



**NEAR EAST UNIVERSITY**

**INSTITUTE OF GRADUATE STUDIES**

**DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE**

**IMAGINING ALTERNATIVE FUTURES:  
ECO-CRITICISM AND THE DEPICTION OF CLIMATE CHANGE AND  
ENVIRONMENTAL CONCERNS IN IAN MCEWAN'S SOLAR**

**MASTER THESIS**

**OTHMAN AL-ALWANI**

**Nicosia**

**December, 2024**

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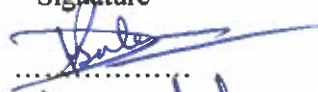
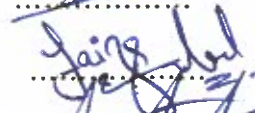
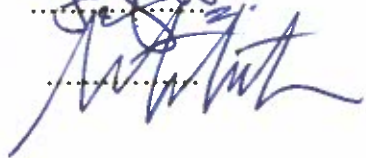
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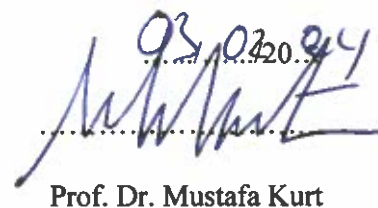
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**December, 2024**

### Approval


We certify that we have read the thesis submitted by Othman Al- Alwani titled by **“Imagining alternative futures: eco-criticism and the depiction of climate change and environmental concerns in Ian McEwan’s solar”** and that in our combined opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of English Language and Literature.

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### **Declaration**

I hereby declare that all information, documents, analysis and results in this thesis have been collected and presented according to the academic rules and ethical guidelines of Institute of Graduate Studies, Near East University. I also declare that as required by these rules and conduct, I have fully cited and referenced information and data that are not original to this study.

**Othman Al-Alwani**

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## **Acknowledgments**

I would like to express my heartfelt gratitude to the soul of my beloved father, who always encouraged us to pursue knowledge. He was my first supporter and the driving force behind my journey to this stage. May God have mercy on him and grant him a place in Paradise. I also extend my thanks to my dear family—my mother, may God protect her, and my brothers and sisters, may God watch over them. My sincere appreciation goes to my supervisor, Prof. Dr. Mustafa Kurt, for his invaluable guidance in writing this research and for overseeing my progress throughout the development of this thesis. I am deeply grateful to all my friends and those who stood by me and supported me during my academic journey. Lastly, I thank everyone who contributed to my learning, even through a simple word, during my academic life.

**Othman Al-Alwani**

## **Abstract**

### **Imagining alternative futures: eco-criticism and the depiction of climate change and environmental concerns in Ian McEwan's solar**

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This research study utilizes a qualitative approach to examine the representation of climate change and environmental issues in Ian McEwan's "Solar". Grounded in eco-criticism, the methodology involves a detailed analysis of the novels' language, imagery, symbolism, and character development to uncover underlying meanings, themes, and socio-cultural contexts related to environmental concerns. The study emphasizes thorough exploration, interpretation, and contextualization of textual data to understand the complex phenomena depicted in literature. The primary data source consists of the novel, with close readings and textual analyses revealing relevant passages, themes, motifs, and narrative techniques pertaining to climate change and environmental issues. In addition, secondary sources such as critical essays, scholarly articles, and author interviews are used to supplement the analysis and provide further insights into the theoretical framework of eco-criticism and the broader discourse surrounding environmental literature. Narratives and discourses from the texts are gathered, analysed, and categorized based on the research focus.

***Keywords:*** Solar, climate change, eco-criticism, environmental issues

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## CHAPTER I

### INTRODUCTION

#### **Introduction**

The human being is an integral component of the natural realm. From a scientific perspective, humans are composed of diverse elements such as carbon, water, and cellular matter (NAVEH, 2000). Consequently, we are essentially comprised of the same elements that exist in nature, making us an inseparable part of it. Within the natural world, there exists a profound interconnectedness, where various cycles influence and impact one another. Our culture plays a significant role in shaping our perception of nature, which in turn influences the very essence of nature itself. It becomes evident that certain aspects of our culture have left a lasting imprint on the world we inhabit, shaping its current state.

Throughout history, humans have maintained a close connection with rivers, lakes, and wetlands, relying on them for essential resources such as water, food, fiber, and medicines, as well as for places to live. However, due to excessive exploitation, many of the world's freshwater sources have undergone significant changes, resulting in the degradation of their ecosystems. The detrimental consequences of pollution, habitat destruction, excessive water usage, the construction of dams, drainage systems, and the introduction of invasive non-native species are just a few examples of the negative impacts caused by various factors like urbanization, intensified agriculture, navigation, flood control, and inappropriate aquaculture. Any alteration to the natural hydrological cycle within a river basin has a profound effect on the behaviour, characteristics, and overall ecology of rivers, lakes, and wetlands. The primary emphasis of climate fiction, or Cli-fi for brief, is global warming and climate change. It is a subgenre of narrative in the apocalyptic style. As a new genre, its goal goes beyond just expressing subjective sensations; it also encompasses conceptual global forces, outlines complex spatiotemporal scales, and encompasses non-human viewpoints. Its consistency is spawning fresh perspectives on the climate catastrophe and climate change.

There have been books on the modern era, climate change, and the environmental impacts of human activities. These human activities are not only affecting human life but also have a direct impact on other creatures and the earth's environment. This degradation has already reached a point where it is causing many changes in the environment and climate. These changes are affecting the entire ecosystem, thus creating fear and uncertainty about the future, as to what the future holds for the younger generation. This change and fear of the future has been expressed by various writers in their novels. Basically, these theories were merely conceptual or anecdotal, but several authors have now done significant work on this issue of climate change and catastrophe. These works deal with the diversity and consequences of the modern age in the world of the future and compelled an ecological critic to undertake a comprehensive review of the contemporary literature on the reforms and to search for answers to questions about the uncertainty of the future.

Environment and climate change regarded as current worldwide critical issues which require quick attention and different solutions as societies fight against the complex challenges raised by the ecological corruption and the consequences of environmental change. So, the literary works has emerged as a powerful medium for engaging with these issues and envisioning elective possibilities. This study focuses on the novel “Solar” that written by Ian McEwan in 2010 in which it investigates its portrayal of environmental modification and natural worries depending on the perspectives of ecocriticism theory.

Moreover, eco-criticism considered as a field of literary criticism that started in the late of the 20<sup>th</sup> century as it reflects the role of literature in describing the relation between nature and the environment, proving that literature addresses the ecological and environmental issues. Thus, this thesis examines the novel from the ecological perspective in order to explore how it offers an alternative future starting from human feedback about environmental difficulties, and the impact of technology on our environment by in-depth textual analysis.

In other words, the study explores how the novel deals with a crucial eco-critical concept such as the relation between culture, environmental justice, and ecological

interactions in which it investigates how the texts motivate the environmental awareness and enforce readers to re-evaluate their environmental perspectives. So, the aim of this study is to enhance our understanding of how literature provides the development of ecological awareness and influences societal reactions that dealt with climate change and environmental issues. Thus, this will be achieved by examining the novel through the lens of eco-criticism, providing useful insights into the role of literature in addressing these concerns.

### **Background of the Study**

Nowadays, the environmental interests and climate change evolved as a major global issues, requiring in-depth study and effective responses from a different professions, like literature which has proven to be a valuable way for exploring and addressing these complex concerns with the clash of civilizations, the consequences of environmental decline, in addition to the urgent need to reduce the change of climate, highlighting the challenges, summarizing the underlying thinking, and depicting the desired future that includes environmental issues (Dunlap & Jorgenson, 2012).

Moreover, ecocriticism is one of the most prominent branches of literary criticism that emerged in the late twentieth century, as it provided a framework for analyzing how literature depicts nature and the environment, examining the relationship between humans and non-humans, criticizing human impacts on the natural world, in addition to the role of literature in dealing with environmental topics, with an emphasis on the interaction of all living things and the crucial need for environmentally responsible practices.

Because fiction uses imagination to portray human lives, writers such as Margaret Atwood, Barbara Kingsolver, Michael Crichton, Ian McEwan, Amitav Ghosh, Paolo Bacigalupi, Ursula Le Guin, and Nathaniel Rich have contributed to this emerging genre, demonstrating their profound understanding of social structures and ecology. Thus, their writings based on the imagination of the past, present, and future to depict climate change's literature, such as science fiction, dystopian and utopian fiction, and occasionally it is speculative.

Thus, Ian McEwan's well-known book *Solar* (2010) is presented in this perspective. He writes novels and screenplays in English. In their ranking of the top 50 writers, *The Times* portrayed him as the greatest British author. His 1998 novel *Amsterdam* earned him a Booker Prize. In the book *Solar*, Michael Beard is both the protagonist and the antihero. He is a British physicist who won the Nobel Prize for his efforts to identify technology solutions for the interrelated environmental and energy crises.

Notwithstanding his distinguished reputation and top-notch education, his inner world is rife with emotional upheaval and moral dismay, and his personal life is chaotic. Beard's fifth marriage ended at the start of the novel, which caused him to become preoccupied with his responsibilities as the director of the "National Centre for Renewable Energy." He was the one who ended his prior relationships and marriage, and Patrice is the first to do so by having an affair with Beard's assistant, Tom Aldous. Because of this, despite his respectable status, Michael Beard's petty retaliation, envy, self-loathing, and desire are the main themes of the book. A non-violent altercation between Aldous and Beard ensues after this, during which Aldous describes his solar energy breakthrough before unintentionally falling and hitting himself on the coffee table, which results in his instant death. Beard chose to leave the scene because he knew he would undoubtedly be charged with this murder, but not before gathering proof that Patrice's former boyfriend Rodney Tarpin was a killer. Meanwhile, Beard receives Aldous's study paper on solar panels, which he displays to the world as his own work. He then gets ready to take advantage of them on the global market.

One of the main ecological issues of the century, according to McEwan, is climate change. Because Beard represents the thoughts of all scientists and links their responsibilities and innovations to the grave ecological problem of climate change, he depicts the private lives of scientists. In addition to being a piece of revolutionary thinking on the part of the physicist Beard, the fact that he revived his fellow scientist Tom Aldous's carbon-free photovoltaic solar energy invention after his death to combat climate change is also a response to metamodern environmentalism, which calls on science and scientific institutions to return to nature.

This study aims to highlight the power of literature in engaging readers, provoking thought, and inspiring change against the environmental challenges and climate change by examining the selected novel in the context of eco-criticism. Consequently, we can get valuable insights into how literature might foster biological awareness and contribute to sustainable practices and methods by comprehending how these works imagine chosen futures and fleeting natural consciousness.

### **Problem Statement**

The problem of this study was the need to study how solar energy contributes to envisioning an alternative future in the face of climate change and in responding to environmental problems as it aimed to address the gap between the role of literature in shaping public discourse and promoting environmental awareness, providing the relation of climate change, the environment and the emergence of our sustainable environment

### **Purpose of the study**

This study based on the environmental perspective to examine the representations of climate change and environmental issues in *Solar* by investigating the author's cognitive strategies to reflect social change and environmental concerns, and explore the presentation of alternative responses to emergencies and climate change in books, to explore the presentation of social concepts such as links between culture and nature, environment justice, and ecological engagement in narratives, and examine how books develop social awareness and support students to review their engagement within the global community.

### **Research Questions**

- 1- How does the novel highlight the climate change and the environment?
- 2- How does Ian McEwan think about the future scenarios concerning the climate change? and what techniques they used?
- 3- How does the novel depict human-nature relationships during climate change?

### **Significance of the Study**

The importance of this study based on the involvement of our understanding concerning the role of literature in addressing the environmental issues and climate change, especially with regard to the framework of environmental criticism that aims to provide perceptions into the potential of literature to enhance the environmental awareness and consciousness, in addition to envision an alternative future by focusing on solar energy. The study has worked to improve our understanding towards the literary strategies used by the author to depict environmental issues and climate change, as it examines how the novel deals with environmental crises by imagining a new future, and examining how narratives depict important concepts of environmental importance such as the relation between nature, culture, environmental justice, and environmental interdependence. In addition, the study contributes to the ongoing discussion on how climate change, environmental issues, and literature intersect, emphasizing the importance of storytelling and imagination in shaping societal responses towards the environmental challenges by highlighting the ability of literature to motivate and raise change.

### **Limitations of the study**

The study underscores the importance of critically analyzing the novel to uncover underlying biases and enhance the understanding of researchers from various backgrounds. However, it is crucial to acknowledge that the limitations of the research may hinder its direct application to real-world scenarios or broader national contexts. The complexities of global environmental issues and the potential solutions proposed in the literature may not be fully captured, emphasizing the need for a more comprehensive and inclusive approach to address these pressing concerns

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **Introduction**

This chapter include the theoretical framework that represented by the eco-criticism theory highlighting its history in addition to the related studies that deals with the topic of this thesis.

#### **Theoretical Framework**

##### **Eco-Criticism theory**

Today, the global environment is suffering from several natural disasters that threaten ecosystems, which requires combating them not only by relying on science and technology, but also by changing modern attitudes. Literature has played a role in this confrontation, which requires a deeper knowledge of society and its multiple contexts.

The term "Ecocriticism" originated from William Rueckert's essay "Literature and Ecology: An Experiment in Ecocriticism" in 1978. However, it remained relatively unknown until the 1989 Western Literature Association meeting, where Cheryl Glotfelty reintroduced the term and advocated for its use to encompass the broader field of nature writing studies. Glen Love further supported Glotfelty's call for "ecocriticism" in her speech as the Past President, titled "Revaluing Nature: Towards an Ecological Literary Criticism". Since that pivotal meeting in 1989, the term "ecocriticism" has gained significant recognition and flourished as a critical discipline (Mishra, 2016).

As a purely multidisciplinary discipline, it is broad in scope, limitless, and focused on long-term sustainability. Borlik in his book "Ecocriticism and Early Modern English Literature argues that Elizabethan and Jacobean writers were acutely aware of how people's actions affected the global environment and they were concerned (Borlik, 2022).



Ecocriticism comes from the word “eco” which refers to “ecology” (the branch of life that deals with living things and their physical surroundings) and “criticism” which refers to expressing a founded disapproval of someone or something on its apparent mistakes or errors. Ecocriticism is thus the study of the relationships of organisms (both animals and plants) to their physical habitats.

Furthermore, (Dietz & Garrelts, 2014) define ecocriticism as “a broad term for literary analysis informed by social or ecological science because it examines the relationship between literature and nature through a variety of methods that has little in common with no overt concern with nature.” Based on the definition, environmental criticism can be said to be a term in literature that refers to a social or ecological discipline.

Ecocriticism is most appropriate when it comes to a work in which the landscape is seen as dominant, also with an important relationship between author and place, personality and place. Geography includes spatial rocks, soil, trees, plants, rivers, animals, air as well as human perceptions and non-human variables (Dietz & Garrelts, 2014).

In this case, ecocriticism focuses on how literature is connected to the physical world, showing how culture (and humans) harm nature and vice versa. Roderick Nash, who contends that civilization created the wilderness, demonstrates the significant influence of literature on the conception of nature (Glottfelty & Fromm, 1996).

Certain literary works are exposing human courtship of nature, exposing conventional attitudes as well as providing new avenues for thinking about nature and how it relates to human civilization. Furthermore, according to Lawrence Buell, "ecocriticism takes its power from a natural commitment to the need of rehabilitating that which has been efficiently marginalized by means of mainstream societal assumptions, rather than from a central methodological paradigm of inquiry" (Buell, 2025).

Based mainly on Buell's justification, it can be said that the variety of ecocritical exercises emphasizes that these protests should now pay attention to the nature that exists in people as well as in environments where humans have a significant influence, rather than just the trees and rivers that are mentioned in texts.

Environmental criticism discusses the natural world and how people have responded to it throughout literary history. Ecocriticism is the study of the interaction between literature and the natural world. An environmental literary method is the ecological review. Ecocriticism aims to highlight the need to reconsider how humans interact with the environment via literary works.

Buell asserts that there have been waves of ecocriticism in English literature, with the tendency continuing to be younger. The first wave's foundations of realism, logocentrism, and historicism, as well as nature writing, pastoral poetry, and desert romance, were all present. It was the restoration of a natural, wild (non-human) environment. The scope of first-wave ecocriticism has been surpassed by second-wave concerns. It was activist in nature; unlike first-wave ecocriticism, which focused on extreme wildness, it considered the environment of residential, agricultural, and intensively controlled wild regions. A similar shift has been agreed upon by way of Burberry. Also, Postcolonial ecocriticism has recently gained popularity. With the upward thrust of postcolonial ecocriticism, there has been a larger interest in postcolonial literature. The postcolonial tranche ecocriticism has emphasized the concerns of starving, dehydrated, banished, homeless, ill, and imprisoned human beings all the world over (Mabie, 2016).

In his essay "Nature, Culture, and Territory in Contemporary British Poetry," Munther Mohammed Habib summarizes environmental readings of contemporary British poetry, reflecting a strong sense of environmentalism. Both Edward Thomas and S. Eliot have shown concern with the disturbing changes in the human relationship with nature, calling for meaningful engagement with the natural world (Habib, 2020).

Brown also asserts that there is a unique spiritual connection between the natural world and humankind, and this is demonstrated through images taken from nature and the natural world, such as the late Romantic poet Landon's feminist poem, which

focused on the place of women in the public and private spheres in mid-nineteenth-century England (Zapf, 2006).

Environmentalism emerged as a critical response to industrial modernity, gaining momentum in the last of the 20th century due to growing concerns about the impact of environmental degradation on all life forms. Rachel Carson's ground-breaking work is often credited as the pioneering text in the field of environmental studies, sparking the initial modern environmentalist movement in the 1960s. This movement led to a surge in both fictional and non-fictional literature exploring humanity's evolving relationship with the natural world.

Moreover, the emergence of environmentalism led to the formation of academic disciplines including Environmental Studies, Anthropology, History, and Philosophy. Thus, these fields have provided varied viewpoints on environmental challenges, expanding discussions on sustainability and conservation initiatives. The late 20th century's industrial achievements had a huge impact on the environment, highlighting the importance of environmental awareness towards the industrialization of the globe and how it influences our relations with nature. Consequently, the Earth's natural state distinguishes itself from man-made creations by remaining undisturbed and unaltered.

Natural Wilderness specifically refers to land that remains unaltered by human hands. The disconnect between humanity and nature has a deep-rooted history, with ecocritics focusing on its origins in Christian and post-Christian Western culture due to the emergence of industrial capitalism in Western Europe and its subsequent spread through colonialism. A significant aspect of ecocriticism involves examining the long-standing tradition of viewing man and nature as separate entities, a concept that was particularly emphasized during the Enlightenment era, notably in the philosophy of Rene Descartes. The modern era's cultural norms and human practices have contributed to the deterioration of the natural world, as highlighted in the article written by Howarth assertion that the belief in humanity's ability to control nature has fuelled conflicts and environmental strain. "The dogma that culture will always master nature has long directed Western progress, inspiring the wars, invasions . . . that have crowded the earth and strained its carrying capacity".

Since the rise of modernity, society has been progressively adopting a more westernized culture and ideology. Western culture, in particular, upholds the belief that humans are a superior race. This perspective is also reflected in the Bible, which states that man is the most rational being and has the authority to dominate over other creatures. White, 2003 argues that our current science and technology are heavily influenced by this Christian-centric view, leading us to reconsider our relationship with nature and our ultimate purpose. The field of literature and environment studies has emerged in the 1990s, with its initial focus being on equating the environment with nature and exploring literary interpretations of the natural world in various forms of literature, including poetry, fiction, and non-fiction. “Both our present science and our present technology are so tinctured with orthodox Christian arrogance toward nature . . . we must rethink our nature and destiny” (White, 2003).

### **Waves of Eco-Criticism**

The field of Literature and Environment studies has undergone significant changes since the 1990s. Initially, the focus was primarily on the relationship between literature and the natural world, with an emphasis on poetic, fictional, and non-fictional interpretations of nature. Lawrence Buell identified two waves of ecocriticism, with the first wave focusing on nature writing, nature poetry, and wilderness fiction. This group of eco-critics upheld the philosophy of organism and viewed the environment as the natural environment, emphasizing the preservation of the 'biotic community'. Thus, Buell asserts that there have been waves of ecocriticism in English literature, with the tendency continuing to be younger (Buell, 2025).

#### ***1- The First Wave (1970s–1980s): Foundational Ecocriticism***

The first wave of ecocriticism emerged in the 1970s and 1980s as environmental awareness grew in political and intellectual circles, and this early period was marked by the first attempts to include environmental concerns in literary studies, as well as concurrent environmental movements.

This wave dealt with the environmental context as it coincided with the emergence of a growing environmental movement, supported by the publication of important works

such as Rachel Carson's *Silent Spring* (1962), and the first Earth Day in 1970, while environmental issues such as pollution, resource depletion, and conservation became more prominent in popular culture. Thus, the first wave of ecocriticism was largely influenced by nature literature, which focused on human interactions with nature, with authors such as Henry David Thoreau and John Muir prominent, whose writings were considered fundamental to understanding the human experience of nature. Therefore, the primary goal of the first wave of ecocriticism was to raise awareness about the effects of culture on nature, advocating for the celebration of nature, condemning those who harm it, and promoting political action to reverse the damage caused. In essence, the initial aim of ecocriticism was centred around caring for the earth and protecting the natural world

## ***2- The Second Wave (1990s): Expanding the Scope***

Ecocriticism expanded during the 1990s to include beyond the study of writing about nature and environmental challenges to a broader range of literary genres and conceptual frameworks. This wave was defined by the formulation of ecocriticism as an academic subject, which led to the formation of specialized publications, conferences, and organizations. Thus, scholars influenced by poststructuralism, feminist theory, Marxism, and postcolonialism have developed sophisticated theoretical frameworks for ecocriticism like *The Ecocriticism Reader* which published by Cheryl Glotville and Harold Fromm in 1996, providing the basis for a more rigorous approach to the topic. Also, The Society for the Study of Literature and the Environment hosted the first international ecocriticism conference in 1992 which helped establish the topic. Furthermore, journals such as *ISLE* began to publish interdisciplinary studies in literature and the environment, allowing for a more nuanced examination of the relationship between literature and the environment. Thus, Buell in his article said that the ecocritics of the second wave advocated environmental justice and the concept of “social ecocriticism,” which takes into consideration both urban and rural environments. Consequently, this wave played an important role in the emergence of new subfields of ecocriticism, such as ecofeminism, which analysed how the poor were inordinately

affected by environmental issues and examined the links between the exploitation of women and the environment (Buell, 2025).

### ***3- The Third Wave (2000s–Present)***

This wave of ecocriticism emerged in the early 2000s in response to growing global concerns about environmental degradation, climate change, and the anthropogenic period, where human activity has overtaken natural processes as the dominant driver of Earth's ecosystems. Unlike previous waves that focused on the ethical aspects of human-nature relationships and the representation of nature in literature, the third wave's horizons have expanded to include interdisciplinary global perspectives on the complex interactions of environmental justice, globalization, and posthumanism.

Moreover, it has focused on addressing environmental challenges that exceed the national and cultural edges, such as rising global temperatures, biodiversity loss, and pollution. thus, this wave plays a crucial role in analysing how environmental problems excessively affect marginalized people, seeking to provide some solutions that enhance and achieve the balance social justice with environmental sustainability. As a result, this wave aims to highlight the brutal reality of our rapidly deteriorating environment, prompting authors and intellectuals to use this platform to explore not only human tyranny over nature, but also how nature itself can be used as a tool of oppression. This wave examines the long-term consequences of such dictatorship.

### ***4- The Fourth Wave (Emerging Trend: 2020s and beyond)***

This wave of ecocriticism, which began in the 2020s, represents a critical evolution of environmental thought in response to today's growing ecological concerns. Building on the work of previous waves, this phase emphasizes real-world solutions, interdisciplinary collaboration, and an intersectional approach to environmental issues.

Consequently, this wave highlights the significance of multi-disciplinary approaches that merge the concepts from literature, environmental science, sociology, technology, and public policy to address complicated environmental concerns in a complete and novel way through different collaborations. Also, it highlights the importance of

literature and arts in promoting climate action, envisioning permanent futures, and motivating global societies to solve environmental issues. Therefore, by studying the critical advances in this wave, it seeks to identify how ecocriticism might continue to adapt to the pressing demands of the twenty-first century, reducing the gap between cultural analysis and authentic environmental reform.

### **Concepts of Eco-criticism theory**

#### ***Nature***

The eco-critics employ a comprehensive interpretation of the term 'nature', extending beyond the mere depiction of natural elements in literature. In this context, nature encompasses the entirety of the physical environment, encompassing both human and non-human entities. The interconnectedness between these components forms the foundation of ecocriticism, emphasizing the symbiotic relationship between living and non-living entities.

A harmonious coexistence between humans and the natural world is essential for the preservation of a healthy ecosystem, benefiting both mankind and the planet. This perspective underscores the importance of maintaining a balance between human activities and the environment, ensuring that no entity dominates or disrupts the delicate equilibrium necessary for a sustainable ecology.

The modern ecological consciousness has a feeling that the balance between human and the natural world must be maintained. A perfect ecology is one in which plants, animals, birds and human beings live in such harmony that none dominates or destroys the other".

#### ***Anthropocene vs Biosense***

Human nature is inherently anthropocentric, placing humans at the top of the hierarchy. As the only species on Earth capable of literature, humans perceive themselves as superior to all other organisms. However, ecocriticism challenges this anthropocentric perspective by emphasizing the equal significance of every element within the environment. In the field of ecology, the tragic flaw of humanity lies in its

anthropocentric vision, which contrasts with the biocentric approach. This vision compels humans to conquer, harmonize, domesticate, violate, and exploit every natural entity. Anthropocentric views prioritize humans, leading them to either sentimentalize or dominate the environment. Conversely, the biocentric perspective shifts the focus away from human dominance and explores the intricate interconnections between humans and nonhuman entities. In this particular scenario, explains that anthropocentrism refers to the belief that humanity is the most important entity, with all other forms of life being seen merely as resources to be exploited by humans.

This mindset stems from the notion that humans are superior to animals and therefore have the right to use them for their own benefit. Those who adhere to anthropocentrism perceive themselves as the focal point of the world, believing that everything, including the environment, resources, and non-human entities, exists solely for their own purposes. Consequently, this perspective has resulted in an imbalanced power dynamic between humans and nature, where humans hold the power while nature is rendered powerless.

### *Nature vs Culture*

The eco-critics aim to reconsider the relation between culture and nature, as stated by (Barry, 2020), the current ecological crisis is a consequence of human culture. Since the beginning, humans have lived closely with nature in their natural surroundings. Culture is intertwined with the geographical landscape, as seen in works like Synge's Aran Island, Hardy's Wessex, and R.K. Narayan's Malgudi, which influence the characters in their writings. Culture is a product of the people who have inhabited an environment for generations. As long as humans maintain a close association with nature, there will be no ecological threat. However, with the progress of science and technology, humans have become disconnected from nature, jeopardizing their own survival. The natural environment has been replaced by man-made structures. The global crisis we face is not solely due to how ecosystems function, but rather how our ethical systems function. Overcoming this crisis requires recognizing our impact on nature and reforming our ethical systems based on that understanding.



### ***Ecofeminism***

Ecofeminism, a key idea in Ecocriticism, is the merging of ecology and feminism. This word incorporates a variety of philosophies, including feminism, environmentalism, animal liberation, antiracism, and anticolonialism. (Plumwood, 2017) argues that ecological feminism is a response to the problems provided by the feminist and environmental movements in the late twentieth century. One of the fundamental concepts of Ecofeminism is structuralist anthropology, which acknowledges the widespread perception in various civilizations that women are inferior to males. This ideological system justifies not just women's enslavement, but also environmental exploitation. Ecofeminism arose as a critique of androcentric dualism, which maintains the artificial and cultural notion of male domination over females.

### ***Environmental Justice***

The concept of ecocriticism challenges the traditional notion of human superiority over nature by emphasizing the importance of environmental justice. In the past, humans have viewed themselves as dominant over other species in the biosphere, but now there is a growing recognition that nature is not to be conquered but to be respected as a fellow inhabitant of the earth's ecosystem. It is crucial for us to reassess our destructive tendencies towards nature and recognize that any harm we inflict upon the environment will ultimately have consequences for us as well. The current global crisis is not solely a result of ecological imbalances, but also stems from the ethical frameworks that guide human behaviour towards the environment.

To address this crisis effectively, it is imperative that we acknowledge our impact on nature and work towards reforming our ethical systems to align with principles of sustainability and environmental stewardship. By understanding the interconnectedness of all life forms and ecosystems, we can strive towards a more harmonious coexistence with nature. Kerridge insists in his article that “The environmental justice movement is a collective term for the efforts of poor communities to defend themselves against the dumping of toxic waste, the harmful contamination of their air, food and water, the loss of their lands and livelihoods, and the indifference of governments and corporations”.

In the current era, characterized by the pressing issue of environmental degradation, it is crucial to acknowledge the following: "It is imperative to recognize that the environment is not separate from us, but rather an integral part of our existence" (Buell, 2005, p. 112). Developing nations are adopting Western development ideologies, which have led to the extensive devastation of the natural environment. Industries excessively consume raw materials, resulting in the overexploitation of our precious natural resources.

### **World Eco-Literature**

Ecocriticism draws its inspiration from three prominent American writers who exalt nature as a vital force and depict the wilderness as it exists in America. These writers are Ralph Waldo Emerson (1803-1882), Margaret Fuller (1810-1850), and Henry David Thoreau (1817-1862). This trio belonged to a collective of New England writers, including poets, essayists, novelists, and philosophers, known as the transcendentalists. They were the pioneers of the first significant literary movement in America to establish a sense of "cultural independence" from European influences. Ralph Waldo Emerson explored the impact of nature in his initial reflective prose work, *Nature*. He embraced a unique perspective on nature, commonly referred to as 'transcendentalism,' which posits that 'the divine' or 'god' is present throughout nature. Emerson argued that a deeper understanding of reality can be attained through the study of nature (Emerson, 2018).

Margaret Fuller's *Summer on the Lake During 1843* serves as a Transcendental travel narrative that delves into the vast American landscape, particularly focusing on the Great Lakes region. In her work, Fuller contrasts the practical objectives of the settlers with the spiritual and aesthetic aspirations of the tourists, highlighting the different ways in which individuals interact with and perceive nature (Fuller, 2025).

Henry David Thoreau is widely recognized as the pioneer of Ecocriticism, with his work "Walden" serving as an autobiographical narrative detailing his two-year sojourn in a cabin near Walden Pond, situated two miles from his hometown of Concord. This literary masterpiece is celebrated for its depiction of a deliberate withdrawal from contemporary society in favour of a spiritual rejuvenation through a profound

connection with the natural world, prompting a transformative shift in readers' consciousness from self-centeredness to environmental awareness.

In a similar vein, Robert Frost, a prominent American poet, frequently incorporates elements such as woods, lakes, stars, and horses in his poetry, which may appear simplistic on the surface (Alçar, 2025). However, upon closer examination, Frost's verses unveil profound insights into the fundamental truths of human existence as mirrored in the natural world. For example, his well-known poem "Stopping by Woods on a Snowy Evening" explores the eternal beauty of nature in contrast to the temporary character of human existence, underlining humanity's inherent relationship to the environment.

### **Critics of Ecocriticism**

(Slocombe, 2005) contends that ecocriticism, like postmodernism and post-structuralism, suffers from the same "abandonment of the real" dilemma. Slocombe argues that ecocriticism is beneficial because it focuses on place rather than space, grounding us in material reality. This aligns with the view of theory as "seeing everything as textuality," while ecology emphasizes the existence of the nonhuman world outside of our language and meaning. He argues that ecocriticism faces a challenge as it aims to engage with 'the real' using language, which is inherently metaphorical and detached from reality. On the other hand, categorizes nature into three distinct versions: the metaphysical, the realist, and the lay/surface concept. According to (Soper, 1995) the metaphysical notion of nature is the framework through which humanity perceives its uniqueness and distinctiveness, representing the realm of the non-human.

The concept of nature, when used in a realist sense, pertains to the physical world and its governing laws. On the other hand, the layman's understanding of nature typically refers to the natural environment as opposed to urban or industrial settings, including landscapes, wilderness, countryside, animals, and raw materials. The challenge lies in distinguishing between these different interpretations of nature and discerning the real from the metaphorical.

Howarth (1996) outlines some fundamental principles of ecocriticism while also pointing out some criticisms of the field. He argues that ecocriticism may become one-sided and lack self-reflection if it maintains a strict "Us vs. Them" political stance. notes that ecocriticism encounters resistance in contemporary literary studies due to the challenge of bridging the gap between science and literature, which have become increasingly distant disciplines. Despite humanists discussing fields, maps, and frontiers, literature is perceived as having no specific location; therefore, the idea of merging it with ecology, a discipline rooted in place, appears illogical to many. explores the parallels between theory and ecology, highlighting the intricate nature of the comparison. Theorists argue that we are responsible for constructing all meaning, emphasizing the indispensability of readers in the interpretation of texts. On the other hand, ecologists emphasize that we do not possess the ability to create the land or its inhabitants. This perspective seemingly widens the divide between literary criticism and ecology, but a shift in viewpoint may be the key to streamlining their integration.

According to (Evernden, 1978), ecology can be considered a scientific discipline. However, it deviates from the conventional subject-object relationship that is fundamental to most sciences by emphasizing interrelatedness. In doing so, it not only challenges the mindset of those obsessed with constant growth and development, but also poses a threat to the very essence of science. Evernden supports his argument by providing various examples that demonstrate the interconnectedness of all living organisms, highlighting that this connection extends beyond mere causal relationships to a molecular level. One might argue that literature follows a similar structure: various authors write books on different topics, yet they all consist of words and characters. Moreover, they are interconnected through fundamental morphemes and graphemes, as well as the intertextuality that binds them together. suggests that literary works are akin to fossil fuel in terms of stored energy, but they possess the ability to be replenished. This is because they originate from the perpetual sources of language and imagination.

The transfer of certain ecological aspects, such as the rejection of the subject-object relationship mentioned by Evernden, to literature may not be as unreasonable as it seems. In a previous discussion about place, he concludes that the "right to place, to

know where one is from, is a right that is difficult to argue with the tools of the scientist." He believes that integrating the arts and humanities with science is not only logical but also essential in order to delve into the "underlying roots of the environmental crisis rather than simply its physical manifestation" In his writing, he argues that there is no existence of an individual as a separate entity, but rather an individual-in-context, a component of a specific place, defined by that place From this perspective, the notion that science and literary criticism cannot be logically integrated is merely a manifestation of a narrow-minded way of thinking, and ecocriticism aims to reconcile the divide between these two fields. argues that ecocriticism has faced criticism for its perceived narrow focus on nature writing, which is already heavily centred on the theme of nature and typically carries an environmental message. Nevertheless, as ecocriticism has evolved, the scope of primary texts under scrutiny has broadened. Without this expansion, the thesis in question would not have been possible, highlighting the importance of moving beyond the confines of nature writing in ecocritical analysis.

Furthermore, Glotfelty & Fromm argue that ecocritics have faced criticism for their allegedly romantic, nostalgic, and conservative perspective on the world, promoting a regression to a less advanced society. While this critique may be valid in certain instances, there are proponents such as (Glotfelty & Fromm, 1996) a co-editor of a prominent ecocriticism publication, who explicitly reject the notion of a "return to Nature".

To put it briefly, the act of criticizing specific elements of contemporary society does not automatically mean that one cannot also appreciate other aspects of it—or even those very same aspects, albeit executed in a distinct manner. While it may appear at times that ecocriticism promotes a regression to a time before industrialization, only a small number of ecocritics would actually align themselves with such a proposition.

## Climate Change Literature

### *Climate Change Fiction (Cli- Fi)*

The phrase 'Earth matters' has been adopted by environmentalists as a rallying cry against any form of harm inflicted upon nature. Climate change is a pressing concern that has garnered attention from scientists, environmentalists, journalists, and writers worldwide. This issue has become so urgent that journalist Dan Bloom coined the term 'cli-fi' or climate change fiction in 2007 (Holmes, 2014). In response to the concerns expressed by environmental theorists (Slocombe, 2005) regarding the lack of literary narratives addressing climate change, Bloom argued that this subject is indeed explored in cli-fi novels and films. In his article titled "The crucial role of art in addressing the warming world," strongly emphasizes the power of literature and its potential to bring about positive change in the face of the climate change crisis. He raises an intriguing question, stating that despite our awareness of the issue, it has not deeply resonated within us or become ingrained in our culture. He highlights the absence of books, poems, and plays that tackle this pressing matter. In contrast, he draws a parallel with the immense artistic response to the AIDS epidemic, which not only generated a remarkable outpouring of art but also had significant political impact.

In a similar vein, (Arons, 2008) highlights that the connection between humanity and the environment is a matter of immediate importance, and one that should be tackled by individuals involved in critical and intellectual endeavours, such as theatre artists and scholars (p.93). The call to create artistic works to address the challenges of climate change and global warming has been consistently emphasized since the onset of the twenty-first century. During the interview with David Holmes, Bloom expressed his concerns regarding the future of humanity and the potential dangers posed by carbon dioxide emissions. In terms of the narrative's structure, Bloom discussed the possibility of addressing it in the past, present, or future. He also mentioned that climate fictions in literature and movies could be approached from either a utopian or dystopian perspective. The author has the ability to either paint a bleak picture of a world suffering from the consequences of climate change and global warming, or to present an optimistic view of a world that has successfully avoided disaster. Regardless of the

approach taken, Bloom firmly believes that "cli-fi is a fiction genre that might be helpful in waking people up and serving as an alarm bell" (Holmes, 2014).

Bloom cautions against the adverse effects of climate change and global warming on the environment. Cli-fi is not considered a distinct literary genre due to its lack of a specific plot structure and stylistic guidelines (Goodbody & Johns-Putra, 2019). However, by incorporating elements from various genres, it serves as a useful term for a substantial collection of narrative works that primarily focus on climate change and the associated political, social, psychological, and ethical issues. Additionally, it explores the intricate relationship between humanity and nature (Kahneman & Tversky, 1982) highlighting how human actions have contributed to the widespread environmental destruction.

### **Climate Change and Ecocriticism in Solar**

Ian McEwan's novel *Solar Power* focuses on environmental themes, particularly those related to climate change. The story revolves around Nobel Prize-winning physicist Michael Bird, who strives to create a sustainable energy source free from dependence on fossil fuels. Bird is portrayed as a selfish and unlikable character who engages in womanizing and plagiarism and displays excessive pride throughout the book—leading him to prioritize his physical needs over preserving the ecosystem. Thus, by presenting the story from Bird's perspective, McEwan's novels effectively highlight the conflict between his personal desires and his official duty to combat climate change.

The concept of 'Nature' can be better understood when viewed in the context of solar energy. Solar energy serves as a backdrop for exploring and explaining ecological crises, such as wilderness, humanity, animalism, and progress. argues that solar energy provides a useful lens through which to examine these related concepts. Additionally, the character of Beard can be interpreted as an allegory for humanity as a whole. His reckless consumption and resistance to growth and change symbolize the indifferent progression of modern capitalist consumerism towards ecological destruction. Melissa embodies the essence of a 'mother nature' figure, symbolizing vitality, care, equilibrium, fertility, and granting Beard (or, us) the opportunity for redemption through embracing fatherhood (maturity, development, the future).

However, she also issues a stark cautionary message, stating *"I will proceed regardless. It will be a sorrowful existence without you, but not as sorrowful as having nothing"* (McEwan, 2010, p. 201). In a similar vein, *Solar* may be interpreted as narrating the potential for human termination, while leaving the fate of the planet uncertain. *Solar* also critiques the scientific establishment, as demonstrated by Beard's journey to the United States with his stolen project, which becomes increasingly entangled in financial concerns (Habib, 2020). This highlights the influence of capitalism's constant commodification of culture. Furthermore, *Solar* can be interpreted as a deliberate engagement with the ecocritical metanarrative of climate change fiction. It explores the extent and feasibility of the intersection between science and culture, with Beard's assertion of the incompatibility between the Heisenberg Principle and morality suggesting a scepticism towards the potential for cultural impact. Some critics even view *Solar* as a form of climate change denial.

However, an alternative interpretation could suggest that McEwan is actually challenging conventional scientific practices. While Beard receives a Nobel Prize for his contributions to the field of physics, specifically in the realm of photons, the proposed solution in the narrative involves a synthetic photosynthesis developed by a relatively unknown post-doctoral researcher. This narrative choice may allude to the ongoing paradigm shift within the biological sciences, a field in which Richard Dawkins, a frequent collaborator of McEwan, is actively involved.

Furthermore, this narrative element could be seen as a subtle indication towards the ecocritical concept of achieving a harmonious balance between culture and nature. *Solar* alludes to and explores the idea that science, like individuals such as Michael Beard, must evolve and adapt. It emphasizes the shortcomings of climate change science itself, placing more emphasis on these issues than ecological factors. It is worth noting that McEwan's portrayal of the scientific establishment and its capitalist-individualistic bias also highlights scepticism towards climate change. Furthermore, it depicts the commodification of science through marketization, reducing it to a form of Lyotardian performativity. This perspective is echoed in the work of (Habib, 2020).



### **Solar's critical reception**

Reactions to *Solar* from literary critics have been sluggish. Adam Trexler and (Goodbody & Johns-Putra, 2019), pointed out that there is not much study on the book in their 2011 review on "literature and climate change," but they also predicted that *Solar* "will almost certainly be the focus of much research" (REF) in the years to come. However, as of this writing, there are still very few significant critical analyses of the book, and nearly all of them have tried to extract simple allegorical interpretations from the main character's actions Beard suggesting that the book gives us "the opportunity to be in touch with human frailties, which, alas, reside in us all." also highlights the book's "pessimistic attitude about human behaviour," and suggests that *Solar* is helpful in thinking about "risk," as she illustrates by comparing "the risks [Beard] is taking in his private life" to the risks we are taking as a species with climate change.

Critics have overwhelmingly condemned the work on this premise in which *Solar* has been criticized for being a poorly executed satirical take on the "issues novel" genre. He suggests that these readings rely on a restricted understanding of allegory and do not allow for interpretations beyond its basic limitations. Greg Garrard has built the most significant engagements with *Solar*. In an unexpected twist, Garrard authored what called as 'a playful interaction with the novel, dissecting it before it was released'. Garrard (2009) claimed to be able to estimate how McEwan will interact with climate change in *Solar* by examining the evolution of what he viewed as 'the idea of human nature' across McEwan's career. Garrard stated that such a strategy may provide 'a route past the formal difficulties to creating a book on climate change', which had hitherto been linked up in the opposing poles of 'fatalism' or 'idealism'. Garrard used McEwan's own words before the novel's release to support his hypothesis. I would have lost interest in the novel if I had adopted a moral perspective. I needed an exit clause. The get-out clause states that this is a study of human nature with elements of comedy. "I couldn't see how a novel would work without falling flat with moral intent".

## Related Research

The researchers looked at the intersection of ecocriticism and literature as a means of imagining alternative futures due to climate change and environmental issues. They analysed the main themes, hypothetical structures, and explorations in the field of ecocriticism, with an explicit focus on the depiction of environmental change and natural concerns in the selected books. Thus, by looking at these literary works, we learn how ecocriticism helps people imagine different futures and become more environmentally aware. The researcher takes some previous production to compare with the current research.

An article written by Habibi in 2015 prove that the novel written by Ian McEwan's deals with ecocriticism that highlights the scepticism surrounding the metanarrative of global warming discussions at international conferences. This inquiry explores the parallels between natural and artificial photosynthesis, suggesting that imitating nature could have been a potential solution to the global disaster if scientists had prioritized humanity over egotism in their work. This study highlights how profit-driven scientists prevent universal congregations from being practical and efficient in addressing global warming.

Another study titled “*Sustainability or climate change? An ecocritical analysis of Ian McEwan’s Solar*” (Hartvigsen, 2016) This article examines the novel *Solar* via an ecocritical literary lens. With an emphasis on sustainability and climate change, the goal is to examine how the reader is affected by the main characters, setting, symbolism, and satire. Tom Aldous, the hero, is committed to living a sustainable life, whereas Michael Beard, the protagonist, is a vile, self-centred antihero who consumes everything and everyone. Aldous stands for the sustainable and alternative lifestyle, whereas Beard represents the avaricious capitalistic Western consumer civilization and its male leaders who ignore the warnings of a deteriorating environment. In a sarcastic manner, humour and mockery reveal humanity's frailties and avarice. The CO<sub>2</sub> producing transport system and cancer are examples of symbols that represent overconsumption and a stressed-out world. The reader is prompted to consider the continuous conflict between

sustainability and climate change, as well as the need to adopt a more sustainable way of living.

*Satire in the Anthropocene: An Ecocritical Analysis of Ian McEwan's Solar and Jonathan Franzen's Freedom* (Thorsen, 2019). This study contends that modern satirical novels should be considered important additions to the communal narrative on climate change since they are advancing the environmental discourse. The thesis examines important environmental concepts and depictions in Jonathan Franzen's *Freedom* and Ian McEwan's *Solar*. The conversation focuses on the relationship between capitalism and climate change and attempts to determine whether a more idealistic strategy—where a new set of economic and environmental regulations are deemed necessary—or a more practical one—where new technology is prioritized—is the best way to stop climate breakdown.

"Imagining alternative futures: eco-criticism and the depiction of climate change and environmental concerns in Ian McEwan's *Solar* " studies how writing, particularly chosen literature, contributes to visualizing alternative outcomes in the face of environmental change and natural problems. This literature review examines the key topics, theoretical frameworks, and research findings associated with eco-criticism. It looks at how selected works present situations, study biological emergencies, depict human instinct links, and discuss natural activism and morals. Furthermore, the review highlights the importance of literature in raising environmental awareness and driving activism.

Even though "Ecological Film Festivals" and "Imagining Alternative Futures" focus on different kinds of media (film and literature) and how they deal with climate change and other environmental issues, they all want to raise awareness, get people to act, and make people more aware of the environment.

Similarly, "*Imagining alternative futures: eco-criticism and the depiction of climate change and environmental concerns in Ian McEwan's Solar* " This book explores the role of literature in depicting alternative futures amidst climate change and environmental challenges, examining the themes, narrative techniques, and literary strategies used in these novels to address climate change and environmental concerns. It

also highlights the power of literature to promote environmental awareness and inspire activism.

Another study, in "*Environment and the writing of the English left: the red and the green*" the main focus is on examining the relationship between British Left-wing literature and ecology. The book looks at how British leftist writers' literary works reflect and address environmental issues in which it examines these authors' engagement with ecological issues like pollution, deforestation, industrialization, and the exploitation of natural resources, as well as the environmental concerns they express. The book explores how literature by British leftist writers reflects and addresses environmental issues, such as pollution, deforestation, industrialization, and the exploitation of natural resources. Also, the book analyses how these writers incorporate ecological themes into their works and use literature as a means to promote environmental justice and sustainable practices.

In comparison, the current study examines the role of literature, particularly Solar in imagining alternative futures amidst climate change and environmental challenges. The literature review explores the themes, narrative techniques, and literary strategies employed in the novels to address climate change and environmental concerns.

## **CHAPTER III**

### **METHODOLOGY**

#### **Research Design**

The research methodology utilized in this study is qualitative, centering on detailed textual analysis and interpretation of specific novels. Through this method, a thorough examination of the complex themes surrounding climate change and environmental issues depicted in literature is made possible. The qualitative research design is a systematic method that aims to understand complex phenomena by thoroughly exploring, interpreting, and contextualizing textual data. When applied to analysing novels, this design focuses on conducting a detailed examination of literary elements such as language, imagery, symbolism, and character development. The goal is to uncover underlying meanings, themes, and socio-cultural contexts embedded within the text. This approach prioritizes the researcher's engagement with the text, allowing for flexibility, reflexivity, and iterative interpretation. As a result, it enables nuanced insights into the subjective experiences, perspectives, and emotions portrayed in the narrative (Creswell & Poth, 2018)

#### **Data Collection Methods/Tools**

The novel "*Solar*" by Ian McEwan is examined from an eco-critical perspective, with the primary focus being on the text of the novel. Through close reading and textual analysis, relevant passages, themes, motifs, and narrative techniques that relate to climate change and environmental concerns are identified. In order to enhance the analysis and provide a broader context, secondary sources such as critical essays, scholarly articles, and author interviews are also utilized. These secondary sources contribute to the theoretical framework of eco-criticism and offer valuable insights into the wider discourse surrounding environmental literature.

### **Data Collection Procedures**

The process involved reading the novel to have a thorough comprehension of the plot. The second step involved reading a secondary source that was relevant to the situation. Next, data was gathered through narration and discourse from relevant texts. The data was analysed and divided based on the research questions. The final step was drawing conclusions from data analysis results.

### **Data Analysis Procedures**

- Solar was subjected to close reading and textual analysis.
- Relevant passages and themes related to climate change and environmental concerns were identified.
- Eco-critical concepts such as human-nature relationships and environmental ethics were applied to interpret the data.
- Findings were synthesized to reveal insights into the authors' treatment of environmental themes and their implications within the broader eco-critical discourse.

## CHAPTER IV

### FINDINGS

#### Introduction

*Solar* by Ian McEwan conveys the obvious and immediate threat of climate change in a way that is both humorous and sobering. Its tale is distinctive because it blends the private and the public spheres while raising ethical concerns about human nature. In light of the global economic and environmental crises, he is challenging the possibility that man will be the agent of change rather than destruction and steer the world in a more constructive direction by placing a theoretical physicist as the protagonist of his story—and a Nobel laureate at that. Man's perspective on the world must shift if the world is to be changed.

Nobel laureate Michael Beard demonstrates that while there is a part of humanity that is willing to change for the better—at least the desire is there—he faces two obstacles: the powers of global trade and consumerism as well as his own indifferent disposition.

As we can see now, ecocriticism has broadened its focus from a local to a global perspective. A "transnational and translocal" strategy is now employed by some of the most well-known environmentalists. There are countless types of environmental problems in the world. Others examine the environmental imagination of various civilizations throughout the world, while some scientists opt to analyse photos of Earth from space, such as Google Earth. However, some study the conflicts that exist between the environment and freedom or between the environment and science. Lastly, the list of topics is far from definitive, with some choosing to highlight the global economy, global capitalism, biodiversity, or ecology.

#### Synopsis of the novel

In *Solar*, the main character is Michael Beard, whose weight issues are vividly depicted as

*"the new curtain-swing of fat that hung below his armpits, the innocent stupidity of swelling in gut and rear"* (McEwan, 2010, p.6).

On the other hand, Tom Aldous serves as a contrasting figure to Beard. Aldous is portrayed as young, with a *"big-boned goofy face and flaring nostrils,"* sporting a ponytail and a wrist bracelet made of intertwined grubby red and green string (McEwan, 2010, p.28). Furthermore, Aldous has an impressive athletic background, having boxed for Norfolk in the county championship, rowed for his college at Cambridge, and even achieved a respectable seventh place in a San Francisco marathon (McEwan, 2010, p.28). In terms of diet, Aldous follows a self-righteous regimen of salad and yogurt (McEwan, 2010, p.28). 1. The narrative describes a scene where cubes of pork belly are presented on a bed of buttered rice, creating a visual image of a hill-fort.

This imagery not only appeals to the senses but also conveys a sense of abundance and indulgence. The use of food as a metaphor for opulence and luxury is evident in this description, highlighting the lavish lifestyle of the characters in the novel. Additionally, the dessert described in the text is a decadent combination of chocolate, goat's cheese, cow's cheese, white grapes, rolls, chocolate mint, and Burgundy wine. The contrast between the richness of the ingredients and the fleeting nature of the meal, as indicated by the disappearance of all items except the grapes when the tray is removed, underscores the theme of excess and transience in the novel. This portrayal of extravagant consumption reflects the character's hedonistic tendencies and their preoccupation with material pleasures. Towards the end of the novel, there is a detailed description of a lavish meal consumed by a character, consisting of skinless chicken breast, minute steaks, bacon, honey, cheese topping, twice-roasted jacket potatoes, butter, and crème cheese. This elaborate dish symbolizes the protagonist's indulgence and excess, serving as a reflection of their privileged status and insatiable appetite for luxury.

The emphasis on the ingredients and preparation of the meal underscores the character's adherence to traditional values of wealth and consumption, highlighting the contrast between the elite class and the rest of society. Indifference towards the healthiness and environmental impact of the food he consumes characterizes him as he simply indulges in whatever he desires, prioritizing his own needs over nature and his



well-being. In contrast, Tom embodies the values of the emerging youth generation, showing concern for health and environmental sustainability, striving to coexist harmoniously with nature rather than causing harm to it.

Beard and Tom exhibit stark differences in their lifestyles and values. Beard thrives on his fame, leveraging his honorary university position in Genova and his prestigious title of Professor Beard, Nobel laureate, for personal gain. He actively seeks out official roles with financial benefits, as his existing sources of income are deemed insufficient. Beard's materialistic tendencies align well with the values of an individualistic, capitalistic, and consumerist society. He openly admits his disinterest in nature, activism, and relationships, showcasing a lack of concern for environmental issues, social causes, and personal connections. In contrast, Tom's character is shaped by a more altruistic and environmentally conscious mindset. He values greenery, gardening, and country rambles, demonstrating an appreciation for nature and a willingness to engage with the environment. Tom's involvement in protest movements highlights his commitment to social causes and his active participation in advocating for change. Unlike Beard, Tom's character is characterized by empathy and a genuine concern for others, as evidenced by his dedication to his relationships and his efforts to make a positive impact on the world around him.

Beard's sole focus lies within himself, as he eagerly takes advantage of anything in his surroundings that can benefit him. However, Beard is far from being a morally upright character; instead, he embodies the very essence of humanity. His extravagant, unethical, and insatiable behaviour goes against the expected norms and values of society. Moreover, Beard symbolizes the vices of greed, lust, and gluttony, three of the deadly sins. By portraying Beard in this manner, the author deliberately distances the reader from the main character, highlighting the breach of values and moral issues. Consequently, the characterization of Beard serves as a critique of society and its disregard for the environment.

Tom Aldous is a dedicated individual who has committed his life to combating environmental catastrophe. Beard's assertion that Tom is "naïve" is met with Tom's acknowledgment and his emphasis on his singular focus on scientific work, devoid of

social interactions or leisure activities. Tom's unwavering dedication to addressing the challenges posed by climate change is evident in Beard's observation that "climate change was consuming Tom Aldous." Despite the toll it takes on him, Tom remains resolute in his pursuit of solutions to the environmental crisis. Tom's persistence in advocating for sustainable energy solutions is highlighted in his plea to Beard to consider working on solar energy projects. Expressing his desire to do what is right for the environment, Tom emphasizes the importance of collaboration in securing a better future for the planet and its inhabitants. 1. Tom, the fresh-faced and altruistic scientist, emerges as both a hero and a guardian angel. The dynamic between Tom and Beard symbolizes the clash between nature and culture, the struggle between preserving the environment and succumbing to consumerism, and the contrast between selflessness and greed.

The battle between the financially well-established class, represented by Beard, and the new group of people thinking in sustainable solutions, represented by Tom, culminates in Beard's victory due to his adherence to old consumption habits and his societal power. Despite having the ability to effect change, Beard prioritizes his own desires, seeking revenge after discovering Tom's affair with his wife, Patricia. As their marriage deteriorates, Michael plans to move out and threatens to fire Tom, prompting Tom to emphasize the importance of their cause over personal vendettas (McEwan, 2010, pp.81-89).

Tom's plea for rationality and a focus on saving the world rather than succumbing to emotional impulses highlights the clash between individual desires and global concerns. Aldous urges Beard to consider the bigger picture and transcend personal grievances, emphasizing the significance of sustainable solutions over private revenge. This conflict underscores the tension between immediate gratification and long-term environmental responsibility, challenging Beard to reassess his priorities and embrace a more forward-thinking mindset.

### ***Solar's approach towards climate change and environmental impact***

Examining *Solar* through the lens of photosynthesis highlights some basic ideas in literary theory and ecocriticism and suggests that they may be related. This study's

argument is based on a synthesis of Glotfelty's and Estok's ecocriticism. Ecocriticism, according to Glotfelty, is primarily about "the interconnections between nature and culture, specifically the cultural artefacts of language and literature." As a theoretical discourse, it negotiates between the human and the nonhuman (Glotfelty & Fromm, 1996). In this study, Glotfelty's definition of ecocriticism can be dovetailed to Estok's who argues that ecocriticism is:

It is not just a matter of studying nature or natural things in literature, but a theory of bringing about change through analyses of the function—thematic, artistic, social, historical, ideological, theoretical, or otherwise—of the natural environment, or aspects of it, which can be represented in documents (literary or otherwise) that contribute to material practices in material worlds.

In a sense, *Solar* exemplifies "ecofiction," a genre of literature that aims to express ecological concern about the dire consequences of global warming while highlighting moral dilemmas brought up by human relationships with nature. Because *Solar* deals with ecology and explains to the reader how man's greed has devastated nature, its appeal extends beyond the literary community to a wider biospheric community. McEwan exaggerates the moral dilemmas surrounding this anthropocentric situation in order to both shock his readers by showing them how moral decay is closely linked to contemporary environmental calamities and to fulfil his own obligation to preserve the environment. In fact, McEwan does not waver from his social and ethical commitments in the face of contemporary cultural destruction of nature; rather, he views this worldwide catastrophe as the sole appropriate subject for his creative career. He shifts from microcosmic problems in his early works, including *Enduring Love* and *Atonement*, to macrocosmic occurrences in *Amsterdam* and *Saturday*, when he is appalled by the catastrophic impact of man on environment.

Some critics view *Solar* as more than just an artist because he is nearly the pinnacle of the macrocosmic extreme of his thematic spectrum: some state that he is more of "a public intellectual—an eminently sane and reasonable man who happens to be a novelist but is finally more concerned to play a broader, edifying role" (McEwan, 2010, p.93). McEwan, a writer with a strong interest in science and the environment, aims to remind

his scientifically inclined peers of their reliance on nature and what they have simply forgotten in their arrogance over man's dominance over the natural world.

The connection between science (physics in this case) and the arid, dusty environments in which Beard works—in the American desert of New Mexico, where he begins his solar project that was plagiarized, and outside of Reading, England, where he serves as the first head of the Centre—metaphorically suggests the emptiness and vulnerability of science.

This relationship is supported by the failure of two nature-based initiatives that were implemented at these locations: building a wind generator and capturing solar energy. Therefore, *Solar* is a representation of the world's ruined near future in the event that a sensible option is not taken. The novel humorously identifies the reasons why many choices taken at numerous international summits are unrealistic and unworkable in order to offer a potential workable remedy. Although McEwan acknowledges that certain scientific innovations have a detrimental effect on the environment, he never completely disproves science's ability to disclose the truth. In order to create his literary artifice, he instead replicates the scientific patterns and equations that govern the chaotic reality in logical terms. Since he commutes in the land equations via equal sign between the knowns and unknowns, he may be seen as a writer who is able to apply "equation" between science and literature.

In *Solar*, McEwan discusses a number of different subjects in addition to the main one of global warming and its relationship to scientific institutions and commercial backers. These include the witch-hunting nature of the media, the intersection of gender and scientific endeavours, the compatibility of ethics and science, self-interest and social obligations, politicizing the crucial issue of global warming, and the viability of artificial means for limitless energy supplies.

The novel's "real subject is the slippery nature of truth and the very fallible people who claim to pursue it," according to SEYED JAVAD HABIB. "One of the underlying themes in *Solar* is of undeserved success, built on plagiarism, of individuals always on the verge of being uncovered as a sham," James Heartfield observes in his comments on

the power of *Solar*. One of the things that McEwan has been criticized for is practiced here (Habibi, 2015).

A portion of the reviews have also examined *Solar* from a moral standpoint. Jennie Yabroff, for example, highlights that *Solar* is not your typical whodunit and says that its most captivating element is

*"The way it subverts the reader's assumption that no crime can go unpunished, that justice must be served." "We live in a culture where moral ambiguity often seems more threatening than violence itself, and where much of our art tells us that good triumphs over evil, even if real life suggests otherwise," (McEwan, 2010, p.94)*

Despite his approval of its moral dilemma, Geoff Nicholson finds fault with it: *"satirists always have to be moralists at some level, but the moral dilemmas that occur in 'Solar' never seem quite real or urgent enough"* (McEwan, 2010, p.94) These readings of the novel would not certainly get the acknowledgement of McEwan, who in an interview with Mick Brown asserts,

*"The thing that would have killed the book for me, I'm sure, is if I'd taken up any sort of moral position, I needed a get-out clause. And the get-out clause is, this is an investigation of human nature, with some of the latitude thrown in by comedy"* (McEwan, 2010, p.100)

One of the main elements of the novel that has not received enough attention is the relevance of both artificial and natural photosynthesis in the solar system. The ecocritical significance of these two processes, especially for McEwan, who is concerned with global warming, must be adequately explained in conjunction with other set pieces depicted in *Solar*. The world's largest biochemical process, natural photosynthesis, is an equation whose methodical orderliness and highest precision give McEwan an unmatched chance to both anchor the anarchic state of global warming "without" the text and control the chaos "within" the text produced by flamboyant Beard. On a thematic level, there is some convincing evidence that this process forms the novel's core.

As McEwan's spokesperson, Beard's post-doctoral assistant Tom Aldous draws attention to photosynthesis's potential to address the energy crisis and global warming,

saying, *"We need to take another look at photosynthesis, see what we can learn"* (McEwan, 2010, pp. 46-47).

Beard later affirms the complete accuracy of this modelling by claiming that natural photosynthesis has been

*"Perfected by evolution during three billion years of trial and error," carrying on the late Aldous's project of creating a solar panel by mimicking natural photosynthesis* (McEwan, 2010, p.142)

Natural photosynthesis, a process with abundantly available reactant components (sunlight, water, and carbon dioxide), may truly produce the oxygen and carbohydrates that the planet so desperately needs.

Beard is the "noblest" of the many immoral, disreputable heroes McEwan is known to produce, and he is introduced at the very beginning of the narrative. In addition to having several girlfriends, Beard betrays each of his five marriages by falsely accusing Rodney Tarpin, his fifth wife's innocent boyfriend, of accidentally murdering Aldous, who had an affair with his fifth wife. In an effort to commercialize it, he pilfers Aldous's brilliant concept for halting global warming through artificial photosynthesis.

To quote Robson, Beard *"knew much about light, but about forms of public expression in contemporary culture he was in the dark"* (McEwan, 2010, p.20). Failing in his domestic, social and professional life, he is definitely an antihero; and it is foreshadowed and manifested when Beard uses a fragmented quotation from Milton's description of the fall of Hephaestus in Book I of *Paradise Lost* to lure the English student Maisie (his first divorced wife):

*...From morn  
To noon he fell, from noon to dewy eve,  
A summer's day; and with the setting sun  
Dropped from the zenith, like a falling star* (McEwan, 2010, p.28)

The analogy made between Beard and the falling Hephaestus seems appropriate from a different angle, namely their respective occupations. The god of fire, metalworking, and crafts, Hephaestus, is credited with creating a large portion of the gods' splendid

apparatus. He is credited with forging nearly all of the exquisitely made, powerful metallurgy that can be found in Greek mythology.

The notion of artificial photosynthesis only solidifies in Beard's thoughts after he meets Aldous, who warmly embraces Beard's novel concept—a mathematical assertion known as the "Beard-Einstein Conflation." Beard won the Nobel Prize in Physics as a result of this proposal. Thus, Mitchison argues:

*"This confusion is actually an extension of concepts in Einstein's well-known 1905 paper on the photoelectric effect, which gives a quantum explanation for the emission of electrons when light strikes a suitable material,"* (McEwan, 2010,p.97)

Ultimately, this creative combination led to Bird's discovery of the photovoltaic system, which opened the door to artificial photosynthesis and the production of energy from sunlight. Bird did not aspire to use artificial photosynthesis to produce energy, as the early parts of the novel depicted at the turn of the twentieth century. *"Practically rather than merely rhetorically" gets "engaged with climate change and announces a number of initiatives which one of them is the Centre"* (McEwan, 2010, p.22)

He is unable to dedicate himself to the National Centre for Renewable Energy's massive project to develop the WUDU (Wind Turbine for Urban Domestic Use) because his scepticism leads him to dismiss it as a costly and futile endeavour; he emphasizes that it *"ought to be abandoned, when it was devouring nearly all the budget and growing in complication as it diminished in interest"* (McEwan, 2010, p.38). He was appointed as the centre's figurehead for a year.

Aldous and Beard's desire to create a solar panel that, like a plant leaf, captures sunlight and uses it for photosynthesis indicates the importance of nature in providing them with this basic parallel. According to Glotfelty & Fromm, 1996, ecology is a means of interacting with life "by decoding the streams of information that have direction and purpose." One way to understand one of such signals is to presume a metaphorical similarity between artificial photosynthesis on the intra-narrative level of the solar system and natural photosynthesis on the extra-narrative level (Glotfelty & Fromm, 1996). Actually, this comparison, which has thematic ecological relevance, arises in *Solar* as a result of the interaction between nature and civilization.

Additionally, McEwan demonstrates his skill at "fictionalizing nature" here, while previously being an expert at "naturalizing fiction."

Two arguments support McEwan's use of the metaphorical connection between artificial and natural photosynthesis. First, metaphor is an "ontological mapping across conceptual domain." He and Johnsen contend that "our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature" (White, 2003) in their book *Metaphors we live by*. Second, as Howarth states, "it finds its voice by studying the relations among the properties of species, their distribution across space, and their adaptive course in time," metaphor is a useful tool to help ecology find its voice (Glottfelty & Fromm, 1996). Therefore, this metaphorical parallelism is not merely a decorative device at the edge of language; rather, it clarifies how McEwan is able to examine the global warming enterprise as a whole by contrasting two diverse phenomena, one from culture and one from nature. Soon after Aldous' untimely death, Beard's focus shifts to using the concept of artificial photosynthesis to create a full-scale power plant. As Beard shows the outcome of his nine-year study of Aldous's idea, the evolution of this conjecture does, in fact, become the main focus of the last portion of *Solar*.

Beard has up till now opposed the temple, which environmentalists have constructed from the

*"Familiar litany of shrinking glaciers, encroaching deserts,  
dissolving coral reefs, disrupted ocean currents, rising sea levels"*  
(McEwan, 2010, p.49)

He concludes that individuals "routinely" refer to the earth "as proof of thinking big" because he is sceptical of the seriousness of global environmental challenges. He only confronts the pressing problem of global warming after calculating his personal advantages and progress. He even recites Aldous's parable, which is an example he tells Beard to show him the ease and accessibility of the solution to the man's most pressing environmental issue: the tale of a man who gets stuck in a forest and dies of thirst while it is raining, in order to convince the pension-fund managers to fund the project. Since he only has an axe and is skilled at felling trees, the man begins chopping down the trees



to drink the sap rather than just opening his mouth and absorbing the rain. According to Aldous,

*"all we have to do is hold out our cups" since "that rain is our sunlight" with "sweet rain of photons" (McEwan, 2010, p. 37).*

In *Solar*, a story like this has two purposes. On the one hand, it aids Aldous in convincing the pessimistic individuals of nature's capacity for self-defence when properly utilized and serves as a reminder of their rational intellect and the "ultimate mover" in the cosmos:

*"God's greatest gift to us is surely this, that a photon striking a semiconductor releases an electron" (McEwan, 2010, p.36).*

This possibility is hinted to in various parts of the book, such as Beard's project's contradiction. In order to combat the catastrophic effects of global warming, artificial photosynthesis-powered solar panels need a hotter planet; this intriguing and thought-provoking situational irony suggests that the two often distinct discourses of science and ethics may be combined.

However, the difficulties Beard faces in completing this project—such as the significant loss of investment and, ultimately, Tarpin's destruction of the resulting solar panels—indicate that such a fusion is doomed to fail if contemporary rational man, as Beard is portrayed, never accepts the reality of ethics. The destruction of solar panels is, in fact, a simple consequence of science used for personal gain rather than for the sake of humanity: a perspective that justifies everything, including immoral or unethical behaviour.

Beard's portrayal of the dominance of this notion of science and scientists justifies profiting from even the suffering of the world. Beard eventually acknowledges the veracity of the environmentalists' apocalyptic claims about rising global warming, but he never allows this insight to guide him toward his ethical obligations and consistently only thinks about his own gain; in his argument with his American partner Toby Hammer, for example:

*"Here's the good news. The UN estimates that already a third of a million people a year are dying from climate change... Toby, listen. It's a catastrophe. Relax!"* (McEwan, 2010, p. 298).

But throughout the book, he never realizes the value of ethics and how crucial they are to human life.

Even though Beard's depiction of the photovoltaic project is hazy in its specifics, it is clear from the novel's intermittent explanations of its several stages that it is based on natural photosynthesis. According to McEwan, Beard creates panels that mimic the structure of a leaf and contain tubes that carry

*"the light-harvesting semiconductor, the aqueous electrolytes, and the membrane of Plexiglas on top, with a base of conducting stainless steel."* (McEwan, 2010, p. 292)

The solar panels require sunlight to split water into hydrogen and oxygen, which are then compressed and stored in large tanks. The gases are then recombined to power fuel-cell generators. Beard chose the location of the project near Lordsburg in the American South-West due to *"more sunshine hours per year"* and *"a reliable water source"* (McEwan, 2010, p.261). Beard does not appear to be a responsible scientist who values nature and animal survival. In the latter two-thirds of *Solar*, McEwan interweaves the development of his artificial photosynthesis research with a sketch of his gluttonous habits, sexual promiscuity, and opportunistic efforts to cash in on global warming. The mise en scene reveals Beard's disqualification for his eco-friendly endeavour, leading to an avalanche of misery in episode 2009.

In the last episode, Beard meets a setback soon before the grand opening of his solar installation, despite his achievement in building and installing the panels. All people who have been duped and harmed by Beard have come together to defeat him. Barnard, representing the Centre and Aldous's father, requests that Beard stop the project's display to avoid being prosecuted with 'stealing of intellectual property'.

Tarpin, who was imprisoned for eight years for murdering Aldous, travels to New Mexico in retaliation. Melissa, Beard's ex-girlfriend, and her daughter rush to see Darlene, his Lordsburgian sexual partner who is about to marry him. Tarpin's use of a sledgehammer to destroy the panels of Beard's plagiarized invention serves as a

metaphor for McEwan's thoughts about global warming policies and meetings. The sledgehammer represents arrogant behaviour that shatters any 'panel', including expert panels at world summits and Beard's solar panels. The sledgehammer of self-interest has been employed for devastation throughout *Solar*, despite being a builder's tool. In the narrative, Beard uses a sledgehammer to depict Tarpin's murder of Aldous, which also ends up destroying Beard's ambitious enterprise.

McEwan portrays egoism in a funny manner by portraying the 'boot room' of the ship that brought them to the North Pole, as well as displaying selfishness through Beard's sledgehammer-broken panels. The boot room scene in *Solar* exemplifies the ineffectiveness of international summits and the lack of commitment from environmentally minded communities. Michael Beard and 20 other environmentally aware artists and scientists are scheduled to put their outdoor gear on designated pegs. In reality, the boot room is a physical representation of the intellectual class's answer to global warming. The attempt to glean meaning from the novel's complicated structure is best demonstrated by the interpretation of its hilarious sections as a sarcastic picture of man's ability and desire to save the world.

The boot area quickly becomes chaotic as people leave their belongings and steal each other's hats, boots, and gloves. According to Beard: *"how were they to save the earth . . . when it was so much larger than the boot room?"* (McEwan, 2010, p.109). The language of *Solar* combines the illusory worldwide goal to limit global warming with a metaphor of a ship's boot-room.

Jones refers to this relationship when he says,

*"Perhaps the answer to the boot room/climate-change conundrum is to accept that short-term self-interest will always defeat any altruistic attempt to take the long view, and instead of trying to make people be good, look for ways to turn their badness to the planet's advantage"*  
(McEwan, 2010, p.20)

The room parallels the inter-subjective space where man interacts with man; it reflects McEwan's idea he expresses in an interview with Mike Brown:

*"There's something comic about idealism, and our capacity for rational thinking and gathering data and evidence on the one hand,*

*and on the other these little worms of self-interest, laziness and innate chaos” (McEwan, 2010, p.98)*

In *Solar*, McEwan chooses to be a 'reality creator' rather than a 'myth builder' due to his concern for climate change and desire to instil terror in readers. To do so, he incorporates the detailed truth of the 2009 United Nations Climate Change Conference, often known as the Copenhagen Summit, into the finale of the novel.

***Ian McEwan's vision of future climate change scenarios and the techniques he employs***

*His doctor plainly exposes the allegorical link that Beard is unable to make: ““Don’t be a denier”, Doctor Parks had said, appearing to refer back to their climate-change talks. “This won’t go away just because you don’t want it or are not thinking about it”. (McEwan, 2010, p.238)*

Ian McEwan uses a combination of metaphorical themes and direct conversation in his representation of environmental difficulties and climate change to emphasize how urgent it is to solve these current challenges. McEwan uses explicit language to highlight the gravity of the situation when he confronts Beard, the main character, about the truth of climate change through the figure of Doctor Parks. In the story, rhetoric like "Don't be a denier" and "This won't go away just because you don't want it or are not thinking about it" is used to directly invite readers and Beard to notice and address the environmental issues that society is now experiencing.

The paragraph highlights key ideas like environmental consciousness and climate change via deft use of patterns, imagery, and character development. The direct conversation between Beard and Doctor Parks is a crucial confrontational moment in which the sharp connection between denial and the impending threat of climate change is made clear. In addition to advancing the story, this exchange represents society's larger battle to recognize and respond to environmental concerns.

Furthermore, the dialogue's imagery—such as the idea that something "not going away" in spite of one's neglect or avoidance—acts as a potent metaphor for the ongoing and worsening effects of environmental impairment. McEwan skilfully conveys the meaning of complacency and the need for quick action with this imagery. These issues

are closely related to character development as well, because Beard's reaction to Doctor Parks' warning illustrates his internal struggle and slow realization of the effects of climate change. Beard's journey has reached a turning point at this time, which may lead to reflection and a change in perspective that may influence his behaviours and choices going forward. Overall, this passage's combination of patterns, imagery, and character development deepens the examination of its main ideas and forces readers to consider their own views on social responsibility and environmental stewardship.

Here's the good news. The UN estimates that already a third of a million people a year are dying from climate change. Even as we speak, the inhabitants of the island of Carteret in the South Pacific are being evacuated because the oceans are warming and expanding and rising. Malarial mosquitoes are advancing northwards across Europe... Toby, listen. It's a catastrophe. Relax!

The passage weaves together a captivating story that contrasts a sobering plea for relaxation with worrisome statistics concerning the effects of climate change. The list of grave repercussions, which includes rising sea levels and the spread of illnesses, is indicative of the author's use of rhetorical devices to arouse urgency and anxiety. This emphasizes how serious the issue is and how quickly action must be taken. Furthermore, giving concrete examples—like the evacuation of Carteret Island— gives the topic a more tangible and immediate quality that helps readers relate to it.

However, the abrupt transition to the directive "Relax!" introduces a jarring juxtaposition that invites further analysis. This shift in tone could be interpreted as a rhetorical device aimed at capturing the reader's attention or challenging societal attitudes towards climate change. It may also reflect a broader theme of cognitive dissonance or denial in the face of overwhelming evidence, prompting readers to question their own responses to environmental crises. Overall, the passage effectively combines factual information with rhetorical strategies to convey the urgency of addressing climate change while also prompting reflection on societal attitudes and responses to environmental challenges.

Beard had heard rumours that strange ideas were commonplace among liberal arts departments. It was said that humanities students were routinely taught that science was

just one more belief system, no more or less truthful than religion or astrology. He had always thought that this must be a slur against his colleagues on the arts side. The results surely spoke for themselves. Who was going to submit to a vaccine designed by a priest?

In this passage, the author delves into Beard's perspective regarding the perceived divide between the humanities and sciences, specifically in the context of liberal arts departments. The author employs Beard's internal monologue to explore his scepticism towards the humanities' approach to science, portraying a sense of incredulity and disdain towards what he views as relativistic attitudes.

The passage begins with Beard hearing rumours about the prevalence of unconventional ideas within liberal arts departments, particularly regarding the equivalence of science, religion, and astrology. This sets the stage for Beard's scepticism, as he questions the legitimacy of such views. His scepticism is further fuelled by the suggestion that humanities students are taught to perceive science as merely another belief system, devoid of objective truth. This challenges Beard's understanding of the scientific method and its rigorous pursuit of empirical evidence.

Beard's perspective reflects a common stereotype or misconception held by some individuals regarding the humanities' approach to science. He perceives this characterization as a slur against his colleagues in the arts, believing that the results of scientific inquiry speak for themselves and dismissing the notion of equating science with religion or astrology.

The passage concludes with Beard's rhetorical question: "*Who was going to submit to a vaccine designed by a priest?*" (McEwan, 2010, p.31), which serves as a rhetorical device to emphasize Beard's scepticism and disdain towards the idea of incorporating religious or pseudoscientific beliefs into scientific practices. It highlights his apprehension towards the potential consequences of blurring the lines between science and belief systems traditionally associated with spirituality or superstition.

Overall, the passage provides insight into Beard's perspective on the relationship between science and the humanities, highlighting his scepticism towards relativistic

interpretations of scientific truth. It also invites readers to consider broader questions about the intersection of science, belief, and academic disciplines, prompting reflection on the role of empiricism and evidence-based inquiry in contemporary society.

*It was one in a list of issues, of looming sorrows, that comprised the background to the news, and he read about it, vaguely deplored it and expected governments to meet and take action. And of course, he knew that a molecule of carbon dioxide absorbed energy in the infrared range, and that humankind was putting these molecules into the atmosphere in significant quantities. But he himself had other things to think about. And he was unimpressed by some of the wild commentary that suggested the world was in 'peril', that humankind was drifting towards calamity, when coastal cities would disappear under the waves, crops fail, and hundreds of millions of refugees' surge from one country, one continent, to another, driven by drought, floods, famine, tempests, unceasing wars for diminishing resources. (McEwan, 2010, pp.15-16)*

The author uses a literary device in this text to contrast the protagonist's indifferent view on climate change with the seriousness of the environmental problems discussed. By focusing on the protagonist's personal worries rather than the larger environmental issues facing the world, McEwan emphasizes the protagonist's indifference to and detachment from the impending tragedies of climate change. The contrast between public knowledge of environmental challenges and the pressing need for society action to solve them is poignantly brought to light by this storytelling method. McEwan depicts the protagonist's apathy and mistrust towards the gravity of the situation in order to address climate change and environmental challenges. The protagonist's apathetic reaction to hearing about climate-related disasters is shown in this line, which speaks to a larger cultural indifference toward environmental issues. McEwan criticizes society's indifference and unwillingness to recognize the pressing need for coordinated action to combat climate change by depicting the protagonist's contemptuous attitude toward catastrophic forecasts and warnings.

*"He did not deserve these distractions. They were encircling him, women, an Albuquerque lawyer, a north-London criminal, the unquiet cells of his own body, in a conspiracy to prevent him making his gift to the world. None of this was his fault. People had said of him that he was brilliant, and that was right, he was a brilliant man*

*trying to do good. Self-pity steadied him a little”* (McEwan, 2010 pp.236-237)

In this passage we witness the protagonist's inner turmoil and self-perception amidst various distractions and obstacles. McEwan employs narrative techniques to delve into the protagonist's psyche, revealing layers of complexity and internal conflict. The use of third-person narration allows readers insight into the protagonist's thoughts and emotions, offering a subjective perspective on his experiences. Through this narrative technique, McEwan creates a sense of intimacy with the protagonist, inviting readers to empathize with his struggles and frustrations.

McEwan also employs vivid imagery to convey the protagonist's sense of being besieged by distractions. The metaphor of encircling forces, including women, a lawyer, a criminal, and bodily ailments, paints a picture of overwhelming pressure and interference in the protagonist's life. This imagery reinforces the protagonist's perception of being thwarted in his pursuit of making a significant contribution to the world.

Furthermore, McEwan explores the protagonist's internal dialogue, revealing his feelings of victimization and self-pity. The protagonist believes that these distractions are conspiring against him, hindering his ability to fulfil his potential and make a meaningful impact. The mention of self-pity reflects the protagonist's struggle to cope with external challenges while maintaining a sense of self-worth and purpose. Through the protagonist's perspective, McEwan engages with themes of ambition, self-perception, and adversity. The protagonist sees himself as a brilliant individual with a noble intention to "do good" in the world. This portrayal highlights his ambition and desire for recognition and accomplishment. However, the protagonist's perception of external obstacles as conspiratorial forces underscores his vulnerability and insecurity in the face of adversity.

Moreover, McEwan's portrayal of the protagonist's inner turmoil invites reflection on the nature of personal agency and external influences. Despite the protagonist's belief in his brilliance and altruistic intentions, he finds himself ensnared in a web of distractions and setbacks beyond his control. This exploration of agency versus circumstance adds depth to the protagonist's character and resonates with broader existential themes.



Finally, Ian McEwan employs narrative techniques such as third-person narration, vivid imagery, and internal dialogue to depict the protagonist's inner turmoil and self-perception amidst various distractions and obstacles. Through this portrayal, McEwan engages with themes of ambition, adversity, and personal agency, inviting readers to empathize with the protagonist's struggles and reflect on the complexities of human experience.

*Pathogens swam in hordes across the moat of his defences, they swarmed over the castle walls armed with cold sores, mouth ulcers, fatigue, joint pain, watery bowels, nose acne, blepharitis – a new one this, a disfiguring inflammation of the eyelids that erupted into white-peaked Mount Fuji styes that pressured his eyeballs, blurring his vision. Insomnia and monomania also distorted his view. (McEwan, 2010, p.22)*

The author employs vivid and visceral imagery to depict the protagonist's physical and mental state amidst a barrage of health-related issues. Through the use of metaphorical language and detailed descriptions, McEwan delves into the protagonist's internal struggles and external afflictions.

The metaphor of pathogens as invaders besieging a castle evokes a sense of siege and vulnerability, highlighting the protagonist's perception of his own body as under attack. The imagery of pathogens swimming across the moat and swarming over castle walls conjures a vivid picture of relentless assault and infiltration. This metaphorical language not only emphasizes the severity of the protagonist's health issues but also underscores his feelings of helplessness and vulnerability in the face of illness.

Furthermore, the catalogue of symptoms described—cold sores, mouth ulcers, fatigue, joint pain, watery bowels, nose acne, blepharitis—paints a comprehensive picture of the protagonist's physical suffering. The specificity of these symptoms adds a layer of realism to the portrayal of illness, enhancing the reader's understanding of the protagonist's deteriorating health. Moreover, McEwan explores the impact of these physical ailments on the protagonist's mental well-being. The mention of insomnia and monomania suggests that the protagonist's health struggles extend beyond the physical realm to affect his psychological state. Insomnia, characterized by the inability to sleep,

and monomania, a fixation on a single idea or thought, further compound the protagonist's distress and exacerbate his sense of disorientation and despair.

Through this passage, McEwan engages with themes of physical and mental health, vulnerability, and resilience. The protagonist's battle with illness serves as a metaphor for broader existential struggles and the fragility of human existence. By depicting the protagonist's physical and mental suffering in such vivid detail, McEwan invites readers to empathize with his plight and reflect on the universal experiences of pain, adversity, and resilience.

The use of metaphorical language, vivid imagery, and psychological insight in this passage effectively conveys the protagonist's internal struggles and external afflictions. Through the portrayal of illness as a besieging force and the depiction of specific symptoms and their impact on the protagonist's mental well-being, McEwan offers a poignant exploration of human vulnerability and resilience in the face of adversity.

*He felt an oily nausea at something monstrous and rotten from the sea, stranded on the tidal mud flats of a stagnant estuary, decaying gaseously in his gut and welling up, contaminating his breath, his words and, suddenly, his thoughts. "The planet," he said, surprising himself, "is sick". (McEwan, 2010, p.148)*

In this passage, the author employs rich sensory imagery and metaphorical language to vividly depict the protagonist's visceral reaction to the concept of environmental degradation and climate change. Through the protagonist's physical and emotional response, McEwan offers a poignant exploration of the profound impact of ecological crises on individual consciousness and existential perspective.

The metaphor of "something monstrous and rotten from the sea" evokes a sense of dread and revulsion, suggesting that the protagonist perceives environmental degradation as an ominous and grotesque presence threatening the natural world. The imagery of this monstrous entity stranded on the tidal mud flats of a stagnant estuary conveys a sense of stagnation and decay, emphasizing the dire consequences of environmental neglect and pollution.

Furthermore, the description of the protagonist's physical symptoms—oily nausea, decaying gaseously in his gut—serves as a visceral representation of his visceral reaction to the environmental crisis. The use of sensory language enhances the reader's understanding of the protagonist's distress and discomfort, conveying the profound impact of environmental degradation on individual well-being.

Furthermore, the metaphor of the world being "sick" captures the protagonist's awakening to the seriousness of environmental issues and how they affect Earth's overall health. McEwan emphasizes the urgent need for environmental stewardship and group action by personifying the globe and giving it human traits. This exposes the connection between human activities and the natural world.

McEwan addresses existential concerns about climate change, environmental responsibility, and ecological consciousness in this piece. The protagonist's instinctive response highlights the emotional and psychological costs of environmental degradation on both individual and societal awareness, acting as a metaphor for the larger human response to ecological catastrophes

*There would' he tells us be vigorous, differently hued fungal growths in creamy whites and soft greyish-greens, a blossoming on the abandoned cheese, the carrots, the hardened gravy. Airborne spores, a parallel civilization, invisible and mute, successful living entities. Yes, they would have long settled to their specialized feasts, and when the fuel ran out, they would dry to a smear of charcoal dust.*  
(McEwan, 2010, p.110)

In this passage, Ian McEwan utilizes vivid imagery and metaphorical language to depict the proliferation of fungal growths and the decay of organic matter in the absence of human intervention. Through the protagonist's musings, McEwan offers a contemplative exploration of the resilience and adaptability of microbial life forms in the face of environmental changes.

The description of "vigorous, differently hued fungal growths" evokes a sense of vibrant and diverse microbial ecosystems thriving in the absence of human presence. The use of descriptive language such as "creamy whites" and "soft greyish-greens" imbues the imagery with richness and detail, painting a vivid picture of the fungal colonies blossoming on various organic substrates.

Furthermore, the metaphor of airborne spores as a "parallel civilization" highlights the intricate and complex nature of microbial communities, which exist alongside human society yet remain largely invisible to the naked eye. By personifying the spores as "successful living entities," McEwan underscores their adaptive capabilities and their role as essential components of ecological systems.

The imagery of fungal growths feasting on "*abandoned cheese, carrots, [and] hardened gravy*" conveys a sense of organic decay and decomposition, emphasizing the cyclical nature of life and death in the natural world. Through this depiction, McEwan suggests that even in the absence of human activity, microbial life forms continue to play a vital role in breaking down organic matter and recycling nutrients.

Moreover, the image of fungal growths drying to "*a smear of charcoal dust*" symbolizes the eventual decline and decomposition of organic material, highlighting the transience of life and the inevitability of decay. This metaphorical depiction serves as a reminder of the impermanence of all living things and the cyclical nature of ecological processes.

### **Depiction of human-nature relationships in the context of climate change in *Solar***

The shift in the nature-culture relationship after the 1980s is embodied through the conflict between the anti-hero Michael Beard and his antagonist Tom Aldous. It can be suggested that, whereas Beard as a middle-aged man epitomizes the generation before the 1980s, Aldous -a young post-doc in 2000s- represents the generation after the 1980s. To begin with Beard's character, his perspective of the natural environment is in accordance with Greg Garrard's description of the "cornucopian" due to Beard's "calculating" character. Garrard remarks that the cornucopian attitude includes the idea that the progress of humanity has increased as a result of economic and technological improvements. They declare that environmental problems are exaggerated or imaginary, and that the earth's sources are enough for the continuation of human welfare.

Similarly, Beard

*“was unimpressed by some of the wild commentary that suggested the world was in ‘peril’, that humankind was drifting towards calamity”*  
(McEwan, 2010, p.21)

He thinks that environmental crisis is dramatized and just a fantasy since, for Beard the

*“end of the world was never pitched in the present, where it could be seen for the fantasy, it was, but just around the corner, and when it did not happen, a new issue, a new date would soon emerge”*  
(McEwan, 2010, p.21)

Although Beard rejects climate change throughout the narrative, he accepts it in the end of the novel which absurdly strengthens his cornucopian characteristic. To clarify, when Toby, Beard’s business partner, feels irritated as “no one’s going to buy a fancy [solar] panel” from them as a result of the new studies which claim that the planet is cooling instead of heating, Beard tries to persuade Toby that they will definitely sell their solar panels as the planet’s condition is a *“catastrophe”* (McEwan, 2010, p.298). Ironically, he acknowledges that global warming is a real issue when the welfare of his artificial photosynthesis project, and thus, his aim to earn money by selling panels depend on it:

*Here’s the good news. [...] There’s a meltdown under the Greenland ice sheet that no one really wants to talk about. Amateur yachtsmen have been sailing the North-West Passage. Two years ago, we lost forty per cent of the Arctic summer ice.* (McEwan, 2010, p.298)

Beard tries to persuade Toby that global warming is a serious concern when capital is at stake, despite his belief throughout the book that climate change is a myth. In this way, Beard's anthropocentric worldview is heightened by his capital-centred and selfish personality, which is linked to his cornucopian viewpoint. Beard thinks that his personal financial gain is more important than the environment's future within the framework of anthropocentrism, the theory that human interest is seen as superior to that of other forms (Buell, 2025).

Furthermore, Beard "greenwashes" the project and himself in order to increase financial gain, even though his solar project is intended to lessen the effects of global warming. Greenwashing is a tactic where companies "invest more money, time, and

energy into slick PR campaigns aimed at promoting their eco-friendly images, than they do to actually protect the environment,".

Beard and Toby, his business partner, promote solar-generated electricity as though it would benefit the entire town, although they know that their project, which is intended to generate solar energy in Lordsburg,

*"would not really be supplying electricity to Lordsburg at all." A nearby utility company would purchase their kilowatt-hours*  
(McEwan, 2010, p.332)

Therefore, they focus on solar energy's financial gain rather than its environmentally beneficial qualities.

On the other hand, Tom Aldous, the young post-doc, who works at the Centre where Beard is the head, stands for the stereotype of a generation that was born in a world in which everything is defined by waste. While Beard is a consumer and a cornucopian, Aldous is an environmentalist. Environmentalists are "people who are concerned about environmental issues such as global warming and pollution, but who wish to maintain or improve their standard of living as conventionally defined, and who would not welcome radical social change". They are concerned about pollution or the scarcity of resources and seek help from certain organizations rather than taking radical actions

Beard is a genuine figure and a typical modern citizen, despite the fact that his weaknesses are overdone enough to make him a caricature. We discover that he *"comfortably shared all of humanity's faults"* (McEwan, 2010, p.171) and that he was *"a city-dweller, an indoors man who lived by the keyboard and screen"* (McEwan, 2010, p.71). He is a character who one can at least somewhat relate with due to his human weaknesses, which helps the reader balance empathy with critical judgment. Beard's everydayness is essential to his metaphorical role since it makes him relatable to the reader and a suitable representation of contemporary reality.

But Beard is more than just a symbol of societal fashion. It may be argued that certain characteristics of the realism tradition ambiguously negate his allegorical purpose. A concern for historicity and character development reminiscent of the realism novel is revealed by the way Beard is portrayed as both an individual and a

representation of his society, as well as by the way his private life gets intertwined with current societal concerns. Since "the fact is that we are people and people within a society," as Raymond Williams puts it, "that whole view was at the centre of the realistic novel".

According to Elizabeth Deeds Ermarth, "particularity, circumstantiality, humble subject-matter, viewpoint, chronology, interiority, externality" are among the most distinctive features of realism. *Solar*'s emphasis on the protagonist's interiority, the abundance of specific details provided about the everyday experiences of his life, and its linear chronological structure all remind us of these elements. To put it another way, Beard is more than just a flat metaphor since he is a fully realized person with a distinct subjective thought and experience.

If its concerns are somehow antithetical to those of the allegory, realism allows McEwan to build a true-to-life character that implicitly echoes broader, more complex phenomena of which it can be taken as a representative without surrendering his individuality to generalization. Thus, allegory and realism work in a complementary manner, where the former allows to address what exceeds the latter while the latter helps set the former in the plausible framework of everyday reality.

One of the most remarkable parts of the allegory may be the continual attention on Beard's body, which is reinforced by the realism elements discussed above and inspired by the classic allegorical motif of the body politic. Contemporary literary works frequently use the metaphorical motif of the dysfunctional, diseased body to reflect and condemn their shattered societal situation, as Catherine Bernard eloquently shown.

Descriptions of Beards body, metaphorically referred to as *the 'Expanding Universe'* (McEwan, 2010, p.223), pervade the novel, reminding the reader of his ever-increasing weight and insatiable hunger. We see him *'bending with effort against the newly thickened cordon of fat around his waist'* (McEwan, 2010, p.82) and learn later that he *'had developed . . . supplementary chins'* (McEwan, 2010, p.225). Through the interior monologues embedded in the third person narration, we are given access to his thoughts as his obesity becomes disabling: *'strange to think back to the days when he could put his socks on while standing up'* (McEwan, 2010, p.325). These constant

descriptions offered by the disembodied narrator through the protagonist's own gaze convey a feeling of exponential growth towards self-destruction. The parable of consumer society's lifestyle and its detrimental effects is most evident in Beard's unrestrained junk food eating. Beard eats *"four wedges of skinless chicken breast, interleaved with three-minute steaks, the whole wrapped in bacon, with a honey and cheese topping, served with twice-roasted jacket potatoes already impregnated with butter and cream cheese,"* to name just one of many examples (McEwan, 2010, p.278).

Encouraged by a realism concern for accurate portrayals of everyday life, the frequent recitations of such in-depth accounts convey a sense of unbridled consumption and highlight the most detrimental elements of contemporary society's eating patterns. Furthermore, it may be argued that Beard's diet, which is heavy in processed foods and animal protein, is not only environmentally reckless but also self-destructive, which contrasts with his work-related concerns about climate change.

### **Summary of the analysis**

McEwan highlights climate change as a key ecological problem of the century. He discusses scientists' personal life because Beard embodies the minds of all scientists and links their responsibilities and creations to the severe ecological challenge of climate change. Beard, a physicist, resurrected his colleague Tom Aldous's carbon-free photovoltaic solar energy after his death to control climate change. This represents a call for metamodern environmentalism in science and institutions to return to nature. Beard, despite being a womanizer, is sad at his wife's friendship with Tarpin. As a result, he abandons his study, including wind energy. Beard's study on wind and solar energy aims to control climate change. After Aldous's request to continue the research, Beard travels to the Arctic for a climate change program, reflecting McEwan's environmental worries.

The message conveys that human are responsible for their own misery and that immoral societies must prioritize the preservation of natural resources. However, Technology, Ecology, and Humanism have been characterized as cultural parodies. McEwan discusses how these three things work together to ensure a good life on Earth. Beard's environmental concerns and personal grief are intertwined. This type may live a calm and moralistic existence by properly cycling through these three areas. According



to David Adams, the Guardian's environment correspondent, McEwan rewrote a portion toward the conclusion of his novel, *Solar*, after closely following the result of the Copenhagen Summit in December 2010.

*Solar* effectively summarizes the Copenhagen Talks' inability to address climate change mitigation. The Copenhagen Summit emblem offers information on Beard's standing in the plot. As seen in the graphic below, the logo might represent the chaotic state of Beard's life as well as the world climate. As the novel progresses, Beard's persona compounds the cosmic turmoil.

The logo, according to T.S. Eliot, is an 'objective correlative' that reflects Beard's uncertainty between his interior and external worlds. McEwan concurs: "everything has collapsed around him [Beard] and he knows that Copenhagen will be just right for him." as he is likely to confuse people. Based on his firsthand experience in 2005 with twenty-four eminent artists and scientists in the Arctic, McEwan decided to write an 'eco-friendly' novel about the effects of climate change. *Solar* depicts Beard during the same journey to the Norwegian Arctic Island of Spitsbergen. Despite the similarities between Beard's experiences and those of McEwan, the solitary author on this cruise, Meredith acts as McEwan's mouthpiece.

McEwan uses a set of 'rimless spectacles' like his own to highlight their shared perspective. Meredith finds a link between ecological concerns and man's moral decline in today's 'amoral' atmosphere. Meredith cites Heisenberg's Uncertainty Principle to argue that moral and ecological concerns are inextricably linked:

*"the more one knew of a particle's position, the less one knew of its velocity, and vice versa, encapsulated for our time the loss of a'moral compass', the difficulty of absolute judgements"* (McEwan, 2010, p.106)

Beard's lack of faith in the worth of art is refuted by McEwan through Meredith. Beard and many of his associates call him a "gangling novelist." They also deny the role of art in solving environmental problems and sit

*"in silent wonder," oblivious to the fact that art "in its highest forms, poetry, sculpture, dance, abstract music, and conceptual art" has the power to "lift climate change as a subject, gild it, palpate it, reveal all*

*the horror and lost beauty and awesome threat, and inspire the public to take thought, take action, or demand it of others" (McEwan, 2010, p.107)*

According to him, "*demonstrations, [which] like prayers, like totem-pole dances, were fashioned to deflect the course of a catastrophe*" (McEwan, 2010, p.108) have a similar impact on the catastrophic world issues as art does. Ironically, *Solar* demonstrates the opposite as a literary art. *Solar* is evidence of how well art can raise public awareness of contemporary environmental concerns, despite Jones' assumption that

*"there is some pathos in the irony of a novel about climate change pointing out the fruitlessness of attempts to tackle climate change through art" (McEwan, 2010, p.20)*

Despite his reputation for being serious in his literary career, McEwan believes that satire is the best way to convey his disapproval of the cultural response to environmental disorder in general and the current global policy in particular, echoing Juvenal's statement that "it is difficult not to write satire".

Rather than turning his work into comedy, the inclusion of some humorous scenes in his story—such as when Beard's sexual organ becomes lodged in the zipper of his pants during his journey to the North Pole—serves as comic relief, adding humour to his otherwise sombre, depressing portrayal of the flaws in contemporary society. "For McEwan, comedy is the means, not the end". McEwan, according to this reviewer, is the kind of author who despises comic books because, to him, they are "like being wrestled to the ground and being tickled, being forced to laugh".

McEwan goes beyond disparaging and disparaging the many international meetings on global warming in his satirical portrayal of *Solar*, which features Professor Beard as its protagonist and elicits laughter, disdain, disgust, or even outrage from the reader. In an interview with Alter in The Wall Street Journal, he notes that his implicit goal is to balance the "seriousness" of scientific discourse with the "unseriousness" of fiction:

*"The topic of climate change [is] a subject impacted with hard science: physics, climate science, statistics, graphs, measurements—things that are fairly hostile to a novel" (McEwan, 2010, p.100)*

Actually, McEwan is able to blend humorous sequences with somewhat sombre, melancholy, and regretful depictions of politics, science, and ethics because to the sarcastic language. *Solar* "is both funny and serious, light and dark, morally engaged and ironically detached," So, it is a work of fiction that does not follow the "satirist-must-be-moralist" pattern because, aside from its indirect criticism of hypocrisy, conceit, folly, and human greed in light of climate change, Beard is not shown in a moral quandary or has any structural issues.

"The thing that would have killed the book for me, I'm sure, is if I'd taken up any sort of moral position," (REF) Mike Brown, who quotes McEwan, emphasizes. McEwan believes that one should not be a moralist in order to be a good novelist. A get-out clause was what I needed. Additionally, the get-out clause states that *"comedy adds some latitude to this investigation of human nature"* (McEwan, 2010, p.100). Because of this, *Solar* lacks any morally upright characters.

Numerous instances in the book imply that it is satirical, and that *Solar* is a complete rejection of global policies and conferences that denounce them for stemming from national or private interest in the problem's profitable aspects. One such instance is Beard's address to allowance fund managers, who aimed to convince them to support his artificial photosynthesis research. His charitable discourse, which is disguised as altruism, is actually rife with sarcasm. For example, he states:

*We either slow down, and then stop, or face an economic and human catastrophe on a grand scale within our grandchildren's lifetime.  
"And this brings us to the central question, the burning question.  
How do we slow down and stop while sustaining our civilization and  
continuing to bring millions out of poverty?" (McEwan, 2010, p.206)*

One further instance that qualifies *Solar* as parody is Beard's contentious discussion with Susan Appelbaum about women and physics. Beard's opponent is Appelbaum, a professor of cognitive psychology.

*She was an objectivist, in that she believed the world existed  
independently of the language that described it, she spoke in praise of*

*reductionist analysis, she was an empiricist, and, by her own proud admission, an 'Enlightenment rationalist,'" she says of her work as a psychologist, which is what Beard should have been as a dedicated scientist (McEwan, 2010, p.192)*

Beard walking behind the curtain at the rear of the stage where he is giving his speech in order to puke up the nine smoked salmon sandwiches he had devoured before to his lecture is another incident that subtly alludes to the avarice and irrationality of the global warming policymakers. Another noteworthy instance in this respect is when Beard's email invitation to the Copenhagen Summit is contrasted with a description of the expensive dinner that Beard had ordered

*orange-colored cheese, dipped in batter, rolled in breadcrumbs and salt and deep-fried, with a creamy dip of pale green (McEwan, 2010, p.381)*

Lastly, the story's portrayal of Beard's existence serves as a microcosm, reflecting the macrocosmic environmental catastrophe. In fact, the physical, moral, and social circumstances of Beard, the usual representative of Eco protecting forums, degrade during *Solar* as the critical state of the world climate worsens. From the first episode, which takes place in 2000, to the final one, which takes place in 2009, Beard begins to question his contribution to science. He grows increasingly obese in his fifties and loses all moral and social integrity; he cheats, lies, and steals, and he gets too involved in the politicized science. In the most recent episode, Beard is extremely obese and, surprisingly, has started to exhibit the signs of melanoma, a type of skin cancer that is mostly caused by the effects of global warming. On the macrocosmic level, Beard's doctor's observation that his melanoma "*won't go away just because you don't want it or are not thinking about it*" (McEwan, 2010, p.328) refers to the dire state of climate change, expressing the interest of artists such as McEwan in pushing the public into a state of emergency for action.

Furthermore, the satire in *Solar* is not limited to forums concerned with the environment, it also targets the media, since the use of all the issues, ideas and events that the novelist relied on for literary creativity cannot be achieved by journalism as it is achieved by fictional stories because what is presented by the mass media has no artistic quality or aesthetic value, that is, it depends primarily on the taste of the masses and

their popular culture based on the similarities between art (in our case, fictional stories) and the mass media in dealing with different issues, including global warming.

In two significant events in the story, McEwan parodies what he describes as the "very rackety, partisan, sometimes very intrusive" nature of the media and how its perspective does "acidify" the raw material they have access to. The first incident, which focuses on Beard in the media, concerns the unintentional death of Aldous, Beard's fifth wife's lover. Beard's remarks on the distinctions between the male and female brains are the second example that highlights the true nature of the media.

*One of the things they [mass media] love to be is indignant," McEwan said in the Wall Street Journal interview with Alter, referring to the press's caustic output as "indignation." I believe that people now enjoy outrage more than they did sex. Outrage tends to excite. So, a media storm is often driven beyond all reason, people taking offense or people huffing and puffing (McEwan, 2010, p.101)*

One of the main aims behind writing *Solar* is to challenge the usefulness of international conferences on global warming, one of the most important issues of our time. In an attempt to crystallize the reasons for writing the novel, which has received more global attention than his previous works, it deals to some extent with personal, local or national themes, which leads McEwan to make his readers realize that when there is no strong collective will to eliminate global catastrophes, international gatherings become useless and useless.

## CHAPTER V

### DISCUSSION

This chapter presents the discussion of these findings in comparison to the studies in the literature.

#### **Solar's approach to climate change and environmental impact**

Ian McEwan's "*Solar*" offers a satirical yet provocative look at climate change through the perspective of protagonist Michael Beard, a scientist dealing with personal and professional issues. Caustic social satire, dark comedy, issues of environmental catastrophe, scientific ethics, and human folly are all expertly blended by McEwan. The novel highlights how challenging it is to address climate change from a political and scientific perspective, as Beard tries to make sense of his supposed support for renewable energy sources and moral failures.

London, a prominent location within *Solar*, is depicted as an industrialized urban area. In Ian McEwan's novel, it is described as a "*colossal disc*" that operates like a complex space station, functioning with remarkable self-sufficiency and intricacy (McEwan, 2010, p.108). The cityscape is characterized by its towering concrete structures adorned with steel, resembling a massive wound. The ceaseless flow of traffic, akin to catheters, constantly moves to and from the horizon, leaving little room for the remnants of the natural world to thrive (McEwan, 2010, p.109). This portrayal emphasizes the overwhelming dominance of human desires and needs, which appear unstoppable and generate a palpable intensity, akin to the scorching breath of civilization (McEwan, 2010, p.109). Consequently, London emerges as a man-made menace, posing a significant threat to the natural environment.

In *Solar*, the Arctic and desert are the final areas of wildness. The Arctic is a difficult environment for humans, particularly Beard, who is untrained and unfit to face the "frozen dark" (McEwan, 2010, p. 61). He prefers to stay in camp for comfort, but when he ventures out, he faces survival challenges. His penis nearly freezes and he is almost

devoured by a ravenous polar bear. (McEwan, 2010, pp. 55–71,). Nature challenges masculine authority and masculinity, posing a threat (Coupe, 2).

The narrative has several situations where Beard travels by car, aircraft, or snowmobile. During one of his several airplane travels, he looked down at London from "*his wondrous, and wondrously dirty machine*" (McEwan, 2010, p.109). "Dirty" might refer to filthy oil or the dirty use of fossil resources. In his first snowmobile ride, Beard "*slid forward with a shriek of overworked engine and a puff of stinking black exhaust*" (McEwan, 2010, p.56). McEwan describes a journey from London to Dallas to El Paso, where he picks up an outsized SUV and travels through the desert at a slow speed (McEwan, 2010, p.230).

Both novelists and historians work with character or agency. E.M. Forster remarks that a novel differs from history in that "it is the function of the novelist to reveal the hidden life (of a character) at its source," *whereas a historian might infer a character's existence from what is displayed on the surface* (McEwan, 2010, p.53). A scientist and novel laureate's mean secret life is revealed by *Solar*: Michael Beard is described as "*a man of narrowed mental condition, anhedonic, mono-thematic stricken,*" (McEwan, 2010, p.3) married five times, and is currently living a sluggish mental life. His fifth marriage is currently failing, and he is a fatso repugnant philanderer whose life is, in short, a mess. This establishes the tone of the narrative, which is a blend of humour and sombreness, a light-hearted look at his personal life, which is going through a crisis, and its relationship to the grave problem of environmental disaster. His primary obsessions are food and physical pleasure; he leads an egocentric existence, unconcerned with the outside world and only focused on advancing his job. He refused to take family or the idea of having children seriously, declaring that "*it was lovers he needed, not wives*" (McEwan, 2010, p.71).

A novelistic protagonist's eventual metamorphosis during the story is one of its peculiarities. Beard dismissed him and others like him when his junior co-worker Aldous, who works with him at an institute in Berkshire, discussed issues like climate change, melting glaciers, and the planet's impending doom: "*injustice and calamity animated them, it was their milk, their lifeblood, it pleased them*" (McEwan, 2010,

p.49). Then he was really affected by a casual trip to the North Pole (many in the Centre assumed he was heading there to "see global warming for himself") and a meeting with a group of climate change campaigners. Jesus stated that *"it was important never to lose faith in the possibility of profound inner change"* and that it was a mistake to give up hope at any point in life (McEwan, 2010, p.92).

Beard was not particularly interested in climate change or climate change art, but he did listen to the activists' discussions about treaties between warring nations, the importance of reason over greed and short-term interests, the warning of a catastrophic future, and the need to adopt

*a different way of for everyone, a lighter tread on the precious filigree of ecosystems, a near-religious regard for new rules of human fulfilment in order to flourish beyond supermarkets, airports, concrete, traffic, even power stations* (McEwan, 2010, p.105)

Despite his lack of ideals, he did not protest to the idealist campaigners. However, the sentences that followed reflected his pessimism about human nature:

*Four days ago, the room had started out in orderly condition, with all gear hanging on or stowed below the numbered peg. Finite resources, equally shared, in the golden age of not so long ago. Now it was a ruin.... How were they to save the earth – assuming it needed saving, which he doubted – when it was so much larger than the boot room?* (McEwan, 2010, pp.108-109)

Beard believed that human nature itself was reflected in the general shame he witnessed in the boot room. According to him, boot rooms required effective protocols in order for "flawed creatures" to utilize them appropriately. Since only excellent laws could rescue the boot room and law-abiding individuals, he did not wish to leave anything to science, art, or idealism. If one applies the metaphor to a globe where several warring nations coexist, it paints an impossibly chaotic picture of a few individuals having a wild time in a little boot room.

Later in Book II, Beard brought up the human project idea in his conference speech.

*The Human project must be safely and cleanly fuelled, or it fails, it sinks. You, the market, either rise to this, and get rich along the way,*



*or you sink with all the rest. We are on this rock together, you have nowhere else to go...*" (McEwan, 2010, p.207)

McEwan goes on the darker sides of human nature, such as ambition, greed, and moral decay, using the protagonist's experiences and choices to demonstrate how these tendencies may lead to environmental catastrophe. In the novel *Solar*, Beard explores the relationship between loneliness and technology while attending a climate change retreat in the Arctic. This is a metamodern reading, reflecting Beard's depression from her marriage with Patrice and affair with Tarpin. McEwan used technology to minimize human growth, emphasizing its impact on nature. Beard's personal progress differs from that of other individuals. The novel's metamodern interpretation shifts the focus from Beard's internal joy to photosynthesis, highlighting his personal failings.

*Solar* uses the metaphorical character of Beard to symbolize the psychological effects and hardships of living in a period when the industrial world has grown aware of its own destructive geological forces. *Solar* dramatizes components of cognitive psychology such as the propensity to prioritize short-term wants above long-term hazards (Kahneman & Tversky, 1982), as well as psychological states such as denial, dissonance, and numbness in response to climate change. *Solar's* focus on the protagonist's psyche highlights the various forces driving climate change inaction, rather than limiting it to greed or stupidity.

*Solar*, influenced by the realism school, exhibits Tom Cohen's theory that scale effects can lead to cognitive dissonance and denial in seemingly small judgments. *Solar's* use of metaphor allows readers to ponder on Nixon's "slow violence" and the sense of insignificance it creates. With the various metaphorical connotations of a protagonist who may simultaneously imitate a discordant body politic, the excesses of consumer culture, and gradual environmental destruction, *Solar* pulls together the interwoven themes underpinning the climate catastrophe.

McEwan addresses technology's implications and uses it to solve issues. What McEwan examines in *Solar* is the discovery that science alone cannot enhance people's lives; ethical instincts are also required. He proves that science will never be able to undo nature's destruction again. Beard is known for stealing a colleague's discovery to

create a low-cost gadget to tackle global warming, while also attempting to be a moral relativist. He recognizes his errors as a womanizer, which caused personal issues.

Human actions, specifically industrialization and consumption, speed up climate change, leading to changes in Earth's ecosystems and weather patterns. This disturbance goes beyond our planet, possibly affecting the wider universe through occurrences such as space debris and radio interference. Furthermore, the advancements in technology that we have made, while often helpful, also present dangers to our very existence, such as the proliferation of nuclear weapons and the potential contamination of space during exploration. The effects of the climate crisis caused by human activity are becoming increasingly evident as temperatures worldwide approach the critical 1.5°C threshold, which is considered the tipping point for irreversible damage to natural ecosystems and significant alterations to our way of life. This shift has resulted in a rise in severe weather events such as intense wildfires, floods, and unprecedented heatwaves.

### **Ian McEwan's vision of future climate change scenarios and the techniques he employs**

Blochi and Lehtmäki both contend that McEwan's climate fiction employs satirical allegory as a genre, which Katrine Berndt acknowledges as well, stating that *"the novel's comic representation of science confronts society with its weaknesses, satirically exposing self-indulgence, corruption, and the dangers of unrestrained consumption that distinguish twenty-first-century culture"* (McEwan, 2010, p.86). According to Berndt, Solar is a humorous, exaggerated portrayal of both science and society in the age of consumerism, with McEwan using Beard as a symbol of humanity's unwillingness to confront the effects of excessive waste.

Berndt views Beard's depiction of the harm he causes to himself as a way to parody the traits of the Anthropocene and the egotistical way in which humans exploit the planet and its resources (McEwan, 2010, p.89). Berndt's main focus is on how Solar *"presents science as comedy"* (McEwan, 2010, p.98) in order to replicate the widespread perception that technology advancements can address the climate catastrophe. By doing this, she discovered that McEwan's book exposes the shortcomings of scientists on both

a personal and professional level through Beard and his colleagues. Additionally, it asserts that scientific knowledge cannot be expected to resolve issues that have arisen as a result of humanity's destructive nature by criticizing the political and economic interests that influence modern research culture (McEwan, 2010, p.99).

Therefore, Berndt interprets *Solar* as a book that challenges humanity's self-concept and attitude toward the environment by using satire to expose humanity's moral delusion on a scientific, economic, political, and social level rather than offering an uplifting message or teaching readers how to deal with environmental changes.

Trexler acknowledges that *Solar* is an allegory, as do most reviewers, but he contends that the book challenges the idea that allegory serves to disclose the fundamental truth of human reality. By doing this, the story rejects the apocalyptic nature of climate change, which undermines the sense of urgency that allegory typically provides. Trexler contends that "not even Beard is so conceited as to believe he is a Last Man or an Everyman" in this regard. Rather, Beard is a particular instance that serves as a useful metaphor for the affluent West at this particular point in time.

Instead of the ideal moral order found in traditional allegory, *Solar* is supported by a scientific explanation of the human mind (McEwan, 2010, p.49). The story makes fun of humanity's inability to respond to environmental concerns through metaphorical humour. Its painfully familiar protagonist reflects a "*common human in heritage that supersedes individual subjectivity*" (McEwan, 2010, p.49) and impacts humanity's capacity to confront climate change, according to Trexler. The novel attempts to link its hopes of surviving extinction on its account of scientific realism, even if it knows that the "[a]ttempts to regenerate human morality, even on pain of apocalypse, are doomed to fail" (McEwan, 2010, p.49) and so confronts humanity's moral compass.

Trexler implies that McEwan thinks the material, natural world is more malleable than human nature by relying on science to provide hope and a solution for climate change (McEwan, 2010, p.52). Additionally, he suggests that how science is portrayed "*serves to justify fiction as an essential means of understanding the world*" (McEwan, 2010, p.53) and that Beard's indifference to climate change may serve as an example of "*the need for greater self-consciousness*" (McEwan, 2010, p.53). The reader may

become aware of the risks associated with overusing Earth's natural resources when they are compelled to read Beard's account of climate science. Furthermore, the explanation of evolutionary psychology may help readers recognize their own behavioural issues and comprehend why it is difficult for them to deal with climate change.

According to Chris Maughan's paper "Collective Unconscious: Climate Change and Responsibility in Ian McEwan's *Solar*," *Solar* is a metaphor for and reflection of the actual climate problem and how people are responding to it. He is more interested in examining the novel's connections to the themes of accountability, blame, and climate change, though. In this way, he provides a reading of *Solar* that is not centred on how the book can alter the reader's perception of themselves. Rather, he suggests that the book teaches readers about humanity's collective responsibility, how blame is easily assigned in discussions about climate change, and how humans alone are powerless to alter the course of the climate crisis.

Maughan argues that the novel still contains elements that focus on the importance of collective action, as he does not see individual neglect of the climate crisis, but rather draws parallels between his environmental stance and his experiences as a privileged white man. "*Mainstream collective inaction on climate change*" (McEwan, 2010, p.25).

However, within the ask for collective action in *Solar*

*Will certainly not be enacted by the Beards of this world, but by those able to read beyond his failings, to devise and develop models of collective action that for now can only be glimpsed at the margins of our societies, in our collective unconscious* (McEwan, 2010, p.33)

Maughan argues that the lessons of the novel remain hidden in its playful and ironic symbolic approach, which makes them more difficult to discover as McEwan uses symbolism "*as a way to open up interpretation*" (McEwan, 2010, p.32), in a way that negotiates and challenges the boundaries of symbolism.

## Depiction of human-nature relationships in the context of climate change in the novel

The story also discusses the complex interrelationship between the humanities and sciences. "A 'scientific' outlook on the world and a 'humanistic' worldview collide," Beard is a scientist, so he doesn't see why it could be crucial that other fields, like art, address climate change. However, when he travels to Norway, he encounters artists who share his concerns about global warming. He could have said anything he wanted about them because *"he was among scientific illiterates"* (McEwan, 2010, p.103). But unlike his own perspective, the artists are deeply worried about global warming and wish to actively contribute to raising awareness of its predicted consequences. Beard, however, *cares "little for art or climate change, and even less for art about climate change"* (McEwan, 2010, p.101). In an analepsis he is musing about his college girlfriend Maisie, who is a literature student, and comes to the conclusion that literary studies are neither important nor difficult:

*The reading was a slog, but he encountered nothing that could remotely be construed as an intellectual challenge, nothing on the scale of difficulty he encountered daily in his course* (McEwan, 2010, p.277)

In another part of the novel, Beard thinks about rumors he had heard previously:

*It was said that humanities students were routinely taught that science was just one more belief system, no more or less truthful than religion or astrology* (McEwan, 2010, p.182)

Reconciliation is rarely the outcome of the ongoing discussion over the relative importance of the two distinct disciplines. Eco-critics frequently advocate for cooperation between these two, albeit distinct, disciplines, bolstering the idea that they must discover points of agreement and strategies to capitalize on one another's research in order to be relevant to the broader public.

Bread criticizes literature and the arts, as was previously said. However, the audience may harshly condemn his own actions. Since Beard is merely a fictional character in a work of literature, his arrogant remarks about the humanities cannot be taken too seriously. This very ridiculousness is shown by the assertions of a fictional character,

such the ones described above. Therefore, although *Solar* undoubtedly parodies people, its main audience is academia, particularly scientists Their main representative, Professor Beard, is a robber, a fraud, a cheater, and someone who is resting on his laurels. He also lacks original ideas and primarily poses as employed in order to avoid working.

## CHAPTER VI

### CONCLUSION AND RECOMMENDATIONS

This chapter presents conclusions based on the research findings according to the objective and sub objective(s) of the research and gives recommendations accordingly.

#### Conclusions

##### **Solar's approach to climate change and environmental impact**

The natural and cultural landscape of Bread's life, which has been taken as a metaphor for this transformation, shows the changing relationship between culture and nature, depicting Bread's suffering as an exile in a consumer world rather than directly narrating the tragedy of climate change and environmental issues, suggesting that nature is not a central presence in a world of economic profit and commodities.

This study illustrates how, in contrast to other eco-fictional works that are overtly and traditionally nature-oriented, *Solar* raises awareness about environmental crises by decentring nature and by depicting a changed perception of the earth, in line with Cheryll Glotfelty's contention that "consciousness raising" about environmental issues is important in ecologically focused criticism (Glotfelty & Fromm, 1996). Awareness of environmental issues and "toxic consciousness" are increased by this decentring. Thus, rather than providing a conventional nature-oriented critique of climate disruption, *Solar* opens up new avenues for discussion in ecocriticism.

Ghosh uses the remark, "the great irreplaceable potentiality of fiction is that it makes possible the imagining of possibilities," to argue that McEwan's *Solar* is a novel that chronicles reality and that fiction may adopt socio-ecological viewpoints. Beard's speech on climate change, stealing research, and using money in the name of science ultimately explains how people favour luxury over an environmentally conscious mindset.

Michael Beard, the protagonist, is incredibly repugnant and immoral. He lacks self-control and is conceited and egocentric. He stands for the over consumptive Western

culture that is destroying the world. The answer and the future are symbolized by young Aldous. Sadly, he is destroyed, and the idealistic virtue is defeated by the self-centred evil, symbolized by Beard. American businessman Toby Hammer perpetuates the idea that Westerners are avaricious and self-centred while downplaying the threat posed by global warming.

Man's place and function on Earth are called into question by the characters' deeds and morals. In addition to exposing the risks associated with climate change, Aldous serves as a symbol for an alternate way of living.

### **Ian McEwan's vision of future climate change scenarios and the techniques he employs.**

*Solar* uses Beard as an allegorical figure to highlight the psychological effects and difficulties of living at a time when the industrial world is aware of its own destructive geological power. In connection to climate change, *Solar* dramatizes psychological states including denial, dissonance, and numbness as well as aspects of cognitive psychology like the propensity to prioritize immediate demands over long-term hazards (Kahneman & Tversky, 1982). By concentrating on the protagonist's thoughts, *Solar* is able to highlight the many reasons for climate change inaction without dismissing it as the product of stupidity or avarice.

Furthermore, *Solar* is a prime example of Tom Cohen's theory that scale effects may transform seemingly insignificant choices into conundrums that lead to cognitive dissonance and denial because of its concern for the accurate portrayal of commonplace everyday happenings that are influenced by the realism tradition. *Solar* encourages contemplation on the mechanics of Nixon's "slow violence" and the atmosphere of insignificance that surrounds them by allowing the reader to see them through metaphor rather than presenting these scale effects directly.

*Solar* unifies the complex problems behind the climate disaster through the multifaceted metaphorical implications of a protagonist who might simultaneously represent a discordant body politic, the excesses of consumer society, and gradual environmental destruction. *Solar* demonstrates Norgaard's concept of parallel reality



through the viewpoint of a character in denial, illuminating how and why it is so hard to comprehend both climate change and daily life at the same time.

### **Depiction of human-nature relationships in the context of climate change in the novel**

In *Solar*, Ian McEwan examines the complex and sometimes contradictory relationships between nature and humanity considering climate change. McEwan criticizes humanity's indifference, conceit, and self-interest in dealing with one of the most urgent global challenges through the figure of Professor Michael Beard. Beard's disdain for the arts and humanities as well as his disengagement from nature highlight a larger societal failure to acknowledge the interdependence of disciplines and their capacity to work together to address environmental issues.

The book highlights the many ways that people respond to climate change by contrasting Beard's scientific viewpoint with the fervent initiatives of artists and environmentally conscientious people. Beard's personal failings and cynicism act as a microcosm of society's immobility, showing how selfish actions and a lack of cooperation obstruct significant advancement.

In the end, *Solar* highlights the necessity of multidisciplinary collaboration in the fight against climate change. McEwan implies that neither science nor the humanities by themselves can offer a complete answer by parodying Beard's haughtiness and the snobbish attitudes of academia. In order to lessen the effects of global warming, the book advocates for a single human-nature connection that values different viewpoints, raises awareness, and motivates group action.

## **Recommendations for Further Research**

Prospective research endeavours within the realm of eco-criticism and literature may delve into a wider array of literary works spanning various genres and cultural backgrounds. This approach could facilitate a more thorough comprehension of the portrayal and interpretation of environmental motifs in literature on a global scale. By examining a diverse selection of texts, scholars can gain valuable insights into the multifaceted ways in which environmental themes are represented and analysed in literary narratives.

Furthermore, conducting comparative analyses between modern literary creations and timeless classics could offer illuminating perspectives on the shifting attitudes towards climate change and environmental issues throughout different eras. Contrasting contemporary works with established masterpieces may reveal evolving societal perceptions and responses to environmental challenges over the course of literary history. Such investigations could contribute significantly to the ongoing discourse on environmental sustainability and the role of literature in shaping public awareness and attitudes towards ecological concerns.

Furthermore, it would be beneficial for future research to explore the influence of eco-critical literary analysis on the attitudes, behaviours, and engagement in environmental activism among readers. Conducting longitudinal studies that monitor the shifts in reader perceptions and actions prior to and following their exposure to eco-critical literature could yield valuable insights into the efficacy of literature as a means to promote environmental awareness and drive social transformation. Moreover, there is potential in investigating the feasibility of collaborative initiatives involving writers, scientists, and activists, as this could foster novel strategies for addressing environmental issues through the power of storytelling and advocacy.

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## APPENDIX

### SIMILARITY REPORT

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