite of advanced technology that form one of the main pillars of anthropocentric world order. All these representations can be thought to contribute to feelings of solastalgia in the subtext.

The examples of solastalgia are communicated through the observations and remarks of the characters throughout the novel. For instance, Lanyon is commissioned to take the body of a general in the army, finding out on the way that the world is immersed in chaos. His observation of such a horrendous scene is described as follows:

What it was like topside Lanyon hated to imagine. Tunis, where all that was left of the Sixth Fleet was bottled up, had been a complete shambles. Vast seas were breaking over the harbor area, sending two-foot waves down streets 300 yards inshore, slamming at the big 95,000-ton carrier Eisenhower and the two cruisers moored against the piers. When he had last seen the Eisenhower, she had taken on a 25-degree list and the constant 50-foot rise and fall had begun to rip huge pieces of concrete from the sides of the pier. (*WFN* 15)

This shocking description of the actual size of the airborne disaster arouses fear and anxiety even in Lanyon who is a military officer thought to be accustomed to witness such bad events.

Another observation made by Lanyon describes the global effects of the disaster in the following:

Lanyon gathered that the wind showed no signs yet of abating; its rate of increase was still a steady five mph a day, by the latest estimates 117. After the initial period of inaction at last some organized attempt to preserve order was being made. Governments were requisitioning coal mines and deep shelters, stockpiling food and medical supplies. News reports were conflicting, but apparently most of Europe and America were still little more than inconvenienced, while South America, Africa and the East had suffered complete dislocation, and the first signs of famine and epidemic were revealing themselves. (*WFN* 23)

Lanyon experiences the deadly effects of the disastrous wind and seem to be anxious about the situation of this transformed world, which can be evaluated as a sign of solastalgia. In addition, he recognises that the surface of the globe is uninhabitable and the human race is on the brink of extinction. These events can be thought as solastalgic responses to the changing environment.

Another significant impression of Lanyon is seen when he is on duty in Genoa, Italy as described below:

To Lanyon it appeared to be undergoing a massive artillery bombardment. On all sides the remains of houses and shops were collapsing, exploding in clouds of debris and rubble that vanished in a few seconds, swept out toward the sea on the endless conveyor of the air stream. The scene reminded Lanyon of World War II Berlin, a vast desert of gutted ruins, isolated walls that ran up five or six stories, buildings stripped to their steel superstructures, streets that had vanished under the piles of masonry, leaving a dead land as shapeless and amorphous as a slag heap. (*WFN* 68)

The windborne disaster is likened to scenes of a war that demolishes the cities and causes a lot of damage. Ballard thus implies that nature has waged a merciless battle against the humans. It can be thought that these descriptions excite solastalgic feelings in the readers. It is evident from the context that Lanyon is observing a heavily damaged

urban area that has lost its original form, shape, and meaning. As the narrator perceives the heaps of debris everywhere, this type of appalling environmental change can create a sense of displacement, disorientation, and desperation. In other words, Lanyon's uninhabitable surroundings could lead to solastalgia because they have lost their sense of place and safety forever.

On the other hand, distinctive aspects of Ballard's stylistic mastery are embedded in *The Wind from Nowhere*. The first is that nature strongly is reminiscent of actual existence to human since anthropocentric ideology is ultimately vanquished and torn down by the natural forces which is described as follows:

With the slight difference that this time the whole world was in the last lifeboat ... Not so good, but not so bad either. Tokyo and Singapore, of course, are gone, but one can't expect those cardboard jungles to stand up to winds above hurricane force. Pity about Venice." (*WFN* 31-32)

The second is that the basic pillars of human civilisation such as science and technology are rendered useless and inefficient. In this context, the novel demonstrates that nature is the actual dominant force on Earth and all other living entities are hierarchically subordinate. The scientists, who are the most intelligent group of all humans, become incapacitated, hapless, and hopeless against the rage of the nature, which is emphasised by Dr. Lovatt Dickinson from meteorology service as follows:

I can't say that I've anything very hopeful to report. The wind speed is now 175 miles per hour, an increase of 4.89 miles per hour over the speed recorded at 10 A.M. yesterday, maintaining the average daily increase of five miles per hour that we've seen over the last three weeks. The humidity shows a slight increase, to be accounted for by the passage of these enormous air volumes over the disturbed ocean surfaces. We've done our best to make high-altitude observations, but you'll appreciate that launching a balloon in this wind, let alone keeping track of it, is well-nigh impossible. However, the weather ship Northern Survey off the coast of Greenland, where the wind speed is down to a mere 85 mph, has reported data indicating, as one would expect, that the velocity of the global air stream declines with decreasing density. (*WFN* 33)

Based on these statements, Ballard insinuates that human has created an empire of science and technology whose rulers are yet unaware of the natural principles, and seems to claim that science and technology cannot be a panacea to all the problems encountered by humankind and the scientists are devoid of foresight, reason and volition to do anything to curtail the predicaments. In this sense, it can be thought that man cannot harness the power of nature and become its master, which overlaps with posthumanist arguments.

Moreover, Ballard implicitly equalises the human and nonhuman world to unveil their flaws and irresponsible conduct towards nature which seems to avenge on humanity. The force of the wind expels people who are unable to go above the ground to take refuge in underground tunnels, bunkers and basements. Thus, Ballard highlights the disastrous consequences of the hurricanes on all people, as well as conveying a subtle message that humans are no longer privileged and superior to the nonhuman nature. It can be commented that the environmental and climatic changes diminish human dominance on the surface of the planet, which is embraced by posthumanism.

On the other hand, it is emphasised in the novel that humans cannot harness the power of the slightest environmental changes (Sankhla 151). This is narrated by the conflict between the human and the nonhuman through the high speed of the wind in a dystopian fashion as indicated in the following:

The walls are thirty feet thick; they'll carry the impact of a dozen hydrogen bombs. Five hundred miles an hour is a trivial speed. The paper-thin plating of aircraft fuselages withstands it comfortably. (*WFN* 61)

However, these constructions built to protect people from the relentless power of nature succumb to the strong winds towards the end of the novel. All the elements of civilised societies are blown away and destroyed by nature. As admonished in a parable, humanity is advised not to challenge or break the balance of nature. In other words, it can be argued that survival of humans is in the hands of the nature that is transfigured by humans themselves and humans are bound to bear the outcomes of their actions.

Towards the end of the novel, Ballard delineates the ultimate force of nature which is about to hit the final blow on humans. The novel also demonstrates that nature will revolt against humanity by posing a series of calamities and causing both widespread ruin and anxiety if the natural order is disrupted by the human, who is demoted to an arch-enemy of the nature and then vitiated in the following:

For a moment Hardoon stared at the darkened panels. "Its force is incredible," he commented to Maitland. "Nature herself in revolt, in her purest, most elemental form. ... And where is Man, her prime enemy? For the most part vanquished, utterly defeated, hiding below ground like a terror-stricken mole, or wandering about blindly down dark tunnels. (*WFN* 107)

This quotation underlines that human civilisation is altered into debris by nature as a result of anthropogenic exploitation of the terratic ecosystems, Ballard thus criticises man's crimes perpetrated against the nature.

Furthermore, Ballard projects some symbols to show the duel between man and nature. The Hardoon's Tower stands for technoscientific progress, capitalism and humankind's challenge against nature. These represent humanist ideals and principles that are rejected by the posthumanist thought. The tower is a gigantic pyramid-like structure constructed in a state-of-the-art manner by Hardoon, who is an affluent magnate businessman with a private army, so as to withstand the hurricanes and strong airstreams as well as conquer and master the natural systems. The tower can also be considered a personification of human-centred ideologies and egoistic assumptions that disregard the nonhuman beings and can be symbolically called as the high nemesis of nature. It is introduced as an ostensibly secure place to take shelter from the airborne hazards. However, the author actually criticises the industrialised world using the Tower as a metaphor that symbolises anthropocentric arrogance and encroachment into the nonhuman world. In the final chapter of the novel, the Tower collapses with the violent winds, and is eventually annihilated by the colossal hurricanes, pinpointing the desperation of humanity reduced to pieces of rubble. Hardoon's exaggerated self-confidence is converted into despair, arousing solastalgic emotions. As a stereotypical character, Hardoon ignores his human identity due to his reliance on technology and continues to live in his own controlled and shielded canopic world. In the end of the plot, the disastrous wind quickly deprives Hardoon of his power and status, his empire being smashed into smithereens.

The novel also presents a general overview and admonition to evaluate the response of society to the catastrophes. The seriousness of the catastrophic incidents is displayed by the protagonist's actions and melancholic thoughts about the disastrous moments in which the world is entrapped and envisaged. As can be expected from a scientist, the protagonist Dr. Maitland desperately but rationally seeks ways to protect people against airborne hazards, especially his wife Susan, turning out to be a futile attempt in the end though. Thus, the novel seems to serve as a warning to human species, and may be interpreted as an "allegorical representation of the breakdown of society facing existential threats" (Boyarkina 224). In this sense, the strong windstorms and hurricanes caused by solar radiation described in the novel can be likened to famous sword of Damocles to fall upon against anthropocentric hubris and irresponsibility

observed on the axis of nature and human interrelations. This indicates that humans are to be overwhelmed by the natural forces if they continue to damage the environment.

Furthermore, the novel provides valuable insights within the borders of apocalyptic imagination for contemporary readers to question the role of human agency in shaping the environment. Anisha Dahiya expounds that “Ballard prophesizes the vision of an ecocatastrophe triggered by human induced global warming leaving earth totally unfit for human survival which can turn into reality anytime” (158). However, discussing the role of the main character in the novel, Leonard Orr states that “... the hero does not avert the catastrophe, does not restore order, does not greatly ameliorate the lot of the survivors” (479). It can be argued that the author focuses solely on the ecological collapse, and thus seems to promote environmentalist perspectives in fiction while criticising anthropocentric transformation of the Earth. This is portrayed through the protagonist’s behaviours as a member of a special rescue team. On the other hand, Ballard brings an evolutionary vantage point to the interplay between the human and nonhuman as stated by Maitland in the following:

Let's face it, we haven't really done so for a long time. I know it sounds despicable, but adaptability is the only real biological qualification for survival. At the moment a pretty grim form of natural selection is taking place, and frankly I want to be selected. (*WFN* 93)

These statements underline the fact that only the strongest entity can survive the disasters and that humans coexist with nature. It can also be suggested that there is a symbiotic relationship between the human and the nonhuman in order to survive.

Nevertheless, Ballard provides a shockingly realist and striking viewpoint for the future of the nexus of humanity and nature. In the whole, the novel divulges humankind’s weaknesses in universe and ventures to dismantle established anthropocentric ideals and conceptions about the nonhuman. Moreover, Ballard gauges the plotline to degrade humanity and Western civilization by concentrating on apocalyptic and postapocalyptic scenarios and dystopian visions to take precautions against climate change, which can be seen in other works of the author. The author also intends to emphasise that humans must radically change their anthropocentric and stereotypical mindsets in order to live happily in an optimum balance with nature in today’s disaster-stricken planet. Finally, Ballard insinuates that the natural systems should never be challenged, transmuted or interrupted and that humans endeavour in vain to evade catastrophes.

Ballard tackles with social, political and ecological issues by problematising and criticising human exceptionalism, anthropocentrism and capitalism in the novel, which can be explained and supported by posthumanist views that human should be respectful towards the nonhuman nature and not disrupt their mutual relations with other natural elements. In this context, the novel does not endorse a calamitous ending for the human civilisation, but can be regarded as a cautionary-tale questioning the central role of humanity lost against the nonhuman. It is then apparent that humans have to share their agency with the nonhuman, namely other life forms. In relation to that view, Diana Coole and Samantha Frost (2010) contend:

Our existence depends from one moment to the next on myriad micro-organisms and diverse higher species, on our own hazily understood bodily and cellular reactions and on pitiless cosmic motions, on the material artifacts and natural stuff that populate our environment, as well as on socioeconomic structures that produce and reproduce the conditions of our everyday lives. (1)

These statements show that the human and the nonhuman beings are entangled with each other and cannot live without depending on the other. Using a posthumanist lens, it can be commented that the humans who are the so-called masters of the universe rapaciously and irresponsibly go on exploiting natural sources for their own benefit and progress and disregard their vulnerabilities and those of the nature, thereby paving the way for their own demise.

In conclusion, *The Wind from Nowhere* offers a critique on Western anthropocentrism and human exceptionalism. The novel not only shatters humans into pieces in comparison to the nonhuman nature, but also evidences how powerless humans are when challenged by a natural disaster. Based on the arguments in the analysis of the novel, it can be suggested that the nature is indispensable for human survival while humans are not necessary for the nature. *The Wind from Nowhere* is a remarkable novel that conveys significant messages to modern societies depending on modern consumerist and capitalist culture represented by Hardoon. Boyarkina emphasises that “Ballard makes the profound psychological analysis of the industrialist Hardoon, a narcissistic and psychopathic megalomania, one of the persons possibly to blame for the destruction of ecology, ozone layer, and the appearance of the hurricane” (229). Since posthumanism defies and rejects anthropocentric thoughts that ascribe a central role for human in the universe, it can also be commented that Ballard mentions about insignificance of humans in the face of nonhuman nature. Furthermore, Ballard

utilises natural disasters as reminders of our actual identities and criticises human egoism. He underscores that nature cannot be controlled and never will be overthrown by humans. He hints that humans must be disengaged from their exploitative character, respect the nonhuman entities and embrace an ecocentric philosophy in order to live comfortably and in complete harmony with the nature on the Earth. Finally, considering from a posthumanist conception, Ballard seems to imply that the human civilisation will have to face extremely adverse climatic and ecological conditions if the nonhuman nature is neglected, degraded and left unprotected. However, Ballard grants a little chance of survival for humans since the hurricane ceases completely and implies that the nature itself has paramount importance for humans. Moreover, it can be interpreted that science and technology are not always sufficient to protect people from harm and cannot be regarded as a comprehensive solution to all problems experienced by humans.

All in all, Ballard weaves an embedded pattern of solastalgia through the characters' observations on how the environment is violently transformed by the wind. The characters in the novel are portrayed as passive figures who cannot change the situation and agree to their fate and future. They all feel desperate and hopeless in response to the windborne disaster. Ballard thus delves into inner world of humans and their frailties as well as offering a sharp critique on Western anthropocentrism and emphasising the reciprocal relations between the humans and the nature. This narrative and depictional style is also seen in other novels in the tetralogy to be analysed in the subsequent chapters.

1.2. THE DROWNED WORLD: A PSYCHIC TALE OF SUNKEN CIVILISATION

The Drowned World (DW) is the second instalment of Ballard's climate fiction series, and can be seen as a pioneering work that grapples with catastrophic climate change, global warming, deglaciation and their devastating consequences in a realistic fashion. The novel is an extension of a shorter story published in *Science Fiction Adventures*. Frequently acclaimed as Ballard's best fiction by critics, it offers a prophetic admonition about the unpredictability of climate crisis and its possible cataclysmic impact on both human and nonhuman world. In relation to the setting of the novel, Tracey Clement notes that the Earth has been transfigured by the meltdown of glaciers and rising sea levels due to stained solar storms, resulting in overflowing all

over the world and rise of exotic flora and fauna (27-28). Paul Dobraszcyk extrapolates in the following:

Ballard's novel presents a hallucinatory vision of a future London that has been sunk beneath vast flood waters created by the melting of the polar ice sheets, the latter caused by rapid global warming that resulted from a sudden increase in solar radiation. The Drowned World imagines London as a city that has been literally swamped by exotic flora and fauna that has reverted back to resemble that of the Paleozoic era. (5)

This statement shows that humanity has undergone a serious geological retrogression due to non-anthropogenic factors that trigger severe climatic changes. However, interestingly, the climate change in the novel is not caused by anthropogenic factors but an extra-terrestrial element. The flood is caused by fluctuations in solar radiation that increase atmospheric temperature, and thus melt the glaciers at the poles, radically altering the ecological balance of the Earth. The story is narrated by a third-person omniscient narrator. The novel plotlines a massive and destructive flood submerging cities and countries all around the world. As a result, the humans are on the verge of extinction, desperately struggling for survival. The novel also uncovers the clash between the protagonist's indefatigable but inefficacious endeavours to survive and the antagonist's attempt to take advantage of disastrous landscape for profitable business and pillaging, as well as unfolding psychological and emotional distress caused by intense heat and isolation. Ballard also describes recession of evolutionary time recession by picturing "the human world overflowed by water and jungle owing to a sudden and dramatic meteorological change" (Rossi 81). Thus, the reader is vacuumed immediately into a sweltering atmosphere of the macabre ambience transfigured into a prehistoric jungle, as described below:

Soon it would be too hot. Looking out from the hotel balcony shortly after eight o'clock, Kerans watched the sun rise behind the dense groves of giant gymno-sperms crowding over the roofs of the abandoned department stores four hundred yards away on the east side of the lagoon. (*DW* 5)

This post-diluvian story begins in 2145 in London which is inundated due to the flood where the land is thoroughly unrecognizable and nearly all the residential areas are sunken by rising sea levels, only a lagoon remaining for the survivors. Dr. Robert Kerans, who is a biologist and the protagonist of the novel, leads a cohort of scientific survey team in the lagoon, the last shrinking piece of the land surviving the global apocalypse, whose mission is to create a report of the changes in the ecosystem in the region. The novel also describes how the Earth geologically reverts back to Triassic

period when most of the lifeforms lived in the oceans. In this context, Siobhan Lyons articulates that “the apocalyptic motif is often portrayed negatively, where survival and salvation are perceived as the unquestionable goals of humanity” (2). This motif is intricately forged into the novel, displaying a melancholic landscape where existence of human race is seriously imperilled. Moreover, this depiction is reminiscent of the oft-mythologised city of Atlantis which collapsed into depths of the ocean.

Since climate change has generated myriads of possible imaginings in narratives, floods can be suggested as a common motif in climate fiction. Caroline Edwards states that the novels dealing with such issues “depict a range of cataclysmic floods and encompass both the small scale of texts whose tsunamis and deluges are local, partial, and/or provisional, as well as the larger-scale and planetary accounts of rising sea levels, global disaster, and pluvial shift in meteorology” (212). In line with that, Ballard vividly describes the expanding effects of the flood in the novel as follows:

The bulk of the city had long since vanished, and only the steel-supported buildings of the central commercial and financial areas had survived the encroaching flood waters. The brick houses and single-storey factories of the suburbs had disappeared completely below the drifting tides of silt. Where these broke surface giant forests reared up into the burning dull-green sky, smothering the former wheatfields of temperate Europe and North America. (*DW* 19)

At this point, Ballard displays a severe climatic transformation of the Earth due to increasing temperatures and a gradually submerging landscape, which identifies a postapocalyptic setting. It can also be suggested that the nonhuman nature has reverted to the Triassic period characterised by the rise of dinosaurs that dominate the life cycle and huge shifts in biodiversity. In this setting, the humans perceive that they are time-stricken and no longer able to survive the extreme climatic conditions and emerging new reptilian predators. Humans are threatened by encroachment of other living beings such as iguanas and enormous crocodiles. This inhospitable landscape urges humans to abandon their environment and seek ways to escape the catastrophe.

Solastalgia is a major component of the novel's thematic exploration. The rising and warming oceans result in sweltering temperatures, flooding, and a new primeval environment as flora and fauna mutate to adapt to the new conditions. Instead of focusing on how humankind is destroyed by the disaster, Ballard presents solastalgic feelings and traumatic experiences, which is manifest in the characters' reactions to the

changed landscape, which is both hostile and unfamiliar, causing disorientation and emotional distress. There is a sense of loss and a constant, nagging feeling of an inability to adapt to the new reality. The protagonist, Dr. Robert Kerans, and other characters experience this feeling due to their longing for a world that no longer exists, yearning for the pre-human environment which the risen seas have submerged. Kerans is unsettled by the realization that the natural world is developing in forms that are entirely new and worrying. Ultimately, the novel portrays a world where the human race is forced to confront their sense of place on the planet as their environment undergoes catastrophic change, causing a sense of solastalgia, a feeling of grief for a world that no longer exists or cannot exist in its old form. In addition, Ballard paints an imaginary post-apocalyptic setting in which human civilisation experiences a similar and synchronous regression as well as cultural and mental aspects. The characters live in isolation which impairs social interaction due to their unstable moods.

The protagonist Dr. Kerans embarks on an expedition requiring a great struggle for revivifying the fallen humanity that is primitivised by the climatic changes and maintaining human values such as reason, morality, and rationality in a flooded ambience. Furthermore, Ballard picturesquely describes multiple aspects of transformation of humanity under extreme climatic conditions and emphasises its psychological impact throughout the novel. On the other hand, Ballard not only focuses on the changes in outer space where the environmental disasters ravage the world but also probes into inner space which he defined as “an imaginary realm in which on the one hand the outer world of reality, and on the other the inner world of the mind meet and merge” (29). In this novel, this is obviously reflected in the protagonist’s psychic transformation as a result of severe environmental changes, and his futile efforts to overcome the predicament and confrontation with flooded urban landscapes. In this context, Sellars and O’Hara state that “the external transformation of [the urban landscape] to reflect and marry with the internal transformation of Kerans, who is the only character in the novel to fully embrace both of these transformed worlds” (90). Ballard thus describes a detailed and outstanding panorama of how the physical world and human psyche are utterly dissolved and humans are expelled to adapt to the environmental changes in the event of a global apocalypse. It can be observed that the nonhuman nature aims to expatriate humans from their comfortable residence and

restore its original position in the universe, which causes an intermingling cluster of melancholic emotions. In this context, Ayşe Şensoy claims that “humans’ non-ecological relationship with the planet and their non-sustainable tendencies bring about solastalgia, breaking down the healthy connection between physical and mental health of human beings and the health of the biophysical environment” (216). Viewed from a posthumanist lens, it is clear that the humans are no longer as powerful and superior as they thought to be in the face of the nonhuman nature and feel distressed and depressed due to the changing environment with which they are strongly interlinked.

The novel teems with many representations of solastalgia that is narrated through introspective means into the main character’s solitary life, and attempts to reveal the hidden ideas and emotions with regards to changing topography and climatic conditions. Ballard elaborately describes the environmental changes and their psychological impact on the characters whose inner worlds are haunted by the sight of rapidly transmutating ecosystems while focusing on the collapsing civilisation as follows:

Rationalising, Kerans told himself that he had been wise to remain in the hotel—the storms were erupting more and more frequently as the temperature rose—but he knew that his real motive was his acceptance that little now remained to be done. The biological mapping had become a pointless game, the new flora following exactly the emergent lines anticipated twenty years earlier...Already he accepted the lavish brocaded furniture and the bronze art nouveau statuary in the corridor niches as a natural background to his existence, savouring the subtle atmosphere of melancholy that surrounded these last vestiges of a level of civilisation now virtually vanished forever. (*DW* 10-11)

Ballard continues to highlight that humans also undergo a series of mental transformations in their isolated lives embedded with solastalgic emotions. Şensoy supports this notion by emphasising that disruption of interrelations between humans and nonhuman nature cause a set of negative emotions including anxiety, depression, grief, alienation, homesickness and trauma, and all the characters in the novel suffer from these psychological maladies in the lagoon (217). Dr. Kerans is portrayed as the only survivor who is aware of the fact that drastic environmental changes affect both human and nonhuman nature. This phenomenon is exemplified below:

This growing isolation and self-containment, exhibited by the other members of the unit and from which only the buoyant Riggs seemed immune, reminded Kerans of the slackening metabolism and biological withdrawal of all animal forms about to undergo a major metamorphosis. Sometimes he wondered what zone of transit he himself was entering, sure that his own withdrawal was symptomatic not of a dormant schizophrenia, but of a careful preparation for a radically new environment, with its own internal landscape and logic, where old categories of thought would merely be an encumbrance. (*DW* 14)

The isolation of the protagonist described above can be deemed as an indicator of solastalgia as he is compelled to abandon his familiar environment and strive for his life. He is also forced to adapt to the transforming nature that regresses to prehistory.

The unusual ecological changes described in the novel both provide a retrospection to the previous geological eras and arouse symptoms of solastalgia in the novel. Ballard voices these solastalgie feelings from Dr. Bodkin's point of view in the following:

Apart from a few older men such as Bodkin there was no-one who remembered living in them-and even during Bodkin's childhood the cities had been beleaguered citadels, hemmed in by enormous dykes and disintegrated by panic and despair, reluctant Venices to their marriage with the sea. Their charm and beauty lay precisely in their emptiness, in the strange junction of two extremes of nature, like a discarded crown overgrown by wild orchids. (*DW* 19)

Thus, the author seems to recapitulate solastalgie emotions in Bodkin's observations about ecological changes, as well as displaying vulnerability of humanity and the invincible power of nature in the midst of climatic chaos.

On the other hand, referring to evolutionary theory, Ballard extrapolates mental and physical adaptation to the catastrophic conditions surrounding humans and other species bound to survive in the following:

Everywhere the same pattern has unfolded, countless mutations completely transforming the organisms to adapt them for survival in the new environment. Everywhere there's been the same avalanche backwards into the past—so much so that the few complex organisms which have managed to retain a foothold unchanged on the slope look distinctly anomalous—a handful of amphibians, the birds, and Man. It's a curious thing that although we've carefully catalogued the backward journeys of so many plants and animals, we've ignored the most important creature on this planet. (*DW* 41)

These sentences underpin that humans are not as resilient and adaptable as to the changing physical conditions they live in, showing that human is weaker than nature.

Nevertheless, Ballard galvanises nostalgic and solastalgie feelings about the Earth in the past as follows:

But I'm really thinking of something else. Is it only the external landscape which is altering? How often recently most of us have had the feeling of déjà vu, of having seen all this before, in fact of remembering these swamps and lagoons all too well. However selective the conscious mind may be, most biological memories are unpleasant ones, echoes of danger and terror. Nothing endures for so long as fear. Everywhere in nature one sees evidence of innate releasing mechanisms literally millions of years old, which have lain dormant through thousands of generations but retained their power undiminished. (*DW* 42)

In this context, Ballard seems to promote posthumanist thoughts in this novel, focusing especially on the psychological effects of the disaster on one hand, penetrating into the ecological anxieties and fears with concurrent psychic transformation of the characters

on the other. Şensoy also impinges upon the fact that the distress caused by the loss of familiar residence and environment engenders a concatenated shift in mental states and impairment of social interactions, and thus leads to psychological and emotional problems in a worsening landscape draining humans of sense of identity, time and place while harming human health which is reflected in responses of Dr Kerans and other remaining survivors (217). This can be a perfect representation of solastalgia depicted in the subtext.

Moreover, Ballard symbolically depicts mutilation of humanity by depopulation, abandonment and oblivion of the past, occurrence of a new timeline that is not chronological but biological, and inner and outer metamorphosis throughout the novel. London is deprived of its previously dynamic and busy life, losing its inhabitants who have fled to safer zones due to unbearable temperatures, and transformed into an aquatic desert. The memories of the past are forgotten, never to be recollected again. The world is invaded by various elements of nature and biologically re-established. Both psychologically and physically, the characters are expelled to adapt to the inexorable conditions surrounding themselves. Finally, the human civilisation is defeated and overthrown by the changing climate, positioning the nonhuman nature triumphant over the humanity fallen in spite of advanced technology and scientific progress. Based on these interpretations, it can be concluded that Ballard attempts to display the destructive outcomes of industrialisation, capitalism and exploitative lifestyles of modern western societies, as well as implying that these will bring about an inescapable end for humanity.

Moreover, the protagonist is gradually isolated from other people in the station and ponders upon psychological aspects of the imminent danger and human's mental adaptation to rapidly changing environmental conditions. The visions of sunken cities are overt manifestations of deconstructed and collapsed human systems and triumphant natural forces dominating the Earth. In support of this view, it is stated that Ballard realistically demonstrated the weakness of humanity and its advanced technology by describing humankind as ineffective and devoid of control over both outer and inner world (Brigg). It can be argued that Ballard warns humans not to exploit the environment for their interests.

The author portrays Kerans, who wants to contact with prehistoric memories in

his dreams, as a chivalric figure embodying a spiritual purpose in his quest. However, viewed through a psychological lens, Ballard assumes a uterine fantasy in which humanity is enswathed by water as in the mother's womb. This is romanticised by Kerans's dreams that can be accepted as psychoterratic syndromes revealing psychic past of humanity, which is triggered by the regression to the Triassic era as a result of severe climatic changes. These dreams lead Kerans to seek prehistoric periods in the history of humankind as depicted below:

These are the oldest memories on Earth, the time-codes carried in every chromosome and gene. [...] Just as psychoanalysis reconstructs the original traumatic situation in order to release the repressed material, so we are now being plunged back into the archaeopsychic past, uncovering the ancient taboos and drives that have been dormant for epochs. The brief span of an individual life is misleading. Each one of us is as old as the entire biological kingdom, and our bloodstreams are tributaries of the great sea of its total memory. The uterine odyssey of the growing fetus recapitulates the entire evolutionary past, and its central nervous system is coded time scale, each nexus of neurons and each spinal level marking a symbolic station, a unit of neuron time. (*DW* 47)

This quotation reveals that the protagonist and the rest of the survivors cannot preside over neither their internal nor external worlds once an environmental crisis breaks out. The nonhuman nature retaliates humans who exterminate their own environment by means of calamities, leaving them alone with their mental capability in order to handle the emotional and psychological impact of loss in the end. Ballard also emphasises that humankind plays an impermanent role on the planet and can easily be wiped out.

Additionally, Dr. Kerans is challenged and entrapped by the survival instinct and his venture to restore the past memories adapt to the new environment shattered by the climatic changes, which is described below:

Is it only the external landscape which is altering? How often recently most of us have had the feeling of *déjà vu*, of having seen all this before, in fact of remembering these swamps and lagoons all too well. [...] Everywhere in nature one sees evidence of innate releasing mechanisms literally millions of years old, which have lain dormant through thousands of generations but retained their power undiminished. [...] we all carry within us a submerged memory. (*DW* 46-47)

Based on these quotations it can be interpreted that Dr. Kerans feels solastalgic about what is happening around and discovers the actual truth of human-nonhuman interconnectedness embedded in both the human and the nonhuman worlds. The process of adaptation slowly deconstructs Kerans's personality and redirects him in the desolated and 'literally drowned' world. As a result of his psychic metamorphosis, Kerans ventures to mitigate the chaotic situation experienced, characterising him as "a second Adam searching for the forgotten paradises of the reborn sun" (Mambrol).

However, the protagonist fails to fulfil his purpose in his instinct-oriented life in the end. On the other hand, Ballard paints the psychological fluctuations of Dr. Kerans who experiences a dilemma between acting on his psychic dreams, facing the reality of the situation and evading the nightmarish dangers of the natural catastrophe intermingling with each other as follows:

Just as the distinction between the latent and manifest contents of the dream had ceased to be valid, so had any division between the real and the super-real in the external world. Phantoms slid imperceptibly from nightmare to reality and back again, the terrestrial and psychic landscapes were now indistinguishable, as they had been at Hiroshima and Auschwitz, Golgotha and Comorrah. (*DW* 80)

The effects of solastalgia are manifested by Dr. Kerans' changing physical features and chaotic dreams in the form of a somaterratic and psychoterratic disorder since the flood compels him to live in isolation with a depressive mood due to negative environmental changes. These two terms are explained by Albrecht as follows:

I created the "new" realms of the "psychoterratic" and the "somaterratic" to explain the relationship between the Earth and physical and mental health states. The psychoterratic deals with the health relationship between the psyche and the biophysical environment (terra = the Earth), while the somaterratic is focused on the health relationship between the body (soma = the body) and the biophysical environment. ("*Earth Emotions*" 64)

Based on these statements, it can be commented that the human psyche and body is shaped and transfigured by the nonhuman nature and humans can live happily and comfortably as long as the nonhuman nature is respected, valued and protected. Moreover, it can also be argued that even the slightest destruction or negative transformation encountered in the nonhuman nature could have adverse and irreversible consequences for humans.

On the other hand, Ballard presents some criticisms on negative human qualities such as selfishness and greed by introducing a villainous character in order to tackle with human and nonhuman interrelations. Strangman, a neo-pirate with an army of looters trying to collect treasure from the submerged cities, is an antagonist before Kerans and others. Strangman represents humanity's flaws and insatiable greed, and capitalist ideologies juxtaposed by anthropocentric exploitation of the nonhuman nature. Hence, it can be interpreted that Ballard intentionally peoples this novel to criticise human supremacy over nature and human-induced climate change.

Additionally, Ballard creates binary oppositions with the characters. Strangman advocates capitalist and patriarchal ideals while Dr. Kerans who represents scientific thought and tries to reconstruct the civilised world of the past is the exact opposite. Strangman thrives to pillage the drowned wealth in the cities with his pirates while Dr. Kerans struggles to reverse the catastrophe and bring back good old days of humanity, though failing to do so upon concluding that defying against the nature is pointless. On the other hand, the fact that Strangman who is literally obsessed with the past insistently asks Dr. Bodkin whether he remembers London a long time before the cataclysm reveals the binary opposition of past and present. His mission of looting treasures belonging to the final period of the twentieth century exposes his insatiable and greedy personality. Moreover, he aims to drain cities in order to restore them to their former condition. His endeavour can only be seen as a return to the twentieth century capitalist world order when humans dominated the nature as well as exploiting its elements. This pseudo-chivalric attitude of Strangman can be interpreted as he claims to be the saviour and benefactor of humanity.

In conclusion, throughout the novel, Ballard “examines the relationship between inner changes and interrelates them with the natural disaster” and “shows the negative aspects of post-apocalyptic setting less important to reveal it as a reawakening and returning to humanity rather than the ending of it” (Soofastaei and Mirenayat 17-18). Ballard’s underlying message in the novel is weighted upon the symbiotic interrelations between the human and the nonhuman worlds. Though there is a close connection between them, a continuous conflict seems to persist and continues to affect human life. Hence, the nexus between human and nature has become a stage for the continuum of interchange, both parties interacting with each other to sustain their existence. The dwindling characters gradually recognise that the nonhuman nature is victorious over them and are plagued by bizarre dreams, resulting in a big mental transformation. This flux of changes serves as a means to remind humans that their behaviours are shaped by and linked to the natural environment in the evolutionary process and reclaimed by ancestral traits (Tait 28). The novel also divulges the sensitive balance between environment and multiple dimensions of humans’ health by exemplifying experiences of Dr. Kerans during the catastrophic conditions. Ballard implies that new relationships should be established between the nonhuman nature

and conveys that all the elements of nonhuman nature which support human existence and survival may counteract with the human race when they lack ecological consciousness. Hence, humans must respect the ecological balance and protect the nonhuman nature to prevent solastalgic emotions. Finally, it can be argued that Ballard's prescient imagination, strong socio-political criticisms and dire projections about the planetary future and various eschatological threats seem to signal how humanity is spiralling into an ecological breakdown accompanied by a psychological crisis. Brian Baker states that "Ballard produces a radical imaginary that explores the deep implications of time, space, psychology and evolutionary biology in order to dismantle anthropocentric narratives and, in turn, open up alternative ways of experiencing, and conceiving of contemporary human subjectivity" (13). Ballard also touches upon serious ecological concerns and concentrates on the interplay between the nonhuman nature and the human.

Finally, Ballard reiterates his narrative pattern of solastalgia through the main character's mental and physical transformations while depicting how the world is submerged by the flooding water and criticising negative human qualities such as hubris and greed represented by Strangman. The characters in the novel are also adversely affected by environmental degradation and come to recognise that it is inevitable to adapt to the new circumstances in order to survive. Ballard captures a psychological view in the minds of the characters who are haunted by eccentric nightmares. It can be concluded that the representations of solastalgia in the novel intersect with the bonds between human and nature.

CHAPTER 2: FIERY AND GLOWING TALES OF NATURE

The apocalypse is not something which is coming. The apocalypse has arrived in major portions of the planet and it's only because we live within a bubble of incredible privilege and social insulation that we still have the luxury of anticipating the apocalypse. (McKenna)

J.G. Ballard continues to delineate catastrophic landscapes about the future of humanity as he does in his two previous novels examined, and this time uses elements of fire and earth in the subsequent novels in the tetralogy, maintaining his predictions and warnings about climate change and its effects on individuals and societies in a gloomy tone.

The Burning World (1964) narrates an anthropogenic disaster resulting in a severe drought that forces humans to leave their residence and a society wrecked by capitalism and consumerism. Moreover, Ballard instrumentalises the fire in the form of drought as a dominant agent that incurs environmental change throughout the novel to convey his messages. This novel also predicts that global climate change makes the world hostile uninhabitable for humans who are flung into a struggle for survival due to water shortage. Similar to the other novels examined in the previous chapter, Ballard criticises western colonialism and anthropocentric notions that lead to the fall of human civilisation and exploitation of natural resources in the subtext. On the other hand, Ballard describes the death of the river thought as the main source of life as a remarkable factor that engenders solastalgic feelings and reaction of the characters to the disaster in the novel. Again, Ballard implies that humans are of fragile nature and experience moral crises and corruption in the face of disasters, which can be scrutinised through a posthumanist lens.

The Crystal World (1966) depicts a mysterious and supernatural phenomenon in a jungle in central Africa which petrifies people, plants and animals into crystals. Like in his other novels in the tetralogy, Ballard selects the earth as a major focus of narration and moulds it into a strange incident of crystallisation. The main character who is a scientist arrives in the jungle, being vacuumed into a weird conflict and struggle for survival. The protagonist also experiences loss of environment, a mixture of anger, fear, and anxiety as result of the transforming landscape. On the other hand, the novel conveys that the world should be reconstructed by superseding individuality and

egoism, which can be seen as by-products of anthropocentrism and capitalism, in turn fusing humans and nature together in a harmonious fashion.

2.1. *THE BURNING WORLD (THE DROUGHT): DESERTIFIED HUMANITY IN A “DUST BOWL”*

The Burning World (BW) (1964) is the third novel of Ballard’s cli-fi quartet. An expanded version of the novel was published in 1965 under the title of *The Drought*. The catastrophe described in the novel results from anthropogenic factors that break down ecological equilibrium and render the world uninhabitable for humans. Moreover, the novel portrays a postapocalyptic vision of a society wrecked by capitalist order. The world is ravaged by gradually occurring drought that is caused by industrial toxic wastes and contamination of oceans that prevents evaporation and curtails precipitation. As a result, the Earth is transformed into a vast desert. The human race faces extinction at a point where aridity and water shortages trigger social corruption and upheaval eviscerating long-established foundations of humanity. People become climate nomads, migrating towards the remaining water sources to survive while their civilisation declines. The landscape negatively transformed by human interference with natural systems is described as follows:

Covering the off-shore waters of the world’s oceans, to a distance of about a thousand miles from the coast, was a thin but resilient mono-molecular film formed from a complex of saturated long-chain polymers, generated within the sea from the vast quantities of industrial wastes discharged into the ocean basins during the previous fifty years. This tough, oxygen-permeable membrane lay on the air-water interface and prevented almost all evaporation of surface water into the air space above. (BW 36)

This shockingly desiccated landscape is also dotted with ecological concerns as in other postapocalyptic fictions of the author. *The Burning World* (1964) draws a stark contrast to *The Drowned World* in which the world is submerged in an amniotic universe where the humanity rapidly devolves into primitivity since the society collapses as soon as the water is drained away from the surface. In this sense, it can be argued that both novels narrate the same stories of the corrupted and primitivised humanity challenged by a colossal apocalypse. Ayşe Çiftçi başı opines that

Humankind, in desperate straits, has resorted to violence in order to survive in a global desert. The novel represents how human cultures crumble in quest for even a drop of water, vividly picturing the devolution of scientifically and technologically advanced modern human societies to their primitive conditions. (80)

This comment shows that Ballard brazenly displays how humans react to major

environmental changes and disasters, and critiques anthropocentric notions and the continuum between the human and the nonhuman nature.

The protagonist of the novel is a scientist as is the case in Ballard's other novels in this tetralogy. Dr. Charles Ransom is an anthropologist who is abandoned by his wife, Judith. Similar to Dr. Kerans in *The Drowned World*, Ransom plays a stranded figure who strives to survive and discover the actual meaning of life in the event of a worldwide catastrophe. Diverging from his other cli-fi novels, Ballard emphasises in this novel that human agency is the major reason for drying streams, rivers and lakes in, exploring the reciprocal relationship between the human and the nonhuman natures. It is articulated that this novel narrates a human-induced climate change through depicting anxious and fearful experiences in a world of wasteland (Jeroncic and Willems 6). In this regard, it can be commented that there are several representations of solastalgia in the novel which is to be discussed from posthumanist standpoint which counts human as a constantly changing, adapting and evolving species.

Ballard sets the stage of this apocalyptic landscape by implying a solastalgic mood as follows:

At noon, when Dr. Charles Ransom moored his houseboat in the entrance to the river, he saw Quilter, the idiot-son of the old woman who lived in the ramshackle barge outside the yacht basin, standing on a spur of exposed rock on the opposite bank and smiling at the dead birds floating in the water below his feet. The reflection of his swollen head swam like a deformed nimbus among the limp plumage. The caking mudbank was speckled with pieces of paper and driftwood, and to Ransom the dream faced figure of Quilter resembled a demented faun strewing himself with leaves as he mourned for the lost spirit of the river.
(*BW* 3)

The protagonist is depicted as a solitary character who lives in his houseboat on the river. He is aware of the transformation occurring around him, but failing to do anything to curb the process except for feeling sorrowful and anxious about the deteriorating ecosystem. His domestic life is shattered, losing its meaning and purpose in this dried-out setting. Thus, Ballard portrays empty landscapes showing lack of relationship between humans and their living environments. On the other hand, Rob Latham articulates that "the protagonists struggle towards a private accommodation with the cataclysms, a psychic attunement to their radical reorderings of the environment" (Latham 106). This phenomenon is reflected Ransom's self-isolating manners and ruminations about the catastrophe as if he suffers from a nervous breakdown. Nature decomposes gradually due to the severe climatic changes. Ransom only observes this

grave landscape change over time and how it influences the local inhabitants as delineated in the following:

Ransom was aware that the role of the river in time had changed. it had played the part. Once of an immense fluid clock, the objects immersed in it taking up their positions like the stations of the sun and planets. The continued lateral movements of the river, to which Ransom had become more and more sensitive during his visits to the houseboat, its rise and fall and the varying pressures on the hull, were like the activity within some vast system of evolution, whose cumulative forward flow was as irrelevant and without meaning as the apparent linear motion of time itself. The real movements were those random and discontinuous relationships between the objects within it, those of himself and the other denizens of the river, Mrs. Quilter, her son, and the dead birds and fish. (*BW* 8)

Ransom recognises that humans are alienating from each other and their physical environment when the river dries up. The river both metaphorically and really represents life and hope for survival for all living beings, so the absence of river can be regarded as a symptom of solastalgia, as described by the author:

With the death of the river so would vanish any contact between those stranded on the drained floor [. . .] Ransom was certain that the absence of this great universal moderator, which alike, would prove of crucial cast its bridges between all animate and inanimate objects importance. (*BW* 8)

Therefore, the water shortage urges local people to abandon their place and head towards coastal areas to find water. However, Dr. Ransom chooses to stay and experience the effects of the apocalypse. Considering Ballard's earlier climate fiction novel, the transformed geography is blended with psychological change, which causes solastalgia as well.

Additionally, Ballard's prescient imagination and portrayal of the interrelations between the nonhuman environment and humankind renders the novel phantasmagorically appealing and interesting. The novel also arouses horror and concerns for survival for the characters since the civilised world is rapidly turning into dust and bereft of water sources. This can be exemplified in the following:

With the death of the river, so would vanish any contact between those stranded on the drained floor. For the present the need to find some other measure of their relationships would be concealed by the problems of their own physical survival. Nonetheless, Ransom was certain that the absence of this great moderator, which cast its bridges between all animate and inanimate objects alike, would prove of crucial importance. Each of them would soon literally be an island in an archipelago drained of time. (*BW* 14)

Equalising the roles of human and nonhuman with regards to their mutual bonds, Ballard depicts the irreparable and destructive impact of drought on both humans and nonhuman beings as follows:

There are few places in this country where there aren't small supplies of local water, if you work hard enough for them ... But see it from his point of view. Thousands of head of cattle

dead in the fields, to these poor farming people it must seem like the end of the world. (*BW* 30)

It can be interpreted that both the human and the nonhuman natures are threatened and adversely affected by environmental degradation, underlining a need for collective consciousness about ecological issues.

On the other hand, Ballard puts an emphasis on his main character's isolated and chaotic life who shelters in a boathouse in the middle of the drying lake, attracting attention to the role of the nonhuman elements in shaping human mind and psychology. This is explicated below:

The house reflected this domestic and personal vacuum. The neutral furniture and decorations were as anonymous and free of associations as those of a motel—indeed, Ransom realized, they had been unconsciously selected for just this reason. In a sense the house was a perfect model of a spatiotemporal vacuum, inserted into the continuum of his life by the private alternate universe in the houseboat on the river. Walking about the house he felt more like a forgotten visitor than its owner, a shadowy and ever more evasive double of himself. (*BW* 33)

The protagonist's meeting with Lomax who is a rich and influential man shows that nature is exploited for the sake of capitalist human interests and is merely valuable when it completes its services for the humans. Ballard criticises anthropocentric hubris and indifference using the dialogue below:

Ransom gestured at the windows. 'It's plain enough. You really must have been busy if you haven't noticed. The entire balance of nature has—' Lomax snapped his fingers irritably. 'Don't talk to me about the balance of nature! If it wasn't for people like myself, we'd all be living in mud huts.' He peered darkly at the city. 'A good thing too, judging by that—I mean what's happening over there, in Mount Royal? I take it most people have left?... (*BW* 47)

Ruminating on the disastrous landscape and his isolated life, Ransom is eventually compelled to abandon his residence to survive and lead a group of people in order to resurrect civilisation from its sewers by establishing a new social order. Ballard narrates this in the following:

Ransom sat back, knowing that even if this grim prospect were ever to materialise, he himself would not be there. This change of heart had occurred after his visit to Lomax. There he had realized that the role of the recluse and solitary, meditating on his past sins of omission like a hermit on the fringes of an abandoned city, would not be viable. The blighted landscape and its empty violence, its loss of time, would provide its own motives. (*BW* 55)

Based on Ransom's thoughts, it can be commented that the bleak landscape and deplorable conditions require humans to ponder upon their interrelations with the nonhuman nature plagued by anthropocentric encroachment and take necessary steps to

preserve and protect the nonhuman. Otherwise, an impending catastrophe lurches on the way to eradicate humanity.

Ballard intends to show that humans are influenced by the transforming world as they consume the natural sources while advancing the earth into a total devastation. Moreover, the human agency which is criticised in the general plotline of the novel is revenged by the nonhuman nature through a great drought that mutilates the world. The author predicts one of the most significant threats to humanity, depicting a realistic and bleak setting to alert the modern societies as well as calling urgent action to protect and preserve invaluable and irreplaceable natural resources like water and soil. The novel is also aimed to inoculate ecological consciousness among the readers by projecting doomsday scenarios and juxtaposing human and nonhuman components of the planet on the brink of extinction (Adhikari 94). Ballard also embeds in the subtext that “if we abandon the world as it is, and focus on new worlds of technological invention, all is lost” (Latham 106). Finally, humans’ psychic bonds with their environment are vital for maintaining a firm and peaceful relationship with the nonhuman nature. If these bonds weaken or are torn apart, both the human and the nonhuman natures will suffer.

The vast geographical changes and psychological transformation of the characters go hand in hand as in other cli-fi novels of Ballard. The author depicts a world without water in which capitalism has consumed all natural resources for the sake of technoscientific progress and financial wealth. This can be considered as a new world order in which those who can dominate over the nature, in other words the water as in the novel, can control and rule out the whole population. At this point, Richard Lomax, a wealthy architect denying the actual impact of the drought, appears as the antagonist who attempts to possess water supplies as the water is the only source for survival in this hellish atmosphere and abuses it to build a hegemony over others. He never reconciles with Ransom, manifesting major characteristics of anthropocentrism and capitalist mentality. In this sense, he can be likened to Strangman in *The Drowned World* and Hardoon in *The Wind from Nowhere*.

Moreover, the author builds a surrealist milieu by using the painting of ‘Jours de Lenteur’ by Yves Tanguy to describe the protagonist’s experiences with the natural environment, his inner confrontations and feelings of estrangement from his physical and social environment (Milicia). This surrealist tendency causes solastalgic emotions

persist in Ransom's mind and soul and manifests itself in the following:

On the left was a snapshot of himself at the age of four, sitting on a lawn between his parents before their divorce. On the right, exorcising this memory, was a faded reproduction of a small painting he had clipped from a magazine, 'Jours de Lenteur' by Yves Tanguy. With its smooth, pebble-like objects, drained of all associations, suspended on a washed tidal floor, this painting had helped to free him from the tiresome repetitions of everyday life. The rounded milky forms were isolated on their ocean bed like the houseboat on the exposed bank of the river. (*BW* 9)

Based on this quotation, it can be argued that the drought seems alluring to Ransom as he passively accepts the results of the disaster while the painting serves as a mask to hide his lost memories and reveal his innermost feelings of solastalgia. In relation to this, Ballard himself accentuates his surrealistic and phantasmagorical fictional vision in the following:

I am interested in the surrealists altogether, because I am a great believer in the need of the imagination to transform everything, otherwise we'll have to take the world as we find it, and I don't think we should ... We should remake the world ... And that's what surrealism does. (qtd. in Bresson 7)

Consistently shaping his early novels with many socio-political implications and human exceptionalism, Ballard projects insightful messages on the degradation of humanity and ecological collapse via the protagonists' observations who are solitary scientists amidst disasters. Charles Ransom is a self-isolating figure suffering from an emotional and mental crisis with an extinguished past life, watching from his houseboat the retreat of the river and the dwindling lake alongside transformation of social and natural order. Ransom is an anthropologist who lives like a hermit in his confined abode amidst the chaotic landscape. Eventually, Ransom who is reluctant to abandon his place and a few others are compelled to evacuate their region to the New Shore's "Dune Limbo" where they seek refuge and re-establish a new social order by purifying and distilling the sea water. This is exemplified in the text in the following:

Behind them the city disappeared from sight, but twenty-five miles further to the south Ransom could still see the smoke staining the sky. On either side of them, beyond the vehicles driven onto the verges, the fields stretched away into the morning haze, their surfaces like buckled plates of rust. Fencing posts leaned in the air, and isolated farmhouses, the dust drifting against their boarded windows, stood at the end of rutted lanes. Everywhere the bright bones of dead cattle lay around the empty water troughs. (*BW* 62)

This quotation shows that drying landscape disconnects humans from their environment and causes irreversible damage. This situation seems to create an atmosphere of chaos

and disorder after the apocalypse, contributing to solastalgia as the land is forsaken by humans.

Subsequently, Ransom who travels inland again to investigate the city witnesses a metamorphized lifestyle inflicted with depravity and insanity. Ayşe Çiftçi başı underpins that humanity loses control under catastrophic conditions as a result of estrangement from themselves and their environment, only rivalling for their survival (40). Besides an overwhelmingly unbearable drought, a severe psychological drought breaks out, driving people into madness and escalating social turmoil. Bearing these in mind, it can be extrapolated that Ballard intends to delineate how the environment and humanity is mentally and physically transformed in the event of a global catastrophe and humans are bound to cooperate so as to survive in this obliterated world.

Consequently, Ballard holds the opinion that humans who have dominated the Earth have become utterly indifferent, insensible and blind towards the natural environment as a result of capitalism that has consumed and eventually depleted the natural sources, resulting in tremendous disasters and irreversible destruction. In such a gruesome landscape, Ballard points out that the world is drained of meaning and value in the following:

Yet this stopping of the clock had gained them nothing. The beach was a zone without time, suspended in an endless interval as flaccid and enduring as the wet dunes themselves. Often Ransom remembered the painting by Tanguy that he had once treasured. Its drained beaches, eroded of all associations, of all sense of time, in some ways seemed a photographic portrait of the salt world of the shore. But the similarity was misleading. On the beach, time was not absent but immobilized, what was new in their lives and relationships they could form only from the residues of the past, from the failures and omissions that persisted into the present like the wreckage and scrap metal from which they built their cabins. (*BW* 82)

Ballard draws a pessimistic painting of humans who have fading memories, are disconnected from their past and dislocated from their familiar environment. All these representations can be thought to arouse solastalgia as the characters are estranged from their local environment and experience distress and nostalgic feelings as a result.

However, Ballard depicts an enigmatically terminal point at the end of the novel where the dry climate changes into a cooler one, and the rain, symbolising rebirth and regenerating the nature, comes to salvage humanity from the drought. This exemplified in the last chapter of the novel as follows:

Although it was not yet noon, the sun seemed to be receding into the sky, and the air was gradually becoming colder. To his surprise he noticed that he no longer cast any shadow onto the sand, as if he had at last completed his journey across the margins of the inner

landscape he had carried in his mind for so many years. As the light failed, the air grew darker. The dust was dull and opaque, the crystals in its surface dead and clouded. An immense pall of darkness lay over the dunes, as if the whole of the exterior world were losing its existence. It was sometime later that he failed to notice it had started to rain. (*BW* 160)

This quotation emphasises that Ballard leaves a chance for humans in the hope that their civilisation could maintain its existence. It can be commented that the rain symbolises the future of human-nature relations. Thus, this ‘happy ending’ erases solastalgic feelings from the protagonist’s mind, paving the way for establishing a better society and environment. It can be regarded as a glimmer of hope for developing stronger relations with the nature.

In the final chapter of the novel, the main character Ransom is bereft of capability to perceive the environmental transformations heralding a possibly better future. Ballard seems to emphasise that isolation and alienation from one’s environment is associated with a lingering obsession with the catastrophe for a long time and a psychological combination of fascination, confusion and disbelief about the inescapability and irreversibility of the calamity. It is also stated that the protagonist living in this dried ambience is compelled to ponder upon his links with the nonhuman nature and directed to question what it means to be human in a catastrophic condition (Boer 30). In this context, it can be assumed that Ballard refers to posthumanist conceptions of human identity.

Finally, Ballard touches upon solastalgia through observations of the protagonist who is isolated from his community and defies against the predicament alone. However, he soon discovers that he cannot escape from the catastrophe and surrenders to nature. It can be interpreted that the protagonist’s experiences and actions converge well with solastalgic feelings of fear, anxiety, guilt and so on. Therefore, it can be concluded that humans cannot live without interacting with the nonhuman nature and taking advantage of natural resources, and humans tend to dehumanise in the event of a colossal disaster.

2.2. *THE CRYSTAL WORLD*: A PRISMATIC INSIGHT ON NATURE AND HUMAN IN A PETRIFYING LANDSCAPE

The Crystal World (CW) is the last volume of Ballard’s climate fiction tetralogy. Ballard formulates an intriguing vista of human entanglements with nature by depicting “the organic world remade in mineral form” (Knowles 341). It was acclaimed by Richard Lupoff as “idiosyncratic but highly effective” and “a very important science

fiction book” (56). At the core of the novel lies a monothematic transformation of the natural environment through crystallisation of material structure of beings. The novel hinges upon an extraordinary phenomenon that transforms everything into crystal. Ballard weaves a gloomy atmosphere in which an inscrutable material change transforms both humans and nonhuman nature in the African jungle into crystalline form. The novel actually narrates how this crystallisation changes temporal flow. One of the characters in the novel intentionally decides to stay behind, surrendering to crystallisation in order to survive, thereby evading death from an incurable disease and gaining immortality. Nevertheless, Ballard exerts survival instinct on the characters in this extraordinary environment that allure them to accept their fate as in other novels in the tetralogy. Additionally, the strangeness of crystallisation reformulates space and time, affecting both the humans and the nonhuman nature.

As is the case in other novels in this tetralogy, Ballard tries to unearth human soul by anatomising the main character’s thoughts, reflections, reactions and emotions in the course of a light and dark ambience where these two contrastive elements of nature counterbalance each other. Ballard opens the novel by depicting this mysterious landscape and its first impression on the protagonist Dr. Edward Sanders in the following:

Above all, the darkness of the river was what impressed Dr. Sanders as he looked out for the first time across the open mouth of the Matarre estuary ... although it was ten o'clock the surface of the water was still grey and sluggish, leaching away the sombre tinctures of the collapsing vegetation along the banks... At intervals, when the sky was overcast, the water was almost black, like putrescent dye. By contrast, the straggle of warehouses and small hotels that constituted Port Matarre gleamed across the dark swells with a spectral brightness, as if lit less by solar light than by some interior lantern, like the pavilions of an abandoned necropolis built out on a series of piers from the edges of the jungle. (*CW* 1-2)

It can be commented that the protagonist is vacuumed into a grave atmosphere that could trigger development of miscellaneous thoughts and melancholic emotions about the natural environment.

The novel narrates adventures of Edward Sanders who arrives at Port Materre in Cameroon by a steamboat to meet his friends Max and Suzanne Clair, once his mistress. Sanders, the protagonist of the novel, is a doctor travelling to an isolated hospital where patients with leprosy are treated in the depths of the jungle. On the way to his destination, he encounters a mysterious phenomenon that converts everything into crystals. This phenomenon reveals itself at the beginning of the novel and begins to

incite restless emotions about the environment in the protagonist.

Additionally, the use of crystals as a form of imagery is derived from Ballard's short story "The Illuminated Man" set in African jungles. In the story, Ballard depicts the adventures of a journalist investigating an unfathomable case of crystalline growth in Florida where all life forms including humans cannot do anything to curb this strange phenomenon. Ballard presents the major cause of this apocalyptic event as an atomic mutation that deconstructs the natural ecosystems, forging the flora and fauna into a bizarre crystalline form. However, the author intends to concentrate on the effects of the crystallisation on human psychology through the protagonist's experiences and thoughts about the changing environment and interpersonal relationships. It can be argued that Ballard prioritises self-discovery and transformation of his characters' inner worlds rather than the nature itself as he does the same in the other novels in his tetralogy.

In the beginning of the novel, Ballard lays the foundation of this suspenseful plot by blending 'bejewelled' natural elements and his surrealist imagination although he paints solastalgic images and ideas in the minds of the characters as described below:

Nevertheless, the sense of unease persisted. Puzzled by the dim light, Dr. Sanders turned his attention to the inshore areas, following the river as it made a slow clockwise turn to the southeast. Here and there a break in the forest canopy marked the progress of a road, but otherwise the jungle stretched in a flat olive-green mantle toward the inland hills. Usually, the forest roof would have been bleached to a pale yellow by the sun, but even five miles inland Dr. Sanders could see the dark green arbours towering into the dull air like immense cypresses, sombre and motionless, touched only by faint gleams of light. (*CW* 4)

It can be commented that this strange landscape directs both the character and the readers to witness a series of mysterious incidents to happen, as well as arousing solastalgic feelings while the environment is gradually transforming into crystals and rendered uninhabitable and inhospitable to humans as a result. This phenomenon "may be read as symbolic of a slowly approaching death or stillness, of entropy, of the end of the world which starts to spread slowly over the globe" (Klonowska 75). This 'ominous and luminous' situation is not confined to Africa and seen in Florida Everglades, U.S. and Pripyat marshes, Soviet Union. Ballard thus steers the plot towards a global apocalypse threatening all the world as he does in his previous novels in this quartet.

Ballard pushes the protagonist into a cobweb of strange incidents that bears several omens to the impending dangers. Dr Sanders contemplates on his past failures in his life and the environmental changes that turn out to be irrevocable. He is tempted by the magical and prismatic forest and yields to his fate without resignation in the end.

Ballard makes pseudo-scientific explanations for the crystallisation process which is thought to take place as a result of collision of matter with anti-matter, impairing time in the universe and leading to the super-saturation of the terratic systems. However, what makes the novel distinct from other novels in the series is that this inexplicable and disastrous phenomenon is not caused by anthropogenic factors. This is depicted in the following:

Just as a super-saturated solution will discharge itself into a crystalline mass, so the super-saturation of matter [...] leads to its appearance in a parallel spatial matrix. As more and more time 'leaks' away, the process of super-saturation continues, the original atoms and molecules producing spatial replicas of themselves, substance without mass, in an attempt to increase their foot-hold upon existence. The process is theoretically without end, and it may be possible eventually for a single atom to produce an infinite number of duplicates of itself and so fill the entire universe. (*CW* 85)

Ballard attempts to define the predicament in scientific terms by referring to structure of the matter. This uncontrollable process of material transformation simultaneously annihilates time, marking a deviance or a dramatic change in the mechanisms of natural and universal laws. However, this spontaneous phenomenon proves to be detrimental to all living organisms that are frozen and immobilised in diamond-like forms. Despite seemingly brilliant and scintillating, the phenomenon remains pervasive and irresistible, disrupting the natural systems and making humans defenceless and anxious. This can be thought as an example of solastalgic consequences.

On the other hand, during his perilous journey into the jungle through the river which is the only way of escape from this catastrophe, the protagonist has personal conflicts with Ventress, a Belgian architect and his roommate in the steamboat, a weird priest named Father Balthus and Thorensen, the owner of a diamond mine. He comes ashore on the spring equinox when darkness and light are in perfect harmony. Here Ballard contrasts the landscape and characters' isolated mental states, establishing a firm background for the plotline. In an interview, Ballard clearly explains:

My fiction is all about one person, all about one man coming to terms with various forms of isolation ... The protagonists of most of my fiction feel tremendously isolated, and that seems to exclude the possibility of a warm and fruitful relationship with anybody, let alone anyone as potentially close as a woman (Sellars and O'Hara 109).

While moving towards Mont Royal to find his colleagues at the hospital, he is accompanied by Louise Peret, a journalist who wants to investigate the rumours about strange phenomenon in the jungle. Soon, they recognise that the forest is eerily turning into crystal form. The city of Mont Royal is also abandoned due to the encroaching

apocalypse like other cities in Ballard's quartet. The military troops in the forest offer to help Sanders who witnesses the actual apocalypse as described below:

But what most surprised me, Paul, was the extent to which I was prepared for the transformation of the forest—the crystalline trees hanging like icons in those luminous caverns, the jewelled casements of the leaves overhead, fused into a lattice of prisms, through which the sun shone in a thousand rainbows, the birds and crocodiles frozen into grotesque postures like heraldic beasts carved from jade and quartz—what was really remarkable was the extent to which I accepted all these wonders as part of the natural order of things, part of the inward pattern of the universe. (*CW* 41)

In this quotation, Ballard depicts a surreal landscape that engulfs the human and the nonhuman nature and bewitches the protagonist who acts as a passive observer of the events. In other words, it can be thought that both the human and the nonhuman natures are equally affected by the unusual catastrophic changes.

On the other hand, it is unravelled by the characters that the crystals can freeze the objects and living beings in a suspended state, emphasising their capacity to stop the flow of time, space and life. It is discovered that the jewels extracted can liquefy the crystals and release the victims, proving insufficient to curb the progress of the debilitating situation though. Eventually, after a series of deadly events, Sanders returns to the jungle when he accepts the impossibility of evading the crystallisation, immolating himself to the hands of his fate.

It can be stated that the characters are not mentally resilient and powerful enough to face the apocalypse in *The Crystal World*, behaving as strangely as the phenomenon occurs. They appear to be attracted and repulsed as well. The external changes also find their path to the innermost parts of the characters' personality and reactions. In this regard, it can be argued that Ballard analyses the depths of human psychology and his mutual interactions with the environment, signalling to modern societies about the outcomes of ecological destruction that may be caused by humans or whatever in the future as in his other novels.

Consequently, Ballard again uses his boundless imagination and remarkable narrative style, painting a "crystal-clear" landscape in a tenebrous atmosphere where human and nonhuman world is petrified and solidified into a unique ontological form, devoid of time and space. Articulating on the apocalypse, Rob Freeman notes that "*The Crystal World* is an anti-journey, populated with slowed-down people and petrified animals – crocodiles choking on diamonds, blind snakes with glass eyes, men lurching through the undergrowth with feet becoming explosions of quartz, sticking to the floor"

(Freeman). Furthermore, it can be inferred that the crystallisation is not only threatening but also fascinating for the characters since it freezes time and space of any being, whether human or nonhuman, incarcerating them eternally. In parallel with this discussion, Aidan Tynan claims in the following that:

While wind, deluge and desertification are mere occasions to reveal a dangerously transformed Earth, crystallisation springs directly from a new formalisation of space and time resulting from the appearance of what Ballard calls ‘anti-time’ – a concept modelled on anti-matter – which causes time to leak out of the universe (402).

Based on these interpretations, it can be concluded that *The Crystal World* differs from Ballard’s other novels in the tetralogy since it does not directly deal with climate change, but rather supernatural phenomena that merge both human and nonhuman. The crystallisation is presented as a metaphor to symbolise both death and resurrection to a better life without demarcation of space and time or human and nonhuman nature. Additionally, the occurrence of crystallisation fuses the characters with the nonhuman nature. Thus, the apocalypse of crystallisation redefines the humans’ status and interrelations with the nature.

To sum up, *The Crystal World* is a suspenseful novel interwoven with a marvellously episodic quest of mystery and exploration that describes an unprecedented disaster story vitrifying all living beings and unearthing the labyrinths of human mind. Additionally, the novel seems to demonstrate that the human and the nonhuman share the same fate in the event of a catastrophe, and are bound to coexist as well. It can be interpreted that humans cannot be considered as separate from their environment and are tightly interconnected to the nature. On the other hand, based on the discussions above, solastalgia is embodied by the characters’ interactions with their environment. The characters also experience fear and anxiety while trying to get rid of the chaos induced by crystallisation. The process of crystallisation merges the characters together and reconciliates them with the nature. The main character follows the same path as in those in other novels in the tetralogy, awaiting his inescapable death. Finally, Ballard concludes that this unification of humans with nature provides hope for rebuilding a better world in harmony with the nonhuman nature.

CONCLUSION

For me, the best of cli-fi does two things: it delivers a powerful and emotional story and it pushes the reader to wake up to the existential threat that man-made global warming poses to future generations. So good cli-fi is both a great read and a call to action, either direct or indirect. If it doesn't wake us up, it's just escapist entertainment. I am not interested anymore in escapism.
(Bloom, "Q&A.")

As emphasised by Dan Bloom, climate fiction is a powerful tool to depict the devastating effects of anthropogenic climate change on both human and nonhuman nature. This flourishing subgenre of science fiction also serves to warn people against the dangers of the climate change and global warming and its catastrophic consequences on the planet. In this regard, James Graham Ballard has penned a series of climate change-oriented novels in the 1960s, voicing environmental concerns and problems with apocalyptic and postapocalyptic settings. With his exclusive auctorial style, J. G. Ballard digs into climate change issues in his tetralogy by vividly depicting the catastrophes, implicitly blaming capitalist western world for the environmental predicaments, while concentrating on the psychological response of humans to these adverse conditions that threaten human existence and struggle for survival.

Ballard follows an elemental storyline in the tetralogy, which is noted by Lorenz J. Firsching that "each of the four [...] depicts present-day civilization being destroyed by one of the classical elements (by air, water, fire, and earth, respectively)" (297). Ballard's ecological catastrophes pinpoint to environmental degradation and role and responsibility of humans in transforming the Earth. These novels that are fictionalised on an element as a major theme emphasise the mutual interactions of human and non-human in times of ecological traumas and crises that create fear and anxiety.

J. G. Ballard has created a huge collection of science fiction works that boosted new literary trajectories in British literature with an intriguing mosaic of various themes, sharp critique on modern human society, psychological explorations, degeneration of society when faced with extinction and collapse of civilised world. His greatest contribution to the sci-fi genre has taken place with his apocalyptic and postapocalyptic fiction novels, engendering a new sub-genre known as climate fiction. Ballard's cli-fi novels written in the 1960s can be regarded as milestones for contemporary environmental literature. The plotlines, depictions of colossal natural

degradation and transformation, characters' inner and outer conflicts and quests are worth analysing from many different perspectives since they provide abundant philosophical, ideological, scientific and psychological background for scholarly debates and research.

In recent decades, there is a growing interest in discussing ecological disruption and climate change issues among the academia. These interests intersect at a crossroad where the role of human in transforming the planet is open to criticism and comprehensive interrogation. At this point, a new approach named as posthumanism has appeared, giving rise to different debates across many scientific disciplines. As discussed in earlier chapters of this thesis, this complex term has a wide range of definitions, connotations and interpretations, often perceived as a highly sophisticated form of a human being created by technological improvements and describing newly emerging concepts. Moreover, it is a big fallacy that posthumanism is an end to human identity which is supposed to be replaced by a synthetically developed human being. Rather, posthumanism is a thought system that decentralises human from his dominant status, placing humanity in an equal level with other living beings on the Earth. It can also be deemed as a response to anthropogenic activity that deteriorates global ecosystems and is doomed to drive humanity to the edge of total annihilation.

J. G. Ballard has eloquently emphasised catastrophic results of mal-transformation of the Earth as well as describing the interrelations between human and nature in his tetralogy. Embedded with deep psychological analysis of the characters and harsh critique of the capitalist world that exploits every single piece of the nature for more profits and prosperity, Ballardian "worlds" resonate well with posthumanist viewpoints that blur the frontiers between the human and the nonhuman natures and question the role and agency of the human. Additionally, Ballard has elaborately delineated psychological effects of climate change on humans in his novels. In this context, this thesis mainly aspired to underline the posthumanist inclinations in Ballard's climate fiction with a focus on the representations of solastalgia (i.e., climate anxiety). The phenomenon of solastalgia is evident in all novels examined. It is represented by isolation of the characters from each other and the nature itself, abandoning residential areas for survival, seeking refuge from disastrous windstorms, flooded cities and intense heat, drying landscape and protecting from supernatural forces. The main characters

who are scientists from different fields serve as embodiments of solastalgia. It can be interpreted that their actions, efforts, mental states and decisions add up to increase solastalgic feelings when they experience the effects of the elemental ecocatastrophes depicted in the novels. Each protagonist is engrossed and isolated in a quest for restoring the disrupted order and fail to do nothing to change the situation though they are scientists. They feel miserable and impotent amidst the disasters. It can be concluded that the loss of environment due to the catastrophes, whether induced by anthropogenic or non-anthropogenic, incites solastalgia for humans who suffer the dire consequences.

Ballard can be regarded as a zealous literary architect who interpolates an array of huge calamities and the relentless struggle for survival at the edge of extinction. He sets the stage for the disasters and narrates the disastrous story in medias res in the selected novels. Then, he begins depicting the inner and outer landscapes of the human and the nonhuman, which is prominently seen throughout his cli-fi novels. Ballard's preoccupation with psychic and planetary changes and prognostications about the future of humanity may be evaluated through the lens of posthumanism.

A significant point to discuss in Ballard's climate fiction novels is that anthropocentrism and capitalism are introduced as the major culprit of apocalypses, and human chauvinism and culpability that promotes human superiority over all living beings and is lamed for the apocalypses is intensely criticised. Despite advanced technology and scientific progress, the apocalypse is invariably undefeatable and leaves enormous havoc behind. The flaws and frailties of humanity are also unveiled with numerous explorations and detailed depictions in the novels in question. Therefore, Ballard implicitly emphasises that the dominant position of human on the Earth is necessary to be reconsidered and reformulated from a new angle. This can be accomplished by taking posthumanist principles into account.

Transcending literary tendencies of his period, J.G. Ballard is one of the most prominent representatives of cli-fi that was not coined at the time of his writing. Renowned for his short stories and contemporary novels, Ballard's early novels written in the 1960s narrate cataclysmic stories of humankind that centralise on survival and the interrelations between the human and the nonhuman world. Each of these cli-fi novels focus on a catastrophe induced by a natural or unnatural element that is destroyed and

transformed by anthropogenic and non-anthropogenic agents.

Each novel centralises on a great ecological devastation, causing fear and anxiety due to transformation of the Earth beyond recognition. This climate change-induced version of anxiety is termed as solastalgia, a kind of nostalgic feeling for dramatically changing geographical landscape or loss of environment blended with fears and concerns about the future of one's living place. In this regard, solastalgia captures zeitgeist of our globalised and industrialised world, opening new paths to reconsider the deleterious effects of anthropogenic climate change on our lives and the planet.

Additionally, Ballard projects his critical views on human civilisation, Western capitalism, colonialism and environmental challenges in these novels by synthesising an idiosyncratic literary style that incorporates a complex mesh binding the internal and the external, the material and the objective, the constructed and imaginary realms complex (Knowles 341). In the novels studied in this thesis, Ballard draws attention to anthropogenic and non-anthropogenic climate change and their fatal consequences on human race and the planetary systems while deconstructing humanist views and attitudes and offering new perspectives to better understand and even resolve these issues.

Ballard's characters undergo a synchronous progress that leads to environmental and social alienation, invigorating them to react to and behave against human hegemony over nonhuman nature and anthropocentrism. In this regard, these novels in question emphasise the posthumanist notions to evaluate Ballard's criticism on human subjectivity and exceptionalism and the decline of the Western civilisation in the wake of ecological apocalypses. Thus, Ballard's novels present how fiction can represent environmental concerns in disastrous scenarios and fall of humanity when faced with extinction. Ballard interrogate anthropocentrism and classical humanism by exposing frailties of human mind and flaws that cause environmental degradation as a result of Western consumerism and colonialism, which situates his novels well within the current discourse of posthumanism.

Ballard's selected novels are distinguished from other narratives about global climate change. These novels encapsulate ineffective scientists as the protagonists who do not embark on heroic adventures for survival amidst the catastrophes, rather prefer to accept the dooming phenomena and adjust to the transforming environment though it is

lethal to them (Taylor 96). These novels also incorporate anthropocentric notions at the core of the plotlines. In *The Wind from Nowhere*, Ballard dismantles and defies against Western capitalism and anthropocentric ideologies by depicting extremely powerful hurricanes that inflict global devastation. However, Harlan Wilson criticises the plot for being formulaic and lack of stylish and detailed narration in the novel, and states that the psychological aspects of the catastrophes are ignored, even claiming it to be not a 'Ballardian' work (66). In *The Drowned World*, he points out that the submerging human civilisation and the nonhuman nature are tantamount to each another and an evolutionary entropy emerges if the natural balance is disrupted. In *The Drought*, he puts the blame on the anthropocentric notions that exploit natural resources extravagantly for the catastrophic drought by depicting a western industrialised world in which consumerist culture causes demise of human race. Finally, in *The Crystal World*, he metaphorically uses crystallisation to explain human unification with the nonhuman in the event of an apocalypse. Moreover, Ballard exceptionally highlights the responses of the characters and their psychological transformation synchronising with the ongoing disasters in each novel. He openly rejects anthropocentrism that causes the downfall of humanity in these novels while advocating ecocentrism that favours the sustainability and survival of the nonhuman nature. In this regard, it can be argued that Ballard implicitly produced both a posthumanist and ecocentric philosophy by endeavouring to inoculate environmental consciousness into the readers in the novels analysed.

Furthermore, Ballard uses negative affiliations such as evil, arrogance and exploitation with anthropocentric ideology by means of the antagonists like Harpoon, Lomax, Strangman and Ventress who embody these in a well-suited mode. It is also implied in these novels that capitalism is predestined to bring an end to humanity sooner or later. The author conveys a subtextual message that humans should maintain a peaceful relationship with the nature and the costs of breaking down the natural mechanisms is severe and irreversible unless such a bond between the nature and the humans is established. On the other hand, the author contends that humans need to reshape their perspective of the nature in a new context that doesn't confront with the nature if emergent ecological crises are to be subverted and eliminated. Ballard's blend of cli-fi and apocalyptic narration manifests that an immense catastrophe is awaiting the Earth unless urgent action is taken to prevent major ecological predicaments.

Ballard has provided us a prophetic vision about the future of the world, forewarning us against climate change and natural disasters with a sense of realism and validity. Moreover, this thesis draws attention to posthumanist paradigms that are born to replace conventional humanist notions and examine the novels in the light of this new lens. Consequently, all these novels project us the conception that the human and the nature which is inherently important are absolutely interdependent, and cannot survive without the other.

All in all, what emerges with extreme lucidity to the readers from Ballardian cli-fi novels is that the Earth is highly susceptible due to climate change and can be fundamentally transformed into an alien planet as a consequence of any kind of anthropogenic, natural or unnatural factors or disasters. Ballard also presents a grave warning for modern human to establish good relationships with the nature in order to live happily on the Earth. Consequently, Ballard's climate fiction novels can be adapted to cinema to reach the masses easily, which may heighten public interest and awareness on environmental concerns and enable people to take action against climate change.

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