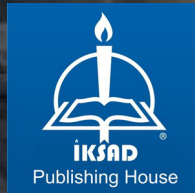


ECOLOGY DYSTOPIA AND FICTIONALIZATION

Bülent Cercis TANRITANIR, Fatma KARAMAN

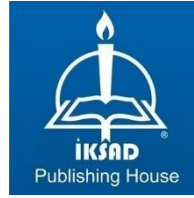


ECOLOGY DYSTOPIA AND FICTIONALIZATION

*“IMPACT OF INTERRELATION OF ECOLOGY AND DYSTOPIA ON FICTIONALIZATION
PROCESS: THE WINDUP GIRL AND THE WATER KNIFE BY PAOLO BACIGALUPI, AND THE
DROWNED WORLD AND THE DROUGHT BY J. G. BALLARD”¹*

Bülent Cercis TANRITANIR, Fatma KARAMAN

VAN



BU KİTAP İKSAD RB PROJESİ KAPSAMINDA YAYINLANMIŞTIR.

¹ This book is produced by the MA thesis prepared by Fatma Karaman and supervised by Bülent Cercis Tanrıtanır under the supervision of Van Yüzüncü Yıl University, School of Social Sciences, Van Türkiye.

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Development and Social
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(The Licence Number of Publicator: 2014/31220)
TURKEY TR: +90 342 606 06 75
USA: +1 631 685 0 853
E mail: iksadyayinevi@gmail.com
www.iksadyayinevi.com

It is responsibility of the author to abide by the publishing ethics rules.
Iksad Publications – 2021©

ISBN: 978-625-7687-43-0
Cover Design: İbrahim KAYA
January / 2021
Ankara / Turkey
Size = 16 x 24 cm

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A. INTRODUCTION

Human is a social entity that socializes, brings the communities into being and leads them. These communities form the human ecosystems in which the wellbeing of mankind was preferential yesterday, is privileged today and will be of top priority tomorrow. As Stanley A. Cain states “Human ecosystems run the gamut from relatively small and simple to very large and complex. Man is both the most cosmopolitan and the most important influent among species. This results in almost all ecosystems having been penetrated and modified by man,...” (1960, p. 160). In other words, mankind has improved its power both in dominating nature and leading different occupations within a manmade system from 4000 B.C. and 3000 B.C till present. As a result of that a civilization cannot be handled without ecology which is surrounded and controlled by human (Bhattacharya & Ghosh, 1992, p. 76). “In general, then, a study of ecology without consideration of the roles played by man can give only a partial view of communities and ecosystems”; likewise, “a study of man without due consideration of his biotic and abiotic co-members of the ecosystem can be misleading as to his opportunities and his limitations.” (Cain, 1960, p. 160). Around 40,000 to 200,000 years ago mankind realized that they can make use of nature, but in time it turns into manipulating the environment for the sake of human ecosystem.

Human has in fact been both a producing and a consuming creature since their existence. In earlier, the number of this creature was not

more than five million in the hunting-gathering stage. Therefore, their consumption was not a big deal for other creatures that have their own ecosystems on the same planet (Bhattacharya & Ghosh, 1992, p. 76). However, modern human communities began changing nature 50 000 years ago with their spreading from Africa to all around the world (Ellis, 2015, p. 321). As a consequence, human are occupying most of the surface of the planet and, today, more than half of consumption by human is left to nature as waste (Bhattacharya & Ghosh, 1992, p. 76). This waste pollutes nature and it will bring the end of man in the near future since environmental pollution can affect human life from all aspects. This can be called as a kind of self-destruction because there is an “energy relations” between human and nature. In a sense, “exotic luxury foods”, “solid, liquid, and gaseous fuels”, “hydro- and steam-generated electricity” and more are transmitted from one part of the world to another part (Cain, 1960, p. 162). In that, human needs nature and ought to use it economically. However, there is a power struggle among different nations and societies all around the world. This struggle leads up to endless wars damaging nature and all the other ecosystems (Cain, 1960, p. 161). These wars are not only on the battle fields but also in the industry, technology and economies. As a result, each country tries to be the most powerful one and pushes the limits which result in manipulating nature. It can be said, “... for industrial civilization the ultimate human ecosystem is a world-wide one and that all others are only partial sub-systems.” (Cain, 1960, p. 163). Even though human beings are not aware, these sub-systems are the inseparable parts of human ecosystem. Additionally, nature is unjustly

treated and exploited by the unreasonable employment of technology (Tsekos, Tsekos, & Christoforidou, 2012, p. 188). People need to notice that nature has a limit and technology needs to be used to find solutions to compensate or manage the limited sources wisely. The main reason is that “Still, man is a part of the trophic network of the ecosystems in which he participates. He eats and is eaten.” (Cain, 1960, p. 161). This fact ought to give a fillip to human for the sake of planet and all ecosystems which include human ecosystem at the top.

Unfortunately, the slow change in climate and the unforeseen irreversible results of pollution and exploitation of sources progressing in a long period, cause people live as if there was nothing wrong with the future of nature; namely, their own future. As Hayden Gabriel and Greg Garrard suggest “climate change itself eludes representation because it is too slow (there is nothing for us to see) and too fast (we have not enough time to adapt)” (2012, p. 21). Writing can be seen as a way of reaction to inform people on the pollution, ongoing anthropocentric plans and the dramatic consequences of it which are waiting for annihilating all ecosystems. In that sense, fiction is one of the best genres to reach people because it touches the feelings through possible scenarios. It can be stated that Indeed, fiction, in the broadest sense of the term, is the pragmatically conditioned gestalt of imaginary [...] Fiction reveals itself as a product of the imaginary insofar as it lays bare its fictionality and yet it appears to be a halfway house between the imaginary and the real. It shares with the real the determinateness of its form, and with the imaginary its nature of an

‘As if.’ (Pordzik, 1999, p. 82)²

In addition to imagination, the power of language cannot be denied in the writing process and language needs to be seen as a key to reach human in modern era. In fact, from the Hellenistic period till now, artists and writers have tried to be close to nature through their artworks, with the language they applied in their works and their style. However, today, “ecologically oriented Literature” creates a tremendous impression (Tsekos, Tsekos, & Christoforidou, 2012, p. 191). In this regard, the “ecological crisis” is a good phrase to indicate the “urgency” of the situation. That is to say, a quick and useful reaction is a must that can be attained within the boundaries of “ecocriticism” (Garrard, 2012, p. 21) which can be assessed as a sort of criticism to evaluate and analyze the ecology works. Yet, works written by eco-critics are nonfictional and their readers have a level of education. To achieve the public awareness, eco-fiction and dystopian novels are among the best ways to relay the hard truths to the reader. In these branches of literature, the reader can find him/her self because nature and human are parts of a unit and cannot be divided and when they are forced to be far apart, undesired ends are inevitable. The characters and setting in eco-fiction works are similar; for instance, the human is damaging side while nature is the victimized character. On the other hand, a dystopian novel can be identified as a kind of threatening literature in which nature takes revenge and the balance of

² Quoted from “James G. Ballard’s “Crash” and the Post-modernization of the Dystopian Novel” by Ralph Pordzik.

power changes while the setting is unwanted but probable. Although these two genres look different from each other they are intermingled in the 21st century. In this regard, eco-fiction and dystopian novels can be counted at the top of the literature of reaction. Both have a deep effect on the reader and have desire for a better future while warning their audience. In this study, eco-fiction and dystopian novels will be handled with their structural features such as their characters; human and nature, and their settings; time and place. The book aims to put forward the impact of the interrelation of ecology and dystopia on the fictionalization process of the contemporary novel through four examples; *The Windup Girl* and *The Water Knife* by Paolo Bacigalupi, and *The Drowned World* and *The Drought* by J.G. Ballard. Therefore, after this satisfying introduction to the work, brief information on the biography of the authors will be given. Then, the study will provide a wide examination of the field of ecology; its meaning, its brief history and its significance in human life. On the other hand, the book will present an in-depth research on the dystopia, the short history of this genre, and its reaction toward the natural disasters caused by man. In addition to that the relationship between ecology and dystopia will be handled on a large scale and some elements of the contemporary novel such as characters; human and nature, setting; time and place. Finally, these elements and their exemplifications in *The Windup Girl*, *The Water Knife*, *The Drowned World* and *The Drought* will be illustrated by important scenes and supported with quotations and significant dialogues from the novels.

B. BRIEF INFORMATION ON BIOGRAPHY OF THE WRITERS

B.1. Paolo Bacigalupi

Paolo Tadini Bacigalupi was born in 1972, Western Colorado, and he was brought up by hippie parents. He is graduated from Oberlin College and improved himself in Chinese. After his university education he married to Anjula Jalan in 1998. Today, Bacigalupi, the prolific writer, lives in Paonia and proceeds to write. In his early years, he lived in China for a while and his studies enabled him the opportunity of seeing Hong Kong, India, Malaysia, Laos, Thailand, Japan and Singapore (Caldwell, 2017). Therefore, it can be claimed that the effects of his life experiences in the Far East can be felt in his literary works. At first sight, he is thought to be an Italian because of his name, yet he claims that he has “no legitimate claim to the culture” and he states that he is “more exotic in print”. Moreover, he is a nature lover and writer who tries to bring nature to forefront through his dystopian works which are full of ecological elements. Besides, Bacigalupi believes that the person cannot be handled without nature because they are an inseparable whole and he thinks that alienation from nature affects human’s own nature. In an interview with Allan Vorda, Bacigalupi emphasizes the future results of people in these sentences

We all know that we will be making do with less, even as we try to convince ourselves that we’ve actually got more. We’ll enjoy less open space, fewer species and less diverse ecosystems, less clean

water, less cleanwater, less clean air, less ecosystem resilience, less cheap energy. Life today is probably as good as it gets. Of course, we could actually start planning and preserving and living as if we've got a long-term interest in the planet (...). (2010)

As a dystopian author Bacigalupi admits that he is influenced by J. G. Ballard, Cormac McCarthy, Ursula K. Le Guin, Ernest Hemingway, and Gibson at the beginning of his writing career (Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). Bacigalupi started his career with one of his best early publications "Pocketful of Dharma" which is an example of a dark story, setting of which is based on a city in Asia and the time of this dark story is chosen as the years of WWII. This short story was published in *The Magazine of Fantasy and Science Fiction* at the end of the 20th century (Clute, 2018). His early life in nature with a nature lover family must have affected his future as an author who is writing on nature, ecological issues and the future of humankind in a polluted and an exploited world. In addition to writing on environmental issues in *High Country News*, he composed short stories, novellas, books for young adult readers and novels (Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). Even though he is a young writer he has several awards on his literary works. Climate change, genetic engineering especially genetically modified food and environmental issues are among his main concerns.

Bacigalupi gives a start to his real writing adventure with the publication of “The Fluted Girl” in 2003 (Wikipedia contributors, 2020). He composed both “The People of Sang and Slang” which is about body modification, and “The Pasho on the era of extinction in 2004. Moreover, he wrote the story of a biologist in “The Calorie Man” in 2005 which brought him Theodore Sturgeon Memorial Award. In the following year, he applied to his land, Colorado where he was born in “The Tamarisk Hunter” in 2006 and in the same year he wrote “Pop Squad” based on a problematic life-extension. He was good at short story writing and he continued producing notable works one after another. In 2007, “The Yellow Card Man” written on the deterioration of ecology and the unwanted possible results of climate change was published. He wrote *Pump Six* in 2008 and got all these writings together with “Softer” (2007) (Wikipedia contributors, 2020) in his collection *Pump Six and Other Stories* in 2008 and he was awarded a Locus Award (Clute, 2018). The productive young author has a number of short stories which can be listed by their publication years; “Small Offerings” (2007), “The Gambler” (2008), “Moriabe’s Children” (2014), “Shooting the Apocalypse” (2014), “A Hot Day’s Night” (2015), “City of Ash” (2015), “Mika Model” (2015), “A Passing Sickness” (2017), “Fixable” (2019) “American Gold Mine” (2019) “A Full Life” (2019). (Wikipedia contributors, 2020). Besides, Bacigalupi has some writings for young adult readers; for instance, *Ship Breaker* trilogy consist of *Ship Breaker* (2010) which is awarded a Locus Award, *The Drowned Cities* (2012) and *Tool of War* (2014), *The Doubt Factory* (2014) and for younger readers *Zombie Baseball*

Beatdown (2013) which reflects a near future invaded by zombies. He worked with Tobias S. Buckell not only on an audio book *The Alchemist and The Executioness* in 2010 but also, they published *The Tangled Lands* in 2018 (Clute, 2018).

However, Bacigalupi was not a well-known writer of 21st century until the publication of *The Windup Girl* in 2009 which brought him awards of Hugo, Nebula, Locus, Compton Crook and John W. Campbell Memorial Award and, internationally, Seiun Award (Japan), The Ignotus Award (Spain), The Kurd-Laßwitz-Preis (Germany), and the Grand Prix de l'Imaginaire (France) ("Paolo Bacigalupi")³. There are many commentators on this successful novel and one of them, Adam Roberts claims that *The Windup Girl's* "...strongest feature is the world building – the intricately believable portrait of a future Thailand fighting back from environmental collapse." (2010). The novel is structured on the consequences of the genetically modified food on ecological balance and the future of humanity (Clute, 2018). The harvest is "genetically engineered blights", the settlements are under the risk of deluge, calories are used as a result of the depleted fossil fuel, "soring driven motors are wound up by bioengineered mammoths". However, the traders are still after their personal utilities, politicians are still fighting for power; religious institutions are the leading figure of the controlling powers in society (Roberts, 2010). The most confounding thing is that any of power holders is not aware of the fact that Bangkok has

³<https://csi.asu.edu/people/paolo-bacigalupi/> (Retrieved 21.04.2020)

already been ruined and broken apart.

The other well-known book of the author is *The Water Knife*, published in 2015. This powerful book reflects the cruel order of capitalist powers during a drought which evokes the destructive and aggressive impulses of people (Clute, 2018). The publication of the book coincides with the announcement of a reality that California is suffering from droughtiness (Tobar, 2015). The gloomy, additionally, the blood and thunder novel reveals the inevitable results of the ecological destruction and the human reactions in these hard times. As Hector Tobar emphasizes in his article *The Water Knife* is “a vision of the near-future that borrows heavily from the strangeness and conflicts of present” (2015). It can be inferred that the undesired scenarios presented in the book are not far from the real future and one and only reason for this unpleasing future is the deeds of humanity. Also, in the review of the book, Dave Burdick put forward his ideas on the illustration of the future in both *The Windup Girl* and *The Water Knife* by Bacigalupi in these statements “His is a future of resource scarcity, of distant, comfortable haves and multitudinous, ubiquitous have-nots, of corruption, betrayal, violence and nihilism.” (2015).

B.2. James Graham Ballard

James Graham Ballard was originally English born in 1930 in Shanghai as a son of a manager of the China Printing and Finishing Company. He was sent to the Cathedral School in Shanghai but when he was eleven years old, the Shanghai International Settlement was

taken under the control of Japanese forces. Ballard and his family were captured in Lunghua internment camp until the surrender of the army in 1945. Then, Ballard moved to Plymouth, in England, and lived there for a while with his mother and sister. However, they left him in Plymouth in a boarding school to study at University in the following years. As it was planned, Ballard started his expected university years at first in King's College, Cambridge, to become a psychiatrist studying medicine. Yet, there was the love of writing inside him and he attended a competition with "The Violent Noon" which was elected and published in the newspaper, *Varsity*, in 1951 which was prepared and printed by students. After having this success, he decided to continue his career as a writer, he left the medicine and he changed his university and department as well. However, Ballard did not complete his education at Queen Mary College, too, and worked as a copywriter and then as an encyclopedia salesman. Young Ballard enrolled in Royal Air Force (RAF) and this job enabled him to stay in Canada for a while. Thereby, he came across with a new, for him, a genre which is called as science fiction in American Magazines he read. Impressed by this new genre, he moved away from his ex-writing habits and published his first science fiction short story "Passport to Eternity" under the influence of his science fiction readings. His love of writing did not allow him to stay in Royal Air Force and he left his job to be an author sooner or later.

Will Self states in his article "Ballard's mature writing style exhibited a curious uniting of hyperbolic and poetical fancy with often quite

workaday plotting and characterization.” and he adds “Ballard was concerned to create an entire series of parallel worlds that flank the commonsensical one usually described by more conventional, naturalistic, or realist writers.” (Self, 2017). Moreover, Ballard gives clues about the political, social and cultural progress of Britain and other countries at the ends of nine-teens and the beginning of the twenties. He brings together the alternative worlds and the severe facts of the current life (Self, 2017)⁴. Therefore, his writing style is named Ballardian which is explained in Collins English Dictionary as “resembling or suggestive of the conditions described in Ballard’s novels and stories, especially dystopian modernity, bleak man-made landscapes, and the psychological effects of technological, social or environmental developments”.⁵ Furthermore, the voices of different movements and writers can be felt through his texts and he had a great influence on the writers of the 21st century. In 1955, Ballard married and settled in Shepperton where he spent his later 55 years without his wife with whom he had an only nine-year marriage and in 2009, he died of prostate cancer and his dead body cremated (Self, 2017).

The first steps of his thriving writing career started to take shape with the publication of “Escapement” (1956) in *New Worlds* which would be the address of his following several short stories (Self, 2017). Ballard puts forward the necessity of leaving old and taking his

⁴ Until here all biographical information and quotations are provided from the article “Ballard, James Graham (1930-2009), novelist and short story writer” by Will Self.

⁵ Collins English Dictionary. “Ballardian” Retrieved from <https://www.collinsdictionary.com/dictionary/english/ballardian>

narration a step further in the 1900s which is put forward as the beginning of a great technological era in these statements. The old-style novel dealt with fixed societies that were filled with opportunities for the observation of nuances and minute differences. Nowadays there isn't such an easy-chair frame of references removing from the author the need to think. The proper vocabulary and conceptual medium of the present is science and technology. That's the nearest thing we've got to the imperishable and unquestioned values of our forefathers. And science fiction makes the best use of this new modern vocabulary and imaginative vehicle. (Ballard, "Ballard At Home", 1971)

It can be inferred that he witnessed the changing world and necessarily changing writing process which focused on the innovations attained through advancing technology.

J. G. Ballard worked as an assistant editor on *Chemistry and Industry* between 1957 and 1962. To gain experience on the way of becoming a professional author, Ballard wrote his first novel *The Wind from Nowhere* (1961) in a short period of time. Perceiving his capacity, he went on with his second novel *The Drowned World* (1962) and in 1965 he started a new editorship in *Ambit* magazine. He improved his writing through publishing novels such as *The Burning World* (1964), which is reprinted as *The Drought* (1965), and *The Crystal World* (1966), and in 1967 short story collections; *The Overloaded Man*, *The Disaster Area*, and *The Day of Forever* (Self, 2017). In an interview Ballard states his ideas on his three novels, which are claimed to be

the novels on “situations of disintegration”, in these sentences

This doesn't mean I'm a pessimist. All three novels are nominally set in the future, but they're not predictions. They could have been set in the past or the present. The message they contain isn't dependent on the time setting as such. What was valid yesterday is valid today, and will be valid tomorrow. My psychological landscapes are the sort that might be perceived by people during major mental crises? -- not literally of course, but they represent similar disturbed states of mind.(Ballard, "Ballard At Home", 1971)

It can be claimed that he does not prepare pessimistic landscapes and events in his novels intentionally, but he gives point to the psychological state of human which contains archetypal information. However, Ballard did not compose his best until 1969, the publication of *The Atrocity Exhibition*. This work provided him a different way out of science fiction but his novel became “the object of censure”.In 1973, he published *Crash* through which Ballard demonstrates a kind of “orgasmic” relationship between people and the developing technology. His non-stopping pen continued producing more short story collections during the following years; *Vermillion Sands* (1973), *Low-Flying Aircraft* (1979) and *Myths of the Near Future* (1982), and novels; *Concrete Island* (1974), *High Rise* (1975) and *The Unlimited Dream Company* (1979) (Self, 2017). In an interview Ballard explains the reasons behind writing in science fiction genre in these words “I'm writing a specialized kind of fiction. I happen to make frequent use of the genre of science fiction because that's the road into

the mind. It has the right attributes and conventions and it's amenable to the surrealist's imagery and metaphors.” (Ballard, "Ballard At Home", 1971). It can be implied that he applied science fiction to be able to reach the mental state of his reader because the boundaries of science fiction are vast and fantasies are limitless.

Although he had a productive career until the 1980s, it was *Empire of the Sun* (1984) that helped him advance in his career as one of the leading figures in literature. The novel was constructed on the experiences and observations of an eleven-year-old child, Ballard at the camp in Shanghai. Then, he went on his writings in a new path and composed *The Day of Creation* (1987) and *Rushing to Paradise* (1994) within the boundaries of eco-fantastical fiction. At the same time, he was interested in the over- consumption of Western and unnecessarily applied violence in a society which are the criticized issues in his books such as; *Cocaine Nights* (1996), *Super-Cannes* (2000), *Millenium People* (2003), and *Kingdom Come* (2006). Similarly, *The Kindness of Women* (1991) and *Miracles of Life* (2008), which is his memoir published one year before his death, evoke the same feelings while being read (Self, 2017). His literary works are eternized by filmmakers such as; *When Dinosaurs Ruled the Earth* by Val Guest in 1970, *Empire of the Sun* by Steven Spielberg in 1987, *Crash* by David Cronenberg in 1996, *The Atrocity Exhibition* by Jonathan Weiss in 2000, *Low-Flying Aircraft* by Solveig Nordlund in 2002, and *High-Rise* by Ben Wheatley in 2015(Wikipedia contributors, 2020). Charlotte Middlehurst put down an article on

paper on the fourth anniversary of Ballard stating the background of his dystopian writings in these sentences “While most people remember Ballard for his dystopian novels about contemporary Western urbanism and futuristic landscapes, with a couple of semi-autobiographical tangents thrown in, Hewitt argues that the significance of Ballard’s Shanghai childhood actually permeates the oeuvre as a whole.” (2013). In fact, the impact of his childhood memories can be felt in his works but he didn’t concentrate only on these memories and went beyond the limitations of his time despite of his late- coming fortune and fame.

C. ECOLOGY

C.1. What is Ecology?

Ecology can be defined as the research of the relation of beings and other creatures around them. Actually, it bases on the examination of creatures consisting of human and non-human. It is one of the significant terms for biology and it has attracted more attention for several decades (Moyle, Peter B. and Chris Mari Van Dyck, 1993, p. 99). However, the roots of Ecology dates back to a Greek word “Oikos” which means “house, household, family” referring to the relationship between societies and systems (Garrard, 2012, p. 83). In other words, as Gary Snyder defines “It referred originally to the study of biological interrelationships and the flow of energy through organisms and inorganic matter.” (2004b, p. 5). As a concept, ecology was originated in 1866 by, a German scholar, Ernst Haeckel who was a zoologist (Reinmar Seidler and Kamaljit S. Bawa, 2016, p. 72). From the 1800s till now, ecology has been identified as “the study of the functional interrelationships of living organisms, played out on the stage of their inanimate surroundings” (Reinmar Seidler and Kamaljit S. Bawa, 2016, p. 71). Yet, this is the popular identification of ecology, and it has a scientific aspect “...ranging from population ecology to restoration ecology, tropic dynamics, freshwater ecology, marine ecology, molecular phylogenetics, microbial ecology, biogeochemistry, and on and on through a bewildering array of sub disciplines” (Garrard, 2012, p. 83).

In fact, the fear of forest decline and “lake acidification” in New England, forest damage in Europe, and the danger of atomic energy and deforestation of the western part of North America make an awareness toward nature compulsory. Therefore, ‘ecology’ and ‘ecological’ are taken from scientific area to the popular field. In this way, “‘Ecological thinking’ was considered holistic, inclusive, all-embracing, as opposed to the conventional narrow, analytical, reductionist scientific approach” (Reinmar Seidler and Kamaljit S. Bawa, 2016, p. 73). Actually, it was a long time when humans realized that s/he and nature are one and cannot be separated. For instance, “agriculture”, “animal husbandry”, “fisheries”, and “forestry” are among the main interrelations between people and the environment (Reinmar Seidler and Kamaljit S. Bawa, 2016, pp. 74-75). These interrelations pushed human to find new ways to accomplish industrial improvement and this necessity brought along different attempts in various fields such as “steam engine” which caused fuel overuse and “massive carbon emissions” in 1784, and “Great Acceleration” which fastened the use of Nuclear in 1945 (Morton, 2017, p. 118). After the first half of the twentieth century, in 1970, people gathered and tried to take up a position against the wars and exploitation of nature in the U.S. under the name of Earth Day (Reinmar Seidler and Kamaljit S. Bawa, 2016, p. 73). Moreover, the interpretation of the mutual benefits of “organisms”, “ecosystems”, and “human economy” on the tomorrow of human and nature has been the new step. These realization and interpretation give rise to a new ecological perspective in the beginning of the 21st century which

will be remembered as the era of the world wide union of natural sciences and human sciences (Reinmar Seidler and Kamaljit S. Bawa, 2016, pp. 74-75).

It can be claimed that “Ecological awareness is necessarily uncanny. The life sciences have worn away at the human-nonhuman boundary and the life-nonlife boundary.”(Morton, 2017, p. 119). As a matter of fact, demonstrating nature and culture (human) as disconnected entities is an “anti-ecological” classification because humans and nature are an inseparable integrity: therefore, as Timothy Morton states, human “was never fully human” (2017, p. 117). However, people have left their farms and settled in cities because of different reasons. The more crowded cities become, the more pollution comes out and;as a result of that “Liquids and gases pour through thousands of intricately branched underground pipes and conduits, and vehicles and machines belch out polluted wastes into the air.”(Callenbach, *URBANECOLOGY*, 2008, p. 141). Actually, having a prosperous and comfortable life should not be understood as having a car per person but it means “...more congestion, more global warming, more suburban sprawl, more diversion of tax money to support cars, and more hours spent driving instead of living.” (Callenbach, *URBAN ECOLOGY*, 2008, p. 144). Urbanization can be accomplished by a recycling system of mostly used materials such as “stone, wood, cement, asphalt, paper, even cloth fibers” (Callenbach, *URBAN ECOLOGY*, 2008, p. 143). Thus, a comfortable and quality can be achieved and neither human nor nature gets harmed.

In the beginning, ecology could be called as “...studies of how populations of different species fluctuated.” (Callenbach, *ECOLOGY*, 2008, p. 35). Yet, in the progress of time ecology has been assigned different meanings and shaped by different ideologies such as Deep Ecology, Social Ecology, and Ecofeminism. As an environmental philosophy, Deep Ecology not only objects to the exploitation of nature by human but also gives support to human as long as s/he benefits from nature commensurately (Callenbach, *ECOLOGY*, 2008, pp. 36-37) . What is needed is a deeply switch “...in human values corresponding to Deep Ecological principles, and, at least as an interim measure, a ruthless technological instrumentalism that overrides all objections to take measures to prevent collapse, such as the building of nuclear power stations and flood defences.” (Garrard, 2012, p. 21). As a social and political approach, Social Ecology blames institutions that have an undemocratic and repressive attitude toward the weaker one and nature is the weak side if the utilities of worldwide associations are on the stage. Therefore, as Ernest Callenbach states “the devastation of forests, agricultural lands, fisheries, the atmosphere, and the lives of humans are the result of corporate actions; yet corporations, as they are currently chartered and regulated, bear no legal or financial responsibility for these effects.” (2008, p. 38). Additionally, he claims that if society is the reason behind the environmental problems, the same institution needs to find resolutions as well. Thus, the basic duty of society to have an act is political. Furthermore, he indicates that human beings believe that they have some rights and special needs, and these claims “can never

be met so long as we cling to inherently destructive corporate forms.” (Callenbach, *ECOLOGY*, 2008, p. 38). On the other hand, Ecofeminism is another kind of eco approach which has common points with Social Ecology and Deep Ecology. The difference is that Ecofeminists claim that “...male-dominated exploitation of nature parallels the domination of women by men...” (Callenbach, *ECOLOGY*, 2008, pp. 38-39). As it can be understood, even they approach to ecology differently, the main idea of these three ecological views is that nature is manipulated and exploited. In fact that “mastering nature” can be the key word and process which started, initially, around 1500s with the beginning of capitalism (Biel, 2016, p. 11). This mastering process continued with the “*homogenising the inputs* (strains of seed, fertiliser)” “to privatise and commodify” (Biel, 2016, p. 12) nature which can be likened to raping, dividing and commanding the land. It can be inferred that the use of chemicals made everything worse not abruptly but gradually. Therefore, the retrogression of nature cannot be noticed until after irreversible damage created in nature and indirectly human life. It is obvious that humanity is so blind that s/he cannot see the results of their deeds immediately and this unconsciousness brings the alienation and disengagement from nature.

C.2. The Reflection of Ecology on Literary Writing

Ecology is not only an indicated branch of biology, but also it is one of the ways of “the measurement and interpretation of all biological phenomena” and hence, the human is an inseparable part of it (Jordan,

1968, p. 1023). Yet, this creature is; on the other hand, the reason behind the destruction of nature with their growing population, behaviors and waste. The consequences of longing for a better environment have become obvious and found a voice in literature. Eco writing comes out with the rejection of “anthropocentrism” and acceptance of “ecocentric—ecologically centered— view”; in other words, it can be regarded as “the wake of the modern environmental movement...” (Moore, 2014, p. 46). This genre flourishes around American modernism and literature alongside being applied frequently by postmodernists (WELTZIEN, 2000, p. 81). Particularly, in the beginning of the 1970s, science fiction writers began utilizing from the ecological characteristics in their works to make their reader “...think freshly about our species’ place on earth.” (Moore, 2014, p. 46). Actually, it is possible to claim that ecofiction shares common features with science and postmodern fiction. In parallel to create awareness, ecology works purposely demonstrating the harmony of humans and nature which can be regained through reminding the togetherness of creatures in a healthy environment. In that sense, Gary Snyder expresses that “...human contribution to the planetary ecology might be our entertaining craziness, our skills as musicians and performers, our awe-inspiring dignity as ritualists and solemn ceremonialists - because that is what seems to delight the watching wild world.” (2004a, p. 29). Furthermore, Nature writing is needed to be assessed as a significant duty taken on by ecology writers. Özdağ states that nature writers combine the power of the literature and science, and then create a lyrical work (2014, p. 25). Environmental

writing aims to reach the heart of humans because art is a way of having a deeper effect on the addressee. However, with industrialization, the gap between human and nature increased dramatically (Özdağ, 2014, p. 51). This distance creates a desperate longing for the real home which is destroyed for the sake of the endless utilities and demands of the power holders. Longing for home can be demonstrated as one of the most important reasons for nature writing and eco-fiction works. Therefore, it can be affirmed that there is a real and sincere relationship between the writer and the work on nature (Özdağ, 2014, p. 26). Love of nature and the fear of losing it make the author write more to be able to create a consciousness toward environment. Thus, being an eco-fiction writer is a serious responsibility to perform.

In fact, the developments in eco-fiction are the results of the eco-critical writings and the conscious knowledge which comes out with the impending disaster (Özdağ, 2014, p. 13). In ecological writings, the main aim is to evoke a love toward nature which is devalued or ignored a long time ago by industrialization, modern science, religion and philosophy (Özdağ, 2014, p. 20). Writing on ecology is a kind of serious responsibility taken by writers and researchers (Özdağ, 2014, p. 44). Especially, people as the most consuming creature on earth need to have limits and consciousness while benefitting from the limited sources of the generous earth. However, the competitions in consumption make human forget the existence of other creatures in nature. In that point, the duty of eco-critics and eco-fiction writers,

whose main aim is to raise awareness and remind humanity's role in the cycle, needs to be taken seriously. Although the local unawareness is not evaluated as a crucial issue, the disasters caused by local consuming communities affect the global environment. The solution is hidden in the local struggle which will be able to help global healing (Özdağ, 2014, p. 68). As a result of that eco- writing ought to be global; in that, it needs to be universal to be able to create a concurrent collaboration against blind over consumers.

As a matter of fact that eco-criticism and eco-fiction are the main objects of the social awareness of nature. Moreover, these fields of study can be handled as a whole just like scientific fields but their language is different from scientific writing as the language of science is dull and it does not affect its reader emotionally. On the other hand, the representation of nature and impending disaster in the eco-fiction is more effective on the emotions of the reader. Additionally, this representation puts the reader in action and even creates green activists (Özdağ, 2014, p. 19). Although eco-criticism made progress in industrialization, it has not had a real influence on the academic area. There are only some master programs that provide lectures on ecological issues (Özdağ, 2014, p. 117). However, eco-criticism gives hope not only to this generation but also the future generations (Özdağ, 2014, p. 136). The destruction caused by humans and the resources manipulated by power holders are handled critically both in eco-criticism and eco-fiction. In a way, it can be said that eco-writing reveals the destructive power of mankind while providing new

solutions for a better future. In fact, one of the main aims of eco writing is to demonstrate the deep relationship between humans and nature and create a longing toward home through novels and stories based on green. Therefore, the elements of eco-fiction such as character and setting are determined according to this aim. In that point, four figures playing an important role in fiction including humans, nature, time and place can be handled and hence a general view can be created.

C.3. Features of the Characters in Eco-fiction

It is an undeniable fact that character is one of the most significant figures of a plot, fiction and its critic (Hughes D. J., 1962, p. 789). This figure is shaped by imagination which let the fictional character think, talk and act. As Brian Phillips defines “A man in a book is a mark on a page, till the mind makes a name of it; a name is an empty cipher, merely a silt of sound, till the mind informs it with words.” (2004, p. 629)

Therefore, a character needs to be described and shaped by a productive and literary language. Moreover, style is significant in the process of the creation of a character and it can be claimed that “Character is the vital stuff of fiction, and style is the vital stuff of character...” (Phillips, 2004, p. 636). It is obvious that the character’s identity, acts, words and behaviors can be analyzed as the representations of its writer, in a word, its creator. For that matter, it can be asserted that free indirect speech is “the technique of

representing a character's thought in third-person narration, so that the narrator's concern becomes virtually identical with the character's..." (Phillips, 2004, p. 636). As the purpose of the eco-fiction writer is to encourage green activities, the characters of the works can be classified as human and nature.

C.3.1. Human

In eco-fiction, human is both hero and anti-hero; to be more precise, it can be put forth that the reason of the pollution is human while the character who struggles for the well being of human and nature is human as well. Therefore, human needs to take action for a better life and planet; and the steps s/he needs to take are indicated in eco-fiction texts. In fact, six ways to save the earth are supported by ecology works, writers and critics. The first one is reducing the rate of population because the increasing number of the human race is a threat to other creatures and limited sources. The second one is saving on natural sources which will be vital for the later generations. The third one is doing with less instead of trying to exploiting the environment as if everything on the planet belonged to human beings and they have the right of limitless use. The fourth one is recycling and utilization of waste as well as planting trees, filtering the air and providing an environment for water purification. The fifth one is respecting environment by preserving its nature and putting an end to radioactive activities in addition to the military and industrial experiments on nature. The last one is love of other species and dignification of nature not because human benefits from but because

its beauty deserves this worth (Weissman, 2000, p. 343). These policies enable the reader a better understanding of the earth and what the role of the human is in the global warming process beside all the other disasters other creatures have experienced in through history and will be exposed to in near future. In ecology novels, some people are symbolizing the evil side who exploit the resources while some are eco-mentalist, in other words, are environmentally conscious. In short, the role of human in eco-fiction as a character is dual; wrecker and recoverer.

C.3.2. Nature

Nature, as a term, is described as “atavistic, evoking a nonexistent, more fully present, “organic” past” (Morton, 2017, p. 118). It can be named as the home of human being and other species, as well as, it is their past and future since their existence depends on nature. In that sense, five notions can be shown as the key words of nature’s position in the relationship between human and nature. These notions are; “constituent material, context, resource, challenge, and limit” (Weissman, 2000, p. 336). To clarify, it can be said that human body is formed by natural components and ought to abide by the laws of nature. Besides, human is an inseparable part of natural living with all the other species in this context. Additionally, nature is the main source for the well being of existence and it challenges mankind with its rules and elements. Further, nature has limitations which restrain human from the exploitation of the sources and react in case of overuse. Therefore, human needs to be aware of the strong bond

between them and nature. However, people drifted away from nature and this disengagement brought local and global consequences which can be exemplified as “climate change, energy consumption, overpopulation and food shortage” (Coleman, 2013, p. 205). Though some parts of society are not aware of the changing and retrogressive future of nature, some are trying to create social consciousness. Indeed, “Controlling our effects upon things about us is the condition for our current and future hopes of securing ourselves.” (Weissman, 2000, p. 339). As a result of that fact, ecology works create awareness illustrating the significance of nature for the well being of humanity. Thus, in ecology fiction, nature is described as the victimized character which is manipulated by man.

C.4. Setting in Ecology Novels

Setting consists of the surroundings where the characters continue their lives and the period of time when the story occurs. The details of “location, climate, weather, or social and cultural surroundings” can be found in setting. Furthermore, setting can be classified as “backdrop setting” and “integral setting” (“Literary Terms”, 2015). The former provides a vague time and place in reader’s imagination and the main purpose is to present the essence and the point of the story. On the other hand, for the later one, time and place have importance in the storytelling since they shape the script. Undoubtedly, both of these setting types are applied by different genres of fiction. One of them is eco-fiction which, especially, makes use of backdrop setting in that the message is in the foreground

instead of a specific time and place.

C.4.1. Time and Place

In ecology novel, time is an essential element because all the destructive deeds of human occurred in a long time period which is not taken seriously while they continue polluting unconsciously. Yet, time is not in the center and it is not specified by the author now that the basic idea of a writer is to illustrate the long term results of man-centered actions on nature. Further, in eco-fiction novels, place is; forests, mountains, rivers and nature itself. The target is to create a longing towards nature and a turn to the inside of a human. The main aim is not centering the place, as well, because any endamaged area can be a part of the setting in eco-fiction. Nevertheless, real names for the places applied in setting are significant in that it becomes easier to let readers feel wild in its reality. Consequently, virgin nature takes attraction of human and people will try to find ways to compensate for their mistakes.

D. DYSTOPIA

D.1. What is Dystopia?

Dystopia originates in the combination of two words “*dus* and *topos*” which mean “a diseased, bad, faulty, or unfavourable place” and is applied for the first time in the eighteenth century (Claeys, 2017, p. 4). Dystopia as a concept came out under the name of ‘dustpia’ in 1747, and then it was named as ‘an unhappy country’ in 1748 (Claeys, 2017, p. 273). It is used to describe the disorder, destruction and devastation

in the days to come. Besides, dystopia can be used as an opposite term for Utopia because everything is imagined as the bottom of the heap, contrary to utopia (Curl & Brittain- Catlin, 2019, p. 6). In other words, it can be said that “Dystopia and eutopia are the two (opposite) subgenres of utopia.” and there was not a difference between these two terms until the nineteenth century, but then “Dystopia is negatively connoted (dys-topia like dys-phoria), while eutopia is positively connoted (eu-topia like eu-phoria).” (Mihailescu, 1991, p. 214). In dystopian works, there is no hope and there is ultimate desperation because the sources are worn out for the sake of humanity. Dystopia can be defined as a dilemma “...between illusion and truth, power and helplessness, and the problems which arise when sectors collide that humankind can and cannot control” (Curl & Brittain-Catlin, 2019, p. 334). Moreover, dystopias represent “shrinking” spheres in which everything is under a “hallucinatorily” power (Mihailescu, 1991, p. 217). In these spheres, “uncertainty, insecurity, fragmentation, and dissolution of social, political, and economic realities” are handled in a deprecating manner and with the worst scenario (SCHMEINK, *Dystopia, Science Fiction, Posthumanism, and Liquid Modernity*, 2016, p. 67). In that sense, the typical scenes of an imagined hell are often applied “on the grounds of legitimacy of derivation, grace of rhythm, absence of ambiguity, and ease of usage.” (Lederer, 1967, p. 1135). In other words, the scenes; resemble “ancient myths of the Flood” or “Apocalypse of Judgement Day”, are full of “ruin, death, destruction” and “swollen corpses, derelict buildings, submerged monuments, decaying cities, wastelands, the

rubble of collapsed civilizations” and also present undesired conditions such as “cataclysm, war, lawlessness, disorder, pain, and suffering” (Claeys, 2017, p. 3). That is to say, “Burning flesh, cordite, sweat, vomit, urine, excrement, rotting garbage: this is the stench of dystopia.” (Claeys, 2017, p. 4).

Dystopia can be categorized in two; classical and critical in that there is a personal longing for past in an “individual and regressive nostalgia” in classical dystopia while there is a bit of hope created collectively for future as a “social project” instead of an individual yearning for old days (Baccolini, 2004, p. 521). Additionally, dystopias can be classified under three names as well; “the political dystopia”, “the technological dystopia”, and “the environmental dystopia” (Claeys, 2017, p. 5). Firstly, the political dystopias issue undesired futures controlled by imagined authorities and shaped by agony, terror, panic and tyranny. Secondly, the technological dystopias come out as a result of an unforeseen technological advancement and the possibility of unwanted nuclear wars for the sake of being the leading figure of technological power. Thirdly and finally, the environmental dystopias are a kind of warnings which emphasize that “our need for order and control over nature might backfire” (SCHMEINK, *Dystopia, Science Fiction, Posthumanism, and Liquid Modernity*, 2016, p. 60). In other two dystopias, political and technological ones, there are imaginary and sometimes utopian scenarios which are created on the fears of humanity. Yet, in the environmental dystopias, there are possible events which are not

disconnected from the ongoing natural phenomenon. As Ruth Levitas states “Dystopias are not necessarily fictional in form; neither predictions of the nuclear winter nor fears of the consequences of the destruction of the rain forests...” but there is a fact that “...the holes in the ozone layer, the greenhouse effect and the potential melting of the polar ice caps are primarily the material of fiction.” (Claeys, 2017, p. 5). Dystopia dates back to a “metaphorical Apocalypse” in which all the creation vanishes except Noah, his children and pairs from each animal kind. This is accepted as a kind of warning to humanity to repair their mistakes and this kind of dystopias is the result of “humanity’s aggression against itself and against nature”. However, there is an undeniable truth in dystopian thought that eventually “No Noah will save them, and no God will save Noah.” (Claeys, 2017, p. 497). It can give the sense that dystopia is pessimistic but the possible end waiting for human can be more cataclysmal.

D.2. The Impact of Dystopia on Literary Writing

Human fears of unknown and it can be claimed that estimations about the future of humanity and planet are among the scariest scenarios. In respect to this, literature is one of the best ways to create frightening scenarios in which humanity suffers from hunger, lack of water, extreme colds and burning hot. In other words, “...fear of the boundless growth of science and technology at the expense of spiritual growth and individual freedom was the major concern of dystopian novels...” (Pordzik, 1999, p. 80). In this regard, it can be stated that dystopian texts represent “...pessimistically extrapolating

contemporary social trends” along with “oppressive and terrifying societies” (Claeys, 2017, pp. 282-283). These pessimistically created worlds take attraction of the reader who feels insecure about the future and tends to read dystopian texts which depict “...an extremely negative or evil fictional state usually dominated by fear” (Claeys, 2017, p. 7). In other words, “the worst possible world” (Mihailescu, 1991, p. 215) is fictionalized and as Braun states ...the growing importance of literature, film, and art for how individuals and groups figure, imagine, or anticipate what is to come. Indeed, as future scenarios have taken greater significance in public life, the line separating science from fiction has become increasingly blurred, reflected in the emerging genre of “cli- fi,” the proliferation of apocalyptic novels and film, and the reemergence and redeployment of utopian and dystopian fiction... (Bina, Mateus, Pereira, & Caffa, 2017, p. 170)

It can be interfered that dystopia is a multifaceted literary genre since it has common points with modernism, postmodernism, science fiction and it serves the same purpose with popular culture, and social and political criticism (Booker, 2019, p. 174). In other words Ballard puts forward his ideas on science fiction and utopias which are the opposite of dystopias in these sentences.

The cosy paradises of the early SF writers lack conviction for me. Today's Utopias are usually anti-technological. They're expressions of nostalgia for purer, more innocent times. I mean the ‘back to the land and the simple life’ sort of thing. Or the ‘noble savage, back-to-

nature' type of cult. ("Ballard At Home", 1971).

One of the main aims of dystopia is to warn humanity and give them a lesson on the possible destructive futures and; therefore, the breakthrough in technology and its manipulation by powerful countries for the well being of their own nations make it easier to create a dramatic end. In other words, "control and manipulation (often served by powerful technology) affect the 'Environment' and the 'Demography and Social Change' core challenges, leading to potentially anti-utopic and dystopic futures, or collapse" (Bina, Mateus, Pereira, & Caffa, 2017, p. 178). Furthermore, "the framing of GSCs", "the threat of dehumanization processes and loss of meaningful lives and of human values" and "the increase of social inequalities and discrimination" can be assumed as some of the reasons of dystopian scenarios (Bina, Mateus, Pereira, & Caffa, 2017, p. 180). It can be summarized in these words that dystopian novels supply the unusual views on common events differently from all the other genres (Booker, 2019, p. 176). This unfamiliarity provides three basic attitudes toward dystopian fiction which includes the purpose of the writer, the comprehension of the reader and the essence of the work itself. As it is emphasized above, the target of the author is obvious that s/he tries to create a common reaction toward the ongoing annihilation of nature by human and the content is clearly serving for the purpose of author. To get back to the main point, it is possible to assert that "In dystopian fiction the reader is at the same time inside and outside the Undesirable Society, looking through the

'traveller's' eyes, and listening to the authorial or implied narrator's voice." (Koppenfels, 2004, p. 171). The combination of these three figures demonstrates how seriously and critically dystopian fiction is produced. Consequently, four elements applied in dystopian fiction; human, nature, time and place, are affected and shaped by the core idea of a dystopian novel which is tried to be given through an undesired story.

D.3. The Features of the Characters in Dystopian Novels

A dystopian reader cannot recognize the difference between the fact and fiction planets easily as the worlds created in this genre are controlled by power holders and the rest consists of politically depersonalized individuals (Mihailescu, 1991, p. 218). However, there are always questioning characters in a dystopian novel who are conscious about the worsening conditions. In addition to the consciousness, there is grief and depression with an open ending in which protagonist needs to make his/her own choices and perform certain duties (Baccolini, 2004, p. 521). Certainly, these choices and duties are under the oppression of power holders. In the same way, political power determines the power on the usage of the supplies as well. Therefore, nature is utilized thoughtlessly for the sake of the benefits of only one creature, human, and especially for the socially and politically strongest ones among human race. Consequently, the careless behaviors of humankind confront a deserved response by nature such as; floods, drought, fires, and more in a dystopian novel. As it can be understood, dystopian characters can be divided into two;

humans and nature, and nature seize power and takes sort of revenge while human suffer the consequences of their deeds.

D.3.1.Human

Human is portrayed as the cruel and selfish character in the dystopian novel who suffers because of their irreversible damage on earth. Further, human is a hopeless character and there is no way to escape or be saved (PARRINDER, 2005, p. 6). There are stages dystopian human character experiences throughout story to be able to survive and these stages can be assessed as the deserved punishment by nature. The steps of dystopia hero undergo in 19th-century romance can be put in five; firstly, the main character separates from the constructed system of his/her society, s/he leads to solitude, has arguments with the people around, and s/he does not accept their claims. Secondly, s/he needs to take risks and disobediently take a step to prohibited area which is the final stage of the old life and the starting point of the new life. Thirdly, the protagonist experiences a vague boundary between these two lives and goes through a blurred time

zone which is neither in nor out. Fourthly, "...the moment of liminality is anthropomorphically transgressive: it is a 'time of marvels' in which '[m]asked figures, representing gods, ancestors, or chthonic powers may appear in grotesque, monstrous, or beautiful forms'." Finally, a death scene is presented which can be evaluated as the start of a new beginning through which the biological system change direction in that the death announces a new birth(PARRINDER, 2005, p. 11). However, the felt consequences of global warming and the predictions of scientists have created an interest in natural phenomena and the possible future results of ongoing exploitation. Thus, the steps of dystopian hero experiences have changed such as; the first one becomes a natural disaster and the second one becomes a realization. Thirdly, the protagonist, individually, tries to find ways to get away from his/her trapped condition but, realizing that s/he cannot escape, then in the fourth step s/he tries to create a collective awareness. Finally, paying the penalty for the crime against nature and all the other creatures, on the behalf of humanity the hero of a dystopian novel reaches a solution or a glimmer of hope is presented at the end of the story. To sum up, it can be stated that dystopia generally creates a riddle which pushes the reader to solve it and find a lesson for humanity to learn(PARRINDER, 2005, p. 15). As a genre of fiction, dystopia handles people, unreal personas, and the relations between humans and it can be claimed that "...they are often overly zealous in their insistence on the necessity for happy endings, imagining deviant

rebels who beat the system, implausibly rescuing their central characters, and providing ‘hope’ in the persistence of utopian enclaves, the birth of children, and the like.” (Claeys, 2017, p. 489). As a matter of fact, this lesson is presented through the steps experienced by the protagonist and this human being undergoes the undesired future waiting for the rest of his/her species.

D.3.2.Nature

In dystopian novel, nature is both the victim of human and the avenging character of the story. The damage by a human is a kind of rape and nature uses its own power to take revenge from a human who is nothing more than a tiny creature if it is necessary to compare with nature. It is an undeniable fact that the current and possible future world is created by humankind since it has run short of the non-renewable sources for the sake of humanity’s comfort. Moreover, the inevitable outcomes of global warming such as; famine, floods, extreme imbalances in temperatures (abnormal heats or colds) are among the results of human deeds (Bhattacharya & Ghosh, 1992, p. 79). No matter how much people get rich, their greediness causes them to continue ax the resources which mean the future for their own existence. This will make world an uninhabitable place along with “a depletion of forest cover and ozone layers” (Bhattacharya & Ghosh, 1992, p. 79). Although recycling and reprocessing soft cans can be accepted as a way of struggle for nature’s well being, they are not enough to compensate the mistakes made by mankind (Weissman, 2000, p. 343). It can be alleged that the impoverishment of nature can

be regarded as the impoverishment of humanity (Morton, 2017, p. 119). In that sense, “Over the years we have destroyed enough to endanger our next generation less we now hope to leave something for them to save? The decision is ours and ours alone.” (Bhattacharya & Ghosh, 1992, p. 80). This message is one of the main targets of dystopian novels and humans are frightened through possible and the worst scenarios of the future world. While reading this kind of works, readers feel pity at first for themselves, but while reading they justify the deserved revenge of nature.

D.4. The Setting in Dystopian Novels

It is possible to assert that setting is the beginning point of each narration and it changes according to the target of the literary genre. In dystopian novels, new worlds are created and characters have torrid times. David Housewright states that a good setting needs to “transports the reader into these worlds and gives us a sense not only of whom the characters are that live there but why they behave the way that they do.” (“Wherever You Set Your Stories, There You Are”, n.d.). In other words, one of the main methods of dystopian novel setting is alienation which means that the novel concentrates on remote locations and near dates (Booker, 2019, p. 19) and it makes the plot more convincing. These locations and times are full of symbols that create a defamiliarization effect on the reader and enable a deep understanding of the environmental problems caused by mankind. On the other hand, the atmosphere is gloomy, darkened, “gritty, grim, and have a heavy focus on decay and loss” and also there are undesired

natural disasters such as “floods, tornadoes, and hurricanes” (Mesick, 2015). Namely, the places and dates play a significant role in shaping a traumatic setting in dystopian fiction.

D.4.1. Time and Place

In any sort of fiction “...time, like the narrator, is an artifice, an intention, something created according to the needs of anecdote, and never merely a reproduction or reflection of real time.”(Llosa & Liander, 2005, p. 133). In a dystopian novel, time is chosen from the near future and it is apocalyptic but generally there is a vagueness which scares its reader. There needs to be an effective narration to be able to give the essence of the dystopian idea. Therefore, “a literal ‘out of time’ experience” is created “in which the trauma of entry brings on a fainting fit and loss of consciousness” (PARRINDER, 2005, p. 13). In dystopian novels, there are wastelands which create the isolation feeling on the reader. Moreover, rivers are drouthy, buildings are collapsed, streets are empty, there are ruins everywhere, the air is smoky, the colors are dark, or everywhere is under water; in short, danger is everywhere.

E. THE INTERRELATION OF ECOLOGY AND DYSTOPIA

Recently ecology has, step by step, incorporated into its studying field several significant issues such as; human sciences, the rest of the creatures, the interrelation of all sorts of beings on the earth, particularly the intervention of human and a satisfying enhancement of the relationship between human and wildlife (Callenbach, *ECOLOGY*, 2008, p. 36). On the other hand, “Rapid advances in genetic research, the growth of the internet, and fears of pandemic viruses have each provoked a variety of responses in contemporary dystopian literature...” (Hughes & Wheeler, 2013, p. 3). In that respect, ecology works can be handled together with dystopian works as most of dystopian and ecology narratives portray the grim long term outcomes of human deeds. To analyze the contributions of ecology and dystopia to literature, it needs to be known that both of them are novel and critical approaches to the relationship between society and environment and these two literary genres have brought a new voice to the canon. In that respect, Eco-critics, who enquire the ecology fiction, commonly support the evolutive and climate discipline and especially concentrate on ecologic terms of biosystem relation, the resurrection of the environmental science, commanding nature and reducing polluting (Garrard, 2012, p. 80).

Ecology and dystopia depicts the earth on similar purposes now that the message underlying these genres is to demonstrate the relationship between man and nature and the limitless exploitation of human. They

try to warn humanity and evoke an “eco- political action”(Hughes & Wheeler, 2013, p. 6). Moreover, they have similar elements viewed from different aspects, and both of these genres are interdisciplinary which means they engage nature and humans in addition to equating them in point of rights. Not only ecology but also dystopia novels do apply; to biology sciences which present the necessity of the harmony of human and nature for the continuity of existence; to natural balance whose being or absence can affect the being or absence of all kinds of a creature; to technology which has changed and adds many developments to the planet but its being adopted by power holders is a threat for the weak ones; to literary figures such as metaphors and exaggerations which are used to objectify and illustrate the urgency of the course of events. Besides, the advancing technology gives way to artificial intelligence which seems beneficial for humanity. Yet, people are in a fright that one day they will overtake human beings and take control of all the systems. In that sense, the relation between dystopia and ecology is a kind of a necessity because

Within the cultural formation, literary works represent a strong connection not only to the sf genre tradition, but to biological sf, to dystopian critique, and to social commentary. The contemporary public interest in genetics and the posthuman can be noticed not just within the core of the genre, with its hard sf ecocriticism and vivid extrapolations of hybrid posthumanity, but also at the fuzzier edges, where delegates of the high cultural elite pick up on its themes and issues. (SCHMEINK, *The Anthropocene, the Posthuman, and the*

Animal, 2016, p. 71)

Furthermore, it can be claimed that "...the human relationship to the natural world has long been central to the dystopian imagination, and the eco-dystopian 'vocabulary' has been enlarged by more than merely climate change in recent years" (Hughes & Wheeler, 2013, p. 2). In addition to climate change, the elements and the processes of events in ecology and dystopia fictions are similar such as; wildlife, wilderness, human race, animals, plants, progress in technology and its effect on landscapes, climate, weather, and living creatures are issued from the political, ecological, and emotional points of views. To boot, it can be stated that human isolation, the otherness of nature, humorless characters, mutated creatures, diseases and more are among the elements of eco- dystopias. In other words, it can be claimed that. In many contemporary eco-dystopias, technological progress means both a movement away from and simultaneously a movement into or towards nature - away from nature-as-wilderness, but towards nature-as-garden, a constructed, mediated, engineered nature that is still essential to our definitions of urban space or technological utopia. Indeed, this reduction in scale is taken to extremes by a whole subgenre of dystopian narratives in which the contested ground of nature is entirely internalized, and the conflict between untrammelled wilderness and enclosed garden is reimagined as a struggle between 'natural' life and 'artificial' life forms. (Hughes & Wheeler, 2013, p. 3)

Likewise, ramifications of the environmental catastrophe and dual improvements are among the main objections of future real-like environmental scenarios. It can be alleged that "...the all-encompassing metaphorical figure for ecological interconnection is 'Nature's web'" which consists of "...the set of conditions, including climate, food, shelter and the numbers of competitors and predators, that makes it possible for a species to survive in an ecosystem" (Garrard, 2012, p. 12). Mutual benefits need to make it easier for all organisms living on and underground. However, one of these organisms, human thinks that control is in their hand and non-human organisms can be used limitlessly for the sake of the prosperity of humanity. It ought to be kept in mind that "...we are not aloof from our biosphere, however great our power to alter it; we are enmeshed within it. The decimation of plant and animal life entails the potential destruction of humanity." (Hughes & Wheeler, 2013, p. 4). The thoughtless activities of human need to be displayed and literature is one of the best ways to reach a wide audience. Ecology and dystopian fiction as literary products can be affirmed as the best tools to reach this aim because both of them are about human beings, animals, plants and the planet itself. As Gary Snyder states in his poem "The vast wild the house alone. The little house in the wild, the wild in the house. Both forgotten. No nature Both together, one big empty house" (2004a, p. 31) This poem can summarize the relationship between eco-fiction and dystopian novel better because there are ecological elements and a destroyed future all together in eco- dystopias.

E.1. The Impact of the Interrelation of Ecology and Dystopia on Contemporary Novel

E.1.1. The Windup Girl

At first, Bacigalupi has written a short story, more than a novella, which needs to be enlarged and become a well-plotted novel. This transformation has taken his five or six years. Since he lived in China for a while, he was affected by the culture and his work contains some figures of the Far East, for example; *The Windup Girl* is set up in Thailand. Yet, he is regretful that he could not highlight the positive sites of this beautiful country full of the warm-blooded public (Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). Moreover, Bacigalupi applies to artificial intelligence in his novel and this creation comes from some of his ideas about human nature. He puts forward his views on this subject in these sentences "I've always been interested in people who are required to serve someone else." and he continues "I think, at root, I'm interested in what makes us loyal – what binds us to other people."(Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). Genetically artificial character, Emiko is created on a real-life hostess whose behaviors attracted Bacigalupi's interest while he was having an international flight. He reveals his observations in these words "A Japanese stewardess caught my eye, because she was moving with a strange sort of herky-jerky motion. I almost thought she was acting a role because the movements were so robotically stylized. I couldn't

get the image out of my mind.” (Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). Therefore, he decides to apply these robot-like as a character in his story. In the novel, Bacigalupi combines and displays the probable results of the artificial intelligence and genetically modified agri-product which causes nothing more than harm to the system of the earth. As Lars Schmeink states *The Windup Girl* ...is the imagination of a critical dystopian future, extrapolated from our contemporary liquid modernity, in which the posthuman has become a tangible reality that is trying to establish a position in the ‘natural order’ and ultimately ends up threatening to replace the human completely. Both scenarios establish a world of rampant capitalism, of individualistic consumer societies, leading to a global ecological catastrophe, the development of transgenic species (across all biological domains), and ultimately the creation of a rival species of posthumans. (2016, pp. 72-73)

It can be figured out that Bacigalupi creates “diegetic worlds and the ecological catastrophe as a catalyst for changes in the concept of the post human.” (SCHMEINK, *The Anthropocene, the Posthuman, and the Animal*, 2016, p. 75). This combination makes this world inconceivable because it will be the worst scenario in which there are both ecological troubles and a possible fight against artificial intelligence which is created by humans.

In fact, Bacigalupi emphasizes that genetically modified food is distressing in many respects; the deficiency of information of

technology; the utilities of companies which are at variance with the expectation of societies; monoculture planting which is irrational; and corporations whose sole aim is their profits instead of the wellbeing of people (Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). Moreover, this food increases concerns because "...genetic modification will count as a portion of humankind's geological agency, as the genes we develop will spread in time and space beyond the confines of humanity as a species." (Selisker, 2015, p. 514). It can be inferred that the genes of human are also under danger of modification as genetically modified food will surround all around the world sooner or later and the changing eating habits will certainly affect human ecology. Furthermore, during an interview, Bacigalupi claims that human is exploiting the limited sources of the earth with a growing population and they are applying to genetically modified food to meet the needs of the huge population (Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). Even so, the world in the novel is mostly concentrated on energy and natural resources and their annihilation more than overpopulation issues. In brief, Bacigalupi uses the power of writing to depict the real face of hypercapitalist system and in order to achieve his aim he "remaps global capitalist geopolitics, interrogates the future of the nation-state in the face of transnational corporations, and explores the dynamic between capitalist commerce and ecological sustainability" (Hageman, 2012, p. 284).

The world in the novel is depicted as a place with experienced unbearable economic, political and ecological conditions. Annihilation of nonrenewable sources leads to drastic economical effects and a global crisis. Therefore, global interest has risen for genetically modified food and the governments try to patent their own new food. Yet, this causes wars for food and calorie companies to make every effort to ruin the unpatented food to gain the power in economies. It can be alleged that the world in the novel has “undergone ecological change due to rampant and unrestrained capitalism.” (SCHMEINK, *The Anthropocene, the Posthuman, and the Animal*, 2016, p. 75). However, there are rare places where these calorie companies cannot take control of the food and one of them is Thailand which tries to preserve their own genetic seeds safely. Still, there is a rat, Anderson Lake, who works with calorie companies to gain power on national seed banks and preserved food. Along with all these troubles, there is a power struggle in the country between ministries.

In addition to all the problems with food, global warming turns all the systems on earth upside down. It needs to be noticed that the world described in *The Windup Girl* is not settled totally on imagination because some of the stages have been witnessed such as “climate change” and “loss of biodiversity” while some are on the way such as “oceanic acidification”, “changes in land use”, and “chemical pollution” (SCHMEINK, *The Anthropocene, the Posthuman, and the Animal*, 2016, p. 76). Further, these changes trigger economic and

ecological catastrophes which result in “hypercapitalist exploitation of human life, which transforms the human into the inhuman.” (SCHMEINK, *The Anthropocene, the Posthuman, and the Animal*, 2016, p. 79). The novel’s end supports this notion because Gibbons promises Emiko that he will help her generation continue (Bacigalupi, *The Windup Girl*, 2010, p. 505). This end most probably will not be appreciated by people who share an anthropocentric view because it means a new era opens in which artificial intelligence products, in other words New People, will have an identity like a citizen and will have a voice in social life. To sum up, the genetic modification affects social and political life deeply and results in “disease outbreak, genetically programmed immunity” (Selisker, 2015, p. 506) and wars.

E.1.1.a. Human

Bacigalupi describes “the worst of humanity, extrapolated” from the real-life examples and his characters are “broken people” (Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). For example, Anderson Lake is a character who has undergone hard times when he has witnessed starving people. Yet, like all other humans, Anderson does not take lesson and he continues producing harmful stuff even if it can cost more than producing. This situation is stated in these complaint words “They're spending millions to produce trash that will cost millions more to destroy—a double-edged sword that just keeps cutting.” (Bacigalupi, *The Windup Girl*, 2010, p. 16). The exhausting energy sources, climate change, and plagues destroyed human life as well as the

system of nature (173). Moreover, the diseases change form, the agriproducts eradicate and this obliges governments to depend on the calorie companies which are producing patented modified food. Regrettably, these companies make a fast growth and it ends in worst and even Anderson realizes the frightening course of events. The scene is presented in this dialogue between Anderson and Akkarat

Anderson leans forward. ‘Finland was a tragedy, and not just for us. If the world is going to keep eating, we need to stay ahead of cibiscosis and blister rust and Nippon genehack weevil. It's the only way.’

‘You're saying that you yoked the world to your patented grains and seeds, happily enslaved us all —and now you finally realize that you are dragging us all to hell.’

‘That's what the Grahamites like to say.’ Anderson shrugs. ‘The reality is that weevils and blister rust don't wait. And we're the only ones with the scientific resources to hack our way out of this mess. We're hoping that somewhere in your seedbank we'll find a key.’

‘And if you don't?’

‘Then it won't really matter who runs the Kingdom; we'll all be coughing blood from the next mutation of cibiscosis.’ (Bacigalupi, *The Windup Girl*, 2010, pp. 217-218)

Even during the worst conditions, people are racist as it can be seen in the example of the character Tan Hock Seng who tries to regain his

prosperous life and family. He is an othered character because of his Chinese identity and he cannot do more because of his national identity; therefore, he regrets in these sentences “ ‘...we Chinese must stick together. Perhaps in Malaya we were still Hokkien, or Hakka or Fifth Wave, but here we are all yellow cards. I am embarrassed I cannot do more.’ ” (*Bacigalupi, The Windup Girl*, 2010, p. 39). It can be implied that being a Chinese, so-called a yellow card, puts these people on the back stages in the society. Besides racism, there is a fear of artificial intelligence so that New People can take the position of a human being in the hierarchy of life cycle. Probably; therefore, they behave Emiko, who is an abandoned windup girl by her Japanese owner, badly and insult her, even rape and assault her (*Bacigalupi, The Windup Girl*, 2010, p. 53). It can be observed that she is seen as imperfect and even Kannika calls her as “animal” to humiliate (*Bacigalupi, The Windup Girl*, 2010, p. 55). In that sense, Bacigalupi puts forward his thoughts on the murder crime committed by a human-made creature Emiko after being raped by Sombet and his men in these sentences

We all hit breaking points, moments when we decide to stop going along, and change paths. So much of the world wants us to obey and not make waves, to be good workers and consumers and soldiers and parents and children and what have you – even when it goes against our own best interest, and even the best interest of others. (*Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi"*, 2010)

Furthermore, Adam Roberts, while evaluating the attitude of Anderson toward Emiko, states that “I am not sure he quite gets the balance right between critiquing Emiko’s sexual objectification and simply reproducing it.” (2010). It is the shame of humanity but they produce this new humanlike windup girl to serve them both in daily life and sex life.

The human-centered ideas of people is characterized on the scientist character of the book, Gibbons, who is a geneticist forcing the limits of creation. He is depicted by Bacigalupi as “the ultimate pragmatist” because he observes the changes on the planet and he adapts the new system quickly. He applies his logic to be able to continue his life without any loss and this makes him strong. Moreover, he supports the idea that all the creative power is in a human’s hand and s/he is Godlike. Even he believes that human is God of all the other creatures. Additionally, he thinks that human has done what s/he can and “From now on, it’s adapt or die.” (Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). Bacigalupi’s claims can be supported by Gibbons’ thoughts on the ongoing situation in these sentences from the novel

‘The ecosystem unravelled when man first went a-seafaring. When we first lit fires on the broad savannas of Africa. We have only accelerated the phenomenon. The food web you talk about is nostalgia, nothing more. Nature.’ He makes a disgusted face. ‘We are nature. Our every tinkering is nature, our every biological striving. We are what we are, and the world is ours. We are its gods. Your only

difficulty is your unwillingness to unleash your potential fully upon it.’ (Bacigalupi, *The Windup Girl*, 2010, p. 3)

As Gibbons states the ecosystem unraveled and from now on the war of power between capitalists turns the earth to an uninhabitable place more than climate change or exhaustion of the sources since the greed of these people is the key words behind the exploitation of nature. As a result, governments try to keep safe their nations and Environment Ministry takes over responsibility but some authorities cannot overcome their greediness as it is stressed in this quotation from the novel

All life produces waste. The act of living produces costs, hazards and disposal questions, and so the Ministry has found itself in the center of all life, mitigating, guiding and policing the detritus of the average person along with investigating the infractions of the greedy and short-sighted, the ones who wish to make quick profits and trade on others' lives for it. (Bacigalupi, *The Windup Girl*, 2010, p. 174)

The worst truth is that ministries are supporting the eradication and keep silent instead of reacting for the sake of the public and nature. On the contrary, there are Jaidee and Kanya who are patriotic characters trying to save their homeland. As one of the officers of Environment Ministry, Jaidee, is decisive about protecting the seed banks, he is criticized in these words

He is a bully, he thinks sourly. Nothing but a bully walking amongst water buffalo, and though he tries to herd them with kindness, again and again, he finds himself using the whip of fear. The whole Ministry is the same—at least, those who still understand the dangers that they face, who still believe in the bright white line of protection that must be maintained. (Bacigalupi, *The Windup Girl*, 2010, p. 175).

Religious authorities are criticized as well, Bacigalupi illustrate the mission of Grahamites, which is a religious sect, in the novel in these statements “Grahamites, at root, are believers. All that’s good in that - in that they want to protect the natural world - and all that’s bad in that, because they do tend to get carried away and burn things down.” But he does not “view them as a commentary on religion per se,…” (Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). People are not aware that this can be the end and they are paddling at full speed to their own and The Grahamites who preach on the streets of Bangkok all talk of their Holy Bible and its stories of salvation. Their stories of Noah Bodhisattva, who saved all the animals and trees and flowers on his great bamboo raft and helped them cross the waters, all the broken pieces of the world piled atop his raft while he hunted for land. But there is no Noah Bodhisattva now. There is only Phra Seub who feels the pain of loss but can do little to stop it, and the little mud Buddhas of the Environment Ministry, who hold back rising waters by barest luck. (Bacigalupi, *The Windup Girl*, 2010, pp. 241-242)

The main idea is that people are consuming and polluting unconsciously and they do not concern about tomorrow. The obvious comparison between genetically modified food and Emiko's creation "draws our attention to how the seed companies' self-interest acts to the detriment of conventional plant and human life cycles. This infertility stands as a consequential—but once more an invisible—trait programmed by genetic modification." (Selisker, 2015, p. 506).

E.1.1.b. Nature

While working as an online editor of a journal based on environmental issues, Paolo Bacigalupi realizes that the future of the earth seems dark because of the corruption in nature. For instance, wheat rust can bring the end of the healthy and abundant food, and people will not be able to live independently from genetically modified food which is a production of monoculture food industry (Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). Additionally, the threat against agriculture Genetically Modified Food, which is one of the main ideas of the novel, needs to be questioned because it is used by most of the farming factories and countries. In other words, if the corruption of nature continues in this speed, the end of the humanity is not far. In that respect, it can be alleged that the foundation of "calorie companies" (Bacigalupi, *The Windup Girl*, 2010, p. 3) changes the whole agricultural customs because they produce and sell specialized seeds which end up with a great destruction on nature and human health. Especially, "Total Nutrient Wheat", "SoyPRO", and "HiGro

Corn” are used by “generippers” (Bacigalupi, *The Windup Girl*, 2010, p. 8) to threaten governments if they resist being the slaves of calorie companies. What is more, they corrupt the crop intentionally and then create their own healing curative which is called “kink-springs” (Bacigalupi, *The Windup Girl*, 2010, p.

8) containing calorie to strengthen the wounded part of crop. However, they noticed the harm they have caused on nature when they touch and taste the genetically modified food. For instance, when Anderson takes a fruit in his hand, he cannot link it with an kind of fruit or vegetable in his imagination or any sample in his archetypal memory as this genetically hacked fruit has lost its original form and taste like all other genetically modified food. This scene is represented in these sentences

The fruit's long hairs tickle his palm, challenging him to recognize its origin. Another Thai genehacking success, just like the tomatoes and eggplants and chiles that abound in the neighboring stalls. [...] Anderson turns the strange hairy fruit in his hand. It carries no stink of cibiscosis. No scab of blister rust. No graffiti of genehack weevil engraves its skin. The world's flowers and vegetables and trees and fruits make up the geography of Anderson Lake's mind, and yet nowhere does he find a helpful signpost that leads him to identification. (Bacigalupi, *The Windup Girl*, 2010, p. 2)

Furthermore, new animal species are created like “megodonts” and “cheshires” to provide service for human beings, but they lose control.

The megodonts are described as animals which have “enormous heads”, “prehensile trunks” and they “comprise the living heart of the factory’s drive system, providing energy for conveyor lines and venting fans and manufacturing machinery.” (Bacigalupi, *The Windup Girl*, 2010, pp. 11-12). Unfortunately, these huge animals are nothing more than danger for humankind because they have an immense body and they are genetically different from elephants. Bacigalupi explains why he uses megodonts in the story in these words “I wanted to illustrate the connection between calories and joules – the connecting tissue between food and energy- in this world. And, let’s face it, a giant elephant-like creature is pretty fun when it goes crazy in a factory.”(Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). Beside these tamed but still wild creatures, there are cheshires which can be identified as a kind of wild cat inspired by an imaginary creature. More importantly, the second creature is more harmful than the first one but the producers have created it as a birthday gift at first. The scene, when Hock Seng realized the reason behind the creation of this cat, is given in these sentences in the novel Hock Seng has heard that cheshires were supposedly created by a calorie executive—some PurCal or AgriGen man, most likely—for a daughter's birthday. A party favor for when the little princess turned as old as Lewis Carroll's Alice.

The child guests took their new pets home where they mated with natural felines, and within twenty years, the devil cats were on every continent and *Felis domesticus* was gone from the face of the world,

replaced by a genetic string that bred true ninety-eight percent of the time. The Green Headbands in Malaya hated Chinese people and cheshires equally, but as far as Hock Seng knows, the devil cats still thrive there. (Bacigalupi, *The Windup Girl*, 2010, p. 38)

Moreover, this new species creates fear as these “devil cats” are “clever, thriving in places where they are despised. Almost supernatural in their tenacity.” and the direst detail about these supernatural cats is that “Sometimes it seems that they smell blood before it is even spilled. As if they can peer a little way into the future and know precisely where their next meal will appear.” (Bacigalupi, *The Windup Girl*, 2010, pp. 37-38). This new species is nothing more than a danger for all the other creatures in nature and humans because this devilish cat is “shimmering and shading through darkness” and “suddenly entire classes of animals are wiped out, unequipped to fight an invisible threat.” (Bacigalupi, *The Windup Girl*, 2010, p. 165). In that sense, Bacigalupi expresses the reasons why he applies cheshires in his novel in these sentences “Cheshires were a way to illustrate the unforeseen consequences of an invasive species. Something that initially seems harmless and entertaining turns to have ecosystem consequences as it tears through the songbird population” (Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). As Timothy Morton claims in *The Ecological Thought*, “ ‘What’s wrong about genetic engineering is that it turns life forms into private property to enrich huge

corporations.””(Hageman, 2012, p. 294).⁵ It can be inferred that the genetically modified creatures are produced for the benefits of a human being but the engineers have gone so far that these private property life forms have changed the cycle. It needs to be known that nature strikes back sooner or later; in other words, human beings are digging their own graves by polluting environment, changing the cycle, gene-engineering and more. As it is stated in this quotation

In modernity, the Nature concept begins to assert itself in contradistinction to the accelerating logistics of agriculture that gave rise to the Agricultural Revolution and subsequently to the Industrial Revolution. There is an often-noted cultural irony here. Using Nature to combat industry is like using a fake medieval weapon against a modern machine gun. This flimsiness should not lead us to see the Nature concept as ineffective. (Morton, 2017, p. 118)

It can be inferred from the quotation that the more corruption caused by human will ends up with severer consequences. This can be evaluated as a kind of revenge taken by nature in return for all devastating deeds of humankind.

E.1.1.c. Time and Place

The story takes place in a distant future, in 23rd-century, two hundred years later from now. Taking into consideration that we are living in 21st-century, the time of the novel is not so far that it scares reader

⁵ Quoted from “The Challenge of Imagining Ecological Futures: Paolo Bacigalupi’s *The Windup Girl*” by Andrew Hageman.

because such a future is inevitable. The future described in the novel is commented in these sentences *The Windup Girl* imagines a very alternative future in which computers and networks are largely irrelevant. The only computers as well as the energy resources necessary to run them in the novel belong to the Thai government, which strictly limits their use. These shifts not only displace the conventional locations of globalization, but also reconfigure urban-rural dynamics—Iowa and the Thai countryside with Bangkok—in a vision of total interconnectedness that maintains residual structural inequalities. (Hageman, 2012, p. 287).

Moreover, this future is a possible one and the advancements in technology can be regarded as a sign for a similar end. In that respect, Bacigalupi has composed “a future populated by posthuman beings whose subjectivity undermines the ontological stability of “human beings” in the novel.” (Hageman, 2012, p. 293).

On the other hand, Bacigalupi states that he applies broken worlds in his works (Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). The novel takes place in Thailand which is a country Bacigalupi has lived before and applied in his novel as a country trying to guarantee its agriculture future by taking precautions. It is obvious that “Bacigalupi’s setting selections displace the usual centers of action and behind-the-scenes action-driving centers in what amounts to a re-mapping of post-Expansion Earth.” (Hageman, 2012, p. 285). For example, the world

in the novel is a broken and demolished place where global warming has caused “the rising sea levels” and a necessity to built “the dikes and levees” (Bacigalupi, *The Windup Girl*, 2010, p. 173). These precautions are taken to keep Bangkok safe because it is under the danger of drowning. In other words, the collapsed city is described in these words “The sun peers over the rim of the earth, casting its blaze across Bangkok. It rushes molten over the wrecked tower bones of the old Expansion and the gold-sheathed *chedi* of the city's temples, engulfing them in light and heat.” (Bacigalupi, *The Windup Girl*, 2010, p. 87). Additionally, Bacigalupi describes The Quarantine Department in the novel as “a frightening place” and he adds his opinions “I don’t think it’s looked down so much as feared, because of the kinds of genetic material it works with.” also, he asserts that some of the Quarantine Department labs are illustrated according to the real labs of (CDC), the Centers for Disease Control and Prevention (Bacigalupi, "The Author With The Unpronounceable Name: An Interview With Paolo Bacigalupi", 2010). Moreover, the factory of Anderson is illustrated in these sentences

A burst of pale filtering dust kicks into the room as a worker stumbles through the curtains from the fining chamber. His dark face is a sweat-streaked combination of grit and palm-oil spray. The swinging curtains reveal a glimpse of his colleagues encased in pale dust clouds, shadows in a snowstorm as the kink-spring filament is encased in the powder that keeps the springs from locking under intense compression. All that sweat, all those calories, all that carbon

allotment— all to present a believable cover for Anderson as he unravels the mystery of nightshades and *ngaw*. (Bacigalupi, *The Windup Girl*, 2010, p. 16)

According to this depiction, it is obvious that this factory ought to be shut down but Anderson is sitting in the catbird seat. Therefore, anybody cannot claim that his factory is producing unhealthy kink-springs which are believed to contain calorie the crops need.

E.1.2. The Water Knife

The novel is the enlarged version of “The Tamarisk Hunter” which was published in 2006, in *High Country News* (Burdick, 2015). Dave Burdick states his opinions on the novel in this quotation “This is a rich and, yes, gritty world from a smart author who knows the American Southwest well and knows readers better.” (2015). The root cause of this assessment is that the autobiographical effect of Bacigalupi and his environmental sensitivity can be felt in his works and it appeals to his readers. Moreover, in *The Water Knife*, the “Characters dragged together by fate make bargains with each other and with themselves, and sometimes manage to rise to the level of anti- hero. So it’s not all bleak. Like a foreseeable mega-drought would be, at first.” (Burdick, 2015). It can be claimed that there is an unseen net connects the characters around the disasters they face throughout the story. To sum up, it can be affirmed that there is a power struggle similar to big fish small fish among the characters in the novel. Three protagonists who are involved deeply in Phoenix, one

of them is Mexican born Angel Valenquez who is a gang member working for Catherine Case and stealing water rights from different countries to sell and gain power in a bitter life surrounded by cruel water hunters. Actually, the name of the book comes from here because these spies like Angel are called as Water Knife in the novel. On the other hand, Lucy Monroe is the other protagonist who is a journalist trying to illustrate the water wars with her news but she is trapped in the area. She tries to do her best for the local people who are suffering from drought. The last one and the most vulnerable one is Maria Villarosa who represents the weak people in the game trying to have a better life as a woman but she is one of the victims of the system.

The world created in the novel is “abnormal to live” and “horrific conditions of starvation and suffering” are the clues of dystopian novel (Sheppard, 2019, p. 6). Also, the story consists of action and every stage creates excitement for the next step. It can be observed that “There’s a little more techno-jargon, there are explosions and helicopters, breathless action and genuine suspense – even handy places a studio could score a buck or two from product-placement deals with Tesla and others.”(Burdick, 2015). Moreover, the catastrophic drought, which can be regarded as an ecological response, frightens not only the citizens but also the INS and executives. Therefore, death and hopelessness can be counted among the main themes of the novel. Especially “altruistic politicians” die and nobody cares about them because the money talks (Sheppard,

2019, p. 7) and if people do not have money there is no importance of their existence on this world. Unfortunately, the lasting competition between governments has devastating consequences both on humans and nature. Thereby, the power holders, who have lived, had and spent the best, are replaced by water holders in the story. It means that the source of power changes in accordance with the conditions and as a result, the people who desire to gain power need to have water instead of money any longer.

Social media is applied to normalize the events and therefore it can be claimed that "...it is no surprise the world depicted in the *The Water Knife* would perform the normalization of horror through the Twitter post of its suffering citizen. This is a critical reflection of the armchair political protests seen in present-day social media." (Sheppard, 2019, p. 9). Moreover, Bacigalupi makes use of social media comments and hashtags in the novel in order to support his claims for the future (Bacigalupi, *The Water Knife*, 2016, p. 28). Besides, the media is used as a tool to deceive the public and convince them that all of them together with power holders are in the same boat whereas people are suffering both from drought and unbearable living conditions. Similarly, the technology is at the service of the power holders.

Bacigalupi tries to evoke awareness on social and political conflicts and utilities which will bring the end of humans and nature in the near future. Therefore, his story ought to affect its reader with realistic details which contain the exact numbers and statistics

applied to make the novel more factual (Bacigalupi, *The Water Knife*, 2016, p. 9). Even the end of the book excites reader when Angel, Lucy and Maria argues and fights for water rights which means more than only a paper for all living creatures in the area. Dave Burdick states that “...In *The Water Knife*, half the battle is fighting, the other half is winning and knowing is just knowing.” (2015). It can be implied from this quotation that authorities who know of the water rights have the power in their hands. To summarize, it can be deduced that water is life, prosperity, money, work, and treasure. Briefly, the books puts forward that water means everything for living creatures and its lack can cause great disasters such as drought, fires, deaths, storms, migrations and politics will shape on water. In that respect, the novel can be assessed as a kind of warning text whose author is aware of the forthcoming danger.

E.1.2.a. Human

Even in the hardest conditions the water rights cannot be shared and anyone does not think of nature and other creatures but for their own benefits. The greediness of people prepares their end with the beginning of drought. In that respect, Lucy states her regrets with these words “I think the world is big, and we broke it.” and she feels remorse for doing nothing in this sentence “How we saw what was coming and didn’t do anything about it.” (Bacigalupi, *The Water Knife*, 2016, p. 421). Further, human beings have been unwittingly digging their own graves; however, they are not aware of this grim reality. Unawareness of humanity has caused unrecoverable incidents;

for instance, Toomie admits how he and other people have been mistaken and cannot estimate this end. He states “I thought we could keep going like we were.” (Bacigalupi, *The Water Knife*, 2016, p. 113). Yet, every pleasure has a price and they have overused nature whose resources run short. As a result, there is a water trade throughout the novel and Maria is one of these traders trying to sell water to pay her debt. Her miserable living condition is summarized in this sentence “It was almost like buying futures” (Bacigalupi, *The Water Knife*, 2016, p. 56). It can be implied that people have sold their future for a low price in the olden days, when the water supplies have been abundant and nature has been generous, but now they are buying it for high prices.

Politics and state utilities affect people in all aspects of life. In that sense, as long as the politics of the state are shaped on water, people go blind and water wars are inevitable. For instance, one of the water holders, Catherine Case has meetings with “...bald bureaucrat guys, city water managers, Bureau of Reclamation, Department of the Interior”; ironically, they gather and exchange opinions on “...acre-foot and reclamation guidelines and cooperation, wastewater efficiency, recycling, water banking, evaporation reduction and river covers, tamarisk and cottonwood and willow elimination.” as it is stated in the novel “All of them try to rearrange deck chairs on a big old Titanic.” (Bacigalupi, *The Water Knife*, 2016, p. 14). In fact, they seem as if they were trying to find solutions but they are not aware of the fact that they are the reason for all this disaster.

Depending on politics, different kinds of occupations occur in hard times as water lawyers. Likewise, there are water knives who can kill, steal, damage, and even die in order to have the water rights for their employers (Bacigalupi, *The Water Knife*, 2016, p. 280). As a realist journalist, Lucy criticizes Angel's occupation, water knife, with these trenchant words "Live by the gun, die by the gun, right, mijo? You make a living cutting people's water, at some point, the scales got to balance out."(Bacigalupi, *The Water Knife*, 2016, p. 442). Her criticism can be supported by an example from the novel when Angel and Simon Yu, a bureaucrat, argue on the water rights and Angel commands him to shut down the water, Yu resists giving the reason that thousands of people will be suffered if he cuts off the water. Thereupon, Angel accuses them stealing Nevada's water and states his defiant words "If your people are careful, they can live on buckets for a couple of days, till they clear out." (Bacigalupi, *The Water Knife*, 2016, p. 17).It can be inferred that the survival of the fittest process works in the story as people are left alone by the water holders and water knives to struggle against the lack of water and who can resist more will survive.

During hard times humans are not human anymore and the disasters turn human to another creature which is blind, selfish, merciless and brutal. Therefore, people cannot trust each other and it is like a hunting party in which people attack and kill each other for the sake of water which accompanies money and power. It is pathetic but right that "Some people had to bleed so other people could drink."

(Bacigalupi, *The Water Knife*, 2016, p. 443). In other words, the reality of human character is presented through these sentences “...when people lost hope, they sometimes lost their humanity, too. Desperate people did desperate things, became avatars of unexpected tragedy.” (Bacigalupi, *The Water Knife*, 2016, p. 189). It can be alleged that people are capable of doing anything in order to have water just like Maria who sells her body for the sake of money to pay her debt to water holders (Bacigalupi, *The Water Knife*, 2016, p. 215). Her behavior can be questioned but cannot be condemned as her first needs are foreground. In fact, human beings can think about luxury as long as their first needs are compensated but in the book the brands like “Prada and Dolce and Gabbana, Michael Kors, YanYan -all that kind of stuff” lose their value and they are not more valuable than a bottle of water (Bacigalupi, *The Water Knife*, 2016, p. 288). Even racial discrimination does not work anymore as the superiority does not come with the color of skin, money or body strength but only by water.

There is a desperate longing for rain; for instance, when Lucy wakes up, “she was new and clean and lighter than air, and she sobbed with the release of it” expecting that it is raining because there is a noise outside like drops of rain hit the window (Bacigalupi, *The Water Knife*, 2016, p. 23). Yet, it is just a dream and it will be a dream as long as the needed action is not taken by humanity to prevent the drought. Moreover, the feelings “Godwater”, the name used for rain, evokes and the longing for rain in her dream are described with these

words

The dream seemed so real: the rain pouring down; the softness in the air; the smell of plants blossoming. Her clenched pores and the tight clays of the desert all opening wide, welcoming the gift- the land and her body, absorbing the miracle of water that fell from the sky. Godwater, American settlers had once called it as they invaded slowly across the prairies of the Midwest and then pressed into the arid lands beyond the Rocky Mountains. (Bacigalupi, *The Water Knife*, 2016, p. 23)

In fact, this dream is not only Lucy's but also all humanity's dream and she wakes up to the reality when she feels her cracked and broken lips (Bacigalupi, *The Water Knife*, 2016, p. 24).

People even the meteorologists are hopeless since there are not any records for good news even possibilities. Drought as a word used for the current situation in the novel, is criticized as "...drought implied that drought could end; it was a passing event, not the status quo" (Bacigalupi, *The Water Knife*, 2016, p. 30). However, the infinite dryness creates despair and makes self-centered humans more brutal and egocentric. When water does not flow, blood flows and the land is watered with blood and this is criticized in the book with this sentence "It never rains in Phoenix, except when it's raining bodies." (Bacigalupi, *The Water Knife*, 2016, p. 245). For example, there is a dead body of a teenager girl lying in mud-covered by dust and a child's body which is a delicious meal for hungry dogs. This kind of

death makes it difficult to bear the fear of death, and even some of them think it is a sort of salvation. "...maybe she's glad she ain't here. Maybe she's glad she finally found a way out of this damn place." (Bacigalupi, *The Water Knife*, 2016, p. 77). The death bodies depicted in the book creates a minimization of hope. Therefore, mass deaths normalize and are not shocking anymore that "...bodies lay in bags, long rows of people whose journey had ended. Rows and rows of bodies, waiting for guardians to bury them." (Bacigalupi, *The Water Knife*, 2016, p. 103). This normalization creates insanity and people lose their desire and power to struggle for a better life.

The disaster results in loss and damage of human health which is an expected consequence of such a dry air. The inevitable and pathetic effects of this polluted air on Lucy, on behalf of all other people, are depicted in the novel with these words

She coughed into her hands. Last night's storm had messed with her chest more than usual, bits of dust burying themselves deep in the dead-end branches of her lungs. She was coughing up blood and mucus again. More and more, the blood was a common thing that they never spoke about (Bacigalupi, *The Water Knife*, 2016, p. 44).

It can be observed that the health conditions are worsening and there is no way to escape. The lung diseases are common and Lucy like all other people tries to protect herself against dust, wildfire smoke and valley fever but she cannot prevent "invisible airborne *Coccidioides* fungi". Thereby, after a while the acceptance arises because "This was

her life. A dry hacking cough was simply part of that.” (Bacigalupi, *The Water Knife*, 2016, p. 81). Therefore, even if the masks cannot serve the purpose fully, people have to wear filter masks to protect their lungs from burning that much. In time, different illnesses exist and spread rapidly that “Hantavirus, valley fever, and the common cold didn’t stand a chance.” (Bacigalupi, *The Water Knife*, 2016, p. 102). It can be understood from most of the statements in the novel that people are hopeless and wretched. When Angel looks at the dying city from the window “Watching crowds and the clubs down on the wannabe Vegas strip. People pretending they had a life. People scrambling and wishing for a future that was already out of their reach.” (Bacigalupi, *The Water Knife*, 2016, p. 171). It can be inferred that even a water knife is hopeless about the future of the earth and he pities on people who have a bit of hope for the future.

E.1.2.b. Nature

The drought is like a destructive response by nature to humans because water sources are polluted and wasted by humans as if they were unlimited. The forests are cut but it is forgotten that they attribute to the water supplies as well. It is an undeniable fact that people can live for a long time without food but they cannot endure thirst. Therefore, drought or dryness is a frightening scenario for reader. As a result of drought, people have to fight against numerous disasters such as fires, starvation, mass animal deaths and dusty air. For example, in the novel fires surround the forests and leave nothing behind, and sky is not as blue as before because of the burning woods.

When “Lucy smeared muddy sweat off her brow” she “wondered if she even knew what true blue looked like anymore.” In the fact that the color of the sky can be described no longer as blue, tan or gray because “Dust eternally hazed the air here, and if not dust, then the gray smoke of California forest fires.” (Bacigalupi, *The Water Knife*, 2016, p. 82). It can be claimed that people damaged nature so seriously that talking about blueness of sky, clean air or oxygen is not possible any longer. On the other hand, the heats are so unbearable and exhausting that plants try to reach every drop of water to survive as it is depicted in the book

Here, plants spread their roots wide and shallow, starved for every drop. Their saps crystallized to hard shellac, fighting to keep every molecule of moisture from evaporating. Leaves strained up into the unforgiving sky, shaped to catch and channel any rare drop that might happen to fall upon them. (Bacigalupi, *The Water Knife*, 2016, p. 97)

The balance of nature is overturned by humankind and their interference changes the running of the machine. If they want to have the same balance back, they need to rearrange “software and water flows and population” (Bacigalupi, *The Water Knife*, 2016, p. 111). Besides, they have to point out the harmony between animals and plants; as well as cleaning the water and recycling it to be used in greenhouses. In other words, Toomie reminds Maria that they cannot perform what nature does in its own system by their machines or filtering systems and he states that

You run black water down through filters and mushrooms and reeds and let it into lily ponds and carp farms and snail beds, and by the time it comes out the other end, that water, it's cleaner than what they pump up from underground. Nature does all the work, all the different little animals working together, like gears fitted inside an engine. Its own kind of machine. A whole big living machine. (Bacigalupi, *The Water Knife*, 2016, p. 111)

It can be claimed that the broken machine takes revenge with disasters, extreme heats, wild animals which have no way except eating dead human bodies to survive. Actually, people are not aware of their own species that the rotten human bodies are on streets serving a meal to wild dogs and coyotes (Bacigalupi, *The Water Knife*, 2016, p. 383).

Animals are the victims who suffer from the results of human activities and deeds. One of these victims, the howling dog, will probably have died in the following morning as a result of Big Daddy Drought in the novel (Bacigalupi, *The Water Knife*, 2016, p. 24). It can be observed in the novel that animals are manipulated by a human; for instance, even in the worst condition the bad guys in the story use hyenas, these wild animals, to protect themselves, to incarcerate Maria in and to threat weak people (Bacigalupi, *The Water Knife*, 2016, p. 155). It can be concluded that people abuse animals for the sake of their selfish desires. They are used as pets; notwithstanding, their eyes are full of revenge as if they knew that the reason behind this drought is mankind. While planning running away from the place

she is kept without being eaten by hyenas, “This is their world, Maria realized. The broken Phoenix suburbs were their promised land. They didn’t fear the lack of water. They simply waited behind their fences for the time when they would inherit the earth.” As if they were telling behind the cage with their yellow eyes that “We are not like you, sister. We don’t need water. We need blood alone.” (Bacigalupi, *The Water Knife*, 2016, pp. 160-161). This can be commentated as a kind of revenge wished to be taken by these wild animals on behalf of animal kingdom.

E.1.2.c. Time and Place

The time of the novel is not specified but it is clear that the events are happening in sometime shortly. Yet, the wasteful and careless behaviors of humans show that such an end is inevitable. In *The Water Knife*, nature events occur in an extended period of time and people are not aware of the possible consequences of their activities. As it is written in the novel, “Everyone knew the place was dying, but slow death didn’t attract attention.” (Bacigalupi, *The Water Knife*, 2016, p. 136). Moreover, while Lucy and Angel have a conversation on their end, their future and what kind of interpretations will be made after they die out, Lucy states “It makes you wonder what people will call us when archeologists dig us up in another couple of thousand years” and she asks him these questions “Will they have some word for us? For this time period? Will we be Federalists, because the country was still working? Or is this the Decline of the Americans?” and Angel worries that maybe the next generations will call their hard times as

“Dry Time” (Bacigalupi, *The Water Knife*, 2016, p. 421). Calling this period dry times instill fear on the reader.

The story takes place in American Southwest and there are water wars among Colorado, Las Vegas, Mexico, Arizona and Phoenix. On the other hand, there is a longing for old days and old places such as Hanging Gardens of Las Vegas mentioned in the novel. To boot, many real location names mentioned in the book such as; Blue Mesa Dam, Flaming Gorge Dam, Morrow Point Dam, Soldier Creek Dam, Navajo Dam, Glen Canyon Dam, Hoover Dam, Lake Mead, Lake Powell, Lake Havasu, Colorado River, and Carver City. In the novel, cities are invaded and control is taken by power holders who are water holders as well. Phoenix, several cities in Texas, Alabama, each seaside city around the world, and Las Vegas are drying in addition to several natural disasters such as “...climate change and dust storms and fires and droughts...” (Bacigalupi, *The Water Knife*, 2016, p. 169). During hard times, people want to live in places with abundant water supplies. However, in the novel some places are better to live and as Mike reminds Maria that “...it’s not all milk and honey across the border,” (Bacigalupi, *The Water Knife*, 2016, p. 217). Nevertheless, the only way is considered to escape from this damned place to somewhere else. The main reason behind this idea is that there is nowhere to live safely and there is chaos in the streets.

E.1.3. The Drowned World

James Graham Ballard's position in his writings as an author is neutral now that he tries to make his reader feel the formidable outcomes of human deeds and he successfully represents his views through his fiction. In this regard, Douglas Reed states that "Ballard can be marvelously destructive in his dreamscape visions of global attrition. There are certainly no obvious Utopias in his writing. Yet he doesn't see himself as a depressing and morbid prophet."(Ballard, "Ballard At Home", 1971). In that sense, he applies to water as not only the devastating but also the constructive element of his book *The Drowned World*,1962 (Rossi & P., 1994, p. 87). As a result, the novel is settled on "post-apocalyptic spaces" and drowning as it can be understood from its name (Beckman, 2017, p. 65).This work can be asserted as a novel based on social regression or in other words de-evolution issues (Ballard, "Ballard At Home", 1971).Moreover, the novel is constructed as "...the human world, overflowed by water and jungle owing to a sudden and dramatic meteorological change." and Ballard involves the reader in an "asphyxiating atmosphere of the dead city transfigured into jungle" (Rossi & P., 1994, p. 81).In fact, the book is described as a piece of fiction on "situations of disintegration" in which the main character is the earth which is demonstrated as a frustrated "organic entity" doing the worst to take revenge from the last people on the planet in the last minutes of its own existence, in other words, just before the earth die out."(Ballard, "Ballard At Home", 1971).In other words, Ballard successfully "...

exemplify how literature can contribute to an imagining of a more nuanced ecology.” (Beckman, 2017, p. 77). It can be alleged that he threatens humanity through a possible future constructed by mankind.

In *The Drowned World*, the average temperature around the Equator is 180 degrees and it is climbing, also glacial melting at the polar is so fast that “Europe is ‘a system of giant lagoons’, the America Midwest is ‘an enormous gulf opening into the Hudson Bay’, and the global population (down to five million) huddles within the Arctic and Antarctic Circles (where the thermometers, for now, record a ‘pleasant’ eighty- five).” (Ballard, *The Drowned World*, 2014, p. 2)⁶. It can be inferred that J. G. Ballard represents his views on the global warming and its possible consequences through this novel. Furthermore, “Ballard's solitary protagonists traverse liminal states, often as psychological as physical, in which civilization recedes to the status of memory, and existence comes to be dominated and defined by the environment and its monothematic transformation.” (Clarke, 2013, p. 7). For instance, the protagonist of the novel, a marine biologist, Robert Kerans is one of the last guests of the hotel, as one of the last five million inhabitants, and he works with a group of scientists. Actually, living on a testing station is a difficult duty, yet Keran and Bodkin try to do their best to map the “shifting keys and harbours” and to relocate the remained inhabitants. During these studies and “In the latter task he often needed Kerans’ help, for most of the people still living on in the sinking cities were either

⁶ Quoted from the Introduction by Martin Amis in *The Drowned World* published in 2014

psychopaths or suffering from malnutrition and radiation sickness.” (Ballard, *The Drowned World*, 2014, p. 12). At first sight, these scientists seem to search for solutions for the results of their own mistakes but there is nothing to do from now on. Even they are aware of the fact that they are not innocent and they will suffer the consequences of their past. Throughout the story these scientists and inhabitants of the city have experienced extreme heats, encountered mutated animals, witnessed diseases such as skin cancer, tried to survive among the giant creatures and had frightening dreams which consist of archaic memories. At first “Kerans and later Strangman and Bodkins come to realize, the increase in temperature is not a symptom of climate upheaval; climate upheaval is itself a symptom of devolution, which is the underlying cataclysm.” (Clarke, 2013, p. 9). At the end of the story there is a resolution, the level of water decreases and a ray of hope appears.

E.1.3.a. Human

It can be claimed that human is a kind of disaster since most of the natural phenomenons come out or their being is fastened by the disastrous actions of humankind. In other words, as David Weissman states “Ice ages, tornadoes, and meteorites also have environmental effects. Like them, we humans are a large-scale ecological disaster; though we, unlike them, have an excuse: we are self-valorizing, while other things have instrumental value only.”(2000, p. 343). However, the earth cannot adapt to the extreme hot air and raising water levels leads to destructive floods which leave no place to live for human.

This is a kind of punishment by environment as a response to people who underestimate the devastating power of nature. The destructive results of global warming affect not only the earth but also the creatures living on it inclusive of humans. Extreme heats make it impossible for human beings to survive

All over the world, mean temperatures rose by a few degrees each year. The majority of tropical areas rapidly became uninhabitable, entire populations migrating north or south from temperatures of a hundred and thirty and a hundred and forty degrees. Once-temperate areas became tropical, Europe and North America sweltering under continuous heat waves, temperatures rarely falling below a hundred degrees. (Ballard, *The Drowned World*, 2014, p. 21)

No matter how they try to endure, human characters in the novel are emotionally, physically and psychologically affected. It is understood that Keran gives in through these statements “Perhaps these sunken lagoons simply remind me of the drowned world of my uterine childhood-if so, the best thing is to leave straight away. Everything Riggs says is true. There's little hope of standing up to the rainstorms and the malaria.”(Ballard, *The Drowned World*, 2014, p. 28). The possible consequences, which make living difficult even impossible, and their influence on human are stressed in *The Drowned World* in detail. For instance, the physical effects on the protagonist are presented in these words

Although he was only forty, Kerans' beard had been turned white by the radio- fluorine in the water, but his bleached crew-cut hair and deep amber tan made him appear at least ten years younger. A chronic lack of appetite, and the new malaras, had shrunk the dry leathery skin under his cheekbones, emphasising the ascetic cast of his face. As he shaved he examined his features critically, feeling the narrowing planes with his fingers, kneading the altered musculature which was slowly transforming its contours and revealing a personality that had remained latent during his previous adult life. Despite his introspective manner, he now seemed more relaxed and equable than he could remember, his cool blue eyes surveying himself with ironic detachment. (Ballard, *The Drowned World*, 2014, p. 11)

Besides, the physical conditions force humankind that hot air burns their skins like a piece of fire (Ballard, *The Drowned World*, 2014, p. 139). Further, the extreme heats and radiation cause déjà vu, primitive and organic memories, and alarm the IRM in dreams and this affects human psyche deeply. To illustrate the importance of the situation Dr. Bodkin applies these sentences

This afternoon I may have been taking a risk with Hardman, using the heater to simulate the sun and raise the temperature well into the 120's, but it was worth a chance. For the previous three weeks his dreams were almost driving him out of his mind, but during the last few days he's been much less disturbed, almost as if he were accepting the dreams and allowing himself to be carried back without retaining any conscious control. For his own sake I want to keep him awake as

long as possible-the alarm clocks may do it. (Ballard, *The Drowned World*, 2014, p. 45)

It can be inferred that they are under the risk of dying just because of the dreams they have. These dreams play with their reality perception and; therefore, they are trying to stay awake. Further, Dr. Bodkin shares his ideas on the dreams and nightmares which surround their real life via these sentences

The innate releasing mechanisms laid down in your cytoplasm millions of years ago have been awakened, the expanding sun and the rising temperature are driving you back down the spinal levels into the drowned seas submerged beneath the lowest layers of your unconscious, into the entirely new zone of the neuronics psyche. This is the lumbar transfer, total biopsychic recall. We really remember these swamps and lagoons. After a few nights you won't be frightened of the dreams, despite their superficial horror. (Ballard, *The Drowned World*, 2014, p. 74).

When Kerans asks about the dreams, actually nightmares, Beatrice has she shrugs and indifferently says "Jungle dreams, Robert," she mumbles equivocally "I'm learning my ABC's again. Last night was the delta jungles." Giving a cheerless smile, Beatrice adds "Don't look so stern, you'll be dreaming them too, soon." (Ballard, *The Drowned World*, 2014, pp. 50-51). It can be implied that they are accustomed to the nightmares and having these dreams is inevitable.

The last human beings become alien to the world they were born and

the unbearable conditions make them long for the old days. One of the last inhabitants, Dr. Kerans gets bored as well and Sometimes he restlessly made a few entries in his botanical diary about the new plant forms, and during the first weeks called several times on Dr. Bodkin and Beatrice Dahl. But both were increasingly preoccupied with their own descents through total time. Bodkin had become lost in his private reverie, punting aimlessly around the narrow creeks in search for the submerged world of his childhood. (Ballard, *The Drowned World*, 2014, p. 84)

Not only Kerans but also Beatrice is bored with the unpleasant incidents and when Kerans try to warn her against excessive use of alcohol, she states that “I know. Alcohol kills slowly, but I’m in no hurry. Go away, Robert.” (Ballard, *The Drowned World*, 2014, pp. 50-51). It can be interpreted that she is despaired, aimless and hopeless as a result of the hard days they have experienced. It can be asserted that the last inhabitants are aware of the fact that the end is soon and; for example, Beatrice insists on staying and she is ready for any kind of sacrifice as a part of their job but perhaps she does not want to see the fact that the end is inevitable (Ballard, *The Drowned World*, 2014, p. 27). After Beatrice refuses to go with Dr. Kerans and Bodkin, they try to account how long the stock will endure but they notice that there have remained three month or at most six month stock. However, they are aware of the fact that the last inhabitants of the planet need to store to be able to survive (Ballard, *The Drowned World*, 2014, p. 80). Even though Dr. Kerans knows that there is not a sincere and real relation

between them and Strangman, he asks whether he will leave them or not. Strangman protests in these words “Kerans, of course not,” and he continues “We've only just got here.” then he continues his speech wisely, “where would we go? There's nothing much-left now-I can tell you, I sometimes feel like Phiebas the Phoenician. Though that's really your role, isn't it?” (Ballard, *The Drowned World*, 2014, p. 116). It can be understood from what Strangman emphasizes that there is nowhere to go and no choice to make.

On the other hand, when Dr. Alan Bodkin expresses his opinions on the mutation he alleges that human as the most significant creature on earth can be subject to the mutation process as well; Dr. Kerans makes fun of him because claiming mutation of human means a transformation from Homo sapiens into “Cro-Magnon and Java Man” and eventually to “Sinanthropus”. Then, Dr. Bodkin agrees on the same point and states “Though obviously after two or three hundred million years Homo sapiens might well die out and our little cousin here become the highest form of life on the planet. However, a biological process isn't completely reversible.” (Ballard, *The Drowned World*, 2014, p. 42). Although there is not a worthwhile change on human appearance which can be called as mutation, they adjust the necessities. To exemplify, it can be alleged that their eating habits have to change according to the changing conditions. However, “at the most there was a bare three months' stock. After that, they would have to live off the land, switch their menu to wood soup and steak iguana.”(Ballard, *The Drowned World*, 2014, p. 48).Eating habits

changes; for example, Dr. Kerans asks Big Caesar “What's on the menu tonight- roast alligator?” (Ballard, *The Drowned World*, 2014, p. 116). New tastes appear of necessity; to exemplify, Kerans finds and catches a tiny lizard in the bathroom and kills it to prepare a filling meal, then “He lit a fire of tinder with a lens of chipped glass, roasted the filets of dark stringy meat until they were tender. The small steaks melted in his cracked mouth with the exquisite tenderness of warm fat.” (Ballard, *The Drowned World*, 2014, p. 144). In the fact that they need to store to survive and take precautions against the extreme changes in nature, thereby they try to find ways to adapt their living habits to the severe conditions. For instance Fuel raised more serious problems. The reserve tanks of diesel oil at the Ritz held little more than 500 gallons, sufficient to operate the cooling system for at most a couple of months. By closing down the bedroom and dressing room and moving into the lounge, and by raising the ambient temperature to ninety degrees, he would with luck double its life, but once the supplies were exhausted the chances of supplementing them were negligible. (Ballard, *The Drowned World*, 2014, p. 48)

In fact, Dr. Kerans is aware of the evil plans made by Strangman who is named as “white devil” in the novel. His plans are re-flooding the lagoon just for the sake of his own profits and Kerans remonstrates to these plans with these words

The last thing I intend to do is re-flood the lagoon. If anybody tries I'll personally blow his head off. Reclaiming land, particularly an urban area like this right in the centre of a former capital city, is a Class A 1

priority. If Strangman is serious about pumping out the next two lagoons he'll not only get a free pardon but a governor-generalship to boot. (Ballard, *The Drowned World*, 2014, p. 158)

It can be pointed out that human do not and will not change or take lessons from their experiences and they always think of their own utilities even in the worst conditions. Therefore, all these possible scenarios seem unavoidable. However, the resolution is a significant point when humanity finds a glimmer of hope; for instance, when Kerans and Beatrice notice that the water level comes down, their feelings are indescribable (Ballard, *The Drowned World*, 2014, p. 120). Furthermore, the end of the book reveals a new story that includes a new beginning in a new system on a renewed planet for the protagonist who struggled to survive and fight against giant creatures to stay alive. This scene is depicted in these words “So he left the lagoon and entered the jungle again, within a few days was completely lost, following the lagoons southward through the increasing rain and heat, attacked by alligators and giant bats, a second Adam searching for the forgotten paradises of the reborn Sun.” (Ballard, *The Drowned World*, 2014, p. 175). This end makes the reader think for the best future in the worst conditions if human beings continue polluting nature.

E.1.3.b. Nature

Nature can be regarded as the main character of the book controlling human life and washing all the country with a disaster. Humankind cannot live without land because their creation pertains to earth and as their living conditions get harder; for instance, “the water level is still rising” and the durability of human against high temperatures is limited however “Temperatures at the Equator are up to one hundred and eighty degrees now, going up steadily, and the rain belts are continuous as high as the 20th parallel. There's more silt too-” (Ballard, *The Drowned World*, 2014, p. 15). Even the Arctic Circle is currently, in the story, “a sub-tropical zone with an annual mean temperature of eighty five Degrees” (Ballard, *The Drowned World*, 2014, p. 21). Gradually, the conditions retrogress as Riggs indicates “The temperature is still going up” and “The big Equatorial rain belts are moving northward, and they'll be here in a couple of months. When they leave, and the cloud cover goes, the water in that pool will damn nearly boil...” and more will happen soon (Ballard, *The Drowned World*, 2014, p. 26). Even the evil character Strangman complains about the rising temperatures and he suggests that “the temperature will soon be up to nearly two hundred degrees. The entire planet is rapidly returning to the Mesozoic Period.” (Ballard, *The Drowned World*, 2014, p. 91).

On the other hand, both the size and the growth rate of plants are affected by the high radiation level. As a result, the influence of

radiation causes unbelievable mutations and “The first freak botanical forms appeared, recalling the giant tree-ferns of the Carboniferous period, and there was a drastic upsurge of all lower plant and animal forms.”(Ballard, *The Drowned World*, 2014, p. 22). For instance, Dr. Bodkin explains the severity of the transformations and he affirms that they have studied on at least five thousand animals and observed tens of thousands of plants, which are new for scientific experiments, in only three years period (Ballard, *The Drowned World*, 2014, p. 42). This can be evaluated as a kind of adaptation or; in other words, the mutation process through which numerous animals and plants have adjusted their new and difficult ecosystem. One of the great dangers is that the giant alligators and mutated reptilians get terrific day by day (Ballard, *The Drowned World*, 2014, p. 73). Further, these new animals have strong voices, extraordinary swimming skills, huge tails, more than twenty-five feet long and muscular bodies (Ballard, *The Drowned World*, 2014, p. 86). The transformation of animals is exemplified by different kinds of mutated creatures like “albino python”, “albino iguanas”, “albino snakes and lizards”. These white animals are used as a simile referring to Strangman “who stood in his white suit” and is the evil character of the story representing the power holders (Ballard, *The Drowned World*, 2014, p. 99). Strangman one of these power holders who exploit nature for the sake of their own profits pays the consequences of their deeds.

Not only humans but also animals are under the risk of extinction and they are frightened by the noise of the helicopter which comes to take

the last human inhabitants from the area. This scene is reflected in the novel with these words “An immense profusion of animal life filled the creeks and canals: water-snakes coiled themselves among the crushed palisades of the water-logged bamboo groves, colonies of bats erupted out of the green tunnels like clouds of exploding soot, iguanas sat motionlessly on the shaded cornices like stone sphinxes.” (Ballard, *The Drowned World*, 2014, p. 53) It is difficult to survive for other creatures under the burning sun and this survival of the fittest is represented via these statements

As the great sun drummed nearer, almost filling the sky itself, the dense vegetation along the limestone cliffs was flung back abruptly, to reveal the black and stone-grey heads of enormous Triassic lizards. Strutting forward to the edge of the cliffs, they began to roar together at the sun, the noise gradually mounting until it became indistinguishable from the volcanic pounding of the solar flares. (Ballard, *The Drowned World*, 2014, p. 71)

Even though the reason for these mutations and transformations is human, they cannot hide their consternation. For instance, Beatrice cannot hide her astonishment when she realizes that there are thousands of the terrifying giant reptiles outside. Another perplexed character, Dr. Kerans realizes that the antagonists in the novel are manipulating these mutated creatures. In that sense, he puts forward his opinions with these words “...Those devilish things must be their watch-guards...” and he resembles them to “a tame troupe of tarantulas” (Ballard, *The Drowned World*, 2014, p. 88). Actually, the

tragic irony is that even in the worst conditions evil side of humankind try to use these mutated animals to gain power against the weak people. Yet, the story has a promising end (Ballard, *The Drowned World*, 2014, p. 120) and it needs to be regarded that even this happy end is a kind of favor by nature to humankind like a last chance.

E.1.3.c. Time and Place

In *The Drowned World*, time is used as the symbol of archetypal memories which underline human consciousness; for instance, the existence of giant creatures known from old times and stories. Jim Clarke claims that “If Ballard conflates climate with time, he also conflates it with psyche.” (2013). It can be claimed that Ballard uses the power of psyche and its huge memory reservoir. In that regard, Dr. Bodkin tries to find out and response the questions in his mind with these words And how else can you explain the universal but completely groundless loathing of the spider, only one species of which has ever been known to sting? Or the equally surprising-in view of their comparative rarity-hatred of snakes and reptiles? Simply because we all carry within us a submerged memory of the time when the giant spiders were lethal, and when the reptiles were the planet's dominant life form. (Ballard, *The Drowned World*, 2014, p. 43)

Moreover, time flies and the level of water increases constantly; for instance, when Beatrice chooses to stay, she does not concern that “She may be able to hang on for another six months, but next March, when the rain belts reach” there and they “won't even be able to get a

helicopter in. Anyway, by then no-one will care.”(Ballard, *The Drowned World*, 2014, p. 16). In time, it is getting worse and people try to find ways to survive. Furthermore, time is shown as the symbol of the fundamental changes during hard times; for example, “During the next thirty years the pole-ward migration of populations continued.” (Ballard, *The Drowned World*, 2014, p. 22). Additionally, people are hopeless because destruction is huge and time is not enough to repair all the ruin and to be able to escape from the devastated station. In other words, it can be interpreted that time flies and nobody or nothing can run it back. In that sense, Riggs regrets in these words “We should have got out years ago. All this detailed mapping of harbours for use in some hypothetical future is absurd. Even if the solar flares subside it will be ten years before there's any serious attempt to re-occupy these cities.” (Ballard, *The Drowned World*, 2014, p. 17). Thereby, the future of humanity changes “As Kerans sometimes reminded himself, the genealogical tree of mankind was systematically pruning itself, apparently moving backwards in time, and a point might ultimately be reached where a second Adam and Eve found themselves alone in a new Eden.” (Ballard, *The Drowned World*, 2014, p. 23). Besides, time is stressed to demonstrate the durability of human stocks and specific periods are given such as “during the past thirty years” they have tried to make out with limited sources (Ballard, *The Drowned World*, 2014, p. 48).

Most importantly, time is used to illustrate the seriousness of the high temperatures; for example, “It was 11-30” but “the temperature

outside was well over 120 degrees.”(Ballard, *The Drowned World*, 2014, p. 62). When Dr. Kerans controls his thermo-alarm, he notices that everything is above normal because “It was after 3-30, but the temperature was still a hundred and ten degrees, the sun beating against his skin like a fist.”(Ballard, *The Drowned World*, 2014, p. 80). Furthermore, time is applied to emphasize the sweltry weather and its effect on human and animal behaviours. Normally, the weather is expected to be cooler in the morning hours but under these circumstances eighty degrees are accepted as cool and they feel better because the huge groups of mosquito do not fly around (Ballard, *The Drowned World*, 2014, p. 85). It can be inferred that people get accustomed to the changing conditions in time and they are trying to live even in the worst conditions.

Throughout the book, clock details are given deliberately and time is so slow that it makes the reader frighten because silent moments create fear. These scary moments are exemplified in the book with these sentences Kerans leaned against the window, waiting as the minutes passed and left behind the clock fixed at 11-35, overtaking it like a vehicle in a faster lane. Or was it not stationary (guaranteed though it would be to tell the time with complete, unquestionable accuracy twice a day-more than most time-pieces) but merely so slow that its motion appeared to be imperceptible? The slower a clock, the nearer it approximated to the infinitely gradual and majestic progression of cosmic time- in fact, by reversing a clock's direction and running it backwards one could devise a time-piece that in a sense

was moving even more slowly than the universe, and consequently part of an even greater spatio-temporal system. (Ballard, *The Drowned World*, 2014, p. 63)

It can be implied that the days and hours are detailed to make the reader feel the lingering moments such as “27th day. Have rested and am moving south. All is well. Kerans. So he left the lagoon and entered the jungle again, within a few days was completely lost.” (Ballard, *The Drowned World*, 2014, p. 175). To boot, it can be claimed that resembling the moments of the story to a scary day such as “rehearsal of the Day of Judgement” (Ballard, *The Drowned World*, 2014, p. 63) is a good choice for a dystopian novel consisting ecological figures. In other words, the resemblance of “the Day of Judgement” when “the armies of the dead would probably rise clothed in the same filthy mantle” (Ballard, *The Drowned World*, 2014, p. 126) is applied in the novel to stress the terrific atmosphere of the story.

The author reveals the place of the story, which is London, nearly in the middle of the book and the cause of “...this anonymity of the place lies not just in a symbolic value of the city, but in a coherent semiotic structure, a fourfold system of mutilations configuring the image of the city and shaping it throughout the novel.” (Rossi & P., 1994, p. 82). To support the factuality of the story and to make his scenario more effective, J. G. Ballard applies to real addresses and names such as “Coventry Street, Haymarket...” in London (Ballard, *The Drowned World*, 2014, p. 125). In the beginning of the novel, the

location of the plot is decided as “the hotel balcony shortly after eight o'clock” and the protagonist Dr. Kerans gazes at the sunup and observes the “roofs of the abandoned department stores four hundred yards away on the east side of the lagoon.” (Ballard, *The Drowned World*, 2014, p. 7). The hotel which is used as a station for the scientists is described in these words “...the first six storeys of the hotel were below water level and the load walls were beginning to crack, and the 250-amp air-conditioning unit had worked without a halt” (Ballard, *The Drowned World*, 2014, p. 10). Although they have no chances except this lagoon, Dr. Kerans “...realised that the lagoon was nothing more than a garbage-filled swamp.” (Ballard, *The Drowned World*, 2014, p. 13). To boot, the destruction in the city is depicted through these words “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.” (Ballard, *The Drowned World*, 2014, p. 19). Further, the last lands and locations are under the danger of being vanished by the rising water level. The continents and countries change place and shape and this miserable continental change is represented in detail. The continued heating of the atmosphere had begun to melt the polar ice-caps. The entrained ice-seas of the Antarctic plateau broke and dissolved, tens of thousands of glaciers around the Arctic Circle, from Greenland and Northern Europe, Russia and North America, poured themselves into the sea, millions of acres of permafrost liquefied into gigantic rivers.

(Ballard, *The Drowned World*, 2014, p. 22)

People are trying to escape and find new places to survive on and “Now they were to abandon yet another city.” (Ballard, *The Drowned World*, 2014, p. 19). The abandoned places are applied to create the feeling of isolation on reader to help them see the picture of their world if they continue to exploit it. The houses are under water that “Through the cracks in the floors rose the stench of the greasy water swirling through the windows below.”, and animals take place of people and invaded the abandoned apartments; for example, “Disturbed for the first time in many years, the bats which hung from the tilting picture rails flew frantically for the windows, dispersing with cries of pain in the brilliant sunlight. Lizards scuttered and darted through the floor cracks, or skated desperately around the dry baths in the bathrooms.”(Ballard, *The Drowned World*, 2014, p. 61). The terrifying scenes are summarized in these words Looming just below the dark pellucid surface were the dim rectangular outlines of the submerged buildings, their open windows like empty eyes in enormous drowned skulls. Only a few feet from the surface, they drew closer, emerging from the depths like an immense intact Atlantis. First a dozen, then a score of buildings appeared to view, their cornices and fire escapes clearly visible through the thinning refracting glass of the water. Most of them were only four or five storeys high, part of a district of small shops and offices enclosed by the taller buildings that had formed the perimeter of the lagoon. (Ballard, *The Drowned World*, 2014, p. 120)

When Beatrice and Kerans try to steal away from the men of Strangman, Beatrice cannot believe her eyes and she states her longing to the place where she comes from with these words “I can't believe that anyone ever lived here. It's like some imaginary city of hell. Robert, I need the lagoon.”(Ballard, *The Drowned World*, 2014, p. 123).After a while, Beatrice, Kerans and Dr. Bodkin walks around and they are trying to find a safe place but everywhere is ruined. The terrifying setting is pictured in the mind of the reader through this paragraph Huge pools of water still lay about everywhere, leaking from the ground floors of the buildings, but they were little more than two or three feet deep. There were clear stretches of pavement over a hundred yards long, and many of the further streets were completely drained. Dying fish and marine plants expired in the centre of the roadways, and huge banks of black sludge were silted up into the gutters and over the sidewalks, but fortunately the escaping waters had cut long pathways through them. (Ballard, *The Drowned World*, 2014, p. 124)

While they escape, they figure out that from the big ones to the smallest ones all buildings have been tried to be protected by barricades before they are left “so that the entire city seemed to Kerans to have been resurrected from its own sewers. Were the Day of Judgement to come, the armies of the dead would probably rise clothed in the same filthy mantle.”(Ballard, *The Drowned World*, 2014, p. 126). Indeed, the scenes are chosen intentionally from the collapsed places to help the reader notice the future possible end of the

human kingdom. “Already many of the buildings around the lagoon had disappeared beneath the proliferating vegetation; huge club mosses and calamites blotted out the white rectangular faces, shading the lizards in their window lairs.” (Ballard, *The Drowned World*, 2014, p. 83).

E.1.4. The Drought

The Drought, the novel originally named *The Burning World*, 1964, is one of the disaster fiction texts. In fact, ‘global warming’ as a term is put forward by Wallace Broecker, an environmental scientist, in 1975 but J. G. Ballard has written *The Drought* a decade earlier (Clarke, 2013, p. 9). It proves that he is a foresighted writer who can observe, examine and come to the conclusion that the course of events will bring a drought which will be the end for human beings as well as other creatures on earth. Additionally, M. John Harrison states “*The Drought* makes a compelling drama out of the thrills and spills of eco-catastrophe, but it was the end of its author’s unstable, contrarian relationship with the disaster story.” (Ballard, *The Drought*, 2014, p. xi). It is explicit that the author applies ecological elements in a dystopian world created in the novel by humanity. It can be alleged that *The Drought* has “...been depicted as disaster dystopias, mediated through each of the four classical Aristotelian elements of air, water, fire and earth.” (Clarke, 2013, p. 8). These ecological elements are put together in the plot and around the consequences of human deeds. In that sense, Martin Amis comments on the reasons of the disaster in the introduction of the novel and he claims that the waste produced by

industrial activities causes a heavy mantle of the oceans and eradicate the precipitation circle (Ballard, *The Drowned World*, 2014, p. 1). As a result, there are not any clouds and the water supplies cannot maintain any longer. This turns the earth into a dusty and hot desert like fire.

The novel starts with a common dystopian scene in which there is a thick mantle on the oceans and this terminates the evaporation. Moreover, there is not a drop of rain and whether it will rain or not in near future is ambiguous; as might be expected, humanity comes apart (Ballard, *The Drought*, 2014, p. viii). There is a group of people in the book who have not been aware of the worsening conditions at first. One of them is Dr. Charles Ransom who is the protagonist of the story. He has some stored water but it cannot suffice forever; therefore, he tries to manage like other people who have stored water. However, hopeless people abandon their lands and depart for the coast to be able to reach water to survive. They try to live despite all the difficulties and troubles caused by drought and they try to manage the last stocks of water. Since the rivers have dried up, dead bodies of the aquatic animals can be seen in the muddy surface of the old water supplies. Besides, most of the animals in forests and in the zoo suffer and even some of them die because of the smoke and the flames caused by fires. After a long, dry and deadly hot period, the dark clouds appear on the sky and this creates a ray of hope. It can be speculated that the rain in the end of the story is the last chance given by nature to humankind.

E.1.4.a. Human

It is argued that numerous kinds of creatures will be eradicated because humankind manipulates all facilities of nature for their utilities. As a result, people can be exterminated by their own actions which can affect human life directly or can wipe out the natural sources providing living conditions for human (Weissman, 2000, p. 343). In that regard, Ballard explains the core idea of his human characters in his works in these statements “I believe my alternate worlds have integrity. They're mental explorations, evocative journeys in the mind, not the catalogues of implausible gadgetry compiled by so many orthodox science fiction writers. Little of real value or help in understanding the “human condition” comes from most of these works.” (Ballard, "Ballard At Home", 1971). In *The Drought*, nostalgia surrounds people and there is a pathetic change for humanity. However, the weak character of the book always smiles ironically as if he made fun of humanity who prepared their own end and as a result, they are sorrowful now. Since Quilter is aware of the conditions

The continued fall of the river, sustained through the spring and summer drought, gave him a kind of warped pleasure, even if he and his mother had been the first to suffer. Their derelict barge-an eccentric gift from Quilter's protector, Richard Foster Lomax, the architect who was Ransom's neighbor-had now taken on a thirty-degree list, and a further fall of even a foot in the level of the water would split its hull like a desiccated pumpkin. (Ballard, *The Drought*,

2014, p. 3)

After they ruin nature, people seek for ways to get rid of the draining consequences of drought. In the novel, some characters like Ransom always have a pinch of hope and they try to do something to change the desperate situation. On the other hand, some people who want to escape and their own lives; for instance, when Ransom decides to stay behind, Hendry warns him by these words “You sound completely detached, Charles. What are you planning to do—wait here until the place turns into a desert?” (Ballard, *The Drought*, 2014, p. 39). As it can be understood, people try to escape from the relentless results of human deeds and they are hopeless for better days; for instance, some characters like Lomax and Miranda despair of future and criticize Ransom, as he wants to stay behind for a while, in these sentences “Doctor, have you ever seen an army of ants try to cross a stream?” (Ballard, *The Drought*, 2014, p. 56).

Not only the earth but also people do get harmed and people choose to judge each other instead of struggling to find out solutions for the environmental problems which cannot be brought under control. Disasters, frightening scenes and desperate moments that human beings experience are depicted in detail throughout the novel; for instance, By day, when they set out again, they would see the fires burning behind them. The dark plumes rose from the desert floor, marking the progress of the river bed front the south. Sometimes six or seven fires would burn simultaneously in a long line, their billows leaning against the sky. (Ballard, *The Drought*, 2014, p. 191).

It can be asserted that people prepare their own end, slow but a ruinous one; however, human nature never changes in that they are always after power and they can kill not only animals but also people to be able to reach little water supplies. In that sense, it needs to be confirmed that people fulfill the exercises of the survival of the fittest and as it is known big fish always eats little fish.

As a result of the power war, people begin to fight for stream sides like the men who invade Ransom's area shot and state that "Keep off, we came here fist!" (Ballard, *The Drought*, 2014, p. 128). It can be inferred from this example that when water runs out, the blood flows. Further, they do not take lessons from their experiences and continue fighting for power as Ransom indicates "There are too many blood feuds. It's an endless string of little communities, trapping their own small pieces of the sea and frightened of everyone else." (Ballard, *The Drought*, 2014, p. 149). Moreover, Ransom reminds Vanessa "It is a matter of survival" (Ballard, *The Drought*, 2014, p. 161). It can be assumed that Ransom summarizes the condition of creatures, and the most damaging one, a human who can kill his species for his/her own needs and desires. Yet, they cannot get rid of their evil deeds work on their psychology and the dead bodies come back as if they tried to throw up to their murderers. The scene of the floating dead bodies is described in these words

The thousands of bodies they had tipped into the sea after the final bloody battles on the beaches had come back to them, their drowned eyes and blanched faces staring from the shallow pools. The washed

wounds, cleansed of all blood and hate, haunted them in their dreams. Working at night, they buried the bodies in deep pits below the first salt tips. Sometimes Ransom would wake and go out into the darkness, half-expecting the washed bones to sprout through the salt below his feet.” (Ballard, *The Drought*, 2014, p. 148)

It can be claimed that the reader of the novel does not sympathize these dead bodies because they are not victims except for paying a heavy price for their careless exploitation in good days. On the other hand, one of the human characters, Johnstone tries to convince himself that better days are waiting for them somewhere and he shares his feelings and dreams with Ransom in this quotation “You know, I sometimes think we ought to accept the challenge and set off north, right into the centre of the drought... There's probably a great river waiting for us somewhere there, brown water and green lands-” (Ballard, *The Drought*, 2014, p. 89). Although it is difficult, at first, to share the same idea with Johnstone, the reader feels the hope for a better future at the end of the book when it starts to rain (Ballard, *The Drought*, 2014, p. 233). This is the last word of nature to human after a long-suffering stage.

E.1.4.b. Nature

After people completely benefit from, manipulate, destroy, and eradicate nature, they will confront what they deserve; perhaps nature will decidethe future of humansas well as other creatures. The needs of humanity have been provided from nature and its sources but when

these sources extinct one day, the needs of human will change and will be determined according to the rules of nature (Callenbach, *ECOLOGY*, 2008, p. 37). It can be alleged that people unbalance nature and nature turns upside-down the order of earth and makes human beings feel desperately in the novel. Additionally, they try to benefit from all conditions to be able to have a little water supply needed for surviving. One of these scenes, when Ransom puts all effort to reach water, is depicted with these words

Below the jetty Ransom had staked a series of colored poles into the water, but the rapid fall in the level was too obvious to need calculation. In the previous three months the river had dropped some twenty feet. Ransom estimated that it had shrunk to less than a quarter of its original volume. As it sank into the center of the narrow gully, it seemed to pull everything toward it, and the two banks were like the faces of opposing cliffs. This was helped by the inverted tents suspended from the chimneys of many of the riverside houses. Originally designed as rain traps-though no rain had ever fallen into them-the canvas envelopes had been transformed into a line of aerial garbage scoops, the dust and litter raised like expiatory offerings to the sun. (Ballard, *The Drought*, 2014, pp. 6-7)

This entire struggle is just for having and storing water drops to be able to survive. Furthermore, the death is handled as a tool to affect the reader and make them lament for the end confronted by nature and by creatures living in their own habitat. This theme is experienced by Ransom who can be seen as the figure representing mankind in story.

For example, when he comes back from the “bleached shore” to his “miniature universe” or as it is called in the book “a capsule containing whatever future lay before him, had expired with everything else on the floor of the drained river”, he notices the dead bodies lying under his feet (Ballard, *The Drought*, 2014, p. 95). This scene is depicted in these words “At his feet the swollen body of the dog blurred by the heat, and for a moment the whole landscape seemed to be covered with corpses.” Even “The dead fish rotated slowly from their hooks in the drying sheds, and a spasm of dizziness made Ransom retch emptily.” (Ballard, *The Drought*, 2014, p. 95). These scenes are totally opposite of the dreams and plans of humanity for the future.

Human beings have not considered the consequences of their steps and they focus on rising steadily; however, they forget the wildlife, animals, plants and the power of nature. Unfortunately, the life of creatures living in wildness is under danger and there are lots of dead bodies around “The slopes of mud, covered with the bodies of dead birds and fish, stretched above him like the shores of a dream.” and “the drying fish hung in the shadows from the lines of hooks” (Ballard, *The Drought*, 2014, p. 5). Judith notices dark clouds on sky and screams excitedly asks “Is that rain?” but it is not going to rain. Unfortunately, disasters create other disasters, as Ransom stresses desperately “It’s the city. It is on fire.” (Ballard, *The Drought*, 2014, p. 41). However, they need to comprehend that nature takes revenge eventually and For the next three days the fires continued to burn in

Mount Royal. Under a sky stained by an immense pall of black smoke, like a curtain drawn over the concluding act of the city, the long plumes rose high into the air, drifting away like the fragments of enormous collapsing messages. Mingled with the fires of incinerators and abandoned garbage, they transformed the open plain beyond the city into an apocalyptic landscape. (Ballard, *The Drought*, 2014, p. 42)

The sorrowful cries of animals burning in the zoo can be felt by the reader and it creates hatred against their own kind. The drought is so extreme that animals die not only because of fire but also because of the lack of water. Additionally, the scene of burning city and zoo are given with the heart-wrenching details in this quotation A monotonous chorus of bellows and grunts sounded around the zoo, the visceral cries reflected off the concrete pens. The smaller cages housing the ornamental birds and monkeys were empty. In one of the stalls a dead camel lay on the floor. Nearby, a large Syrian bear prowled restlessly about its cage, arms and head rolling around the bars. A hyena stared at Ransom like a blind pig, emitting an endless whine. Next to it a pair of cheetahs flicked around their cages, their small killing heads swiveling as Ransom passed. (Ballard, *The Drought*, 2014, p. 62)

It can be interpreted that the heat is so high that even a camel, which can live for a long time without drinking water, died and this illustrates the seriousness of the climate problem. The reader can feel the desperate conditions of nature and creatures living there when Lomax' observations are explained with these words "He listened to the baying of the animals, deep raucous cries like tearing fabric,

thinking to himself: they'll wake the dead.” (Ballard, *The Drought*, 2014, p. 61). It can be inferred that creatures in nature are in a miserable situation. Moreover, there is no hope and nature proves its power that if it does not rain, everything will drain as it is emphasized in the novel in these descriptions

Rain!-At the recollection of what the term had once meant, Ransom looked up at the brilliant sky. Unmasked by clouds or vapor, the sun hung over his head like an inferno. The cracked fields and roads adjoining the river were covered with the same unvarying light, a glazed motionless canopy that embalmed everything in its heat. (Ballard, *The Drought*, 2014, p. 6)

When Philip finds and brings a swan which “lay inertly with wings outstretched, its plumage glistening with oil in the sunlight”, he asks for water. Yet, Dr. Ransom refuses to help him giving water to clean and rescue the poor bird, because he believes that human is at the top of the pyramid. He does not help with the excuse that the swan is almost dying and the water will be wasted if it is used for cleaning the oily swan. Moreover, he defends himself with these words “The drought may well go on for another two or three months, perhaps forever. There's got to be an order of priorities.” (Ballard, *The Drought*, 2014, p. 23). Human is so selfish that even in this condition they give priority to human beings and neglect other creatures and their needs. “An attempt had been made to feed and water the animals. Clumps of monkey meat lay on the floors, and there were a few pails of water, but the cages were as dry and arid as desert caves.” (Ballard,

The Drought, 2014, p. 62). Yet, this attempt is nothing more than a failure and these prison-like places called zoos to entertain people become huge graveyards. In addition, it can be speculated that one and only reason for this loss is human beings. The imbecile persona in the novel, Quilter behaves ironically “smiling at the dead birds floating in the water below his feet.”(Ballard, *The Drought*, 2014, p. 3). In fact, Quilter can be assessed as the inner voice of the human conscience that the poor creatures are dying and the poor human is laughing at them instead of helping. However, what happens now is the result of his/her own mistakes and poor creatures suffer from the mistakes of this species.

E.1.4.c. Time and Place

James G. Ballard, about his own methods of creating the setting, points out that “The biggest developments of the immediate future will take place, not on the Moon or Mars, but on Earth, and it is inner space, not outer, that needs to be explored. The only truly alien planet is Earth.”⁷ (Pordzik, 1999, p. 81). In *The Drought*, the events developed in an extended period of time and; therefore, people could not recognize the evolution of river. In other words, time is slow but drought sneaks and The worldwide drought now in its fifth month was the culmination of a series of extended droughts that had taken place with increasing frequency all over the globe during the previous decade. Ten years earlier a critical shortage of world foodstuffs had

⁷ Quoted from “James G. Ballard’s ‘Crash’ and the Postmodernization of the Dystopian Novel” by Ralph Pordzik.

occurred when the seasonal rainfall expected in a number of important agricultural areas had failed to materialize. One by one, areas as far apart as Saskatchewan and the Loire valley, Kazakhstan and the Madras tea country were turned into arid dust basins. The following months brought little more than a few inches of rain, and after two years these farmlands were totally devastated. Once their populations had resettled themselves elsewhere, these new deserts were abandoned for good. (Ballard, *The Drought*, 2014, p. 35)

It can be inferred that unawareness of human results in devastation not only for human but also for entire creatures and the earth itself. This devastation is gradual but destructive and when people realize what they do to nature it is so late to bring the old days back.

In the novel, the place is chosen from a riverbank which is muddy and almost dry to represent the dryness and severe results of the heat. For instance, the idiot character, Quilter and his old mother live "...in the ramshackle barge outside the yacht basin..." while Dr. Charles Ransom drifts at the mouth of the stream in his houseboat (Ballard, *The Drought*, 2014, p. 3). The locations are determined intentionally to display the seriousness of the conditions. Moreover, real names are applied for setting such as "The Phoenix", "Mount Royal Zoo" to make the plot more realistic; while some imaginary places are referred to make the story more effective such as "The Draining Lake", "The Crying Land", "The Drowned Aquarium", "A New River", "The Burning Altar", "The Terminal Zone", "The Burning City", "The Bitter Sea", "The Lagoon", "The Illuminated River", and "The

Pavilion”. There is a pessimistic view on the future of the place which makes the reader comprehend the seriousness of the situation. It is pointed out that all the locations “would soon literally be an island in an archipelago drained of time.” (Ballard, *The Drought*, 2014, p. 9).It can be implied that this end is inevitable and people are tied hand and foot. Additionally, the devastated places are exemplified to increase the effectiveness of the disaster story. For instance, after the great fire, “The light ashy dust blown across the lakeside town from the hundreds of incinerators on the outskirts of the city covered the streets and gardens like the fallout from a volcano. The silent quays and boathouses were bleached white by the ash.”(Ballard, *The Drought*, 2014, p. 42).As it can be understood the dust makes it more difficult to live in this devastated place. On the other hand, people are trying to get accustomed to the new conditions of land served by nature. In that respect, the observations of Ransom are presented and a detailed description of the landscape is given in these statements Much of the time Ransom spent by the river, or walking out across the bed of the lake. Inshore, the slopes of damp mud had already dried into a series of low dunes, their crests yellowing in the heat. Wandering among them, out of sight of the town, Ransom found the hulks of old yachts and barges, their blurred forms raised from the watery limbo to await the judgment of the sun. Ransom built a crude raft out of pieces of driftwood and punted himself across the small lagoons of brackish water, making his way in a wide circle back toward the river. (Ballard, *The Drought*, 2014, p. 42)

Finally, it can be pointed out that the addresses and the appearances of locations are given in detail such as the location of the train station is depicted with these directions “Two miles further on a railway bridge crossed the river. A stationary train stood among the cantilevers, the doors of the carriages open onto the line.” (Ballard, *The Drought*, 2014, p. 183). It can be put forward that entire details about the location are given to make the reading more effective and in case people can realize their mistakes and take steps backward before it is too late.

CONCLUSION

Most of people know the meaning of ecology; however, they do not take into consideration that human is an inseparable part of this ecology. Moreover, they are not aware of the possible catastrophic results of the excessive manipulation of nature waiting for humanity in a near future. Animals, plants, earth, rocks, water, and even air have a vital role in this ecology and human-nature relationship. However, human beings putting themselves on the top of the cycle forget this fact and exploit every source inconsiderately. Furthermore, they apply the power of industry, science and technology to eradicate these sources thinking that they can create new and more fertile sources by themselves. In that sense, they make use of genetically modified food to feed over populated cities and artificial intelligence to benefit from human service. However, these advancements result in an ecological crisis and environmental harm. All these changes in nature and excessive progresses in technology create fear; and especially literary works are among the best stages to illustrate this fear. In that regard, ecological figures and dystopian fears are interwoven in the apocalyptic novels.

The integration of ecology and dystopian novels affect the main elements of the works. It can be put forth that humans and nature, the characters of a dystopian novel, are both damaged profoundly and their future is shaped by the changing ecological conditions. For example, people are exhausted, hopeless, aimless and despaired and they are lost. On the other hand, animals and plants experience

mutations and as a result the balance of nature is upside down. Additionally, the settings of the novels are determined in accordance with the needs of the catastrophic futures. For instance, places are depicted with detailed paragraphs displaying all the worst possibilities of the future of the earth. Besides, time is sometimes unspecified, but often is chosen from near futures to make the plot more credible and factual. In that sense, the four novels studied in the book stress all the mentioned details and they have common points that reveal the undesired possible consequences of human deeds on nature. However, generally there is a ray of hope at the end of these books. As a result, it can be affirmed that there are couples in the books which remind a new beginning with the regrets of mankind and promises to tomorrows.

The core idea of the book is to put forward significant ideas on the effects of the relationship between ecology and dystopia; more importantly, the influences of this relationship on the fictionalization of the contemporary novel through the narration of *The Windup Girl* and *The Water Knife* by Paolo Bacigalupi; *The Drowned World* and *The Drought* by J.G. Ballard. The study offers wide research on the field of ecology and a deep analysis on the dystopia. It can be claimed that this work will contribute to the field with this elaborative and utility information on ecology and dystopia and their impact on the fictionalization process. Ecology and dystopia can be seen as an intermingled unity of the reflection of the manmade future. In addition to that the relationship between ecology and dystopia will make it possible to identify and classify the contemporary novel. In short, this

classification and identification will make it easier to observe the impacts of the crucial facts of artificial human life.

This study enables a wide analysis on the field of ecology; its meaning, the pioneers of the area and its significance in human life. On the other hand, the book represents satisfying research on the dystopia, the short history of this theory, and its reaction toward the natural disasters caused by man. In addition to that the relationship between ecology and dystopia is handled on a large scale and the main elements of the fiction such as characters; human and nature, setting; time and place, are examined under this respect. The research concentrates on the topic on a large scale and it will put forward a criticism on the results of the human deeds which have affected not only nature but also human beings themselves. The search is not limited to only an aspect of the troubles and disasters caused by humans; however, all the human behaviors and their results are scrutinized under the boundaries of the writing, narration and all the other elements of the contemporary novel. A definition and description method is applied and a critical view is developed throughout the book. Then, four contemporary novels are handled as the primary sources of this study within the boundaries of the fictionalization process of the combination of ecology and dystopia. Finally, numerous books, book sections, articles, researches, interviews, reviews, and printed and online resources are applied as the secondary sources of this work while supporting the main ideas of the book.

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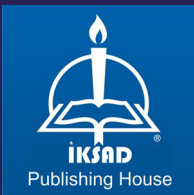
BIOGRAPHY

Prof. Dr. Bülent Cercis Tanrıtanır

Bülent Cercis Tanrıtanır is Professor in the Department of English Language and Literature, Van Yüzüncü Yıl University. He received his M.A. from Anadolu University and Ph. D. from Van Yüzüncü Yıl University. He was promoted to associate professor in 2015 and to full professor in 2020. He studied early American novel, (Late Eighteens and Early Nineteens). Some of his publications include: “A Study on The Application of Threshold Level in View of the School Infrastructure and Teacher Opinions in Van” (M.A. Thesis), “Moral and Ethical Messages in Early American Novels: *The Power of Sympathy, The Coquette and Charlotte Temple and Lucy Temple*”(PhD thesis), “*Dilin Doğuşuna İlişkin Kuramlar (Language Origin Theories)*” (Book translation, 1993). *H.W.Foster, S. ve A. Weld Grimke ile A. Walker'da Mektupla Anlatım Geleneği (Epistolary Narratives in Hannah Webster Foster, Sarah and Angelina Weld Grimke and Alice Walker)* (Book, 2010), *Technopolitical Paranoi in Geogre Orwell and Thomas Phynchon* (Book, 2018), *Paul Auster and Arketip Eleştiri* (Book, Paul Auster and Archytpal Criticism 2019) He takes a multidisciplinary approach that encompasses the fields of gender, nature and ecology. He has articles and papers on fiction of utopia, distopia and diaspora and especially post-apocalyptic fiction His academic interests are women studies, modern/postmodern American fiction, Jewish literature, Amerasian studies within the scope and context of American Multiculturalism. He is currently concentrated on Eco-fiction and Eco-psychology.

Fatma KARAMAN

Fatma Karaman is a teacher of English at the Ministry of Education. She is a M.A. student at Van Yüzüncü Yıl University. She studies on Ecology, Eco-fiction, Dystopia and Criticism. She is the co-author of some articles published on several international journals and social sciences journals of different universities such as Van Yüzüncü Yıl, Atatürk and Çukurova. Her main concern is to go beyond through her academic writings and illustrate the unfair treats against the marginals such as; woman, black people and low-class. In addition, she is a nature lover who searches and writes on ecological issues.



ISBN: 978-625-7687-43-0