

Original Paper

The Challenge of the Anthropocene: Climate Crisis and Human Survival in *The Road*

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Received: December 1, 2023 Accepted: December 25, 2023 Online Published: January 13, 2024

doi:10.22158/elsr.v5n1p50 URL: <http://dx.doi.org/10.22158/elsr.v5n1p50>

Abstract

*With the intensification of the impact of human activities on the Earth's systems, humankind has entered a new era in its history, the Anthropocene, which means that humankind has become the greatest threat to its survival and the Earth's environment, and a major force for change in the Earth's geological formations, however the consequences of human activity in the Anthropocene era were often uncontrolled and unintended, and so the Anthropocene also signaled the need for humans to take greater responsibility for the Earth. Cormac McCarthy's novel *The Road* is mainly written through extreme weather, biological extinction, and ecological imbalance to show the climate disaster caused by human over-destruction of the earth's ecology, to remind people to establish the "Anthropocene" thinking and take the road of sustainable development. McCarthy's depiction of the desolate world of the end of time not only highlights his deep concern about the current state of human existence and ecological problems but also highlights the practical significance of literary works inquiring into the way of human survival.*

Keywords

extreme weather, biological extinction, ecological imbalance, Anthropocene thinking, sustainable development

1. Introduction

Since the rise of human civilization, human beings have continuously interfered with and changed the natural world, and with the deepening of human activities, the Earth's ecosystem has revealed a series of unprecedented geological features, Climate change has brought into sharp focus the capability of contemporary human civilization to influence the environment at the scale of the Earth as a single, evolving planetary system. Following the discovery of the ozone hole over Antarctica, with its undeniably anthropogenic cause, the realization that the emission of large quantities of a colorless, odorless gas such as carbon dioxide (CO₂) can affect the energy balance at the Earth's surface has

reinforced the concern that human activity can adversely affect the broad range of ecosystem services that support human (and other) life and could eventually lead to a ‘crisis in the biosphere’ (Steffen, Grinevald, Crutzen, & McNeill, 2011). Atmospheric chemist and Nobel Laureate Paul Crutzen (2002) pointed out that it seems appropriate to assign the term ‘Anthropocene’ to the present, in many ways human-dominated, geological epoch, supplementing the Holocene — the warm period of the past 10-12 millennia. Crutzen pointed out that in the current era, natural and human systems are integrated, and natural and human forces are closely intertwined, so there is no notion of human intervention in or against nature, and that the future face of the natural world will largely depend on the choices and actions of human beings, and that for this reason, human beings need to change the way of perceiving their roles, and to establish a way of growing with the natural world of the Earth rather than depleting or alienating nature, not consume or alienate nature. Cormac·McCarthy then describes in his novel the world after a concentrated outbreak of ecological destruction by human beings, who recklessly leave the footprints of human civilization on the natural world, leaving the Earth with unbearable hidden dangers such as ecological pollution, biological extinction, and depletion of resources.

Since *The Road* (McCarthy, 2006) published, which has won numerous awards, including the Pulitzer Prize for Fiction, and has been selected as the best book of the year by *The New York Times*, *Time*, and has been described as a novel that will influence the next hundred years. The film based on this novel, has also caused a sensational effect because of its revelation and warning effect. This paper analyses the warning effect of climate disasters in novels from the perspectives of extreme weather, biological extinction, and ecological imbalance, and advocates the establishment of “Anthropocene” thinking, taking the road of sustainable development, actively building a community of human destiny, establishing a mechanism of harmonious coexistence between species, reconstructing the relationship between human beings and nature, and actively responding to the increasingly urgent global environmental problems.

2. Narratives of Extreme Weather

One of the characteristics of the Anthropocene is the significant increase in climate change and extreme weather events, and climate change is one of the most widespread and profound proofs of the fundamentally far-reaching impact of human behavior on the planet. For example, massive deforestation by humans for the exploitation of resources has not only exacerbated the process of desertification but has also induced large-scale environmental destruction. This environmental destruction has had an enormous impact on the Earth’s ecosystems, and the climate crisis is starkly epitomized by the frequent occurrence of extreme weather phenomena. Although these extreme weather events are difficult to perceive immediately, they are like a time bomb that threatens the Earth’s ecosystem at any time. And these extreme weather changes are found throughout Cormac·McCarthy’s novel *The Road*, which describes after the disaster, the entire world is out of order, the weather changes are extremely irregular, and the harshness of the climate reaches an extreme in the novel, including plummeting temperatures, incessant torrential rains, as well as frequent fires and earthquakes.

The extreme weather depictions in the novel highlight the brutality of the apocalyptic scenario, with harsh weather conditions exacerbating the challenge of survival for the protagonist and his son in a desolate world. The father says that he will not survive the winter if he stays put; the snow falls early, freezing the frozen mud into pillars, “The sand rattling against their legs and racing away in the dark and the thunder cracking just offshore. The rain came in off the sea hard and slant and stung their faces” (McCarthy, 2006, p. 198). These frequent weather changes are as if they were retribution for previous human destructive behavior. The extreme weather described was beyond the limits of what mankind could endure, and wintering in place would risk freezing to death, so father and son were forced to seek survival in the warmer south. However, they find that the South is also plagued by severe weather, and the frequency of extreme weather events reveals the environmental degradation and unpredictability caused by climatic catastrophes, making human survival in such environments a great challenge.

There are numerous fire scenes in the novel. For example, father and son have been trekking through the scorched earth for days, and a blazing fire has been burning on the ridgeline for about a year and has never shown signs of going out, “A smoky light out there in the valley. He rose and walked out along the ridge. A haze of fire that stretched for miles” (McCarthy, 2006, p. 41). In this description, the fire had been burning for about a year, the rain had ceased, a haze of fire that stretched for miles, these details present how long the fire lasted, how deep and widespread the destruction was while highlighting that the rain was no longer able to extinguish the blaze. The fire triggered the destruction of vegetation, which in turn deprived wildlife of habitat and food sources. The scale and spread of the fire are vividly portrayed, conveying the severe impact of fire on the ecosystem in terms of extinction of organisms, destruction of habitat, and soil erosion.

Ash is also a common element in the novel, with serious effects on both humans and ecosystems. “the blackened shapes of rock standing out of the shoals of ash and billows of ash rising and blowing down-country through the waste. The track of the dull sun moving unseen beyond the murk” (McCarthy, 2006, p. 12). “He descended into a gryke in the stone and there he crouched coughing and he coughed for a long time” (McCarthy, 2006, p. 10). These descriptions clearly show that the wide range of soot and the seriousness of the pollution, the dust in the air for a long time, are a serious threat to the health of human beings, the novel repeatedly depicts the father coughing up blood and wearing goggles in the scene, highlighting the impact of soot on the father’s physical health. In addition, the problem also poses a serious threat to the survival of animals, as the fires burn down trees and grasslands, leading to habitat loss and a lack of means for wildlife to survive and reproduce, while the pervasive smoke potentially affects the respiratory systems of animals in the long term, further leading to the collapse of the ecosystem. Climate change is seen in the novel as one of the fundamental human impacts on the planet. Environmental destruction sets the stage for climate change, and frequent extreme weather events become a prominent manifestation of this climate crisis. The depiction of extreme weather in the novel is profound and realistic, highlighting the great threat to human society, where the seasons are no longer distinct and weather changes are highly irregular. Extreme weather such as extreme cold, scorching heat,

floods, and fires occur frequently. Such depictions not only emphasize the destruction of the natural environment by climate change, but also express the helplessness and struggles of human beings in the face of these extreme weather changes, and these depictions not only reflect the impact of climate change on the human body but also highlight the overall impact of environmental problems on the entire ecosystem. Addressing extreme weather requires a range of climate-related scientific, technological, and policy measures to mitigate its adverse impacts on human societies and natural ecosystems. The occurrence of extreme weather events is often closely linked to global climate change. Mitigating climate change by reducing greenhouse gas emissions, especially carbon dioxide and methane, among others, is therefore an important task. Promoting the widespread use of renewable energy, advocating a low-carbon lifestyle, and reducing energy consumption are all effective ways to do so. Protecting and restoring ecosystems, such as wetlands and forests, can provide better natural defenses and reduce the risk of extreme weather events such as floods and storms. This requires sound land use policies to prevent over-exploitation from damaging ecosystems. Extreme weather problems are often global and therefore require greater co-operation from the international community. Work together to develop and implement climate agreements, share scientific and technological innovations, and provide resource support to create synergies in global climate governance. These measures require interdisciplinary cooperation, combining knowledge from a wide range of natural sciences, social sciences, and policymaking in a joint effort to address extreme weather events triggered by climate change.

3. Narratives of Biological Extinction

Climate change is just the tip of the iceberg of the Anthropocene phenomenon, in addition to the carbon cycle, humans are significantly altering several other biogeochemical, or element cycles, such as nitrogen, phosphorus and sulphur, that are fundamental to life on the Earth; strongly modifying the terrestrial water cycle by intercepting river flow from uplands to the sea and, through land-cover change, altering the water vapour flow from the land to the atmosphere; and likely driving the sixth major extinction event in Earth history (Steffen, Grinevald, Crutzen, & McNeill, 2011). Global biodiversity has been severely impacted since 1970, with species numbers declining by about 50 percent, yet the global population has dramatically more than doubled over the same period. According to the Global Assessment of Biodiversity and Ecosystem Services (GABES) report released in 2019, about 25 percent of wildlife is threatened to varying degrees, which means that about one million species are on the brink of extinction. Excluding anthropogenic disturbances, the rate of biodiversity decline would be slowed by at least 100 times. Human activities have potentially triggered the sixth mass extinction event in the history of the planet, with thousands of plants and animals facing threats to their survival, making the Anthropocene the first geological period to be dominated by a single species, namely humans. (Sun, 2020)

There is a close and far-reaching relationship between the Anthropocene and biological extinction, with the rise and development of the Anthropocene directly contributing to the dramatic decline in biodiversity and mass extinction events on Earth. The processes of urbanization, agricultural expansion, and

industrialization of the Anthropocene have led to widespread habitat destruction. The destruction of rich and diverse ecosystems has deprived many plants and animals of suitable living environments, and this habitat destruction has led directly to the extinction of many species. Human activities have led to large-scale greenhouse gas emissions, resulting in climate change. Rapid climate change has affected many ecosystems, making it difficult for some species to adapt to new environmental conditions and ultimately threatening their survival. Climate change-induced events, such as melting glaciers, rising sea levels, and extreme weather events, also have a direct impact on biodiversity. Waste, chemicals, and pollutants produced during industrialization and urbanization have had a serious impact on ecosystems. Pollution of water bodies, soil, and the atmosphere has led to a threat to the living environment of many organisms, resulting in a decrease in the number of plants and animals and an increase in the difficulty of survival. In the novel *The Road*, biological extinction is a profound and thought-provoking theme. The novel begins by depicting a desolate world where the entire planet is shrouded in dead silence and traces of life have disappeared. McCarthy vividly presents the severity of biocide, a heart-stopping sight that prompts reflection on how many precious lives have been lost forever as a result of mankind's excessive destruction of the Earth's ecosystem.

In the novel, the endangered species seen by father and son becomes a narrative element that resonates strongly with the reader, and the depiction of biological extinction reveals the parasitism of humans and the incongruity between anthropocentrism and the continuation of life itself. A series of problems caused by the Anthropocene directly or indirectly affect the extinction of plants, which in turn may lead to the collapse of the ecosystem, thus threatening the survival and development of human beings. In the novel, the trees and meadows are engulfed by fire, leaving a dead and desolate scene. The descriptions in the novel are full of sadness and despair, you can see "burnt tree trunks", "dry black bushes", "everything was rooted out", and once vigorous life, now turned into a scorched earth. The death of these plants is undoubtedly proof that the ecological balance of nature has been upset, and all this is due to the extreme destruction of the earth by human beings. The once endless lush forests have now disappeared without a trace, replaced by deadness and barrenness. This sight is a powerful reminder of man's irresponsible behavior towards the natural world and makes people reflect deeply on how to cherish and protect our planet.

One of the characteristics of the Anthropocene is the destruction of nature by human activities, which directly leads to an increase in the extinction rate of animals, and the depictions in the novel reflect the extinction of animal groups to a certain extent. The animals mentioned in the novel include fish, birds, falcons, etc. In the case of birds, for example, "Once in those early years he'd wakened in a barren wood and lay listening to flocks of migratory birds overhead in that bitter dark...He wished them godspeed till they were gone. He never heard them again." (McCarthy, 2006, p. 45). In the father's memory, at the beginning of the disaster, he could still hear the birds chirping in the woods; nowadays the birdsong has long since disappeared without a trace. The father's dialogue with his son also mentions crows, but the image of crows exists only in books; they are no longer found on earth. The father has dreamt of flowers

blooming and birds flying freely, but this dream contrasts with the cruel reality, which profoundly demonstrates the cruelty of an apocalyptic world. Thus, it becomes crucial to preserve biodiversity and take active measures to protect life on earth. Through this narrative, McCarthy expresses his concern about human damage to the natural environment and the loss of ecological balance, and at the same time calls on people to re-examine the position and responsibility of human beings in the natural world.

Biological extinction was depicted in a profound and thought-provoking manner in *The Road*, McCarthy vividly demonstrates the complete collapse of the earth's ecosystem by depicting the desolate world, the scorched-earth-like landscape, and the extinction of endangered species witnessed by father and son. Trees and meadows are engulfed by fires, leaving behind a dead and barren landscape. Charred tree trunks, dry black bushes, and the corruption of everything all symbolize that the ecological balance of nature has been completely disrupted. The extinction of animal groups, such as the silence of bird songs and the disappearance of animals such as crows, and the mass extinction of living creatures make humans intuitively feel the loss of life. To avoid this, it is necessary to adopt sustainable development strategies to ensure that the impact of human activities on ecosystems is minimized, including the promotion of the use of renewable energy sources and the promotion of green technologies to reduce overdependence on natural resources. The protection of biodiversity should be strengthened, especially the protection of endangered species, and nature reserves and wildlife habitats should be established to maintain the ecological balance and prevent more species from going extinct.

4. Narratives of Ecological Imbalance

The different systems of the Earth are interconnected and interact with each other, and once a drastic change occurs in a certain aspect, it will bring about what scientists call the "cascade effect", which is a rapid chain reaction that produces immeasurable and unpredictable consequences (Sun, 2020). The global environmental problems of the Anthropocene era are intertwined, increasing global interdependence. One of the distinctive features of this period is the imbalance of ecosystems, which is reflected in the frequency of extreme weather, loss of biodiversity, fires, extreme cold, and many other aspects.

The causes of ecological imbalance are manifold in *The Road*, and it is implied in the novel that the cause of this apocalyptic scene is a nuclear catastrophe, where a nuclear war releases a large amount of radioactive material, which has a devastating impact on the ecosystems, and where industrialization and resource exploitation have triggered large-scale resource extraction, pollution, and carbon emissions, and where a significant increase in the carbon dioxide content of the atmosphere has accelerated climate change, which has had a huge impact on the environment and also seriously interfered with the survival of living organisms. Worse still, human activities have led to the migration of species and mass extinctions. Species extinctions also manifest the collapse of ecosystems, and these extinction events are not only a single issue, disrupting the food chain and affecting the distribution of resources, but also disrupting the balance of ecosystems. Factors such as fires, soot, and heavy rainfall have led to soil erosion and the destruction of habitats, further exacerbating ecological imbalances, and air, water, and

soil pollution, which directly destroys ecosystem structure and function, is closely linked to climate change.

McCarthy demonstrates the multiple impacts of ecological imbalances on human society and the environment, emphasizing the importance of ecological balance and the urgent need to take measures to address these issues. The interconnectedness of these issues makes the global environmental problems of the Anthropocene era even more urgent and complex. The ecological imbalances depicted in the novel are not just challenges in a single field but also involve complex relationships between many disciplines and fields, and thus their solution requires a comprehensive and interdisciplinary approach that integrates perspectives and solutions from various fields to address their multidimensional and multifaceted nature. perspectives and solutions from various fields to address their multidimensional and far-reaching impacts. In this era of interdependent global ecosystems, a balanced relationship between human beings and nature is crucial, and it is only through global cooperation to manage our resources and ecosystems in a sustainable manner that we can create a more stable and sustainable future for life on Earth. It also compels us to face up to the wide-ranging impacts of human activities on the planet and to take responsibility for the preservation of the planet's biodiversity in to ensure that ecosystems can continue to be stable.

5. Conclusion

McCarthy's *The Road* presents an apocalyptic vision of the Anthropocene era through its insightful portrayal of extreme weather events, biological extinction, and ecological imbalance. However, we must recognize that the climate crisis is not just about greenhouse gas emissions and rising global temperatures, but is a much more integrated and systemic issue involving biodiversity conservation, population development, sustainable resource use, energy, and economic development, and even the treatment of psychological trauma. Therefore, to address this challenge, we need to make joint efforts to tackle it within the framework of establishing a "man and nature coexist in harmony". In addition, we also need to abandon the concept of anthropocentrism, establish a mechanism for harmonious coexistence among species, balance the relationship between human beings and nature, establish an "Anthropocene mindset" and take the path of sustainable development to achieve harmonious coexistence between human beings and nature. Only through such a comprehensive approach can we effectively address the climate crisis and other increasingly pressing global environmental issues and create a better world for future generations.

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