HOW THE WORLD CHANGES DYSTOPIAS: AN ECOCRITICAL STUDY OF EVOLVING CLIMATE FICTION NOVELS

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ABSTRACT

How the World Changes Dystopias : An Ecocritical Study of Evolving Climate Fiction Novels

There is a deep lack of attention to the discussions of climate change, both in general and in literature. The scientific data suggests that we are at a point of no return when with global warming and we will face great climate disasters in the near future. *The Drowned World(1962)* written by J. G. Ballard and *New York 2140(2017)* written by Kim Stanley Robinson, as novels depicting similar drowned futures, use future narratives to criticize current Anthropocentric stances on climate change, and portray dystopic futures as warnings for the present reader. Reading the novels' fluid connection to time and place through the lens of science fiction as a genre that blurs the boundaries between reality and fiction, this work seeks to trace the entanglements future climate narratives offer as alternatives to current dynamics of capitalism and ecological disaster. Both novels use the motif of the water as an actor that freely flows between boundaries and the different scales of time and disaster depictions show the ineffectiveness of Cartesian binaries against a fast changing climate. Science fiction elements blur the well-established time and space constraints of the Western narrative while questioning the human time and place on Earth. The use of posthuman ecocritical theories offer an alternative to present dichotomies between nature and culture. Science fiction works help to shape different ideologies that do not alienate the human from the the nature, which in turn may help the longevity and quality of human life on the planet.

ÖZET

Dünya Distopyaları Nasıl Değiştiriyor: Evrimleşen İklim Kurgu Romanlarının Ekokritik Olarak İncelenmesi

Hem genel olarak hem de edebiyatta iklim değişimi tartışmalarına karşı derin bir duyarsızlık bulunmaktadır. Bilimsel verilere göre küresel ısınmada dönülemeyecek bir noktanın eşiğindeyiz ve yakın gelecekte büyük iklim felaketleriyle karşı karşıya kalacağız. J. G. Ballard tarafından yazılmış olan *Boğulmuş Dünya(1962)* ve Kim Stanley Robinson tarafından yazılmış *New York 2140(2017),* sular altında kalmış benzer gelecekleri resmeden romanlar olarak, gelecek anlatılarını iklim değişikliği üzerine güncel Antroposen düşüncelerini eleştirmek için kullanır ve distopik gelecekleri günümüz okuyucusuna uyarılar olarak resmeder. Romanların zaman ve mekana olan akıcı bağlantısının gerçeklik ve kurgu arasındaki sınırları bulanıklaştıran bilim kurgu ile okuyarak, bu çalışma iklim ile ilgili gelecek anlatıları günümüzdeki kapitalizm ve ekolojik felaket dinamiklerine bir alternatif olarak sunar. İki roman da su motifini sınırlardan rahatça akabilen bir aktör olarak kabul eder ve romanlardaki farklı zaman ölçekleri ve felaket tasvirleri hızla değişen iklim karşısında Kartezyen ikilemlerin yetersizliğini gösterir. Bilim kurgu elementleri Batı anlatımında kurallaşmış zaman mekan sınırlarını bulandırmaya yardımcı olur. Posthümanist ekokritik teoriler doğa ve kültür arasındaki ikiliğe bir alternatif sunar. Bilim kurgu eserleri insanı doğadan yabancılaştırmayan değişik ideolojiler şekillendirmeye yardımcı olur, ve böylece bu ideolojilerin de dünya üzerindeki insan hayatının uzunluğunu ve kalitesini belirlemesine destek olacaktır.

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To Mary Shelley, for her end of the world was a pandemic but she made her monster perish in the waves anyway...

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CHAPTER 1

INTRODUCTION

"If climate change is indeed epoch-changing and humans are a geological force, is this not the worst time to abandon the lessons of history, the insights of the humanities, and the tools of social science?"
-Kathleen McAffee

There is a correlation between apocalyptic discourses and climate change, in that any sort of warning for climate change is regarded as apocalyptic discourse. As such, it is also disregarded as apocalyptic, it is disregarded as exaggeration, or fiction. The scale at which global warming is happening seems too extreme to be true, and the future so comically scary, that it is not a topic of serious conversation. Bruno Latour, as he protests against this quite angrily, writes, "Well, yes, of course, what do you want us to be talking about?!" (Latour, 2017, p.194). In this line of a direct response to a very material and urgent problem, one way of dealing with such protestations sensibly is to accept them, and reproduce the argument as a very convincing apocalyptic narrative. Science fiction, and climate fiction as a genre that has recently established itself apart from it, present a detailed enough way to portray material concerns in fiction, in a way that they won't be contested as not being realistic enough. Such a project can be seen as counter-intuitive, but fiction does affect the real world. A very material example of this is scientists and engineers basing their research on *Star Trek,* creating cellphones and MRIs. A more philosophical discussion can be made on how wars are made and countries are build on religion. Fiction can have very material outcomes in the world. In her book *Staying with the Trouble,* Donna Haraway aptly puts it as follows:

> It matters what matters we use to think other matters with; it matters what stories we tell to tell other stories with; it matters what knots knot knots, what thoughts think thoughts, what descriptions describe descriptions, what ties tie ties. It matters what stories make worlds, what worlds make stories. (Haraway, 2016, p.12)

Climate fiction narratives are based on present experiences and predictions of future climate events. In turn, climate fiction narratives can influence our response to climate disasters which we will undoubtedly face in the near future. Amitav Ghosh also supports this point of view in his book *The Great Derangement.* He supports the necessity of writing climate fiction narratives, saying that "the great, irreplaceable potentiality of fiction is that it makes possible the imagining of possibilities" (Ghosh, 2016, 128). Haraway and Ghosh are not the only ones supporting the necessity of a fictional narrative aid in non-fictional issues, they are among many who point out to to the environmental opportunities, and also catastrophes, that lie in fictional stories.

Climate change is still largely seen as an anthropocentric story, the nature taking its revenge on the humankind, as it did in myths of the old, starting with the Agricultural Revolution to Greco-Roman and Judaeo-Christian myths. This mythological aspect, arguably, gained more strength after the Cartesian divide of the body and the mind that only further advocated a human-centered universe where nature was explicitly stated as the other outside the walls of Thebes. Arguably this endeavor was supported both by non-fictional and fictional narratives. The exploitation of the natural resources, from trees to oil to animals, that followed after as capitalism grew was built on this innate belief that was supported by both common sense and religion, claiming that humans had the right to do as they wanted with the planet. The most common fictional example for this comes from the Bible:

> in the image of God he created them;
> male and female he created them.

> God blessed them, and God said to them, "Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth." (Genesis 1:26-28)

The anthropocentric way of Christianity was seen as a God-given reason for the human exploitation of nature. The human was placed upon the earth to subdue and dominate the nature, but inevitably, the disregard for the nature as the other disturbed the balance of the planet and brought changes that will affect us for generations to come, and being fruitful will become increasingly more challenging as the conditions of the environment will shift dramatically in the upcoming centuries.

Climate change is not merely a future narrative, it is already happening. It has been happening for a while, so much so that, now that its effects are finally becoming visible, it is far too late to stop it. Moreover, while we were too busy to notice, it became the catastrophe that designated a whole geological era radically different than any other point in the Earth's long history. "The Anthropocene" (Crutzen, 2000), coined by biologist Eugene Stormer and chemist Paul Crutzen in 2000, is no longer a word one only comes across in scientific articles. Climate change and its various consequences stopped being a scientific theory; they are now, to quote Lawrence Buell, the crises we dwell in (Buell, 2004, p.173). Ecological catastrophes are now a staple of daily life and thus, of humanities. They are frequently encountered on the news, in the media, in fiction. Yet there remains a fear, an inexhaustible notion of dread in facing even the idea of a hurricane or a tsunami. Constantly aware of our vulnerability to the cataclysmic nature we are immersed in, we are not, nor likely ever to be advanced enough to be independent of the nature which encompasses us.

The awareness of our slow progress and the rapid shift in the climate is also reflected in climate fiction novels, and the larger genre of science fiction, which portrays narratives shifting from outer space odysseys and alien apocalypses to climate related disasters. Fictional works try to navigate this feeling of helplessness in the face an Anthropocenic end. We now live in a reality where we are both the assailants and the victims of a conceptualized nature, the fear-inducing other, from which we have always tried to disentangle ourselves. In the Western civilization, this is especially emphasized by the Cartesian divide of the mind and the body, which posits that the human mind takes precedence over anything material or worldly. However, our attempts to separate body and mind brought us all the more dramatically to the realization that we are embodied beings embedded in nature that is rapidly becoming inhospitable to humans. There needs to be a total reconfiguration of the human-nature dichotomy in order to find a different answer to the question we constantly ask: how do we save ourselves?

Our current efforts, or the lack thereof, will not be enough. Carbon emissions are on the rise every year, the ocean acidification is on the edge of becoming a serious problem that will cause whole species to go extinct. We don't even see the lone polar bear in the advertisements anymore because we are past the point of being able to stop the glaciers from melting. Jonathan Park, quoting the results of a research on global climate change done in 2014 writes:

> The panel's findings have indicated that if the planet were to warm by more than two degrees Celsius above pre-industrial levels, the world would experience a plethora of disastrous environmental consequences. Sea levels would rise by a meter or more, swallowing up coastal and low-lying island populations. Intense wildfires would rage around the world, consuming large swaths of the planet's remaining forests. Some regions would experience heavy rain and flooding, while others would suffer protracted periods of severe drought. Extreme weather events, such as tornados and hurricanes,

> would become more common (World Resources Institute, 2014). (Park, 2015, p. 190)

The latest IPCC (Intergovernmental Panel on Climate Change) conference was held in 2021, with the title "Major climate changes inevitable and irreversible – IPCC's starkest warning yet", in *The Guardian,* it is written that the IPCC reports suggest that "within the next two decades, temperatures are likely to rise by more than 1.5C above pre-industrial levels" (Harvey, 2021). Ever since the Paris Climate Change Agreement in 2015, the intention has been to keep the temperature rise to 1.5C above pre-industrial levels, which was the maximum amount the scientists had foreseen that would continue to sustain a quality of life for human existence. While even such a change would result in extreme weather events, now it is considered highly likely that this number will be reached by the next climate conference in seven years unless immediate action is taken.

This goal set by the IPCC to keep the temperatures down can only be reached with acceptance of the human role in the extreme changes underway. It is no longer merely the human against nature, the Anthropocene sees the scales shift rapidly. It is human progress which becomes detrimental to human health and existence. Historian Dipesh Chakrabarty cautions against further destabilizing the conditions that allow human existence on the planet independent of human systems and ideologies. As Chakrabarty puts it, "unfortunately, we have now ourselves become a geological agent disturbing these parametric conditions needed for our own existence" (Chakrabarty, 2009, p. 218). Awareness of our power, and our powerlessness against nature is also commonly portrayed in cultural works, encouraging people to think about questions of agency within and against the natural background of daily life. In "Unexpected Encounters with Deep Time", Franklin Ginn, quoting Chakrabarty,

notes that “one of the most challenging aspects of the Anthropocene is the way it puts the present in contact with distant times beyond the scope of human experience or even imagining” (Ginn, 2018, p. 214). Considering this sense of distant time as deep time brings us one step closer to understanding our entanglements with the nature. According to Ginn, deep time “is close to Donna Haraway’s *kainos:* the lumpy, thick temporality of a present animated by its immanent pasts but also thrumming with possible futures” (p. 217). In her book *Staying With The Trouble (2016),* Haraway proposes Chthulucene as an alternative for Anthropocene. She suggests the name because it contains the word *kainos,* meaning *“*now, a time of beginnings, a time for ongoing”. This new sort of beginning is one that does not erase the past that comes before it; instead it is a new, fuller way of looking at our linear sense of time. Haraway defines *kainos* as “the sense of thick, ongoing presence, with hyphae infusing all sorts of temporalities and materialities” (Haraway, 2016, p.2). Deep time, when it becomes a contributing factor to climate fiction, connects the future disasters with a history beyond the human scope of understanding and presents the suddenness and the scale of the change we have inflicted on the planet.

However, for most of the time, we measure our time on the planet with watches and calendars, and day by day ecological awareness creeps in, without consent, as petrol creeps in the riverbed or the carbon emissions from the cars we drive to the air we breathe. By gaining the scale of agency we have over the environment and profiting from nature thus, we have doomed ourselves. The echoes of this awareness is in the news reports, television shows and literature. Ecological disasters are now becoming increasingly popular to portray in fiction and non-fiction, in forms of apocalyptic narratives and even satires. Particularly the genre of science

fiction, as well as speculative fiction and climate fiction, focus on ecological disasters and their outcomes. The unique qualities of science fiction novel, its relationship with time and science, allow for yet another kind of ecocritical reading of fictional climate disasters that may prove to be enlightening for the global cultural consciousness of the human race.

We are slowly being forced to realize just how important what we call nature is to us, but it is already too late. How does one deal with a disaster that has already happened? A disaster that is occurring not in a single place, or on a single scale? Science fiction as a genre has a unique temporal structure that allows catastrophe to happen in multiple places, multiple times and multiple scales at the same time. Timothy Morton, in their revolutionary *The Ecological Thought* writes that "we are losing the very ground under our feet," not only that, but we are losing it while "figuring out just how dependent upon that very ground we are" (Morton, 2012, p. 31). Morton's exclamation puts into words the desperate times we are facing and alludes to a near future where daily life will increasingly become problematic for sea level cities and islands. However, for Morton, this very notion of disconnectedness that one feels with ground is not necessarily all negative; it calls for a need to "think big", think in entanglements (p. 20). Moreover, being disconnected may allow us to imagine different futures if we can reach to an awareness and acceptance starting now. IPCC makes statements every year about climate change, begging us to cut down our carbon emissions, cut down on production and waste, degrow if we still want a world living in in the next century. Nobody listens. The two science fiction novels here show particular examples of optimistic world-building against all odds with a future where all seems to be lost to a changed climate and water level rise,

first by portraying worlds we will soon live in if we continue not listening and making the reader question the decisions that will lead us to that future. If these novels and others that imagine climate disasters are given due attention, it can help aid IPCC's call to degrow by helping us focus on how we are running out of time, how our unnecessary pride and greed is ruining the world for us, how we should adopt an intra-active model of living instead of the constant exponential growth of our current capitalist model that depletes natural resources and constantly creates new population to do this more rapidly.

J. G. Ballard's *The Drowned World (1962)* and Kim Stanley Robinson's *New York 2140 (2017)* can be read under the genre of speculative fiction or climate fiction because they are about how climate change affects near futures, but here they will be read as science fiction novels. Both because this kind of reading allows for a wide scope of complex and blurred temporalities to coexist, but also because a reading of the water level rise under the scope of science and fiction at the same time helps to show the different ways in which the water drowns the differences between nature and culture without depending on the fixed differences between scientific facts and fictive concerns depicted in these novels.

Written in 1962 by British author J. G. Ballard, *The Drowned World* was originally published as a science fiction novel, but it was recently branded a cli-fi, or a climate fiction novel, after global warming started to gain a hold in the trends of contemporary science fiction. While Ballard doesn't see himself as a science fiction writer, today, he is widely recognized as one because the narratives he creates frequently take place in future disaster scenarios. *The Drowned World* takes place in 22nd century London, which we only find out midway through the novel because it is

simply unrecognizable after the water level rise. It tells the story of Dr. Robert Kerans, who is a biologist working for the military, searching for different mutated lifeforms in a drowned city of which he doesn't even know the name of. As the novel progresses, Kerans, as well as the other characters, find themselves in a psychological landscape that is as damaged as the natural one.

The second novel is also set in the same timezone. Written by the American author Kim Stanley Robinson, who is famous for his *Mars Trilogy,* in 2017, *New York 2140* is actually quite similar to *The Drowned World* landscape-wise. *New York 2140* is the story of a dystopian New York told by eight different characters. In the novel, over the last century, multiple catastrophes have made the sea levels rise 50ft higher, drowning many cities worldwide. New York, though half-drowned, has remained one of the most popular places on Earth to live in by both the rich and especially the poor. The capital of the United States has moved to Denver, and the economical system is a blessing for the rich and a curse on the poor as ever. The occupants of the Met Life Building are faced with a problem when two men living on the farm floor go missing and suddenly there is a bid to buy off the building. At the same time another tenant, Amelia, is on her way to the South Pole to relocate polar bears, and the two kids Stefan and Roberto have decided to find HMS Hussar and the sunken chests of gold in the Hudson as a storm is approaching.

Because these two novels create a somewhat similar theme set in the same timezone, they offer good ways of comparing just how our ecological or even Anthropocenic consciousness has grown over time. The 55-year gap between the two novels may show how we look at such a drastic change and how our coping mechanisms may have evolved. Ballard and Robinson offer different ways of

focusing on humans and nature during a time of ecological dissolution on multiple scales. This may also impose us with new questions as to how to deal with the climate disasters and their ecological and political consequences in our own time. These novels don't only emphasize our understanding of climate change and disaster, but also through their very existence, confirm the level of the threat and crisis we face as they present a change in the concept of science fiction that has mainly dealt with the threats of alien invasion and nuclear war, echoing the real-life aftershocks of the Second World War and the Cold War that happened after. Though climate change is presented as a "dwelling in crisis" (Buell, 2004, p. 173) that is not felt in such explicit terms, the dystopian scenarios born out of this threat find a similar place in the literature as nuclear war and the Holocaust.

This study will also focus on new ecocritical and materialist approaches to theory and how the reading of animals, and water in disaster novels will be helpful to establish a material agency for nature that is beyond the scope of human agency and understanding. It can be argued, that an all encompassing idea of agency for natural objects, animals or nature itself that is independent of human conception will be helpful to battle against our harmful stance on global warming and climate change. Using new materialist theorist such as Karen Barad and Stacy Alaimo, alongside ecocritical theorists like Timothy Morton and Ursula Heise, this work hopes for a reconfiguring of agential thinking in science fiction works that deal with natural agencies.

There is already abundant evidence against the Cartesian binaries in both social and scientific realms. Most important for us here, and really for a whole generation of humans now standing on the clasp of an catastrophe that has already

occurred, is getting rid of the barrier between us and the nature and accepting that such binaries can exist no longer if we want to sustain a quality human life on Earth. No longer can we protect ourselves from disasters by building walls around us and creating cities, we too are a part of the nature we have started a war against. But does this awareness necessarily endorse a sense of togetherness? Is being together our natural response to being under risk? And what if the risk, the threat against human life on Earth is not something we can make an enemy out of? What if there is no other, only an all encompassing us? Science fiction works create narratives in which these questions can be hypothetically answered and a different mode of living together can be imagined without real life calculations and disagreements, at least in a textual experiment. Such a practice of imagination might allow for new modes of thinking that will inevitably have real life outcomes.

Fighting against the current reality of global warming, or even riding its current is a joint effort where all hands must be on deck, and using fictive works to engage the general public might actually work faster than shouting danger on the news every day. Ursula Heise argues that humanities is an essential part of environmentalist thinking and that "scientific understanding and technological problem solving, essential though they are, themselves are shaped by such frameworks and stand to gain by situating themselves in this historical and sociocultural landscape" (Heise, 2021, p.2). Literature allows for a space for such discussions to happen freely. A science fiction reading in particular gives equal importance to both humanities and sciences' arguments in a particular body of work.

Such a reading consists of interdisciplinary entanglements with various fields of humanities and sciences. The second chapter called "Science and Fiction"

considers the gap between science and fiction and how science fiction works might help achieve a common voice against a time limited threat: ourselves. The third chapter, titled “The Pools of Deep Time” analyzes the fate of humans and nonhumans in the future and what Frederic Jameson calls “the end of history” (Jameson, 2007, p. 37) by looking at how the future disaster narrative of *The Drowned World* locates humans in the midst of life threatening climate circumstances. The fourth chapter, “Children, Animals and the End of History” asks the question of how procreation and capitalist endeavors adapt to fast changing environments through a close reading of both novels. Can there be a progressive end to the end of humanity? A capitalist environmentalism is thought through sexuality and procreation in both novels. This chapter also looks in depth to the relationship between humans and animals which, when rethought, might be more beneficial in the long run than our attempts of constant progress and growth. A theoretical reading of these questions is read through Kim Stanley Robinson’s *New York 2140.* The fifth chapter “Water and Transcorporeality” focuses on the agency of water and the concept of transcorporeality as shown in the novels, and seeks to answer the questions of entanglement between the characters and their environments in the novels. Advantages of a new way of thinking that dissolves the binaries of human civilization through the heat and water rise is discussed. The conclusion focuses on the effects of climate change and disaster depictions in fiction and how science fictions widespread presence in contemporary culture presents it as the most effective choice of platform to rethink naturecultural entanglements.

CHAPTER 2

SCIENCE AND FICTION

"Individual science fiction stories may seem as trivial as ever to the blinder critics and philosophers of today, but the core of science fiction -- its essence -- has become crucial to our salvation, if we are to be saved at all."
— Isaac Asimov

"The boundary between science fiction and social reality is an optical illusion."
-Donna Haraway,

One of the reasons why science fiction as a genre is worth pursuing when trying to raise awareness about climate change is the innate connection it has with what is scientifically accountable. While science fiction doesn't seek the absolute truth, there is a certain amount of accuracy in the way it builds scientific narratives, no matter how different these narratives might be from the reality of our present times. As such, the basis of science fiction is the scientific facts that we acknowledge to be true. Even when a work of science fiction redefines physics, or introduces a totally alien biology, it does so by differentiating it from what we consider to be universally accepted scientific facts. Following this, theories in the areas of physics, biology, geology and ecology become significant agents in building science fiction narratives that portray climate disasters.

Over the years, there have been many attempts to forge connections between science and humanities, mostly in the area of sociological studies, following scientists in laboratories to watch the ways they made discoveries. Science Studies, for example, studies the process of science from a sociological perspective. Following Bruno Latour's Actor-Network Theory, many academics sought out to

analyze the relationship between the scientists and the science. Most famously Karen Barad, in her book *Meeting the Universe Halfway,* focuses on the blurry relationship that defines the scientist, the apparatus and the experiment (Barad, 2007). Significant for the purposes of this discussion, perhaps, is following Bruno Latour's journey from science studies to environmental activism. Latour's work on the Actor-Network theory following the decentered connections between subjects and objects, or as he terms them, actors and actants, led him to James Lovelock's Gaia Theory. In *Facing Gaia (2017),* Latour describes the profound effects of modern sciences in our connection to nature. Both the sciences, as well as religion, politics and economy shape the way we perceive the nature around us. Latour proposes a new way of looking at the world without the colored glasses of different disciplines that shape the nature in ways that would fit them the best. For that, he proposes Lovelock's term for the complex biological relationship between the living beings on the face of the planet and the planet Earth that sustains them. While the term Gaia is to an extent still mythical, the concept of Lovelock's ground work is layered with biological suppositions. The Gaia Theory offers a new way of looking at climate change that holds everyone and everything accountable by the presupposition that we are all parts of one great system (Lovelock, 2000). As such, Gaia offers a framework in which the two novels chosen here can be read in a way that pays sufficient enough importance to science, while still carrying the essence of myth that the flood narratives cannot escape from.

2.1 The great ecological war

Scientific facts get ignored, both by the people who wish to continue with their daily lives as if nothing is wrong and by the politicians who seek their own political and financial gain, rather than what is the best for all. IPCC releases vital research results and policies every seven years without avail, yet their voices will not reach the public. This is astounding when we consider that the effects of global warming are not only felt by birds who change their migration routes, or polar bears who can no longer hunt because of the melting ice caps; global warming directly affects humans as well. Even today, there is climate-related human migration and environmental refugees who are scarcely talked about. We rarely even dare to imagine that one day, we might become one of them. What can be done so that this issue is given due attention, how can literature raise environmental consciousness? What would happen if we negotiate the boundary between science and fiction? Would it compromise the objectivity of these scientific studies and facts, and thereby subjective opinions of the public and politicians who make the calls about climate change?

What if the scientific world proliferates fiction? In a way, it does so constantly. Science is a staple of daily life, no matter how ill-informed one may be, we consider certain things, measurements of time and distances, classical physics, technological norms to be our objective reality. So when the sun rises from the east and sets from the west in a story , when one day is 24 hours in a poem, when the rain falls down from the sky rather than rises up from the ground, when people die in novels, when the author chooses to write about cars, or horses, or the flowers in the back yard, there is a level of scientific information and accuracy that is being transmitted to the reader, which is accepted to be the truth because what is being

depicted in the novel is the daily life, and it is scientifically accurate to the extent that the reader doesn't question if in fact the story takes place on Earth. Such is the case for science fiction narratives, where there is still this basis of facts that is considered to be universally acceptable truths. One could argue then, that explicitly stating the reasons and consequences of global warming in fictional narratives can be a reasonable way to fight against the global ignorance about climate change, a valuable weapon in what Bruno Latour sees as a war waged against all who oppose it (Latour, 2017, p.3). In an interview conducted with both Latour and Ulrich Beck, Latour responds to Beck's optimism about a postmodern change by saying that there is an active fight against climate politics and titles it the "the great ecological war" (Selchow, 2014, p.8). Latour elaborates:

> No, it is fight. I would not say it is resistance. It is an explicit fight. When I say "State of Nature" it is not a nation state – I agree with you on that –, it means that there is, in the mind of those who disagree about climate a superior referee who has already settled the matter – progress, markets, God, science or nature herself. And then, history unfolds just as the mere application of that transcendent rule. But what we discover with climate disputes is that there is no referee. This is what I mean by a state of war, it has nothing to do with nation-states. It is a concept about what defines the time: the end of modernization is the realization there is no referee (p. 3)

Here, Latour is explicitly refusing Ulrich Beck's idea of how global risk can bring global hope. He claims that the choice is "terribly clear: either you agree to tell foes from friends" and deal with the problem politically, or stop categorizing it as a war and "do away with politics" and accept a state of nature that is "already unified" (p. 3). For Latour, and really for many climate scientists, there is no longer a time to have political divisions. The war is with ourselves as a race on the whole, it is no longer a political war but a race against time for survival.

In his efforts to raise awareness about climate change Bruno Latour wrote a book consisting of eight essays, or eight lessons called *Facing Gaia:Eight Lectures on the New Climatic Regime.* To understand what Latour means, it is important to first look at the concept of Gaia itself, named after the Greek Primordial Entity without a father, or the personification of the Planet Earth in Greek mythology. The Gaia hypothesis was first proposed by James Lovelock in 1960s. Lovelock has added to it over the decades but mainly what he proposes is that the living and non-living components of the planet form a "complex interacting system" that can be considered one single organism (Lovelock, 2010). Accordingly, the biosphere of the earth is an active agent in sustaining human life. This means that whatever disaster that may come to be, arises from an interactive relationship between us and the planet. Lovelock's hypothesis was accepted by many, and moreover, it became the scientific supplement to many entanglement theories that sought out posthuman connections with the planet. Bruno Latour, who represents one of the extreme sides of environmentalist activism in his recent works on global climate change, puts the concept of Gaia in a position that is similar to the plot of apocalyptic climate fiction narratives. For Latour, Gaia "has to *appear* as a threat, because this is the only way to make us *sensitive* to mortality, finitude, "existential negation" – to the simple difficulty of being of this Earth (Latour, 2017, p.245). Unless the scale of the tragedy climate change can bring is emphasized, no progressive action will be taken. While Latour's narrative is oftentimes harsh and vindictive as he puts an anthropomoprhized wish upon the planet to drive out the humans away from Earth, the importance he puts on apocalyptic warnings, real or fictive, rings true in an

ecological reading of science fiction, in that disaster narratives exist as a warning, that they are there to wake us up from our ignorant, hubristic slumber.

Another name who doesn't shy away from bringing conventionally more serious topics is Kim Stanley Robinson. While talking about his *Science in The Capital Trilogy*, Robinson writes that many people "thought of science as merely the instrument of power—as the most active and effective wing of capitalism," which is a stance that he doesn't agree with. According to him, we exist in "science versus capitalism," which he defines as a world "in which smaller progressive concepts such as environmentalism, environmental justice, social justice, democracy itself—all these were going to be defeated together, unless they were aligned with the one great power that might yet still successfully oppose a completely capitalist future, which was science (Robinson, 2016, p.6). Because Robinson is both interested in the scientific and capitalistic progresses of today and tomorrow, his stories are rich in criticism for both. *New York 2140,* in particular, shows a huge learning curve from progress for one's own to progress for all which comes from a balanced combination of both science and leftist socialism that also encompasses nature.

In his review of the novel , Michael Polefrone suggests that Robinson uses finance as a symbol that will further emphasize the devastating effects of climate change. He writes, "*New York 2140* exposes the violence inflicted by finance capitalism on the planet and the lie that inhabits it while also showing that any meaningful response to climate change will have to combat the financialization of the economy on finance's own terms". Polefrone calls this the use of "double liquidity" and suggests that for Kim Stanley Robinsons the "ephemeral enemy" is not nature but capitalism. In a way, this reading helps to emphasize Robinson's view

that science or scientific progress is not our natural enemy, but the science used for the sake of exponential capitalistic growth without any regard to natural resources is what we need to be fighting against. According to Polefrone, “linking the two forms of liquidity,” water and money, allows the invisible violence that finance inflicts” to be seen “by disintegrating material into capital”(Polefrone, 2020). Polefrone reads *New York 2140* as a prime example of a fictive work that makes slow violence seen, he writes that “uniting climate change and finance makes both more perceptible, as though they were two near-transparent filters that become darker when overlaid” (Polefrone, 2020). While Polefrone is interested in the capitalistic criticism of the book and the intentionally comical and greedy finance world Robinson depicts, his reading of the coupling between capitalism and climate change to further enhance the visibility of the damage both inflict on the planet further shows the way fictional narratives allow new ways of visualization for global warming. Science fiction narratives, such as Robinson’s, do this even more efficiently because they can be located in the future and thus, show a direct correlation between the choices made today and the results that will be born from them in days to come.

An important aspect of human reaction or the lack thereof, to climate change is the rate of speed we perceive it to be happening. Rob Nixon calls such slow acts of destruction “slow violence” in his book *Slow Violence and the Environmentalism of the Poor*. According to Nixon, slow violence is “a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all” (Nixon, 2013, p.2). Nixon notes that many environmental catastrophes such as climate change, deforestation, and ocean acidification are such slow violences which need to be

thought on different scales that are not readily accessible to human understanding. A strong enough emotional stimulus is needed to make people realize that they are living with the risk of imminent but slow destruction. These stimuli can easily be found in fictional forms of entertainment, which allow for the experience of disaster without an actual disaster happening. Fiction, particularly story narratives, can be considered as an alternative option that has the potential to escape the capitalist censure of other forms such as movies or video games that need significantly higher budgets. Textual works both survive the widespread criticism of the capitalist media, and also offer the reader a more personal experience. We cannot escape the immediate experience when the message is carried to the literary medium, the word narrative. Literature gives life to concerns made a spectacle by the media. Instead of showing only the images of disaster, it brings out the emotions felt during and after; it portrays the emotional human experience of the disaster. Literary works cross this distance between the reader and the environmental disaster, they build an emotional bond. Literary works that fall under the umbrella of the science fiction genre are allowed to do this more freely. Robinson's and Ballard's novels are an important example of this quality, they portray disasters and establish emphatic connections, giving the reader of today a chance to do something for tomorrow. In both novels, water level rise through climatic catastrophes is depicted through the human eye and the psychological damages such disasters create is given alongside the descriptions of ruined cities. The disasters are described locally and emotionally to bring out a response of horror and awareness in the reader to wake us up.

As Margaret Atwood has stated in an interview with *The Guardian*, science fiction authors are not "prophets;" science fiction is "always about now" (Allardice,

2018). Tracing the origins of a future narrative is describing the present, and science fiction engages with the present in a critical way. The future depends on the present actions, not the other way around. Atwood is an author who doesn't like her work to be categorized as science fiction. Instead, she prefers the term 'speculative fiction', which, "encompasses that which we could actually do" (Allardice, 2018). On the other hand, science fiction, which pertains to space adventures as well, consists of things that we will probably not witness. J. G. Ballard, in an essay titled *Time, Memory and Inner Space,* writes that he also considers his work "speculative fantasy", which is the "more serious fringe of science fiction" (Ballard, 1963). As the novels chosen here are also about the scientific factors and advances in the stories and how human inventions effect human life in general, this work will continue to use the term science fiction as the genre for both of the novels rather than speculative fantasy which Ballard prefers.

In an interview, Kim Stanley Robinson, like Margaret Atwood, proclaims that "All science-fiction novels are about the future and about the present at the same time"(Swearingen, 2017). As of this point in time, science still offers the possibility of objectivity, technological progress, and action that these and other science fiction works suggest to deal with climate disasters. When science and literature are brought together, a different point of view, and a different conceptualization of the world comes into being. It is important to note that these entanglements are already underscored by ecocriticism and that they are a part of our understanding of nature and relating cultural views.

In "Eco-dsytopias: Nature and the Dystopian Imagination," Rowland Hughes and Pat Wheeler point out that "apocalyptic visions have the power to transfix their

audience with horror, to command attention and shock people out of a position of comfortable apathy, in a way that strict adherence to the data cannot, even if the long-term implications of that data are terrifying enough in themselves" (Wheeler, 2013, p.2). More than any science fiction, dystopian narratives bring forth the despair of the future in a way that can emotionally move people. Fictional disaster scenarios offer an opportunity to brainstorm on how people may come to deal with the injuries they inflict on the Earth and themselves, without the need for scientific research or professional training, or even the need to make immediate drastic changes in their daily lives. They offer a thought experiment instead, and make the issue more accessible to the average reader or spectator rather than academics or ecoactivists. As opposed to scientific models of climate change such as the ones offered by IPCC predicting the water level rise, fictional works on the subject carry emotional human responses that have the potential to engage the reader more personally. Science fiction offers a unique reading experience where science is actually accessible in fiction and vice versa without fear of scientific accuracy or academic persecution. Brent Ryan Bellamy, in an article called "Science Fiction and the Climate Crisis" writes, "science fiction, ever a tool of imagining the (im)possible, has long offered us the chance to imagine retroactive futurities" (Bellamy, 2018, p. 417). Not only does science fiction allow for an imaginative future, but through that future, retroactive criticism. As to why science fiction is a genre worth pursuing academically, many critics like Frederic Jameson point to its specific connection with time as the main reason. The novels of the genre which fall under the subcategory of speculative fiction specifically deal with the future of the humankind, which means that the time the author is writing, or for a limited amount of time the reader is reading the story

becomes not only their present but the past of this future narrative. This is best put to words by Frederic Jameson, who is one of the primary critics writing on science fiction as a genre. Jameson, in “Progress Versus Utopia; or, Can We Imagine the Future?” writes that science fiction “enacts and enables a structurally unique “method” for apprehending the present as history, and this is irrespective of the “pessimism” or “optimism” of the imaginary future world” (Jameson, 1982, p. 288). Dealing with the consequences of climate change on a fictional platform allows for a critique of the present that can deal with both the pessimist and the optimist outlooks simultaneously and even consider positive changes born out of such negative, pessimistic futures. Thinking about such an outcome requires considering the multiple scales of a future narrative as well as the risk scenarios woven within. The two novels here show different views of togetherness and progress in future drowned cities, allowing a science fiction reading on the expected sea level rise and its effects on humanity in general, both scientifically and fictionally.

2.2 Risk fiction

Another way of looking at this type of science fiction, or speculative fiction, is by calling it risk fiction, inspired by famous sociologist Ulrich Beck’s theory of risk society. According to Beck, the risk society is "a systematic way of dealing with hazards and insecurities induced and introduced by modernisation itself" (Beck, 1992, p. 21). Beck describes risk as “the anticipation of catastrophe” (p. 9). In an interview he does alongside Bruno Latour, he says that he introduces the term risk society in order to argue that “at the end of the 20th century we live in a both/and composition of nature/society- nowadays named ‘anthropocene’. You Bruno, call this

coproduced climate" (Selchow, 2014, p. 1). Risk society deals with the crises of its own making, one of which is the global warming and climate change. As such, many science fiction novels conceptualize a risk society of sorts. Alexa Von Mossner, in "Cli-Fi and the Feeling of Risk," posits that all American climate fiction is risk fiction, "centrally concerned with the potential future consequences of anthropogenic climate forcing" (Von Mossner, 2017, p.129). Ursula Heise, in *Sense of Place and Sense of Planet,* echoes the famous American ecocritic Lawrence Buell when emphasizing the importance of recognizing risk perspectives in ecological readings.

> [N]ovels that describe the contemporary "dwelling in crisis" without unduly apocalyptic or utopian overtones offer no way out of crisis. In the apocalyptic perspective, the utter destruction lies ahead but can be averted and replaced by an alternative future society: in the risk perspective, crises are already underway all around, and while their consequences can be mitigated, a future without their impact has become impossible to envision. (Heise, 2010, p.142)

According to Heise, fictional narratives need apocalyptic or utopian overtones to find a way out of the crisis and while this sort of worldmaking is overly optimistic, many science fiction works dealing with climate disasters do include positive elements and even endings. Novels such as P. D. James' *Children of Men,* or Cormac McCarthy's *The Road,* while depicting horrifying disasters, end with hopeful endings with children surviving. As Heise notes, climate fiction has the "artistic license" to imagine disasters in a way to portray diverse and collective risk experience (p. 130). Science fiction places this risk experience directly in the future of the present of the reader. Heise invokes Chakrabarty, writing that he suggests that fiction has the quality to extend our understanding of time, "in fiction and nonfiction- can achieve not only that but also something eve more important: It can help us to *imaginatively experience* the impact of that geophysical force that is the human (p. 132).

Science fiction also offers a new way of conceptualizing the readers' relationship to time. The following chapter will discuss the importance of time in both climate change and science fiction narratives. For a necessary ecocritical reading of science fiction, the emphasis should be expanded from the simple present future conundrum to include scales which can be called deep time. As ecocriticism and ecological thinking themselves surpass linear temporal narratives, in an ecocritical reading of novels where the concept of time plays a significant role, time itself can be thought on an ecological scale. Traditional thinking posits nature as the origin, and culture or civilization as the future. An ecological reading of science fiction, especially of apocalyptic narratives where nature once again takes over where culture was, may overturn previous presuppositions about a linear dynamic from nature to culture. Such novels may help provide examples as to why such a linear temporality does not exist. Science fiction as a genre helps to portray these complex, hybrid entanglements between time and space, nature and culture in a clearer light. While in no way does it solve any of the entanglements, perhaps seeing that these entanglements really do exist should be the first priority while focusing on science fiction narratives in an ecological framework.

Frederic Jameson, in *Archeologies of the Future,* spends a long time analyzing how this twisted turn of time, a Möbius strip, works in science fiction. According to Jameson, what makes science fiction unique is not how how it deals with the future but "its deepest vocation is over and over again to demonstrate and to dramatize our incapacity to imagine the future to body forth". What is important is not the extent to which we can imagine a future but at what point we actually stop being able to formulate futures that sustain human life. As Jameson also writes,

science fiction "becomes unexpectedly transformed into a contemplation of our own absolute limits (Jameson, 2007, p. 289). At the center of this inability is not the apathy that is usually associated with apocalyptic narratives, but the uncanny horror that no matter how hard we look for it, we won't be able to figure out a way to continue living if the changes we see today become even more drastic.

Nonetheless, such an exercise in creativity is necessary if we wish to survive. It might even be possible to change our future to a somewhat better one by first imagining the extreme and then, plan accordingly. This will come from the awareness of first, fiction's potential to change science; and second, by accepting that we live in a risk society where such an endeavor is necessary for our physical safety as well as our intellectual satisfaction. To understand how this might work, it is important to first look at the concept of risk, then ecological risks in particular, and try to understand why the two novels offer such different views of togetherness in drowned cities. Looking at the sense of community in fictional scenarios might help us imagine how a future sense of community should be in an era of extreme climate change and extreme climate risk. As the creator of risk theory, Ulrich Beck notes:

> The actual social impetus of risks lies in the projected dangers of the future. In this sense there are hazards which, if they occur, would mean destruction on such a scale that action afterwards would be practically impossible. Therefore, even as conjectures, as threats to the future, as prognoses, they have and develop a practical relevance to preventative actions. The center of risk consciousness lies not in the present, but in the future. In the risk society, the past loses the power to determine the present. Its place is taken by the future, thus, something non-existent, inventive, fictive as the 'cause' of current experience and action. (Beck, 1992, p. 49)

Science fiction works imagine the different futures of the risk society we currently reside in. But can the humanities in academia also help this progress or is it yet an endeavor that must be taken only by the sciences and science fiction? It was J. G.

Ballard himself who had said, “above all, science fiction is likely to be the only form of literature which will cross the gap between the dying narrative fiction of the present and the cassette and videotape fictions of the near-future” (Ballard, 1971, p. 62). He is not wrong in the sense that science fiction occupies a good part of entertainment today, from TV shows to computer games. It already offers an olive branch, which if we are open-minded enough, can be accepted by humanities to join in this effort more productively. A sense of togetherness can be imagine with scientists, in a language which they too can understand and a language that is already understood by the people because a large percentage of this risk society already consumes science fiction related media. If anything, it is humanities who are late to arrive to the party after the hoard of science fiction authors who have written their psychological and sociological approaches to climate disaster to wide audiences. For example, the recent movie adaptation of Frank Herbert’s *Dune* won a number of Oscars and became a box office bestseller, following the success of *Interstellar*, both of which deal with ecological questions. A way of looking at science fiction’s effects on the culture is realizing the way it portrays how like nature and culture, sciences and social studies, and even sciences and literature are an inseparable goo, and we are out of time to realize this because of the lack of understanding has led us to capitalize the planet to the point of no return. Now all of the goo is rotting because of the heat. We should be talking about these novels, not only to realize what our future is going to be but to accept what our present is.

While dystopian works are usually imagined as social criticism, they are also a commentary on scientific advancement. Dystopian fiction is also a way of imagining the negative outcome of human going against nature. It is a criticism of

techne, not solely as technology like weapons or medicine, but anything human-made that doesn't exist in nature otherwise. Many science fiction novels and movies are about this very realistic way of thinking about how the technological advancement against nature in the future years can work. This can be related to biology, like cloning people or harvesting organs; or something physics-related, like building spaceships that can travel to other galaxies. Contemporary works are a lot more realistic in their portrayal of the limitations of human imagination, compared to novels or movies from the 20th century. A common example would be flying cars, and how we have kind of erased them in contemporary science fiction in the last 20 years because they don't seem to be happening any time soon because of the lack of natural resources and the argument against profit related to carbon emissions. The scientific advancements in earlier works are a lot more advanced compared to the ones imagined today. As we get nearer to this sense of crisis, the response time changes because we face our own slowness compared to the vast amount of space and time nature encompasses. At the same time, this comes with the realization that while things are changing very fast, our lives are running by just as fast even though our understanding is terribly slow. The Anthropocene puts a new spin on time that is hard to grasp in perhaps anywhere but science fiction, where the concept of linear time is already under suspicion and rules of classical physics can be broken without scientific outcries. Our inability to compensate for the destruction of our own creation technologically will continue to be the main problem as long as we continue to adopt a human-centrist worldview of the current climate crisis.

Conversely, however, the technological tools used to fight water in the drowned cities seem more advanced and achievable in *New York 2140*, not because

of the greatness of human imagination but simply because of what Robinson had access to at his time, 2017. He is not really reaching far out into the future to propose something that cannot be done today. Because we still think we can fight global warming, so does his character, even though he is very skeptical about both his nightmarish future scenarios and how his characters deal with the problems ahead of them, whereas Ballard is a lot more instinctual and chaotic. The passage of time between the two novels is significant considering the changes in the world. Still with the advances in technology we continue to be hopeful, as long as we believe there is enough time to adapt to the circumstances of the disaster.

Both books deal with climate change as a result of global warming. The rising temperatures have caused the water levels to rise, leaving parts of continents submerged. The change is much more excessive in *The Drowned World*, where the greenhouse effect has made the Earth uninhabitable. Almost all of the world is underwater, without the protective elements of the atmosphere the temperatures have risen dramatically. Because there is no protection against sun rays, exposure to much sunlight is radioactive. It's always too hot, because of the temperature the living humans are emigrating to the poles. The change in *New York 2140 i*s much more plausible by today's estimations. It is actually a predicted scenario in extreme scientific models. Various cities were submerged when the sea levels rose, some people live in townships drifting on the water, and others have started living in air colonies. The capital has been moved to a dry ground. The upper part of Manhattan is still dry as well, whereas the lower part was drowned some seventy years ago. The weather is highly unpredictable; it is either too hot or too cold, and the hurricanes have become much more destructive as well.

2.3 The figure of the scientist

In both novels, technical terms of science, biology and finance are abundant. As a hallmark of the genre, scientific terms are chosen to reveal important facts and twists and turns in the novels. Though *New York 2140* bases its technical groundwork on finance rather than biology, it is still filled with biological information about the drowned city that does not yet exist, the toxicity of the sea animals, while not felt, is constantly mentioned. The emphasis on the scientific and the scientists in these novels give the narratives a point of credibility and they also build a parallel with our own relationships with the scientists of our own time, who we perceive as crying wolf as we continue to ignore the changes coming in our way.

New York 2140 is self-reflexive in its own shortcoming in introducing and giving attention to climate change in its form. The chapters told by the citizen or the city, where the narrator is both as a character and the story itself are significant criticisms of the present the author writes in. Robinson first tells the reader of the original disaster, writing that "It was that ocean heat that caused the First Pulse to pulse, and later brought on the second one. People sometimes say no one saw it coming, but no, wrong: they did" (Robinson, 2018, p.140). Like it is today, scientists, politicians and even the common people of Robinson's disaster world were aware of the devastating changing climate change would bring their way.

> Paleoclimatologists looked at the modern situation and saw CO2 levels screaming up from 280 to 450 parts per million in less than three hundred years, faster than had ever happened in the Earth's entire previous five billion years (can we say "Anthropocene," class?), and they searched the geological record for the best analogs to this unprecedented event, and they said, Whoa. They said, Holy shit. People! they said. Sea level rise! During the Eemian period, they said, which we've been looking at, the world saw a temperature rise only half as big as the one we've just created, and rapid dramatic sea level rise followed immediately. They put it in bumper sticker terms: massive sea level rise sure to follow our unprecedented release of CO2! They

> published their papers, and shouted and waved their arms, and a few canny and deeply thoughtful sci-fi writers wrote up lurid accounts of such an eventuality, and the rest of civilization went on torching the planet like a Burning Man pyromasterpiece. (p. 140)

Robinson is openly criticizing the futile efforts of the scientists, whose work is only as widespread and influential as Kerans' futile biology project in *The Drowned World.* He also criticizes the people who refused to pay attention. This is no doubt a problem that overflows the boundaries of the novel form. As Robinson has written here, even if "a few canny and deeply thoughtful sci-fi writers" (p. 140) wrote novels such as this one, the reach of these novels remains limited unless they get turned into big motion pictures and even then, the most real of possibilities when portrayed as fiction remain out of the reach of overwhelming guilt one would feel finally coming into the realization that we are destroying the planet. Another problem noted here is the inreachability and the resulting distrust of scientists in issues concerning global health and practices. Science fiction as a form also brings into the light the problem where the general public and the academia present themselves in yet another, larger binary. It attempts to cross the divide between the common people and academics, just as it does with sciences and humanities.

J. G. Ballard also uses the language of science, particularly biology, in his novel. Both the narrator and one of the other characters, Bodkin, are doctors of science. One of the leading scholars on Ballard's body of work, David Pringle, notes the intentional integration of scientific language in *The Drowned World,* which is also enmeshed with the sounds of nature, making the two seem completely entangled.

> The protagonist, Dr. Kerans, is of course a biologist. Several of the scenes in the novel take place in the mobile laboratory in which he works. The characters are surrounded by the equipment of biological research, and they

> talk in the language of that research. One of the most successful aspects of The Drowned World is the way in which Ballard uses the language of science to spin what is, after all, a "metabiological fantasy." The characters are encroached upon by a renascent biology – a humming, chittering, clicking, and screeching world of life. (Pringle, 1979, p. 20)

Ballard's use of scientific language to justify the biological changes in his characters that bring them back to a primordial state of being by the end of the novel parallels Kim Stanley Robinson siding with science against capitalism in his novels. In either work, while a more natural, or in nature, sort of living is idealized, scientific progress stops being the enemy that is in the way of this goal. Of course, the use of scientific language or language of research is nothing novel. But as Karen Barad continuously emphasizes, the use of language, or the apparatus, is both epistemologically and ontologically significant (Barad, 2007). Here especially, the language is not only textually or psychologically significant as Ballard proposes, but it also matters scientifically.

Ballard is very adamant that science fiction itself is a very big part of developments on Earth. He claims that the emphasis on the journey to space should "switch to the biological sciences". For him, "what we need is not science fact but more science fiction" (Ballard, 1971, p. 158). While he is more interested in the idea of the psycho-literary, and his landscapes are psychologically disease-ridden as well as ecologically, he has a point. Technological developments have done more harm to the planet than they have done good for us. In an interview, he notes that he expected science fiction to be the main literature of the twentieth century and that historians would one day say "here, in science fiction, was a unique literature that responded to the continuous changes that took place, the continuous transformation of people's lives by science and technology. Here was the only literature that responded to this

fact."(McNay, 2020). Ballard is also very clear when he connects his understanding of what science fiction should be with what an ecological disaster tale is. He ties this genre to a long history of catastrophe myths, which allows us to draw a more linear narrative when including science fiction into the realm of ecocriticism. According to Ballard, "science fiction is itself no more than a minor offshoot of the cataclysmic tale. From the deluge in the Babylonian zodiac myth of G*ilgamesh* to contemporary fantasies of twentieth-century super-science, there has clearly been no limit to our need to devise new means of destroying the world we inhabit" (Ballard, 1971, p. 166).

Ballard wrote his stories long before the term Anthropocene was coined and the horrible effects of the human footprint on the planet were accounted for. But writing after the tragedies of the Second World War and the atomic bombs, he was deeply aware of human capacity and tendency for destruction. Like other, nuclear narratives that would focus on post-nuclear apocalypse scenarios, his work still carries some sort of anthropological blame, even when the blame isn't put explicitly on humanity. Ballard's catastrophe in *The Drowned World* is completely scientifically separated from human fault, it happens because of the sun but as he argues in the paragraph above, from the very beginning, the tales of deluge carry that anthropocentric guilt. Science fiction is the extension of this tradition, a new sort of religious bible, for a new, more technologically oriented millennia.

This Anthropogenic blame must be thought of on a wider scale, especially considering the echoes of the Biblical flood that exist in Ballard, whose waters reach further back than the Sumerian civilization. Ever since *Gilgamesh,* we have taken the sin of the flood on ourselves. This sin only changes its form in the Anthropocene

where there is now undeniable evidence of our blame against religious or moral guilt. We need to be able to think about the shape and role of our crimes against nature if we want to think ecologically in a way that will make us stop being this Goliath of the Anthropocene. This can only start from a moment of perceived groundedness in our own temporality, which is depicted at the beginning of the novels as well. This temporal belonging is a part of who we are, bound by the culture of our time as we are, but that doesn't exactly work anymore, not when the ground is swept away from under our feet or the ground floor is flooded with sewer water. Being grounded in a city, having roots, connections to the place, local environmentalism, is now seen as a problem, you need to be able to swim away, move away to survive, even be nomadic really, which goes against our idea of civilization and the Western culture. However, we also live in a postmodern time where the notions of space and time are more interwined and blurred than ever. Books that specifically focus on future cities grapple with this confusion because they also have to talk about specific temporalities that we cannot grasp. We are not only faced with the question of space but of time as well. This is something that makes science fiction fascinating and the notion of geological times instead of this vague idea of a future far far away makes us think about our place (in space and time) on Earth – just as the Apollo 11 picture of the Earth taken from space.

2.4 The future is now

Kim Stanley Robinson was greatly influenced by Frederic Jameson, who was also his PhD. advisor. Jameson has written extensively about the end of time and the end of history, the thought of which is one of the foundation steps of speculative fiction, apocalyptic fiction, and science fiction in general. For many of us, the end of history

is categorized as the end of the written word, the end of civilization, and even the end of humanity. It is a different concept than the end of the Earth, which is the main theme of many different works of science fiction, especially in space-oriented fiction where the end of the world or end of the planet Earth rarely equals the end of humanity, who miraculously find a way off-planet and go on to find new civilizations on other planets, no doubt a mixture of American ideals of the frontier and space race combined in one new big American dream. This narrative generally includes a world where the climate has gone so bad, sometimes through natural causes like solar flares and sometimes because of the Anthropocene, that it can sustain life no longer. However, even if such an endeavor is possible, it does not answer the questions of sustainability and how one might learn to adapt living in the new planetary circumstances. The Space Race of the sixties cost an immense amount of money and didn't yield sufficient enough results for governments to continue funding near impossible dreams. Today, private sector and the likes of Elon Musk and Space X company are more interested in global relations rather than space travel. It has become apparent that even to space travel, global climate change has become an important obstacle, and that time is running out.

One of the questions Jameson asks while dealing with this dilemma is whether there be can be a spatial alternative to time (Jameson, 2003, p. 696). The most obvious answer to this question goes back again, to science fiction narratives, which allow us to think of the present as the past and the future as the present, by localizing the problem to a certain place in time that is removed from us. Especially with a fictional narrative, we are focused on a bubble that allows us to investigate a time frame by freezing it and letting us investigate the spatial dimensions. We are

interested in time, the future, but we can only be interested in it through space, and while this seems like an unlikely connection, Robinson's chosen title for his own dystopia comes quite near in delivering how important spatial boundaries can be for science fiction. He titles it not only 2140 but *New York, 2140,* a detail, which read from Jameson's point of view in comparison with Ballard's drowned city that is barely acknowledged as London, sheds an important light on the distinction between the two authors in their depiction of science fiction and scientific futurities. According to Jameson, "time governs the realm of interiority, in which both subjectivity and logic, the private and the epistemological, self-consciousness and desire, are to be found. Space, as the realm of exteriority, includes cities and globalization, but also other people and nature" (p. 697). Looking at this very simple description, we are once again reminded of Ballard's interest in the inner space. His work is very much interested in time, at one point there is even a reference to a time zone in the novel where normal time ceases to matter and so with it, history. The Drowned World can be read as a story where the end of history truly does happen. In Ballard, "temporality is not merely supposed but becomes the ultimate object or ground of analysis" (Jameson, 2003, p. 706).

On the other hand, Robinson is more interested in the exterior world. He is interested in how to save New York and New Yorkers. Instead of a time zone, his novel has a "death zone"(Robinson, 2018, p. 113) where children are urged not to dive in. In another book, *The Seeds of Time,* Jameson writes about the "ineradicability of what is now called the site – even the site can be done away with? This should not be taken too rapidly as an ecological truth" (Jameson, 2017, p.165). For him, the site or the exterior world is still deeply rooted in practices of capitalism

and thus cannot be done away with completely even when in an ecological context. Jameson's insistence on spatial recognition in both science fiction and ecological narrative is about the capitalist relationship of profit between nature and humans, which is echoed in Robinson's work but is largely contested by ecocritical thinkers. Ursula Heise, most famously, calls for a sense of the planet rather than a narrative that is rooted in American soil like *New York 2140*. She says that instead, "environmentalism needs to foster an understanding of how a wide variety of both natural and cultural places and processes are connected and shape each other around the world, and how human impact affects and changes this connectedness" (Heise, 2010, p.21).

Interior and exterior, local and global, time and space are all binaries that ecocriticism has long sought to be done away with. In many areas, especially feminist critics like Karen Barad and Stacy Alaimo, materialist thinkers like Timothy Morton call to get rid of binaries, of double-faced categories. Science fiction, as a genre, allows for a place where space and time, in and out, humans and the other get entangled without judgment, without the necessity of being scientifically or politically correct. It allows for a sense of the global and the local, of the present and the future in the same narrative without breaking the rules of space and time. Only by contemplating the end of history and also looking at it as deep future can we truly make sure that it is not going to come any time soon.

CHAPTER 3

THE POOLS OF DEEP TIME

Alone, alone all alone,
Alone on a wide wide sea!
And never a saint took pity on
My soul in agony.

-The Ancient Mariner, Coleridge

J. G. Ballard is deeply interested in the concept of time and how it affects the human consciousness. *The Drowned World* is a love letter to the complex relationship we, as humans, have with time, both with the future and with the past. One of the characteristic qualities of Ballard's writing is how he connects the psyche with the environment, which make his descriptions of the characters struggles with time very material. The psychological effects of time are reflected in the environment Ballard describes. This allows for an ecocritical reading of the concept of time and how humans who live in disasters might perceive it.

3.1 The image of the sublime

American author John McPhee coined the term 'deep time' in 1981, nearly two hundred years after it was first described by Scottish geologist James Hutton in 1788. Hutton had realized that sedimentation and erosion on rock faces indicated timescales surpassing that of which had been written in the Bible. This was the Copernican shift that cast a stone at Christian understanding of time and human place on the planet. "The mind seemed to grow giddy by looking so far back into the abyss of time," was how John Playfair, a scientist who accompanied Hutton on several crucial expeditions, described the effect of looking over the stratified promontory of

Siccar Point in Scotland (Farrier, 2016). Historian Dipesh Chakrabarty also notes that human history goes beyond the written records, and even though professional historians shy away from the word, this is called "deep history" (Chakrabarty, 2009, p.212). As David Farrier points out, this deep revelation of the time beyond measure became a big part of Romantic Literature in the 19th century with the idea of the sublime:

> The poet Percy Bysshe Shelley was smitten by the implacable power of Mont Blanc, "the naked countenance of earth," watching balefully as "All things that move and breathe with toil and sound /Are born and die; revolve, subside, and swell." Yet "There is grandeur in this view of life," as Charles Darwin wrote at the close of *On the Origin of Species (1859).* His theory of evolution became imaginable thanks to the window that Hutton pried open onto these terrifying new temporal vistas. (Farrier, 2016)

The sublime changed its face frequently in the Anthropocene, with the mushroom cloud clouding our vision (Tsing, 2015), and later Earthrise, the picture of the planet taken from space by Apollo 8 (Morton, 2012), which took the sublime beauty of Month Blanc to an immeasurable scale. The world became too big and too small at once, both the moment the atom bomb hit and the moment Man walked on the moon became infinite in itself, became timeless. Bruno Latour also gives the example of Shelley's *Mont Blanc* as description of sublime to point of why it is no longer relevant, "*Now lending splendor, where from secret springs/The source of human thought its tribute brings.* But what has become of the sublime lately, now that we are invited to consider another disconnect, this time between[...] *gigantic* actions […] on the other side our complete lack of grasp on what we have collectively done?" (Latour, 2016, p.22). Latour suggests that it is no longer impossible to feel the effects of the sublime because the "guilt is gnawing at" our "guts" (p. 23), even though it is

impossible to blame any individual alone for becoming sublime dangers to the planet ourselves.

Latour, in *Down to Earth: Politics in the New Climate Regime,* points out that this immeasureability of scale and the amount of awe is innately problematic. "We must face up to what is literally a problem of dimension, scale, and lodging," he writes, "the planet is *much too narrow and limited* for the globe of globalization; at the same time, it is *too big*, infinitely too large, too active, too complex, to remain within the narrow and limited borders of any locality whatsoever."(Latour, 2019, p.16). Latour is mainly interested with the spatial scale of the global climate change and how the miles in between the spectator and the spectacle prevent the emotional understanding of disaster. However, the same idea is also applicable on a temporal scale, especially on the scale of deep time, which too is infinitely too large and complex for human understanding. As Latour writes, the sublimity of nature becomes a problem of scale as scientific advancements bring forth the discovery of new planets and new microorganisms, "we are all overwhelmed twice over: by what is too big, and by what is too small" (p. 16).

Anthropologist Matthew Wolf-Meyer posits that there is a "nihilism" to deep time, which means that there is "a sense that, deep enough in the future, it doesn't really matter what happens to humans" (Wolf-Meyer, 2019, p. 80). This is a problem many have tried to grapple with from Al Gore, who tried to invoke this responsibility to the next generations in many of his works including the Oscar-winning documentary *An Inconvenient Truth (2006)*, to feminist critic Maria Puig de la Bellacasa, whose *Matters of Care* extend Latour's matters of concern to both human and nonhuman generations. Wolf-Meyer's concept of nihilism is not merely

interesting on a philosophical level, it comes with real-life consequences that don't only affect us but affects our environment as well. Moreover, there is an acceptance of not only the blame but the willingness and almost need for the humans to destroy the planet in his work. Wolf-Meyer suggests that by conceptualizing humans "as inherently driven toward particular kinds of self-destructive acts enables a form of deep-time nihilism, historically, presently, and in the future...Self-destruction is inevitable, and if there is any hope for humanity to survive, it can only be in a significantly altered form (p. 82). J. G. Ballard has a similar view on science fiction, wherein his claim is that humans continuously seek new ways of destroying humankind on paper, he writes "that from man's first inkling of this planet as a single entity existing independently of himself came the determination to bring about its destruction, part of the same impulse we see in a placid infant who wakes alone in his cot and sets about wrecking his entire nursery" (Ballard, 1977, p. 166). Contemplating if this has anything to do with the author's own death instinct, Ballard refutes this idea. His psychological contemplation of the phenomenon on paper done with the purpose of imagining a positive future. Warren Wagar reads this utopian tendency in Ballard's work as thus through the various interviews Ballard has given over the years: "Even in a work like the Drowned World, where in the last pages the hero limps to his death in the annihilating heat of the neo-Triassic jungle, the ending is a happy one, a triumph of self-transcendence (Ballard to Goddard & Pringle 24-26)" (Wagar, 1991, p.56). Wagar notes that because of this "transvaluation of the traditional Western wisdom", in Ballard's work, "even dystopias are utopian" (Wagar, 1991, p.54). For Ballard, even the open-ended death scene of the novel where Kerans goes South to eventually die of radiation poisoning is a story of

survival. It is presented as an opportunity to regard the passage of time and importance of place differently. Thomas Knowles notes that Ballard's fiction has always anticipated the future, not just as a prophecies, but in "the ways in which he was thinking and writing, and affecting the thinking and writing of his readers, about the world: the external, objective, material world, the inner, constructed, imaginative world, and the complex mesh that binds the two" (Knowles, 2018, p. 341). It is not so surprising then, as climate change accelerates rapidly, these two new symbols of sublime, the burning hot cloud of nuclear catastrophe and the image of the blue planet find themselves inter-meshing in the novel. The novel seeks a different absolution than the main character surviving a drastic change. The psychological wholeness Kerans comes to feel incorporating his broken body into the rest of the world which has managed to carry on has posthuman ethical connotations that have recently come to the front and center of environmental discussions.

Feminist critic Maria Puig de la Bellacasa, in her book *Matters of Care* asks, "Can we think of care as an obligation that traverses the nature/culture bifurcation without simply reinstating the binaries and moralism of anthropocentric ethics?" (Bellacasa, 2017, p.13) Bellacasa focuses on environmental ethics and ethics towards the animal, but her line of inquiry has a important implications for the problem at hand. How do our ethical obligations change when there is no human center to the universe? Or even no center to human existence? How does this relate to our place in the calendar of the *Cosmos(2013)* as Carl Sagan puts it? Names like Ballard, Wolf-Meyer and even Bruno Latour suggest that ethics even in an egoistically human universe are not enough by themselves to save us from destroying ourselves. Indeed, the human-center seems to come with a predisposition towards the destruction of the

rest for the human ego; and the main problem stems from the denial of the fact that we are interconnected with those who we refuse to care about. The Anthropocene, with this new notion of the sublime in mind, finds itself connected to deep time both temporally, but also spatially in the sense that both past and future actions continuously affect the present moment in a very material sense. The place is constantly being shaped by deep time, and human space continuously shapes time. Timothy Morton calls such entities that cover immeasurable temporal and spatial scales "hyperobjects," which is a useful way to define the human effect on the planet, or the Anthropocene:

> Hyperobjects are futural […] they scoop out the objectifed now of the present moment into a shifting uncertainty. Hyperobjects loom into human time like the lengthening shadow of a tree across the garden lawn in the bright sunshine of an ending afternoon. The end of the world is not a sudden punctuation point, but rather it is a matter of deep time. Twenty-four thousand years into the future, no one will be meaningfully related to me. Yet everything will be influenced by the tiniest decisions I make right now. (Morton, 2013, p. 122)

It is hard to locate ourselves in this continuous phenomenon in whose happening we actively participate in. We need to be able to freely move within different scales, those of humans and those of nature, to reshape our understanding. Morton, in *The Ecological Thought,* talks about this fast shift in scales and our inability to adapt to them accordingly. He offers examples where this task is undertaken successfully, particularly in literature. One such example is Milton's *Paradise Lost,* where Milton's Raphael shows Adam and Eve the potential of life outside the Earth, which allows for the imagination to have what he calls the impossible viewpoint of space. This viewpoint is the "cornerstone of ecological thought" according to Morton. With Milton, Morton says, "we're placed in the position of one of the far-off worlds,

gazing back at Earth. We have been teleported. We see ourselves from the point of view of outer space" (Morton, 2012, p.23).

This view from outer space affects our look at the world during the Anthropocene and how we perceive scales significantly. The discoveries in space, the discovery of light years, conveniently named temporally but depicting distance spatially, showed us the very small corner of space and time our planet occupies. We can analyze our new place on Earth with this new found conceptualization of seemingly infinite time and space, yet another Copernican turn that swings us out of orbit, in two parts. The first notion here is the dislocation in space for which Morton gives the example of the sublime effect the Earthrise photo taken from the Apollo 11 mission has had on us and on the future of space-related science fiction.

The second notion is concerned with time. Morton follows this opening with Adam and Eve and ends it with a passage from Coleridge's *The Rime of the Ancient Mariner. "*The sun rises and sets- a day passes in twenty -six words. Events rush like a waterfall. We put our habitual way of being in time in a box and call it natural. Coleridge shows Nature leaking out of the box"(p. 46). We called our time natural and put it in boxes of watches and calendar. But then, the natural time starts to leak out of the box. The way Morton argues Coleridge plays with the notion of time is similar to Ballard's nature flowing out of the box of time we allotted to it. An eternity happens in a couple of words, and then in the vastness of space, an infinite amount of words are needed to tell the story of a few seconds for the Mariner, just as we need a million words to describe the picture of the planet taken from space, or Kerans' last moments getting lost in the radioactive forest, or the water that breaks the walls that protect New York City. Our concept of time and place changes when faced with

disasters, compared to personal disasters such as loss of a loved one, climate disaster narratives enlarge emotion to meet the grander scale of events. The Ancient Mariner loses his whole crew by shooting the albatross, an anthropogenic sin. The disaster strikes not only because of murder, but murder of an innocent part of nature. While many critics suggest that *The Drowned World* is free from this anthropological blame, David Pringle writes that "the whole of Ballard's fiction is haunted by echoes of Coleridge's *The Rime of the Ancient Mariner*" (Pringle, 1979, p.23). His characters echo the displaced turmoil the mariner feels regardless of any personal guilt they might feel. This notion of haunting has taken different forms in the climate change narrative, where we ourselves have become the ghosts of the future. According to David Farrier, "The irony of the Anthropocene is that we are conjuring ourselves as ghosts that will haunt the very deep future" (Farrier, 2016, p.1). There are many paragraphs in *The Drowned World* where the reader feels as a ghost, and many objects in the novel support this idea of haunting by having been dislocated out of their time and having been left by their original owners who have presumably perished years ago.

3.2 London drowned

> Soon it would be too hot...The solar disc was no longer a well-defined sphere, but a wide expanding ellipse that fanned out across the eastern horizon like a colossal fire-ball, its reflection turning the dead leaden surface of the lagoon into a brilliant copper shield. By noon, less than four hours away, the water would seem to burn. (Ballard, 2008, p.7)

Ballard's drowned world is composed of cities lost underwater and people living around the arctic circle in smaller city-like communities called camps. Few choose to continue to live outside these camps, like Beatrice Dahl who lives in her

grandfather's exquisitely well-equipped penthouse in London. She portrays the last vestiges of the bourgeois in Ballard's dystopic narrative, those who have survived but refused to adapt when they could have. The other characters in the novel are outsiders who have come to the lagoon for research: scientists, military men, and later, pirates. Besides the selected few of the city's elite, indeed by the time the story starts this group only consists of Beatrice, the lagoon is nearly uninhabitable. So it is notable that the only available living quarters exist in either very high-end buildings or laboratories designed to hold against the water, temperature, and wildlife.

At the beginning of the novel, Kerans is living at the Ritz hotel, where the water has enveloped the first 10 stories and the rest was abandoned to the elements as well, except the suit Kerans has been occupying for the last few months. The buildings play a significant part in both novels, but more so in *The Drowned World* than in *New York 2140,* we see the building where the character resides in with all its historicity. Whereas the Met Building almost has a sentient relationship with Vlade in *New York 2140,* Kerans is mostly interested in the comforts of the Ritz, which have attracted him through their histories, including the fact that an Italian financier had once occupied the same room Kerans does now. Somehow in a world where no name, indeed even London, matters for the character, the Ritz with its history and historical appearance still means something.

> The Ritz's reputation, he gladly agreed, was richly deserved-the bathroom, for example, with its black marble basins and gold-plated taps and mirrors, was like the side-chapel of a cathedral. In a curious way it satisfied him to think that he was the last guest who would stay at the hotel, identifying what he realised was a concluding phase of his own life-the northward odyssey through the drowned cities in the south, soon to end with their return to Camp Byrd and its bracing disciplines-and this farewell sunset of the hotel's long splendid history. (Ballard, 2008, p.9)

Kerans identifies the building as a chapter in his own history and deems himself as an occupant of the last part of the Ritz's. This continues to hold significance for the character when the rest of the city does not. But why does this matter to him? Again and again, we realize that the characters in the novel have no cultural connections with the city. Beatrice doesn't care about the paintings in her own home even though she is the one who was born and raised there. Bodkin lives in the laboratory, constantly mobile and alien to the city, even though he has memories grounding him there and Kerans makes fun of Strangman's collection of broken statues, calling them bones. Jim Clarke reads this as a total disconnection from the cultural significance of the objects around the characters. "Ballard does not accommodate notions of preservation or mitigation. The bric-a-brac collected by Strangman's team lacks both aesthetic and use value. To Kerans, the items retrieved from the past are simply 'like bones'. Even Bodkins' s tragic and solitary vigil, patrolling the waters that had once been the museum district in his youth, is depicted as more honorable and less futile"(Clarke, 2013, p.11). Yet, Kerans is deeply aware of the Ritz's cultural history and seeks to be a part of it and perhaps wants it to be a part of his because that is the only cultural history that he can actually reach, stuck between, and part of neither of nature and sciences. As a biologist who was born after climate change, Kerans doesn't have a cultural history as we know it. He is located in a natural environment that is constantly changing and hostile to him, performing a science that is now considered futile because human development is unable to keep up with the natural change. Kerans is divorced both from his environment and his work, one too fast and the other too slow to keep up with his body's natural rhythm. He doesn't belong and yet he wishes to, which is the reason why he embarks on his odyssey south. Kerans

not only subconsciously locates himself within the city's cultural narrative but in the culture of the whole race in general. When he cannot ground himself in his present, in the absence of a possible future, he travels to the past. Both to the past that is natural in the sense that he goes back to ancient forests and lagoons; and even though it's not as obvious in the narrative, a cultural past that has been drowned before he was born. This cultural connection extends to religion, which constantly interferes with Kerans' narrative of submersion. Religious ideas still hold value for him at a time and place Christianity doesn't seem to be a part of people's daily lives. Not only does he have this running second Adam narrative in the second half of the novel, but he also takes note of the chapel-like architecture of the room he is staying in while claiming such details are no longer of any import.

> Already he accepted the lavish brocaded furniture and the bronze art nouveau statuary in the corridor niches as a natural background to his existence, savouring the subtle atmosphere of melancholy that surrounded these last vestiges of a level of civilisation now virtually vanished forever. Too many of the other buildings around the lagoon had long since slipped and slid away below the silt, revealing their gimcrack origins, and the Ritz now stood in splendid isolation on the west shore, even the rich blue moulds sprouting from the carpets in the dark corridors adding to its 19th century dignity. (Ballard, 2008, p.10)

Kerans is interested in the high, luxurious life, he is also interested in the melancholic atmosphere. He is very interested in the architectural aspects as well. Even though Kerans has lived his whole life in a camp in the Arctic circle before joining these expositions and has no cultural history that we can connect to the specific cities in we have the present, he is still somehow knowledgeable about these details that no one after him will ever see because they will be completely lost to the elements. What is also interesting here is how the new natural growths of fauna and animals, no matter how weird they seem to the reader, are not described in complete

comparison to what are basically cultural, architectural artifacts. “Even the rich blue moulds sprouting from the carpets in the dark corridors” add to 19th century dignity” (Ballard, 2008, p. 10) of the hotel, they do not feel out of place.. Instead of this uncanny vision of two completely different things coexisting and creating something ugly, this new transformation of mold, which both destroys the human-made carpets and the health conditions of the buildings for human welfare somehow completes the picture of the building’s dignity.

Entanglement or the mesh are now widely used words in new materialism to show the interconnected lives we lead with the objects around us. The phones we use, the clothes we were, the buildings we live in become a part of our identity, just as we become a part of them if they find a new owner. Kerans’ connection with the hotel is not special, but natural when read with a new materialist gaze. Particularly, feminist new materialist’s Karen Barad’s theory of agential realism and intra-activity are helpful when re-configuring these epistemological relationships. As Karen Barad explains, in intra-active thinking “the subject cannot be separated from networks of intra-active material agencies”(Barad, 2007). This intra-action doesn't merely happen with the natural, living world outside the hotel's walls. The furniture in the Ritz shouldn’t hold any importance in the narrative but somehow they still do. Before the climax of the novel, Strangman’s men completely destroy Kerans’ room in the Ritz. He says that he doesn’t have an emotional response to this and that he bore little malice for this wreckage, but it seems like an afterthought. However, “the shattering of this shell” (Ballard, 2007, p. 147) of Kerans, as a cultural human being with his room and memorabilia is portrayed as his tipping point. But wasn’t he already determined to go South? No, It feels like a found excuse to move forward. Kerans’

connection to the Ritz and what the building's cultural history entails is a half-written part of the novel. The connection is there, but Kerans' separation from this cultural shell is not chronological or complete and it doesn't always make sense.

Another way of reading this, however, is to include the possibility that the culture-nature barrier in this book no longer exists, it too has melted away with the rest. The statues are bones, the hotel is a chapel, the books no longer matter, Kerans is a now a natural subject being separated from cultural roots that were never truly his and also never truly wholly cultural because while Kerans is falling apart, the building holds on it's dignity in its synthesis with nature. The building itself is in countless intra-actions with the environment, even more than Kerans is. Perhaps, even its complete divorce from the lagoon had only been a cultural afterthought implanted there by the human. In truth, neither the human nor the building is completely separate from the lagoon, neither in their history nor their structural integrity. Thus, they have a possibility to mutate and evolve the way Ballard envisions. However, this way out doesn't come from a total disavowal of culture or human materialism, but through this process of intra-action that the character eventually begins to accept.

The Ritz, at least at the beginning, also seems like the one place where Kerans can keep his psyche from falling apart, as he notes,"there are no nightmares at the Ritz" (p. 73), perhaps because it is the last standing building of a culture that actually made that city London, a human civilization, instead of some wild lagoon. Or is it because the building was able to adapt perfectly? It will also collapse into the water one day and will be totally uninhabitable. Still, the attention to material materializations of culture through the Ritz, the interior design, Beatrice's paintings,

and Strangman's treasures must mean something. Cultural materials still exist within this utterly wild nature and somehow they continue to matter to Kerans because they need to continue to matter to the reader. Stacy Alaimo, in her work on trans-corporeality, emphasizes Karen Barad's twofold definition of mattering, both ontologically and epistemologically. For both Barad and Alaimo intra-action between things and human is the basis of their theories. "If there are no independent entities, then attempts to determine origins could not be corralled into linear narratives but would radiate in innumerable, matted directions," and "the (post)human is that which was and continues to be 'part of the world in its becoming'" (Alaimo, 2016, p.118). The Ritz and the objects within it, including Kerans, are a part of this entanglement, which cannot be detangled in a linear narrative. The Ritz matters in the narrative because its materiality is a matter of concern as opposed to a matter of fact to Kerans. This connection between Ritz and Kerans is not only spatial, but it is also a cyclical relationship in time as well, where both occupy an important and nonetheless ambiguous part in each other's spatial and temporal history.

Ballard specifically notes that besides the elderly, no one remembers living in cities, and even in "Bodkin's childhood the cities had been beleaguered citadels, hemmed in by enormous dykes and disintegrated by panic and despair, reluctant Venices to their marriage with the sea" (p. 21). It is important to note that disintegration in Ballard is always a psychological process, the human psyche cannot be disentangled from nature or natural disintegration. Moreover, even beyond psychologically, Kerans has no connection to the city or the culture besides the one he forces on the hotel. However, this is one of the places where the nature-culture binary or the stone wall between the wild and the city ceases to exist. We no longer

think like this because all we have known are cities, and not big cities necessarily but walled and defended gatherings of people who live in houses, and Kerans has still lived in a human community growing up that has resembled a city on a smaller scale. Still, Kerans claims that what attracts him to these cities is their emptiness: " Their charm and beauty lay precisely in their emptiness, in the strange junction of two extremes of nature, like a discarded crown overgrown by wild orchids" (p. 21). But what he seems to be really interested in is the last remaining parts of the city that has managed to survive beneath the wild orchids. Karen Barad suggests that bodies and environments are "intra-actively co-constituted. Bodies are integral "parts" of, or dynamic reconfigurings of what is" (Barad, 2007, p. 170). Regardless of Kerans' proclamations that he no longer cares about the city, he has become and integral part of it's ending and the city has become an integral part of Kerans' identity.

The ecological disaster in *The Drowned World* is not human-made. Clarke notes that "Ballard's novels omit discussion of anthropogenic blame" (Clarke, 2013, p. 9). This is not a surprising conclusion. Climate change became a global issue only in the late 1980s, two decades after the novel was published. Though Ballard's narrative carries the echoes of the human sin that has brought the flood, the lack of anthropogenic awareness allows for a different reading of how people could possibly deal with a climate change of this scale. Peter Fitting argues that in Ballard's work, "the sense of crisis and impending catastrophe is transposed from the realm of history to that of nature. The responsibility for the cataclysm, as well as the possibility of doing anything about it, are effectively removed from the domain of human activity" (Fitting, 1979, p.66). Fitting categorizes the human fault of wanting more, or essentially capitalism, as history and compares it with nature which is

completely out of the realm of the human. It is arguable that such a clear distinction between the human and the nature might not have been in Ballard's mind while envisioning this catastrophe and that things are more intertwined than what critics have suggested. While there is no direct blame here as there is in Anthropocene fictions, the consequences of the flooding and human decisions that happen after are intimately entangled. It is impossible to take out human impact and consequence from the narrative while humans still exist and continue to be a part of the ecosystem. It is also true that most of the narrative grapples with human decision and agency, and whether it is still possible to act autonomously in such drastic circumstances. The domain of human activity is still very relevant to the nature.

Solar instability is the reason for the climate disaster in the novel. What Ballard describes is not precisely global warming as we know it; it is an accelerated version of the phenomena that has resulted from things happening exterior to the planet, solar storms, putting the blame on nature if there can be any considered to be separate from human agency. This kind of instability is impossible on such short notice as well – just as it is impossible to have evolution in 200 years. And yet, many other life forms on Earth seem to have adapted to this accelerated transformation, much more successfully than humans, even when the threat was also exterior to them as well. The change had been extremely rapid, "the succession of gigantic geophysical upheavals which had transformed the Earth's climate had made their first impact some sixty or seventy years earlier,"(p. 21) and in three generations the world had changed completely.

3.3 Remembering the past

In the novel, Kerans is living "on two levels," (p.34) one conscious and the other subconscious; one civilization, culture, the city, or whatever is the opposite of the other that is his natural subconscious, his genetic journey down his own timeline. He also coexists on two different scales where time runs differently. Both the Anthropocene and science fiction have a complex relationship with time, in the sense that neither abides by the rules of linearity. Rick Crownshaw defines this relationship of time and Anthropocene as "the return and remembrance of knowledge historically dissociated". Not only cultural but biological matter also returns "as socioeconomic modification of Earth systems manifest themselves cumulatively and latently […] geohistory is anything but linear and progressive" (Crownshaw, 2017, p. 128). Kerans and the rest of the characters who are affected by their strange degenerative dreams are a particularly interesting example of this remembrance. Kerans' history is both progressive and linear, but cyclical and regressive at the same time. He remembers two different pasts, one natural, of the dinosaurs and great lakes; the other cultural, of a city he has never seen but still knows a lot about because he is an educated man. Kerans is constantly aware of new sociobiological relations around him, he constantly finds himself in new but ancient entanglements. A reason why such a complex narrative is possible is because of the allowance the genre of science fiction gives to the linear rules of time. Crownshaw writes that "climate change fiction is often characterized by the future anterior— the dramatization of that which will have been— in the literary imagination of near-future scenarios of catastrophe and post-catastrophe" (p. 128-129).

The climax of the novel doesn't depict a climate disaster like a typhoon or tsunami, but a man-made solution to the water 'problem' Europe faces. Indeed, the lagoons, no matter how dream-like they seem to the characters as they continue their pre-Triassic journey, are a problem to the nonexistent government that has sent the scientists Bodkin and Kerans, and the military there. The optimal way of living is still above water.

> "But how did you seal off the perimeter? There's no Continuous wall around the lagoon."
> "There is now, Doctor. I thought you were the expert in marine biology. The fungi growing in the swamp mud outside consolidated the entire mass, for the last week there's only been one point of influx, took us five minutes to dam it up."
> He gazed out brightly at the emerging streets in the dim light around them, the humped backs of cars and buses appearing through the surface. Giant anemones and star-fish flopped limply in the shallows, collapsing kelp straggled out of windows. (Ballard, 2008, p. 122)

Strangman, through pumps added to his ship, and some fungi, drains the lagoon and makes the city walk-able after decades of submersion. While this is seen as something positive or lucrative by Strangman, it is nothing less than horrible for the characters whose dreamscapes have conditioned them to live in the lagoons of their ancestors. They are faced with a past they don't want to see and really have no connection to because it has disappeared before their generation. There is nothing natural about the city they are now forced to encounter because they have never experienced it in its undrowned form before. Their regression in time or time travel here is not natural but artificial. It's unsettling. "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" (120). There is an allusion here to dinosaur skeletons that are so commonly thought

of in relation to the argument for extinction. Here, instead of ancient reptilian remains, the same effect of sublime horror is achieved by abandoned, submerged buildings once again seeing the face of the sun after they have been transformed by water. Instead of a depiction of animals waking up from their slumber, Kerans likens the building to long-extinct monsters, there to inspire awe but show no sign of life. Peter Sands writes that for Ballard, “the fossil functions as an agent of transformation, enveloping the human within the vast evolutionary temporalities of its own prehistory. Presenting a reappearance of the human’s primordial animal origins, the fossil enacts as an ostensibly decentering force” (Sands, 2021). The synthesis of the previous city and the natural disaster that has covered it, once unveiled, uncovered, recovered from its watery tomb evokes nothing but revulsion.

> "Robert! Stop it! It's horrible!" Kerans felt Beatrice seize his arm, her long blue nails biting through the fabric of his dinner jacket. She gazed out at the emerging city, an expression of revulsion on her tense face, physically repelled by the sharp acrid smells of the exposed water-weeds and algae, the damp barnacled forms of rusting litter. (Ballard, 2008, p.121)

The descriptions of the smell are further enhanced by Beatrice’s reaction to it, her perfect paradise is now proven to be an “imaginary city of hell”. For Beatrice the lagoon and the city are the ones and the same, they are inseparable from one another. She has never experienced it otherwise. Beatrice “needs” the lagoon. Kerans defines the scene as “the total inversion of his normal world” and a “rebirth” that he can make no sense of because he is so chronologically disconnected from the time of the city (he doesn’t see himself as years ahead of the ruins but “millions of years away on the beach of some lost Triassic lagoon” (p. 121).

When the lagoon is finally drained, the characters come face to face with the city which had once been. They walk the wet streets where “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" (p. 124). A grotesque cemetery of the past where everything is now wet and rotten. Things are either dying or dead and expired, they can't imagine a positive outcome for draining the lagoon. To the main characters, this is unnatural. The lagoon needs to exist, they need the water to define their existence. They have never known nor can imagine a life without it. However, this is not the only point of view depicted in the novel. The civilization and order of a human government still exist in the story.

> "Re-flood the-?" Riggs repeated, shaking his head in bewilderment. "Robert, you really are out of touch with reality. The sooner you get away from here the better. 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." (p. 158)

Re-flooding and reclaiming here are shown as two contrasting options for the city. On one hand, the imperialist notion of land claim is still in effect and desired, on the other hand, re-flooding the lagoon seems to be the only viable option. However, in either case, there is a return to the status quo, it is the idea of the status quo that differs from perspective to perspective. Different characters see the flood differently, for some, it is a climate disaster that needs to be persevered, for others it is a natural part of the progress of life on Earth, one that should be adapted for survival. Which view does Ballard ascribe to, and which view should we focus on while reading this novel critically? The problem here is not the effect of time travel draining the lagoon achieves, it's the time it takes them back. These characters do not have their cultural roots in a dry past that can be reclaimed, so they seek to reconnect to a wet past that makes sense to them. However, their minds still seek bits and pieces of knowledge,

the recognition of the lost civilization is what arises this feeling of extreme disgust. The world changes too fast for humans to adapt, This displacement is not only spatial in the sense that they now live in water, but also temporal. Umberto Rossi reads an engineered, purposeful time confusion in the novel. The clocks are no longer working, so human time is irretrievably lost. Colonel Riggs and his man attempt to reanimate the clocks on the face of buildings and churches, which Rossi says:

> must be seen as a sort of symbolic reanimation-therapy for the city itself. Strangman's crew sanctions the timeless status of the city with a christening ritual:
>
> > On another occasion he sent two of his men over in a skiff to the lagoon; on one of the largest buildings on the opposite bank they painted in letters thirty feet high: TIME ZONE. (§9:97)
>
> The city is a time zone not just because it is a time-less zone, but also because it is now an area where a new kind of time is in force, biological rather than chronological. (Rossi, 1994, p. 82)

For Kerans the city is already dead, extinct, Strangman is "resurrecting a corpse"(Ballard, 2014, p. 159). He doesn't even think about cleaning or rebuilding or reclaiming it, it is a corpse that needs to stay buried. There is no change of resurrection. It is impossible to retrieve a past long gone. Yet, he is the one on a journey to past millions of years ago. The fact that the characters find a pre-civilization past salvageable and civilization lost echoes Bruno Latour's exclamation that we have never been modern, or Stacy Alaimo's similar statement that we have never been human, the denial is not of progress but of bifurcation of the human subject and the Other that has set the human apart from the environment. The draining of the lagoon by such artificial means once again echoes the notion of putting up city walls, of separating the human from the rest of the lagoon, the rest of nature where he truly belongs. It doesn't seem to matter that these humans were barely surviving in the lagoon or that they needed special equipment to keep water at

bay, such a direct cut, a wall that keeps the dangers of the nature completely is understood as a step in the wrong direction. Jim Clarke reads the draining scene as a disavowal of notions of "preservation" and "mitigation" of history. Strangman's "modernist - indeed Eliotic – desire to shore up fragments of the past against the ruins of the drowned world is depicted as entirely misguided" (Clarke, 2013, p. 11). Ballard seeks a nature that encompasses the human, Kerans having let go of all his protection against the environment even suggests that Ballard seeks a more porous entanglement, however impossible it is to achieve with the speed Kerans' body can actually adapt to his circumstances. It is curious then, that the problem once again becomes one of speed, one of time. Kerans has run out of time. A more positive reading as Ballard suggests, can only account for a narrative where someone is able to be fast enough to change, adapt and become a new Adam, with a new Eve to continue the human race on the planet. Or another positive reading would be accepting this temporal problem and accepting that human time on the planet, along with his segregated culture has run out.

Ballard's Kerans has found peace with the idea of deep time through immersion, but it is deep time that travels to the future to swallow him whole. It is the deep awareness that he can't fight with the natural progress of time, no matter how unnatural it seems to him in its speed. This total acceptance, even if it means the death of the character, is seen as something positive by the author because his character has finally stopped fighting against the force of nature that couldn't have been fought to begin with. The concept of regressing back to the Triassic age is the authors way of showing that the problem with time is not one that only concerns itself with the future and the speed of our technological development, but our place

on the timeline of the planet. Kerans gives up his connection with the city and ventures into the forests. The acceptance of history as one that belongs to the planet, rather than to characters or a buildings ends the novel on a positive note.

CHAPTER 4

CHILDREN, ANIMALS, END OF HISTORY

"Life, uh, finds a way."

- Jurassic Park

"Make Kin Not Babies."

— Donna J. Haraway, Staying with the Trouble

End of the world, or end of the time is a tricky concept. Catastrophe narratives generally depict end of humanity rather than end of the planet Earth itself. This can be called the end of history instead. Even when a nuclear disaster is in question, or a robot uprising or an alien invasion, the planet is usually left standing, scorched or devastated as it may be. There is still hope for renewal, and new life flourishing without the continuing human existence. That the planet can no longer sustain human life does not mean it cannot sustain any life altogether or it is without any worth without any life upon its crust. The importance of the human life is only important in a human-centered universe, which we realize with scientific advancements showing us the stars and the bacteria that sustain our daily existence on the planet. The life of humans on the grand scope of things is no longer very important. Perhaps it never has been, given the importance of pleasing the gods in ancient religions, or the mere simplicity of destroying millions of lives with a hydrogen bomb or constantly building nuclear plants without any regard for animal or human life around it. But where does this leave us? What does it mean when we say the end of history is not the end of the world?

4.1 The last Adam

Peter Sands, in a book chapter titled, “J. G. Ballard’s Fossil Imaginaries,” writes that Ballard’s climate apocalypse is not concerned with "the maintenance, reconstruction, or redemption of life”. Instead, it “functions as a revelatory unveiling of the drives and desires that gesture beyond the world of the human from within"(Sands, 2021). The life in question here is of course, human life on the planet. There are plants and certain animals that have managed to adapt to the rising temperatures. Giant mosquitoes and reptiles seem to be content with their lives in abandoned buildings. Sands makes this observation about *The Drowned World*'s connection with the dead, the decayed, the rotten, the corpse, the fossil. While there are still those who survive, and even thrive, they are rare. The dead cultural and natural remnants are a huge part of the drained lagoon in the novel. They function “as a means for depicting a power that crosses from the biological into a manipulation of geological matter and mattering. In addition to tying together the human’s beginnings and endings, Ballard’s animal remains speak to an undulating discourse of species that bridges the boundary between bio- and geological worlds” (Sands, 2021).

Ballard’s characters in the *Drowned World* live in a transition to nothingness. The psychological breakdown of the characters and the inertia that follows it when they chose to stay at the lagoon rather than to go north with the soldiers enforces this idea of them being frozen at the threshold of death. By positing them next to the fossil rather than the evolving human, Peter Sands emphasizes the past-ness of the human existence. Whatever future that Earth may have, it does not include the humankind beyond existing as fossils from a long gone past.

In this narrative, the end of the human race is something to be celebrated. For Ballard the end of the world is a positive thing, though he too grapples with the strength of the death drive his characters feel in his writing:

> But are these deluges and droughts, whirlwinds and glaciations no more than over-extended metaphors of some kind of suicidal self-hate?... On the contrary, I believe that the catastrophe story, whoever may tell it, represents a constructive and positive act by the imagination rather than a negative one, an attempt to confront a patently meaningless universe by challenging it at its own game. (Ballard, 2014, p. 166-167)

Ballard looks at the world he destroyed on paper, and seeks to enlighten the human within it. The act of destruction is positive in the sense that it positions his characters and objects in a "meaningless universe," his psychological odyssey reasserts human agency by allowing humans the choice of their own extinction even in their primordial regression to more animistic origins. Umberto Rossi reads Kerans' last act of going south as "his last voluntary decision, the last of his acts that can be explained in terms of will. Kerans says goodbye to his role of historical and cultural subject" (Rossi, 1994, p. 84).

Kerans' decision to continue going South is widely recognized as the "ultimate divorce between humans and the city," a process Ballard builds up gradually as the story progresses from the characters alienating themselves from the others and the buildings surrounding them (p. 84). However, this reading can be contested on the basis of Ballard's insistence on cultural remnants in the narrative. Kerans does not abandon culture at all, he re-situates himself into the biblical narrative by becoming a Second Adam. The image of Adam is not lost when he steps out of the boundaries of the city that had been London, if anything his journey deep into the nature only strengthens the power of this myth. Kerans is unable to let go of his humanly existence, that is his cultural upbringing that posits the human as the

most important, to the moment of his death no matter how positive this death might be. Kerans' inability to disconnect was one of the main problems discussed in the last chapter, this chapter focuses on as to why Ballard sees his death, regardless of personal cultural consequence, as something positive overall.

The question of death once again brings forth the idea of birth, as it must, and particularly why the lack of it might be a cause for celebration for Ballard. There are no children in *The Drowned World*, a child is not born out of the main sexual relationship as in many disaster novels signaling hope and a positive ending such as *The Children of Men, The Road* or movies *A Quiet Place, Mother/Android, How It Ends.* Instead the total separation of Beatrice and Kerans at the end is what is considered to be a positive ending. Nothing in Ballard's work follows the human instinct to live and reproduce, instead the death instinct takes of the characters under the disguise of a primordial adaptation. In this context, human inability to mutate and evolve is almost seen in a positive light, a positive (scientific) choice not to continue reproducing rather than a genetic lack of ability to have children who would be able to adapt to harsh climatic circumstances. Extinction stops becoming a tragedy, it becomes an autonomous choice that re-institutes human agency.

> By the time of Kerans' birth at Camp Byrd, a city of ten thousand in Northern Greenland, it was estimated that fewer than five million people were still living on the polar caps. The birth of a child had become a comparative rarity, and only one marriage in ten yielded any offspring. 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, 2008, p. 23)

This religious way of looking at extinction is one of the cultural vestiges in the novel that Kerans never truly abandons. However, he is a biologist, why must he think so 'culturally' and not 'scientifically'? Humans ceased to have children because they

were unable to mutate accordingly to the circumstances where children would be viable and survive outside the womb. The normal expectation should be that an unexpected mutation makes the fetus nonviable, but here the case is the complete opposite. It's the lack of instant mutation which the main character seeks makes new human life on Earth impossible. Ballard describes an incredibly fast global warming, not caused by humans and carbon emissions but has happened because of "a series of violent and prolonged solar storms lasting several years". The temperatures have risen rapidly in just few years, making tropical areas uninhabitable. Eventually people started colonizing polar regions. So what happened was that humans went through a 'cultural' evolution, and even that is arguable because they did what they knew the best and colonized the frontier in hopes of continuing a well adjusted life, and not a 'natural' one like the other life forms on Earth. This is actually a phenomenon we see even today, though it is voluntary more than an incapability on our parts. Many technologically developed nations suffer from low birthrates, countries like South Korea and Japan actually try to establish new laws because with the way things are going and young population refusing to have children, they are in danger of actually going extinct with the most of the the population consisting of the elderly. So even now it's a problem, cultural or natural, even in the present. Kerans even notes that this process happens "systematically," and tries to reason a natural occurrence through his training. However, this way of thinking once again gives way to the religious narrative. Natural discourse is constantly broken by scientific and religious ones in *The Drowned World.* Ballard's human cannot let go of the cultural background that allows him agency and control over his own fate. Even the undeniability of his own destruction must be explained in his own terms. Jim Clarke

sees Ballard's insistence on a more scientific approach rather than the religious one he can't escape from as "an attempt to avoid reproducing mythopoetics which carry wide-ranging and perhaps unintended cultural connotations." In Clarke's reading, in *The Drowned World,* "nature does not answer to the language of theology or science." (Clarke, 2013, p. 10) However, this does not mean that the human characters are totally free from it. Bodkin relies on the language of science and Kerans of theology to deal with the catastrophe. Strangman, who is using the language of capitalism and Colonel Riggs who is using the language of military seem to still hold any power over nature… for now. If anything this reading only proves that one, humans are unable to give up their 'civilized' patterns of thought and speech, and two, that systematized notions of capitalism and the army seem to have a longer span of life in Ballard's dystopian world, even if it means they would rather float with the waves and rules of nature rather than take a stand against it.

> Ballard's climate dystopias are post-apocalyptic only in the sense that cataclysmic change is in the process of occurring and is not preventable. Mankind lives on, even if only temporarily or precariously, fundamentally altered by the experience. Ballard's failure to attribute blame for climate change is an attempt to avoid reproducing mythopoetics which carry wide-ranging and perhaps unintended cultural connotations. For Ballard, nature does not answer to the language of theology or science. (Ballard, 2007, p. 10)

Clarke's understanding of the change as a continuous coming into being also supports this view. There is an ongoing change and the human race is unable to adapt to it as fast as necessary. It's not really critically important that this change is a regression, but that regardless of what it is, we won't be able to do it fast enough to continue surviving. Clark deals with this by noting that "for Ballard, nature does not answer to the language of theology or science" (p. 10), the human language. The main character in the end manages to overcome both of these cultural roots in order

to be one with nature but still deems himself the second coming of Adam. Kerans' way of overcoming disaster is by declaring himself a second Adam and re-instituting the agency of human religion even though he is the only one who will believe in it. While Clarke is correct in exclaiming that nature in Ballard does not answer to human reason, the human does. In Kerans' deranged mind, the only way of surviving is accepting that there isn't a complete binary between nature and culture anymore. Kerans meshes nature and culture completely in the only way he knows how, by coming the new Adam who will never be able to have children to carry on his legacy, cultural or natural. At this point, Beatrice as Eve is completely out of the question. This second Adam is completely devoid of his cultural memory and yet he is still solely defined by it because he cannot continue to exist without it, having not mutated fast enough to be able to go into the forest without his "dinner jacket" (Ballard, 2007, p. 116), or technological advancements that would protect his body from radiation. In a way, this second Adam is not Adam at all because while he is wearing his cultural armor, a mythic role that he completely fits himself into, he lacks the necessary natural or cultural equipment to continue living on.

Peter Sands notes that, "in situating the human within the chaotic and vital forces of the nonhuman world" the end of the world becomes "a dismantling of the ego-structures of "civilization" that allow for the human "world" to be conceived in the singular " (Sands, 2021). Ballard creates this new totality by creating a religion of one, assured by the lack of reproduction. Even though the nature will swallow Kerans in the end, through this new religion he, at least for one point in time, manages to assert agency over both the culture that is left and the nature that he can no longer keep up with. Going back to Peter Sands' idea of the fossil, he notes that

this “recontextualization of human life... functions for Ballard as a means for depicting a power that crosses from the biological into a manipulation of geological matter and mattering” (Sands, 2021). Kerans becoming both the creator and the last believer of his own religion and eventually being lost in the forests is a recognition of the fact that even though some humans may still exist at camps, human life is biologically over on the planet. The human is now a part of something that is gone, and this is not depicted as the end of the world, but a new beginning.

4.2 A contemporary perspective

On the other hand, Kim Stanley Robinson’s *New York 2140* shows characters who are seemingly surviving just fine in their own drowned city, where the water and the temperatures haven’t risen as fast, giving at least a sizable percentage of people a chance to continue to live in the city. Brent Ryan Bellamy sees the people of *New York 2140* as successfully utopian in their ways of living, he writes that “Robinson’s hypothesis is that, in the wake of catastrophic climate change and sea-level rise, human beings will have found a way to live together and share the work in a highly localized, self-sustaining way” (Bellamy, 2018, p.418). However, arguably, *New York 2140* has a similar word view when it comes to reproduction and children to *The Drowned World,* in that there aren’t almost any in the novel.

Robinson calls this novel a “comedy of coping” (Swearingen, 2017), where he tries to grapple with the devastating floods with a positive, almost comedic mindset that extend to the orphans in the novel. The two child main characters, Stefan and Roberto are almost adult like, they have raised themselves in the street and have never been considered children until they meet the people of the building.

Though they have their child like imagination, none of their acts really portray them as children their age. The only other mentioned child character has been drowned and gone a decade ago, a memory of a broken marriage. Vlade, the child's father, is now a part of the building. The loss of his child has made him a recluse unable to form human attachments out of work setting, he sees the building as his "stone wife"(p. 455). None of the characters have family in the building and presumably elsewhere except Vlade's ex-wife Idelba, who he can't bear to see without the children serving as an important enough reason why. In a sense, these characters who share the same living space and same causes – keeping that living space- become a family in the novel without familial connections or emotional bonds. This utopian living situation seems to be more out of necessity and depression like the policewoman, Inspector Gen, who just stayed in the building after she buried her parents. There is an emotional need for connection outside the family unit that is fulfilled through this commune, but behind the veil there are ex-partners who still show romantic possibility, like Vlade's ex-wife and Charlotte's ex-husband. None of the marriages or relationships in the novel results in children, in fact children are a breaking factor. Instead there is a commune life, even the children are adopted to the commune and not to families at the end.

Of course, this alone isn't enough to claim that Robinson's dystopia has connotations on population control. However, the only successful romantic relationship at the end of the novel, that of Franklin and Charlotte, is significant in its connotations. From the start of the story Franklin is originally interested in the character of Jojo, who, as well as being in the same professions as him, is young and beautiful. Her character is sexualized as a romantic interest by Franklin many times,

however, by the end, he has a relationship with Charlotte who is in her mid-fifties and is described by Franklin on the basis of her imperfections. Franklin is a deeply flawed character, especially when it comes to his perception of woman.

> Charlotte appeared… clumping along with that little limp she has. A solid woman, carelessly curvy, dressed for business; not precisely what you hope to see in a woman's figure. Not that I care about that; I mean not that that' s all I care about. For instance Jojo had a great figure, sure, very trim and well-proportioned, classic features everywhere, neat and attractive without anything being extravagant, you might say….But on the other hand take Amelia Black… I had not been able to avoid noticing along with the rest of humanity that she also had a spectacular figure, with the extra splashes on a big rangy frame that certainly made for at least part of her popularity….Charlotte Armstrong was not perfect, or nice. Good but not nice; and good is more important than nice. Grumpy and sharp-edged, and as I said, solid in form. And sixteen fucking years older. Right now I was thirty-four, which meant she was, oh my God, fifty. Fifty years old! She might as well be eighty! (p. 584)

Franklin explicitly compares the physical characteristics of the woman who are 'available' for a romantic connection, but while Jojo and Amelia are sexy, it is Charlotte he finally sets his eyes on. His reason for this possible relationship is not Charlotte's physical appearance which he considers an important factor to be considered in other women. When he thinks about why he might want Charlotte sexually, the answer he comes up with is that he is falling for her political power.

> No; power is not sexy. But Charlotte Armstrong was sexy. So but what did that mean? Sixteen years older, holy shit. When I myself was sixty, and hopefully still thoroughly hale and hearty even at that admittedly elderly age, she would be seventy-six years old, ack. An inhuman number. If I got to a lucky seventy, she would be eighty-six and deeply, deeply ancient. Up and down the years, the discrepancy was like a Grand Canyon between us. (p. 590)

One could read this choice of a sexual partner, one who will be unable to produce children, as a conscious choice on the behalf of the author. Especially considering that Franklin has formed a bond with the children in the novel, who will be under Charlotte's guardianship but not her children as she will be mainly in Denver. The

children don't really need a mother figure to begin with, having never known one. Any family they might one day make will not be a traditional one, and as it can be seen from his inner monologue, Franklin's plans for a future with an older Charlotte don't include any children. Yet it seems curious that it is the male characters, when such an interaction with children exists, that take the lead. Amelia, for example, the sex symbol in the novel, is also the youngest besides the children. She exists in the novel both with her sexuality and childlike wonder faced with endangered animals. Whenever she is sexualized, it is through a material gaze and not a male one necessarily. She is without sexual partners unlike Charlotte who is older, so she isn't really 'productive' either. None of the women in the novel, even Idelba who had been a mother before, are given motherly roles. It is only the men who seem to be given the mother role to some degree.

The most overt way this is shown is through Vlade, who, keeps the house and cares for the wayward children; while Charlotte runs the building and Inspector Gen, who is always called as such, is responsible for security. It is Vlade who is the symbolic housewife. Robinson subverts the male and female roles, but this subversion is accompanied by a lack of reproduction. The question is this: can this be seen in a positive light? Can there be an Utopian vision where the population is gradually diminished because of changing gender roles in the society?

The women of *New York 2140* are particularly stronger and more outgoing than the men. They mainly hold the power positions: the president and the mayor are women, Charlotte becomes a congresswoman at the end, Amelia is powerful because she is a popular reality star, Gen is an Inspector, Idelba runs a boat full of male crew etc. Whereas men are more in the house keeper role with Vlade being the

superintendent of the Met building, him and Hexter taking the child rearing role. Arguably, for the most part the characterization comes off as a conscious choice to be politically correct to match with the current left climate but, nonetheless, it doesn't come off as a manifesto for a particular way of living or ideology because there are many different female characters with different characteristics. Even Franklin babysits, the women don't. Neither do they have children. However, it must still be noted that in the private sector, especially high ranking jobs relating to the capital seem to be held by men in general, like Franklin's boss or Charlotte's ex-husband and the women aren't really interested in money in general except Jojo who claims that she wants to work with more material, meaningful things rather than money. Amelia earns enough to live in the building but doesn't see herself as a rich star, she is more concerned about the animals. Charlotte wants the money to save the building. The women hold their position of power as a way to achieve other goals they have besides economical gains. Still, Robinson puts women in places of power at the expense of their womanly qualities, they don't have stable relationships or children. Even Amelia, overtly sexual and feminized is nothing motherly. This seems like it is intentional rather than a male writers inability to reconcile power with maternity or womanhood. Of course, a female character isn't solely defined by her traditionally 'womanly' characteristics, but the total lack of them in connection to the lack of families or children in the novel raises questions about the extend Robinson's utopia includes motherhood and children in general. They are no longer seen as an achievement that needs to be had for every woman. The pain Vlade and Idelba still suffer ten years after the loss of their son only enriches the argument about

childlessness when it is considered that they do not unite even though they still love each other.

A common argument in current ecopolitics is the one of degrowth. Giacomo D'Alisa, in *Degrowth: A Vocabulary for a New Era* defines degrowth as "a rejection of the illusion of growth and a call to repoliticize the public debate colonized by the idiom of economism." (D'Alisa, 2014, p.1). While it is mainly an economical term, the idea of degrowth finds place in ecocriticism a lot. It is important to note that even outside the boundaries of finance, the idea of degrowth calls for a shrinking in all areas of life for a better quality of living for many generations to come. The Anthropocene is both the reason and proof that the damage we have inflicted on the planet is beyond the point of return. However, it is possible to limit the effects of further damage on both the planet and the next generations of humans, our children and grandchildren. Bruno Latour sees the only progress possible in this regard as an anti-progress, a progress in reverse for the human growth on the planet. "This would mean rethinking the idea of progress, retrogressing, discovering a different way of experiencing the passage of time. Instead of speaking of hope, we would have to explore a rather subtle way of "dis-hoping"; this doesn't mean despairing but, rather, not trusting in hope alone as a way of engaging with passing time" (Latour, 2017, p.13). This argument against reproduction, or population growth can be called antinatalist, but as Latour says, it is important not to frame this negatively. The excessive human presence on the planet is hurting both the environment and us. I do not wish to refer to eventual decline in birth rates as an antinatalist argument but as a rational one. Excessive birth rates without any planning are only putting more burden on the planet. Latour's notion of not trusting hope, or 'dis-hoping' speaks to

Robinson's view on the children and how his characters interact with the orphans Stefan and Roberto. There is no outright disavowal of children, nor any wish for there to be any more of them by the female characters. However, the children who already exist are taken care of by the community and become useful members of it by taking adult positions. The argument is not a simple antinatalist one but a reconfiguring of the idea of human community and family in general; families in the novel are families of choice rather than families by natural means. Growth happens in a way that keeps the numbers static, but each character still acquires some level of familial bond and connection with the existing children by the end.

4.3 Coexisting with animals

This childlessness was connected to the end of the world in *The Drowned World,* there were biological reasons as to why women couldn't bear children anymore. However, while it doesn't give a natural reason why and suggests social and cultural changes for the difference in family dynamics, *New York 2140* also includes an inclination towards human-animal relationships and coexistence that is both seen as an alternative to parent-child and human-human relationships with the animal like descriptions of children and human like descriptions of the animals in the novel.

Maria Puig de la Bellacasa, in her book *Matters of Care,* suggests that "interspecies love brings additional layers to a concept of more than humans modes of care. Care is required in processes in which humans and nonhumans co-train each other to live, work, and play together to construct a relationship of "significant otherness" (Bellacasa, 2017, p.83). Instead of the constant growth of human population, the book proposes a new relationship with the animals for the continuous

human existence on the planet. One could argue that there needs to be a total reconfiguration of the human nature dichotomy if we ever wish to find a different answer to the question we constantly ask: how do we save ourselves? Only by stopping to think the human as a separate entity from the planet and learning how to learn from it can we start to seek equilibrium. Long have we only seen the land and the animals as resources, without any intelligence or know-how for survival. We have passed the point where this has stopped working, we only made things worse for ourselves by playing fast and loose with the balance of the world. The rapid acceleration of global warming resulting from the carbon emissions in the last century, while still not politically acclaimed enough, has become a part of cultural works as something that is both seen and felt, not only materially but also psychologically. Kim Stanley Robinson, in *New York 2140,* depicts a New York half underwater, where the first floors of buildings are drowned and people use boats to travel. Both humans and animals are learning to live in vastly different circumstances, in a city that is both above and underwater, sometimes depending on the hour of the day. From the start, Robinson is adamant that animals are a part of his narrative, always at the periphery but nonetheless there.

> And so the animals have come back, the fish, the fowl, the oysters, quite a few of them two-headed and fatal to ingest, but back. People too are back, of course, having never left, still everywhere, they're like cockroaches you can't get rid of them. And yet all the other animals don't care; they swim around living their lives, they scavenge and predate and browse and get by and avoid people, just like any other New Yorker. (p. 339)

Here, human is also depicted as another "animal," trying to survive on the streets, now canals, of New York. Later in the narrative, this is further emphasized when children are likened to animals, and when animal carcasses are used to portray the scale of the disaster the city faces and the emotional damage it causes.

Natureculture is a term Donna Haraway has used in *The Companion Species Manifesto*, in which she analyses our relationships with dogs. Nicholas Malone and Kathryn Ovenden define natureculture as "a synthesis of nature and culture that recognizes their inseparability in ecological relationships that are both biophysically and socially formed" (Malone, 2016, p. 1). Haraway, alongside anthropologist Agustin Fuentes and Linda Wolfe[1], has written on companion living with primates, alongside dogs, and the third chapter will see a fictional visualization of her theories in science fiction with Robinson's *New York 2140*. Emily Potter and Gay Hawkins define natureculture as a starting point to "decentre humans from our ontological, ethical-political and cultural stories. The imperative to think about non-human matter in ethical-political terms is fuelled by environmental calamities currently facing the Earth (Potter and Hawkins, 2009, p. 1). Helen Merrick, in a book chapter on Donna Haraway's work titled "Naturecultures and Feminist Materialism," writes that Haraway's writings, like Latour's , is nondualist. "A nondualist approach at its core resists the whole series of traditional binarisms such as nature/culture and human/nonhuman that inform the reductionist systems ultimately threatening the natural environment" (Merrick, 2017, p.101). This nondualist nature refuses the binaries which culture has put upon "reality (ontology) and human understanding of it (epistemology) into separate spheres of human/nature, culture/nature, or human/non-human"(Merrick, 2017, p.103). Merrick suggests that such rethinking inevitably calls for a reconstructing of how both sciences and humanities understand nature and material reality. According to Merrick, Haraway's term 'naturecultures' is not merely a word play but a serious reminder of the constant intra-action that " co-

1 "Primates Face to Face: Conservation Implications of Human–Nonhuman Primate Interconnections"

produces the other and are always/already in relation" (Merrick, 2017, p.103). Haraway brings forth the impossibility of of thinking the nature as a separate entity.

Arguably, while this dis-seperation can be philosophically formulated, and shown in primate experiments, [2]it still remains a philosophical discussion without any material reality on the climate change argument. However, through narrative, it takes another, more tangible form. Nothing is static, there are transformations and adaptations all around us. It is just that the scales we are used to in our daily lives make perceiving them almost impossible. Being able to read these ecological and scientific entanglements in text and imagining these entanglements among the other other connections between the characters allows the reader to think on different scales at the same time.

In the novel, facing a superstorm and the threat of further submersion, a financier named Franklin turns to his furry neighbors, beavers, to find new ways of living in a sunken city. His motives for this are personal, to begin with, he is trying to impress a girl, but increasingly they get deeper, with him saving the children and finally coming face to face with the beavers. There are multiple places in the novel where animal encounters change the trajectories of the characters' lives. During the climax of the novel, the storm tears down New York, and with it, borders between the city and nature, particularly the human and the animal crumble in the moment of disaster. Acknowledging the arrogance of man and making him face a storm he cannot possibly contain, Robinson asks humans to seek guidance from a more adaption-oriented species in a realistic narrative of a near-future where the borders of human settlement and establishment are stretched thinner than ever before. In this

2 Haraway, Fuentes and Wolfe write extensively about human primate relations in their works to show human nonhuman relationships.

case, it is fear and desperation, two of the most important tools of apocalyptic narratives, that stop prejudice from taking over the human response to animal encounters.

This anthropocentric prejudice is predominant in Western philosophy, where humanism posits that only humans have agency, and more importantly agency over nature, a nature proved to be false with the increasing loss of balance in climatic events. Cary Wolfe talks about the anthropocentric fallacy in his paper called "Human, All Too Human". Animals studies, as a field is unfamiliar still to dystopic narratives, which abundantly portray animals but nonetheless tell the human story. The issue at hand is, as harsh as this sounds, is not the animal, but human survival. It is acknowledging our desperation for survival and accepting our need to come to terms with our inability to manage it on our own. It is a call for a posthumanism that acknowledges animals in their own habitat, and if any human agenda should be related to them as in our aid, will come from accepting their part in the nature without the human in the equation. It may be too early and we may be too slow to ever erase the binary between the human and the other that has been built over centuries to feed the human ego. However, a posthumanism that sees the animal as an equal is needed and is perhaps even achievable. According to Wolfe, posthumanism "comes both before and after humanism". Before, because it focuses on bodily embeddedness, both biologically and technologically and after, because it names a historical moment "in which the decentering of the human by its imbrication in technical, medical, informatic, and economic networks is increasingly impossible to ignore" (Wolfe, 2009, p. xv). It is important to acknowledge that decentering doesn't automatically equal disintegrating. Stacy Alaimo, too, in her book *Exposed,*

posits her version of posthuman in her theory of trans-corporeality “not as a historical progression, but as an assertion that, to echo Bruno Latour, we have never been human- if to be human begins with a separation from, or a disavowal of, the very stuff of the world” (Alaimo, 2016, p.77). A reunion with the very stuff of the world doesn’t guarantee the erasure of the human identity, of the human ego. Accepting the higher position of the human in our minds, and trying to elevate other beings there rather than knocking the human down might be more achievable in the short term and we don’t have much time, not when every economic decision in the present determines the climate of the future. Wolfe’s posthumanist call, he writes, “is only posthumanist, in the sense that it opposes the fantasies of disembodiment and autonomy, inherited from humanism itself” (Wolfe, 2009, p.xv). He searches for a more bodily embodied existence and the concept of autonomy, stripped from its humanist shell of reason and intelligence, of political power that is deeply rooted in masculine Christianity, changes radically with encounters with nature that don’t automatically assign the human as it’s rightful owner and master.

Today, we no longer search for meaningful connections with nature by secluding ourselves in the forest, we mainly search for it in the little corners of the city in our hectic lives. It is in the farmers' markets or the plants that we keep, in the stays that we feed, the flowers that bloom from the cracks in the asphalt. When asked, for example, many give New York City and Central Park as a prime example of nature in the middle of the city. Kim Stanley Robinson takes this example and takes it to the extreme by drowning New York, a scenario while on the extreme side, is still within the realm of possibility if carbon emissions continue to increase rapidly. With water, animal presence in the city becomes more apparent than ever.

> There are other dark pools in New York Bay, however. They lie under the eelgrass at the mouths of the city's creeks, deeper than any algorithm can plumb. Because life is more than algorithmic, it's a snarl of green fuses, an efflorescence of vitalisms. Nothing we devise is anything like as complex as the bay's ecosystem. On the floors of the canals, the old sewer holes spew life from below. Up and down life floats, in and out with the tides… At the center of the estuarine network swims the mayor of the municipality, the beaver, busily building wetlands. Beavers are the real real estate developers. River otters, mink, fishers, weasels, raccoons: all these citizens inhabit the world the beavers made from their version of lumber. Around them swim harbor seals, harbor porpoises. A sperm whale sails through the Narrows like an ocean liner. Squirrels and bats. The American black bear. (p. 320)

Robinson's ecology is a North American one. These animals are an inseparable part of New York, just as humans are. Antonia Mehnert notes that the "city is negotiated as a hybrid space that is co-shaped by the natural and the cultural. In this space of climate-culture, humankind and nature are always co-constitutive" (Mehnert, 2016, p.161). The presence of these animals shapes the city just as much as the humans. In a narrative where most of the story focuses on buildings and real estate in a city that is being submerged, the beaver is declared the "mayor of the municipality," "the real real estate developer," because, beyond human intellect and ambition, the beaver is the one who is equipped with the natural talent and ability to survive in such conditions.

Beavers are semiaquatic, they live on both land and water but prefer mainly water because it allows them better protection from predators. They are known for building dams, the largest of which is 2,790ft (850 m) in length—more than half a mile long— twice the width of the Hoover Dam which spans 1,244ft (379m). The dams provide deep enough water so that their lodges don't freeze in the winter, they also flood the area around giving the beavers access to the food supply. As it is also portrayed in the novel, muskrats steal food from beaver lodges, but beavers also

allow muskrats inside their homes if they bring fresh food, they have learned to live together in the harsh circumstances of the winter in a way that benefits both species.

> "[Water] never stopped. It drains the southeast corner of Central Park. It's the old watershed, coming back. Which is what gives the beavers in Central Park their chance. Same up at the northeast end of the park. The beavers chew down the alder and willows—"
>
> "With their teeth!"
>
> "That's right, they are way tougher than vampires, dentally speaking. They chew down entire trees, and weave the trees and branches together until they have a beaver dam, which raises the water some, and slows it down. Then they can build beaver lodges, where you swim up under them to get inside, and when you go high enough inside them it's dry."
>
> "That's very cool."
>
> "It is. And it also makes homes for muskrats, who move into abandoned beaver lodges, or make their own using old beaver cuttings, mostly. So along with beaver, you get all the kinds of animals and plants that used to live on this island, because the beaver dams anchor that whole community." (p. 548)

Robinson clearly shows the beaver as a being the human should aspire to become, to anchor human communities together, and even other species, just as the beavers do with muskrats. Mr. Hexter, teaches the two young children about this new way of being and while the rest of this example has scientists, his main influence is the beaver dam, which can withstand the harsh conditions of the city.

A term that can be used to define this new way of looking at the beaver is "ecognosis" which was coined by Timothy Morton. Ecognosis "is like knowing, but more like letting be known. It is something like coexisting. It is like becoming accustomed to strangeness that doesn't become less strange through acclimation" (Morton, 2018, p.5). Humans and animals adapted, both to each other and the fast-changing circumstances around them that affect their relationships with each other and the world. Just as the beaver and the muskrat find ways of living together, so do the humans with the beavers that don't solely consist of adding them to the food or supply chain. In the novel, instead of capitalistic reproduction, New York becomes a

place for ecognosis, a new knowing and a coexisting between different lifeforms who learn to live together in new ways. Instead of the human solely occupying animal living spaces, now the animals too penetrate human spaces by no will of their own and the human will alone isn't strong enough to have control over them. Nor such a show of human agency is shown to be needed, in fact, it is even proven to be unfavorable. Water forces them to live together, water forces a new type of cohabitation.

The financier Franklin Garr, who has a redemption arch throughout the novel, finds himself getting increasingly mixed with the city in an effort to woo a woman. From looking at computer screens all day to saving drowning children whose faces look like otters when wet, his look at the real estate in the intertidal also starts to become more material, he starts focusing on the objects and beings surrounding him rather than their presence as statistics and numbers as he is used. Franklin calls the moment he figures out how to solve the housing problem in the intertidal, that buildings are collapsing in water, his great epiphany.

> As I watched, a family of beavers came swimming right up to the ragged shore, big noses and heads on the parents, little ones on a line of four babies. They ducked into a beaver mound made of stacked branches and two-by-fours, just offshore from the bank. A low round house, not exactly neat, yet almost so. Constructed, for sure. Strong enough to handle the occasional bash from a passing ice floe. The beaver family disappeared inside, and I recalled from the museum displays that their doorway would be a tunnel underwater, leading up to an above-water level.
>
> Housing in the intertidal.
> Spring was springing. (p. 417)

The animal becomes the epiphany, the source of inspiration. Not the human intellect but the animal instinct to build houses on the water is celebrated. Stacy Alaimo writes that "the Anthropocene suggests that agency must be rethought in terms of interconnected entanglements rather than as a unilateral "authoring" of actions"

(Alaimo, 2016, p. 156). Robinson's reconfiguration allows for a shift in the balance between the human and the animal, where the human intellect puts him above the animal without exception. The human, willingly, seeks to think like an animal.

Franklin's decision to act on his inspiration from beavers, whose way of living in the intertidal actually works, falls in line with the sustainable living we are trying to achieve. The complex relationships between humans and nature is a part of resilience studies, a vital part of the human defense against disasters fast like hurricanes and slow violences like water level rise. Marta Olazabal posits that resilience thinking depends on the nature-human connection and "an integration of nature and its services in urban decision-making would help, thus, to conceive sustainability transformations guaranteeing future ecological services (Olazabal, 2017, p. 87).

Brent Ryan Bellamy brings our attention to the positivist and utopian qualities *New York 2140* has portraying a resilient and sustainable living in the old buildings of New York.

> The office towers of lower Manhattan have become residential cooperatives. They are largely self-sustaining, having whole floors converted to farming as well as being rigged up to generate more electrical energy than they draw from the grid. In some cases, they are also carbon neutral or carbon negative, meaning they either do not add CO 2 to the atmosphere or they scrub it from the air. Here Robinson's hypothesis is that, in the wake of catastrophic climate change and sea-level rise, human beings will have found a way to live together and share the work in a highly localized, self-sustaining way. (Bellamy, 2018, p. 418)

The limits of sustainability without the animal help is tested in *New York 2140,* when Hurricane Fyodor hits and the whole city, human and animal try to take shelter from it, resulting in other human-animal encounters. Donna Haraway sees these encounters as the site of the cyborg, a term while unfamiliar, which is nonetheless

useful in the scope of this argument because it heralds the becoming of something new, a possible new world order. According to her, "the cyborg appears in myth precisely where the boundary between human and animal is transgressed. Far from signaling a walling off of people from other living beings, cyborgs signal disturbingly and pleasurably tight coupling" (Haraway, 2016, p.11). One such encounter happens at the climax of the novel and is later told by the two child characters, Stefan and Roberto, about their near-death experience having been caught in the hurricane in an abandoned building with animals. When asked if they didn't get hungry waiting out the storm, they say that they did and they actually thought about killing and eating the muskrats that were hiding in there with them. They clarify that there were a lot of animals there, snakes, frogs, and spiders but it was muskrats they were interested in.

> "Whatever they were, there was a group of them, a family or something. Five big ones and four small ones. They swam into the warehouse and then they were in the rooms down the hall, mostly. They checked us out. All the other littler things stayed away from them. And from us. Arm's length anyway."
>
> "Actually the muskrats were wondering if they could eat us," Stefan said. "We were wondering if we could catch and eat one of them, and they were wondering the same thing about us!" (p. 492)

The children and the animal come together in the eye of the storm, both seeing each other as potential prey, yet in the end, they decide not to eat each other. The storm puts them on the same ground. Throughout the novel, the children themselves are described as sea rats, as wet otters, and by the end of it, it is their animal-like qualities that allow them to survive the storm. Rosi Braidotti, in "Animals, Anomalies, and Inorganic Others," writes that "animals are no longer the signifying system that props up humans' self-projections and moral aspirations. No are they the keepers of the gates between species. They have, rather, started to be approached

literally, as entities framed by code systems of their own" (Braidotti, 2009, p. 528). It is this acceptance, much like Derrida coming eye to eye with his cat, that changes these kids and leads them to take an interest in animal conservation. The children become animal-like, not because of their age, lack of education, or destitution, but through being able to recognize the animal as an autonomous entity as something completely different and yet very similar to themselves. The mutual decision not to eat each other, no matter how insignificant and comical in dialogue as it seems, becomes the stepping stone of their interest that might one day lead them to open an Institute to save more animals.

In his groundbreaking work, *Flight Ways,* Thom Van Dooren follows the flight paths of migratory birds, whose habitats have been changed, irreparably, by humans and who now face extinction. Yet, Van Dooren sees hope in the direst of circumstances, he sees this as an opportunity for the humanities to finally step into the discussion because environmental humanities "inhabits complex multi-species worlds without the aid (and impediment) of simplistic divisions between the human and the nonhuman, the cultural and the natural. The world is far messier and more interesting than this" (Van Dooren, 2016, p.147). This sense of "multispecies entanglement" is where "learning and development take place, that social practices and cultures are formed. In short, these relationships produce the possibility of both life and any given way of live" (p. 4). Van Dooren's proposal is not far off from Haraway's idea of a cyborg world "about lived social and bodily realities in which people are not afraid of their joint kinship with animals and machines, not afraid of permanently partial identities and contradicting standpoints" (Haraway, 2016, p.462).

The different, yet the same versions of posthumanism given in this work aid Robinson's call for a reconfiguration between the borders of the human and the animal that might be beneficial to both sides, as long as both sides are given equal value. Robinson argues that the destruction of city borders and new connections with animals show how natural circumstances will force us to reconsider the well-established borders between the human and nature that have been a hallmark of Western thought since Aristotle, and seeing it happen in literature before such drastic change is actually felt may help shape future environmental decisions.

As Donna Haraway in *Staying With The Trouble* proclaims, we should "make kin, not babies" (Haraway, 2016, p. 5). By re-figuring the place of children and animals in the context of his hurricane plot, Kim Stanley Robinson asks the reader to reconsider our innate need to make biological families and children while also questioning the co-living habitats of humans and animals in a city that is half drowned. Robinson's future paints a more positive one than Ballard's does for the ongoing existence of human population on Earth, but nonetheless he too asks people to reconsider the capitalistic overpopulation of the planet and our blunt disregard for animal existence in the midst of our lives in the cities. In a future where nature will increasingly sink more into the bones of the artificial cities we have build for ourselves, we too should consider scenarios of entangled living and give further thought into the quality of life the next generations we might carelessly produce as we continue to ignore the climate change and environmental disasters coming our way.

CHAPTER 5

WATER AND TRANSCORPOREALITY

"The substance of water itself insists on submersion, not separation" - Stacy Alaimo

It won't be long before flood narratives such as the ones depicted in the novels will become the reality. Sooner or later, we will be made to learn how to live in water, or perish. Living in the water will also mean living together with different animals and plants that we weren't previously used to living with before. To be able to adapt to these new relationships, a re-configuration of the ways in which we perceive the world is necessary. Instead of our traditional ways of thinking, we must learn to look at the world from a posthuman perspective.

5.1 Water as an actor

> "Have you ever noticed that our building is a kind of actor network that can do things? We got the cloud star, the lawyer, the building expert, the building itself, the police detective, the money man … add the getaway driver and it's a fucking heist movie!" (p. 399)

Mutt and Jeff, the two characters who are kidnapped when they try to destroy the capitalist system by hacking the banks at the beginning of the novel, say that the building they live in is like an actor-network. At the beginning, they are living in a hotello – a tent- in the farm floor of the Met Life Building. The farm floor consists of plants and animals the building collectively grows to sustain their meals and is used occasionally, as a guest room for those in need of a temporary place to stay. It is through chance and joint efforts of the other occupants of the building that Mutt and

Jeff are found underwater by the superintendent of the building, Vlade, at the end of the novel. This is not the only place where Kim Stanley Robinson uses the term actor-network, it is also mentioned by the omniscient narrator of the novel, sometimes named the citizen and sometime the city, but essentially the author criticizing the present time in which we are currently making globe changing decisions. The citizen says that history happened as thus: "individuals, groups, civilization, and the planet itself all did these things, in actor networks of all kinds. Remember not to forget, if your head has not already exploded, the nonhuman actors in these actor networks" (p. 603).

Actor-Network theory (ANT) is a social theory that has sparked many ecocritical theories in its wake, by claiming that social and natural worlds constantly interact in a network of ever changing relationships. Karen Barad's notion of intra-activity and Stacy Alaimo's transcorporeality follow this argument in a feminist new materialist context. One of the creators of the theory, Bruno Latour, in his book *Reassembling the Social,* writes that "the task of cohabitation should no longer be simplified too much. So many other entities are now knocking on the door of our collectives. Is it absurd to want to retool our disciplines to become sensitive again to the noise they make and to try to find a place for them? (Latour, 2014, p.262) The previous chapter looked at the entangled relationships of humans and animals in a possible future dystopia. This chapter seeks to enlarge the scale of the argument of coexistence to nonliving natural aspects of the narrative environments of the two novels in this work and include the water that has swallowed the cities into the argument as an actor, or a mediator with its own relative agency.

Historian Dipesh Chakrabarty notes that it is so difficult to politicize climate change because it cover too many scales at once, "including scales that defy the usual measures of time that inform human affairs"(Chakrabarty, 2014, p.3). Talking about climate, or environment or even nature as a hyperobject as named by Timothy Morton, invites the said nature into the argument of climate change politics. As Kathleen McAfee says, "ecopolitics is ultimately about who is entitled to what, who owes what to whom, how such rights and entitlements are to be enforced, and who gets to decide" (McAfee, 2016, p. 65). Stacy Alaimo, in *Exposed* writes, "the Anthropocene suggests that agency must be rethought in terms of interconnected entanglements rather than as a unilateral "authoring" of actions" (Alaimo, 2016, p. 156). Looking at the agency of the water in water disasters allows us to rethink this singular human authoring that locates us in the center of disaster and tragedy. Submersion narratives allow for a subversion of the human-centered drowning narrative, further emphasized by J. G. Ballard's choice to drown the abandoned city rather than his characters. In a story with drowning in the title, none of the characters die by drowning. Robinson's *New York 2140* features many near drowning experience for the younger characters, but the only true drowning incident is set in the past as something to heal from. In both works, water takes imminence over the submersed characters. In her book *Exposed,* Alaimo also writes that "the substance of what was once called 'nature' acts, interacts and even intra-acts within, through and around human bodies and practices" (p. 1).The novel, as a form, can be seen, as Karen Barad says, "a performative understanding of naturalcultural practices" (Barad, 2007, p. 49). Water, in this particular case, works as an efficient metaphor to showcase this new way of entangling humans with nonhuman beings.

Bruno Latour's recent works increasingly focus on global warming and climate change. In *Facing Gaia,* Latour writes that: "a force of nature is obviously just the opposite of an inert actor; every novelist and poet knows this as ell as every expert in hydraulics or geomorphology. If the Misissipi possesses anything at all, it is agency" that "imposes itself on the agency of all the bureaucrats" (Latour, 2017, p. 52). Jeffrey Jerome Cohen, in *Prismatic Ecology,* adds to this by saying, "the Muddy Mississippi demands attention to inhuman timescales, but its flow is not oblivious to environmental justice" (Cohen, 2014, p. xxviii). The flow of the water is intimately connected with the human decisions, just as how human decisions are connected to the presence of the water in their lives.

One of the main problems feminist new materialism, or posthumanism, has with the concept of human agency is that it is being put on a pedestal, it is solely seen as a product of human intellect that is not being swayed by instinct, human or otherwise. Stacy Alaimo, in *Bodily Natures,* points out that it is "agency to humans, instinct to animals, and the deterministic forces of nature to everything else" (Alaimo, 2010, p. 143). Derya Şahingil, in "Returning to Water: Ecocritical and Intra-active Approaches to the Concept of the Self" writes,

> From the water vapors we breathe in to the rain drop that falls on our skin, the water in our bodies and the water in the universe is in a constant cycle. All beings and nature are connected in this way and they are in a constant communication and interaction. This interaction that ecocritics constantly emphasize can be understood through the concept of intra-action developed by Karen Barad[…] Barad's concept of intra-action plays an important role in understanding the relationship between water and humans (Şahingil, 2012 p. 214, my translation).

Separating the natural agencies from the concept of human agency as thus only further separates the divide between humans and nature, blinding us to the immediate dangers we must face in the Anthropocene by accepting the need to be more

immersed, be more enmesh in the nature. The Anthropocene is a new epoch in thinking, re-calibrating the power dynamics between the human and the nature, and perhaps coming to the realization that all of what we believe to be true about the laws of nature was our own egos speaking all along. Before the Industrial Revolution, which many consider to be the point of no return in us becoming a destroying force of ourselves in nature (Jonsson, Fukurahara), people believed natural disasters to be the wrath of higher beings. What was simply a natural event was thus anthropomorphized, the sea and the land were personified in gods and goddesses, the world was drowned in the anger of a God who saw the very worst in humanity rather than by geological and atmospheric happenings. Mythologies all over the world have water lords and water gods and water demons who cause floods. Abzu is a Sumerian god who threatens a universal flood, there is Enki and Unhurstag who are gods of water who save the Sumerians. Atl is the god of water in Aztec mythology, There is Hydros in Greek, Neptune in Roman, Nethuns in Etruscan. There is Varun in Hinduism and Untunktabe in Native American myths. The Great Flood has been a part of literature since Sumerian times. Zeus ends the Bronze Age with a Great Flood that only Deucalion and his wife survive from. In Hindu mythology, it is Manu who survives the flood after saving Matsya, a god transformed into a fish. In Christian mythology it's Noah who survives and lives 900 years.

These water myths are mentioned in the novels. *The Drowned World* alludes to the Biblical flood multiple times. In "5,000 Years of Fiction," written by Wai Chee Dimock as a review of *New York 2140*, she writes "Gilgamesh could be called "climate fiction" avant la lettre." She notes that Robinson's latest novel is a song of postdiluvian life, less a fateful end than the beginning of a new normal" (Dimock,

2020) -postdiluvian meaning relating to the period after the flood described in the bible. - However, as she also notes, Robinson's water analogies aren't only limited to the Bible, second half of the children's story is related to Herman Melville and *Moby Dick.* He even leaves crumbs of the older times by naming the bartender in novel Enkidu after the epic of *Gilgamesh,* the Sumerian origin of the Biblical flood. Franklin has a friend called "Enkidu, who claimed to be full-blooded Assyrian and went by Inky, and had bad old green tattoos all over his forearms" (p. 22). Robinson's narrative is almost free from the biblical images of the flood Ballard uses, he is mostly interested in the American transcendentalism. He connects the natural disasters to Thoreau and Melville. But the appearance of Enkidu shows his commitment to a longer history of human myths concerning the water that came long before the discovery of the continent. Robinson, through water myths, expands the temporal scale in which we consider natural disasters. In "Science Fiction and Climate Crisis", Brent Ryan Bellamy quotes Wai Chee Dimock's review,

> The gravity of the climate crisis has been steadily pulling genre fiction into its orbit. Global warming unfolds at a spatial scale and temporal rhythm that exceed the capacities of even the most robust literary imagination. Wai-Chee Dimock, who turns to the Sumerian Epic of Gilgamesh (c. 2100 BCE) as the first work to grapple with catastrophic climate change, concludes of climate fiction that "this is an ancient genre about beginnings and endings, with lineages longer, more diverse, and more tenacious than we might think." This approach to climate-focused fiction seems right to me. For such longue-durée thinking, we need to look to myth, epic, and other ancient and residual genres. (Bellamy, 2018, p. 417)

Bellamy, while supporting a rereading of ancient works, also notes that they must be rethought in connection to other works of contemporary climate fiction and science fiction works that feature climate disasters. Kim Stanley Robinson's cameo for Enkidu, the more nature-connected protagonist of the epic *Gilgamesh,* perhaps foreshadows the character Franklin's journey to connect to the nature first through

children, then beavers, while relearning how to live in the water throughout the story. Dimock suggests that climate fiction can "perhaps also be redefined in light of this precedents. Not just a 21st century phenomenon, this is an ancient genre about beginnings and endings, with lineages longer, more diverse, and more tenacious than we might think" (Dimock, 2020). Taking the discussion back to the Romantics that we usually attach this nature to in Western fiction, the overwhelming presence of water in both of the Shelley's, but especially in Mary Shelley's *Frankenstein,* which is thought to be the first modern science fiction novel by some critics, can also be added to this cannon.

David Pringle, one of the most well known scholars on J. G. Ballard asks why should water be seen as a symbol of the past in Ballard's novels. He notes that for Ballard "the meeting-place" of water and the past is the womb, or the sea itself where all life came from millions of years ago. Thus water pre-exists "the individual human being". Ballard isn't alone with his insistence of using water in his narratives, there is a long history to this tradition that has natural and psychological background.

> The entire biological kingdom is founded in water. In ancient Mesopotamia and Egypt the flooding of the Euphrates or the Nile was the source of all fecundity and growth (thus civilization too is founded in water), and so floods, although destructive, have always been thought as life-bearing. The waters scatter the seed and bring new life to the wasteland. Countless myths, fairy stories, legends of heores' births, and popular tales echo this archetypal idea of seeds, including human seeds, borne by water. It is this traditional association of water and life which Ballard utilizes, if ironically, in The Drowned World. Although the floods in the novel have destroyed London, Ballard is far more concerned with the new life that has arisen in its place. The submerged city may present a desolate prospect – and Ballard is not a writer to pass this way without lingering on the potent imagery of all man's works in dissolution- but there is enourmous fecundity and vitality in the life-forms which are imagined as having taken over the lagoons of London." (Pringle, 1979, p. 19)

Lawrence Buell, one of the most well known American ecocritics, who also focuses on the locality of the environment unlike more globally concerned names such as Ursula Heise or Timothy Morton. In his book *Writing for an Endangered World,* talks about resymbolizing the ocean from Rachel Carson's *The Sea Around Us* and *Silent Spring,* which focused on water pollution, to Herman Melville's most famous work *Moby-Dick.* According to Buell, modern science teaches us that we come from the ocean. However, a millennia before that, however, it was a common symbol for primordial reality, as in "the waters" of the Genesis creation narratives, or a symbol for what lies beyond the known world." Then eventually with the rise of psychology and subconscious, it became the symbol of inner space, as it is in the works of J. G. Ballard. Buell refers to Melville when he writes, "meditation and water are wedded forever," affirms Herman Melville's narrator Ishmael in Moby-Dick (1851) (Buell, 2001, p. 199). This genealogical journey the water takes can be seen in the literary works mentioned here, from *Gilgamesh* to biblical flood, to the inner spaces of J. G. Ballard and finally the Melville inspired *New York 2140.* Both the author and the novel in particular play an important part as a story telling device in Kim Stanley Robinson's *New York 2140,* especially during the chapters the children's stories are being told.

Half the time, the children are taken care of by an old man called Hexter who is obsessed with the maps of New York City and the works of Herman Melville. After leading the children on a treasure hunt for the lost gold of HMS Hussar, he tells them about the life of Melville in the city to give them inspiration for their newest adventure. Hexter's narrative seems manipulative at times as he uses the youth of the children to realize his own dreams, but he is not antagonistic or interested in the gold

they find. He is mainly trying to prove that he has been right all along, about the sunken ship and about the importance of Melville for the city and the future of the children.

> "Boys, he wrote the great American novel, and when it was published it killed his career. People used it for toilet paper for a century or so, and for the rest of his life he had to find other jobs to support his family. He kept on scribbling, and they found all kinds of masterpieces stuck in shoe boxes after he died, but for the rest of his life he had to scrape to get by."
> "Like us!" (p. 386)

The children feel a likeness to Melville not through his fame but through his poverty. Eventually this empathy grows to be about animals in the way their encounter with the companion species of muskrats mirror Ishmael's struggles with the whale.

Hexter tells the children the story of the night he met Melville's ghost while he was working as a smuggler. He believes he is still affected by the encounter which will eventually lead him to suggest to the children to find Melville's grave, ironically since the grave is above the water when they find it. This will be the adventure that will almost kill the children when they get stuck outside during the hurricane. It will eventually lead them to look for animals instead of dead and buried treasures. Melville's ghost leads Hexter's boat through the river, when he asks Melville how he can see his way in the fog Melville answers:'I know this river by now, I can say that. Moony night or pouring rain or fog as thick as the thoughts in my head. I can hear where I am. I can feel the bay's bottom, feel it like my bed under me at night. This harbor is my Pacific now. I have finally fitted myself to my circumstances.' (p. 393) This is similar to the human water cycle Şahingil talks about, and the similar instances in the novel where characters confuse the sound of their blood in their ears with the sound of the water. This Gothic presence of the ghost allows for characters

to evolve to “fit themselves into” their “circumstances,” that is the water that is continuing to rise.

> “Then some kind of wave hit us from behind. I felt the wave raise me, and then saw it raise him up and let him down. I looked around, and I think I said, ‘What was that?’ and I couldn’t see anything in the fog. […] ‘It’s that which is after thee, son! I see the line around thee!’ So I turned to look behind again, but I didn’t see anything, and then when I turned back around to look at him, there wasn’t anything there either. He wasn’t there, his rowboat wasn’t there. He was just gone.”(p. 393)

Melville’s ghost says that he sees the line around Hexter, which Hexter explains to the children that the line is about a chapter in the book where he describes the line that goes down the boat tied to the harpoon to kill the whales. So Melville saves Hexter, and the next day he finds out that all the other smugglers had been killed, he alone had survived to tell the tale. If one accidentally gets caught on the line, they too would go down with the whale and drown. Melville sees this as an universal lesson, and that everyone lives their life the same. “The reader reading Moby-Dick by his living room fire, Melville says, is in the exact same situation as those poor sailors rowing their boat after the whale! Because the line is always there!”(p. 394)

Robinson, through Hexter, uses *Moby Dick* to teach life lessons to young and impressionable children. This ghost story is faintly reminiscent of *The Ancient Mariner* in its eeriness and the wish to teach the younger generations about the dangers of what was, in the second chapter, discussed to be a sin against the nature. While Hexter’s intentions stem from his own obsession with the cultural existence of Melville in the city, the children who don’t really know or care about who Melville is besides Hexter’s idolization, eventually learn lessons concerning natural entanglements in their journey to find Melville’s grave when they get caught in the storm with muskrats.

Vlade, another character in the novel who lost his son years ago in a drowning incident, sees the city as a remnant of Atlantis, mentioned in Plato's works such as *Timaeus* and *Critias*, which became the inspiration for utopian works of Francis Bacon and Thomas Moore. Atlantis is not the only drowned world that is lost; there is also Lemuria that was supposed to be located in the Indian or Pacific Ocean. There is also Mu lost in the Pacific Ocean, there is a city in Brittany called Ys that was built below sea level that got flooded. Curt Stager, in his book *Deep Future,* where he depicts what is likely to happen in the next 10,000 years talks about the city of Istanbul as the Black Sea as an origin to the various flood and drowned city stories like Gilgamesh, Noah's Ark and Atlantis.

> What is now the Black Sea used to be a freshwater lake lying below sea level, isolated from the much larger Mediterranean by a narrow neck of land where Istanbul now stands on Turkey's Bosphorus water way. About 8,000 years ago, ocean levels were nearing the end of the stepp post glacial climb when the water discovered a low point and slid a probing finger over the barrier. The erosion took over, within a matter of months a torrent hundreds of times more powerful than Niagara falls was pouring into the Black Sea basin, raising the surface by as much as 6 inches (15cm) per day until two or three years later, it fused with the Mediterranean 500 feet (152m) above the original lake level...follow up studies have suggested more like 115 feet (35m), quite a bit less than the original estimate but still enough to submerge a tall building. (Stager, 2012, p. 92)

This is a similar narrative to Kerans refilling the lagoon in *The Drowned World,* or Hexter telling the story of the day the wall broke in *New York 2140.* Nevertheless Stager suggests that the sea level rise we are likely to face will be more like "bay water leaking into the Manhattan subway system year after year and until the pumps are turned off and the rail tunnels are abandoned to become submarine caves, " which is exactly what happens to the subway system in the novel (p. 96).

In *New York 2140,* the character of old man Hexter tells the story of the day water went over the wall and drown the downtown. "Everyone thought it would

happen gradually," he says, and according to him at some places it did. People had built a surge wall a century earlier called Bjarke's Wall, which worked until it stopped working.

> "Sometimes the Hudson would be raging, whitecaps all over it. And the water would get so high we could see that the river was higher than the city. You could lose your balance if you looked at both sides at once. It kind of made you sick to your stomach. Because the water was higher than the land. You couldn't believe it. People would get the staggers and laugh, or cry. It was a thing." (p. 161)

But eventually the flood came and forced people to run off north. The wall that kept the city safe from the nature crumbled under the pressure:

> "We caught glimpses. The water coming in was brown and white. Filled with stuff. It fell down subway entries and then shot back up into the air. It was loud. After a while no one could hear what anyone was saying. Taxis were floating around. It was crazy. It didn't look anything like what you see down there now. It was crazy time."
>
> "Weren't there people?" Roberto asked.
>
> "There were some. Mostly people ran uptown and got away, but some got caught somehow, sure. Floating in the water like logs, wearing their clothes. They were wearing their own clothes." (p. 62)

The sublime helplessness of the humans against the might of the water is told so Robinson can build a narrative in the following chapters to show how humans come together to deal with the hurricane and its aftermath.

Robinson pays special attention to the actor networks in his novel, trying to make the reader realize that it's not only the rich and the powerful alone who can bring the change even though they too are necessary. The small children, the media personalities, the little people and the animals, even the water itself can be a determining factor in how the future takes shape. It is the collective efforts of everyone including the animals that the characters save their building, that people start a strike to change the way they live in the city and elect Charlotte as a senator

and how Franklin figures out how to construct new buildings that can not only stand against but coexist with the rising water levels.

> Seemingly frozen moments are transient, they break up like the spring ice, and then change occurs. So: individuals, groups, civilization, and the planet itself all did these things, in actor networks of all kinds. Remember not to forget, if your head has not already exploded, the nonhuman actors in these actor networks. Possibly the New York estuary was the prime actor in all that has been told here, or maybe it was bacterial communities, expressing themselves through their own civilizations, what we might call bodies. (p. 603)

Robinson's argument in this paragraph follows new materialist looks on sociology and Bruno Latour's Actor-Network theory, as well as Karen Barad's agential realism. Phenomena, according to agential realism, is " neither individual entities nor mental impressions, but entangled material agencies" (Barad, 2007, p. 56). Acknowledging that the scholars themselves are actors is not enough, " rather, the point is that these entangled practices are productive, and who and what are excluded through these entangled practices matter: different intra-actions produce different phenomena" (p. 58) New York itself is included in its own mattering, just as the beaver mayor, the otters and the toxic clams, the little children and the sunken treasures that are powerful enough to change the tide. According to Stacy Alaimo, "exposed subject is always already penetrated by substances and forces that can never be properly accounted for (Alaimo, 2016, p.83). Transcorporeality, more than actor-networks and intra-action posits the undeniability of living without tangible borders or total individuality for both human and nonhuman beings. Water submerging and drowning these beings in the novels allow for a simple, comprehensive reading of transcorporeality as a concept on paper.

5.2 Transcorporeality

Both books are textually filled with water metaphors and fluidity, they both mention the interior/exterior dilemma the characters are faced with even when they are constantly covering themselves with suits and walls to escape the harmful effects of the water surrounding them. There are points in the narrative where the water outside gets mixed with the water outside their bodies. Vlade, when he goes to seek a possible water leak in the building, hears his own blood. “On this day he woke in almost pitch-darkness. Green light from the clock cast hardly any illumination. He listened for a while. No rushing liquid except for his blood, moving sluggishly around in him. Internal tides, yes. Low tide in there, as on most mornings.”(p. 28).The sound of his blood moves sluggishly around him, not in him. The description of the internal tide is something the reader would expect from Ballard, who is much more prone to lyrical descriptions and metaphors, but it is Robinson who seeks to portray when the human senses fall short, such as hearing your heart beat in silent moments. You think you hear the sound from the outside, or hear the sea from the seashells. There are no clear cut boundaries, not in the future and not in the present either. Another scene where blood and water get confused is in the holding cell, or the container, Mutt and Jeff are kept in underwater.

> “Uh-oh. This is a watertight seal, see what I mean?”
> “I do. So what does that mean? We’re underwater?”
> “Yeah. Maybe.” Jeff puts his ear to the wall. “Listen, you can hear it gurgling.”
> “Sure that isn’t your blood in your ear?” (p. 75)

Underwater, their senses play tricks on them. Human senses alone are not enough to make the complete distinction between inside and outside, between the nature and the boundaries of the individual human body. It is only when mind and philosophy

comes in that we start talking about a Cartesian divide and the hubris that make us so much better than the animals around us.

This confusion of the senses is also seen in *The Drowned World* and the characters' sensitivity to the sounds coming from the sun increasingly confuse them.

> He woke in the suffocating metal box of his cabin, his head splitting like a burst marrow, too exhausted to open his eyes. Even as he sat on the bed, splashing his face in the luke-warm water from the jug, he could still see the vast inflamed disc of the spectral sun, still hear the tremendous drumming of its beat. Timing them, he realised that the frequency was that of his own heartbeats, but in some insane way the sounds were magnified so that they remained just above the auditory threshold, reverberating dimly off the metal walls and ceiling like the whispering murmur of some blind pelagic current against the hull-plates of a submarine. (p. 71)

At one point, Bodkin records these sounds and plays them back to a soldier who is suffering from the same symptoms. It is the sound of the sun that cuts the human barrier, be it of skin or of mind. "Distantly in his ears he could hear the sun drumming over the sunken water. As he recovered from his first fears he realised that there was something soothing about its sounds, almost reassuring and encouraging like his own heartbeats. (p. 73) This sound becomes a comforting factor, becomes the compass in Kerans' life leading him down south. In both cases these natural sounds, much like water, manage to break through the binaries culture has forced on the characters.

Obviously, the presence of water in apocalyptic narratives is vital because water is necessary for the continuation of human life, for drinking and hygiene. But also, another thing that is important and worth talking about is the bodily water. Our own fluids: blood and pee and saliva. It's unreasonable to think only of the amniotic fluid, especially because enough though it might seem like something interior to the mother, it is exterior to the baby's body, so even when we think about our uterine

pasts we are actually thinking about the environment before we were born and not being one or part of the water. Theorizing on the uterine metaphors of *The Drowned World* only goes on to show inseverability of the inside from the outside. However, I think our inability to deal with these boundaries-is a part of any novel that deals explicitly with water, dystopic or not. The attempts to talk about something interior (uterine) turns out to be another way of talking about exteriority. For that reason, I have chosen not to focus on the wombness of the water in *The Drowned World,* and instead study it as literal. I argue a valuable ecocritical reading free from other theoretical and political entanglements that would undermine the novels importance for climate change is still possible. What is exterior is always interior because the human body is porous so the water always finds a way to come in. We are %75 water, any less and we die of dehydration, any more and we drown. We are one with water but water is also an interior and exterior parts of us and there is a delicate balance, a strict measuring game there that affects whether water brings life or death. Barriers, pores, the buildings always leak eventually, water finds a way to get in. Whether it is disastrous or beneficial, it is up to measures and control and how fast the human body or the human building or the human city can adapt. Our messy playing with the laws of nature means that we have destroyed far faster than we will ever be able to protect ourselves from the damage we inflict on the nature. Water, Poseidon, water, life, water, death. Do we drown? Do we want to drown? Was it the plan all along? This integration is also a part of the novels where increased exposure to water or water disasters also result in the dissolution of the psyche for the characters in both novels. Ballard would even consider drowning to be positive, and Robinson gives the younger characters multiple near drowning incidents to teach

them how to survive in the life they will lead constantly immersed in water. Stacy Alaimo posits that,

> submersing ourselves, descending rather than transcending, is essential lest our tendencies toward human exceptionalism prevent us from recognizing that, like our hermaphrodic, aquatic evolutionary ancestor, we dwell withing and as part of a dynamic, intractive, emergent material world that demands new forms of ethical thought and practice (Alaimo, 2010, p.283)

Arguably, in a universe that is not solely human-centered, living a drowned life can even be considered satisfactory.

In an article titled "Weathering: Climate Change and the Thick Time of Transcorporeality", the authors note that"we are not just spatially in climate… As weather-bodies, we are thick with climatic intra-actions, we are makers of climate-time. Together we are weathering the world". According to them,"enmeshed in a world of more-than-human, transcorporeal transits, it is impossible" for us to maintain a "human exceptionalism on the grounds of agency" (Neimanis and Walker, 2014, p.564). And really, the problem is distribution of agency – its always human at the center, ruling over, the leviathan. The problem with the center and the periphery is nothing new, but it is not something we consciously think about unless it is in colonial criticism or race studies. Posthuman thinkers, especially feminist have long since argued against a white christian male centered universe and yet we rarely push the argument beyond boundaries of our own making, to the nature. Several critics in animal studies have tried to show how this boundary might be crossed, perhaps headed by the not so intentional question of Jacques Derrida, who realized that his cat stared back at him. As criticism evolved, such connections were also sought out with nonliving beings.

The fact is we are living in a universe where water is simultaneously rising and not rising at the same time. The scale of it happening makes it harder to see and this belief is further pushed by the capitalist agenda. We act like global warming is not happening and yet at the same time it continues to happen anyway because nature is a separate entity from the human narrative. Dipesh Chakrabarty (2009, 2014) identifies this as one of the main problems of dealing with events on a geographical scale. The time frame of global warming is so big that it escapes our understanding. We are incapable of thinking about the future generations. At the very moment of our own time, we want optimum living conditions. We are selfish. And if we don't even care about the quality of life for our own offspring, who were are genetically wired to care for, why should we care about polar bears?

To escape from this "authoring" of nature, many critics like Timothy Morton, Karen Barad and Stacy Alaimo have suggested a more interconnected model where the human is no longer in the center, in fact there is no longer a center at all. In *Bodily Natures,* feminist critic Stacy Alaimo writes, "the Anthropocene suggests that agency must be rethought in terms of interconnected entanglements rater than as a unilateral "authoring" of actions" (Alaimo, 2016, p. 156). This is the moment where posthumanist thinking becomes vital. Why? What is environmental posthumanism? Alaimo's 'trans-corporeality' is an important term to consider because she denies the human/nature separation through echoing Latour's reasons of disavowal of modernism in *We Have Never Been Modern.* According to Alaimo, trans-corporeality recognizes the human "as posthuman, or as a historical progression, but as an assertion that, to echo Bruno Latour, we have never been human- if to be human

begins with a separation from, or a disavowal of, the very stuff of the world" (Alaimo, 2016, p. 77).

Trans-corporeality, much like intra-action, becomes a framework in which we can achieve more peaceful ecocritical readings, where the natural so longer seen as the enemy or a vengeful mother but an extension of ourselves, just as we are but an extension of the nature around us. Instead of seeing the water as a vengeful God sinking islands, seeing water disasters as a result of our poor decisions to damage both the natural, environment, and the artificial, the city, around us can truly be life-changing. By giving the agency it is due to nature and at the same time still accepting our agencies are intermingled in the worlding of our world, we can be prepared for further climate disasters as we start to accept them a part of our lives and a part of the new natural cycle that we ourselves have helped to create in the Anthropocene.

CHAPTER 6

CONCLUSION

It is not a coincidence that climate disasters in science fiction are on the rise and climate fiction has become a flourishing genre. Carbon emissions, temperature, water levels, ocean acidification are all increasing more rapidly then ever in the history of the planet. Fiction, as always, mirrors the real world. Climate fiction novels are not merely the result of a change external to what is human, but are a part of the countless symptoms we are faced with harming the planet as we do. Serpil Opperman writes that present narratives " often tell disturbing tales because they bear the burdens of systematic exploitation and contamination of the Earth's subsurface and surface ecosystems" and that, through the lens of material ecocriticism, "if we read through narrative agencies the stories of the Anthropocene, our maps of cognition might possibly change so that, even if gradually, disturbing tales can be replaced by less distressing ones (Opperman, 2018, p. 14). It is doubtful that narratives will get any less distressing with the way we are continuing to aid climate change with our refusal to take action. But Opperman is correct in that, climate disaster narratives need to be recognized as stories of the Anthropocene.

Kim Stanley Robinson writes that "utopia is no longer a nice idea but, rather, a survival necessity" (Robinson, 2016, p.10). We have very little time if we want to change the future, the heralds of the apocalypse are already here. This time they are not soothsayers, false prophets, extremist, judgment day cults. Scientists warn against carbon emissions constantly. IPCC makes statements every year about climate change, begging us to cut down our carbon emissions, cut down on

production and waste, degrow if we still want a world worth living in in the next century. Nobody listens. Climate fiction stories portray worlds we will soon live in if we continue not listening because we have already ran out of time.

We need to take an imaginative leap into science fiction in order to realize they are not calls for apathy but for action. Climate fiction novels that are also in the science fiction genre at the same time have an apocalyptic dread that other fictive works don't. An ecocritical approach to disaster narratives is necessary, because soon enough disasters will not just be fiction. The two novels included here, J. G. Ballard's *The Drowned World* and Kim Stanley Robinson's *New York 2140* tells flood stories based in the 22nd century. Because they are located in the near future, they offer good examples as to what we might be expecting if we continue to disregard the climate change we are currently going through.

J. G. Ballard offers a more extreme alternative, that was not informed by climate and water rise predictions of the scientists as Kim Stanley Robinson's novel. His drowned world is almost too hot to sustain human life, the water filthy and filled with mutated animals. There is no hope for change, "soon it will be too hot" and soon enough humans will be no longer. Ballard sees this as a positive ending, regardless of the grim fate of his main character Kerans. In the final act of his death, Kerans manages to both reconnect and recover himself from the cultural and natural bindings that make him an unsuitable occupant of the planet. Ballard closes the page of the humans on the planet with the physiological satisfaction of becoming one with the planet and returning to dust, all the while keeping the hope that for other life forms, life will now be flourishing.

On the other hand, Kim Stanley Robinson starts *New York 2140* with a poor attempt at changing the world. He has two of his characters, Mutt and Jeff hack the banking system. Before they get caught and get stuck in a cell underwater for months, Jeff tells Mutt, "whoever writes the code creates the value" (p. 3). While their attempts at overthrowing capitalism fail, Robinson is very clear that whoever writes the disaster story, gets to chose however it is being told. As such, while the two books are very similar in their descriptions of future, connections to history and nature, as well as arguably their population policies, Robinson's idea of an open ending is a lot more hopeful than Ballard's is with the new generations of humans learning how to be in tune with animals and the nature more. While there is disaster, there is still hope for human life, even if it too has to be lived on a smaller scale.

The connection disaster narratives have to place and time are important. As we learn to look at the world globally and have a sense of planet as Ursula Heise terms it, it is also necessary that we widen our understanding of time. In order to imagine a future where our descendants may still roam on Earth, or to imagine a world free from the tortures the human race inflicts upon it currently, we also need to learn how to imagine a deep sense of past, a planet that was once free from the human effects of the Anthropocene. In *Hyperobjects,* Timothy Morton asserts that:

> The end of the world has already occurred. We can be uncannily precise about the date on which the world ended. Convenience is not readily associated with historiography, nor indeed with geological time. But in this case, it is uncannily clear. It was April 1784, when James Watt patented the steam engine, an act that commenced the depositing of carbon in Earth's crust—namely, the inception of humanity as a geophysical force on a planetary scale." (Morton, 2013, p. 7)

By accepting that the end has already arrived, we can learn to think of new ways of living that are beyond the scope of capitalistic expansion, both of capital and

population that depletes the finite resources of the world even faster. This awareness will surely bring us to think planing the next generations carefully, seek a new kind of degrowth that is not only economical but affects all aspects of life, from cradle to the grave.

As Stacy Alaimo puts it in very simple terms: “we inhabit a corporeality that is never disconnected from our environment” (Alaimo, 2010, p. 156). Any action taken towards slowing down the devastating effects of the climate change will come from us and directly effect us, and all living beings around us. As such, any future conception, scientific, political, philosophical or fictive should include posthuman connections with nonhumans around us as well as humans from all parts of the planet. We are all interconnected, moreover, as Karen Barad proposes, we are all intra-connected. This connectedness can be seen in the works of ecocritical philosophers, from Timothy Morton who proposes the idea of the Mesh, to Stacy Alaimo’s concept of transcorporeality to Bruno Latour’s actor-network theory that is applicable to all beings and all systems of the world and calls for a total reconfiguration of the ways in which we conceptualize the world around and including us.

Concepts such as the hyperobjects, intra-action, or transcorporeality invite us to think in new, hopeful ways about how we build and perceive the world around us. A certain amount of dealing with the climate change comes from opening our arms to the nature, just as how the characters here accept water into their lives. If we can learn how to leave more peacefully with this nature that we still refuse to be a part of, if we can be more open-minded and open-hearted to acknowledged just how entangled we are with everything around us, maybe one day we can also change

these future narratives and utopias can actually come true. It might be to late to change the damage global warming has already inflicted, but that does not mean we cannot get our happily ever after.

Kim Stanley Robinson asks, " are we indulging in a fantasy if we imagine that we could recover from this path we are on, if we were to do something?" (Robinson, 2016, p.9). Maybe so, but it is one of the few options we, those in the humanities, have helping the cause of sustainability and invoking environmental consciousness professionally. Rosi Braisotti writes that there is "widespread consensus in the Humanities scholarly community that it is inappropriate to speak of a "crisis" in our field. But nobody is denying that we spend a disproportionate amount of time actually justifying or defending our existence to the public (Braidotti, 2015, p. 9). The newly rising popularity of climate fiction, and science fiction novels depicting future climate disasters, allow us a way into the discussion of the most important contemporary problem of all: our own survival.

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