Doris Lessing's Boundary Crossings: The Representation of Climate Change in *Mara and Dann: An Adventure*

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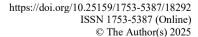
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Abstract

In the novel Mara and Dann: An Adventure (1999), Doris Lessing depicts the survival predicaments of humans and nonhumans tens of thousands of years after a climate catastrophe. This article illustrates the emergence and the main characteristics of climate change fiction and explores how climate change is represented in the novel using the theoretical framework of climate change criticism. In doing so, this study argues that Lessing narrates climate change through crossing boundaries of scales, species, and genres. Lessing transcends the scalar boundary between the short-term human scale and the long-term planetary scale to make climate change and its anthropogenic causes perceptible and visible; she transcends the boundary of species to render humans into another kind of species, threatened by extinction and animal attack, in order to dissolve the dichotomy between subject and object; and she transcends the doom scenarios depicted in fiction dealing with an environmental apocalypse to provide an alternative, better future with the purpose of evoking readers' emotional response and ethical reflection. By examining the boundary crossings, this article sheds new light on Mara and Dann as an epitome of climate change fiction, suggesting Lessing's intentions to deconstruct the age-old dichotomy between humans and nature and to criticise the ideology of anthropocentrism.

Keywords: Doris Lessing; *Mara and Dann: An Adventure*; climate change fiction; boundary crossings







Introduction

The contemporary British writer Doris Lessing (1919–2013), who received the Nobel Prize in Literature in 2007, produced many literary works, most of which manifest her deep solicitude for the life of nonhumans as well as humans. Her novel *Mara and Dann*: An Adventure (1999) describes how humans and nonhumans survive climate calamities over ten thousand years after an Ice Age has plunged the entire Northern Hemisphere into extreme cold and the Southern Hemisphere into complete drought. In the climatealtered environment, human beings and other species alike in the land of Ifrik are reduced to climate refugees with very little food and water and have to embark on a perilous adventure to look for liveable territories. All through their adventure, the two orphaned siblings Mara and Dann experience various hardships, such as severe drought, floods, famine, unknown diseases, kidnapping, and wars, and eventually find a coastal green land where they settle down and strive to rebuild civilisation. Its sequel *The Story* of General Dann, Mara's Daughter, Griot, and the Snow Dog (2005) and Lessing's novel The Making of the Representative of Planet 8 (1982) both imagine the survival predicaments of humans and nonhumans in climate catastrophes, highlighting Lessing's ongoing concern for climate change and its devastating impacts on the whole biosphere.

From the perspective of ecocriticism, critical readings of *Mara and Dann* mainly analyse the close interconnectedness of women and nature from the viewpoint of ecofeminism (Aldeeb 2017) and the depiction of apocalyptic crisis (Li 2012). Even though the novel is discussed as climate change fiction, the studies focus either on the reflections of the Anthropocene (Aydınoğlu 2021), or mainly on textual analysis (Baysal 2022). The issue of climate change and its impacts has not been fully explored using the theoretical framework of climate change criticism. In view of this, this article aims at first illustrating the emergence and the main characteristics of climate change fiction, and then exploring the representations of climate change in *Mara and Dann*. In doing so, this study argues that through crossing the boundaries of scales, species, and genres, Lessing makes climate change and its anthropogenic causes visible and clear on the one hand, and exposes its destructive consequences by delineating the desperate plight of humans and nonhumans on the other hand, implying her intentions to spell the collapse of the age-old dichotomy between human and nature, and to criticise the ideology of anthropocentrism.

The Emergence and the Main Characteristics of Climate Change Fiction

The geological epoch of the Anthropocene, which is deeply marked by human activities, is characterised by anthropogenic climate change. In terms of the features of climate change, its domain encompasses the entire earth beneath the stratosphere, making it almost impossible for humans to perceive and imagine for lack of reference in time and space. Reflecting on the unprecedented temporal and spatial scale of climate change as a complex non-human phenomenon, Timothy Morton puts forward the concept of

¹ The novel is referred to as *Mara and Dann* in the following text.

"hyperobjects" to refer to something that is "massively distributed in time and space relative to humans" (2013, 1). Viewing climate change as a hyperobject illustrates that humans can only glimpse a tiny part of it—its entirety is inaccessible to humans. Humans' perception of prolonged heatwaves or continuous heavy rainfall is just one of the many manifestations of climate change, rather than it per se. Another essential reason why climate change is hardly visible to people is that it is a kind of slow violence, "a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all" (Nixon 2011, 2). In other words, it is a violence inflicted invisibly, quietly, and gradually over time with terrifying effects radiating globally to all humankind and the entire planet. Generally speaking, as "a complex, multi-layered network of relationships extending across time and space" (Mertens and Craps 2018, 136), climate change possesses three particular features: concealment in presentation, latency in time, and being spread in space. Therefore, it is invisible and imperceptible within the short scale of human experience. As the unprecedented ecological crisis in the Anthropocene, climate change challenges the traditional way humans perceive the world. Amitav Ghosh points out "the climate crisis is also a crisis of culture, and thus of the imagination" (2016, 7). As for the crisis of culture, the prevailing anthropocentric culture reduces nature to a passive object that is at the mercy of humankind, which results in various environmental problems in modern society. The environmental crisis largely stems from the crisis of culture. And regarding the crisis of imagination, climate change, with its vast scale, challenges the usual cognitive methods and thus goes beyond the scope of human imagination. It is too vast for people to imagine. In view of this, new narrative discourses are in urgent need to delineate and reflect upon climate change, which has infiltrated into every aspect of our contemporary life.

In this context, climate change fiction emerges and becomes "one of the readiest pieces of evidence of a new climate imaginary in the Anthropocene" (Goodbody and Johns-Putra 2019, 229). As early as the 1950s, climate change fiction began to emerge with the name of "proto-climate fiction" (Goodbody and Johns-Putra 2019, 231). Many of the early depictions of climate change usually portray the non-anthropogenic climate deterioration, ignorant of human responsibilities. In 2007, the American journalist Dan Bloom coined the term "cli-fi" as an abbreviation for "climate change fiction," referring to novels that depict and reflect anthropogenic climate change, with direct narration of climate change or climate crisis scenes as the main feature. Since then, climate change fiction has developed into a new genre in environmental crisis discourse. Greta Gaard applies the term "cli-fi" to novels "in which climate change is a fact and the characters are struggling to survive within the degraded environment" (2017, 146-147). Johns-Putra defines climate change fiction as "fiction concerned with anthropogenic climate change or global warming as we now understand it" (2016, 267). Similarly, Mehnert defines it as "literature dealing explicitly with anthropogenic climate change" (2016, 4). In general, climate change fiction makes human-induced climate change the thematic focus and adopts multiple narrative strategies to meet the many representational challenges mounted by climate change so as to render the abstract and intangible phenomenon visible.

Furthermore, climate change fiction is remarkable for the following main characteristics. The first characteristic is the scale effect. As a hyperobject, climate change has an enormous temporal and spatial scale, which cannot be perceived from the micro human scale. The "scale effect," coined by Timothy Clark, is formed from the discrepancies between the vast spatial and temporal scale of the planet and the short scale of individual human experience. It applies to "phenomena that are invisible at the normal levels of perception but only emerge as one changes the spatial or temporal scale at which the issues are framed" (Clark 2015, 22). The representation of the scale effect is crucial to understand climate change in literary works. The second characteristic is non-human agency. With the frequent occurrences of climate change, earthquakes, and other natural disasters, the connotation of agency is gradually being rewritten. Rather than being a passive object at the disposal of humankind, the natural world not only challenges the limits of modern technology but also brings anxiety and fear to human beings. Agency is no longer terminology exclusive to humankind. Instead, it is a common ability possessed by both humans and non-humans. Non-human agents with intrinsic vitality and subjectivity become the "subject of the Anthropocene" (Woods 2014, 134) and the main narrative motivation in climate change fiction. The third characteristic is open endings. The futuristic worlds created in climate change fictions can be characterised as apocalyptic, post-apocalyptic, or dystopian. No matter what type it is, climate change fiction does not resort solely to the doom scenarios in apocalyptic narratives. Climate change fictions "are dominated not by the sense of an ending but by the wish for no ending," because "endings do not bring neatly resolved meanings" (Johns-Putra 2019, 166–167). In the fast-changing world, the wish for a recognisable and knowable future seems futile and absurd. Therefore, the open and ambiguous ending of climate change fiction is preferable to the traditional apocalyptic scenarios. The above three characteristics of climate change fiction are identified in Mara and Dann when it is examined from the perspective of boundary crossings.

Crossing Scalar Boundaries: The Scale Effect of Climate Change

Being "at the heart of the notion of the Anthropocene" (Vermeulen 2020, 86), scale is the core issue in climate change. As is mentioned above, the scale on which climate change occurs is the long temporal and huge spatial scale of the planet, which is measured with the geological deep time of millenniums or even billions of years. The scale on which climate change is perceived, however, is the much smaller scale of humans, which usually spans no more than a hundred years. The incompatible differences between the short-term scale of human cognition and the long-term scale of climate change lead to epistemological uncertainty and the rupture of scale. In this respect, scale can be regarded as the root cause of the intangibility of climate change. The scale effect emphasises the blind spots caused by the discrepancies between the scale of occurrence of a phenomenon and the scale of observation. Derek Woods refers

to this critical stance as the "scale critique" (2014, 133), which focuses not only on the discontinuities between different scales of humans and the earth, or "scale variance," but also on reflections on human survival during the challenges of the Anthropocene. The issue of scale results in the invisibility of climate change for humans, and serves as the starting point of studying climate change fiction.

A change of scale is needed to perceive climate change. "Climate change per se is a scientific abstraction that works on a scalar level not directly commensurable with everyday experience" (Caracciolo 2021, 8), so modern linear time views based on speed and efficiency and time concepts used to measure human experience fail to represent it. In view of this, Clark proposes a new methodology for text interpretation of "scale framing" (2015, 97), advocating reading literary works from personal, cultural, and ecological scales. Reading at multiple scales requires readers to extend the critical perspective to the huge planetary scale over a time frame of billions of years so as to explore the consequences humans' actions have had on the planet. Similarly, Dipesh Chakrabarty proposes a change of scale in our thinking, which "must now operate at a planetary level" and "must now encompass geological time and the possibility of our own extinction" (Hanson 2016, 164). In an epoch when humans become a geological force, the distinction between natural and human histories has already been collapsed. It is reasonable to examine human beings from the enormous planetary scale rather than the individual scale.

When it comes to Lessing's works, Hanson noticed "questions of scale were important to Lessing's career from the beginning" (2016, 164). In *Mara and Dann*, Lessing elaborately illuminates the scale effect through the following comparison: "a little star among so many that the words thousands, or even millions, became irrelevant; and Ifrik, which they had learned to know with their feet, putting one foot in front of another, was merely a shape among several on this little ball" (1999, 380). The contrast between the gigantic units of stars and the tiny proportions of human habitats on Earth is used to envision the different units of measurement for planets and for humans. In this way, the abstract concepts of scale variance and scale effect could be comprehended concretely.

Furthermore, Lessing crosses individual and planetary scalar boundaries by zooming out human temporal and spatial scales to embed them in the frame of natural history so as to "address the scalar gap between individuals, communality and biosphere" (Sergeant 2016, 120). In this regard, Lessing extends the unit of time frame to measure human history, juxtaposing both humans and non-humans in the same framework of the planet's history, and at the same epistemological level. When human history is traced back, the time frame of thousands of years or tens of thousands of years, rather than of several years or hundreds of years, becomes the unit of measurement, enlarging the unit commonly used. For example, the novel reveals "in the old times, or ten thousand years ago, or ... twenty thousand years ago" (Lessing 1999, 168), "the history of the Mahondis, right back to the beginning ... three thousand years ago" (169). "On the wall map, thousands of years later, no desert, but a lot of different kinds of country" (287). By

expanding the individual scale, Lessing "mediates between historical and biological epistemologies and between recorded and deep history" (Hanson 2016, 174). The modern division between human and natural history is further destroyed in the novel by the sentence that "[a]ll the history of Ifrik has been that—swings of climate" (Lessing 1999, 374). This argument is intensified by many descriptions:

About twenty thousand years ago, but perhaps it was more—there was no ice or snow here. ... They think that for fifteen thousand years all this area was free of ice, and during that time there were civilisations. ... And then the climate changed, and the ice came down and covered all this space. ... The cities and civilisations disappeared under sheets of ice. (Lessing 1999, 199)

The presence or absence of natural disasters determines to some extent the history of human civilisations. Nature can be neither practically nor theoretically separated from culture. Human history and natural history intricately intertwine with each other in that human civilisations are indeed engraved in the environmental history, which witnesses and records vicissitudes in human society.

Another reason Lessing crosses the scalar boundary is to uncover and persuade readers of the anthropogenic causes of climate change. If human history is examined from the magnitude of the planetary scale, a bird's view of it would be grasped. Therefore, the changes of human societies and the deeds of former generations are exposed clearly and comprehensively. In this way, Lessing reveals people's blind complacency towards human civilisation: "[t]hey thought it would all go on for ever ... people always have a tendency to believe that what they have is going to continue for ever" (Lessing 1999, 373). However, "cities did not live so long. Cities were like people: they were born and lived and died" (253). While visiting the museum of human history, Mara sees the disappearance of civilisation along with the extinction of former generations that considered themselves immortal. But they did not go extinct for no reason. The behaviours of those extinct ancient people are incomprehensible and absurd in Mara's eyes:

There was a recklessness about the ways they used their soil and their water.

These were peoples who had no interest in the results of their actions. They killed out the animals. They poisoned the fish in the sea. They cut down forests, so that country after country, once forested, became desert or arid. They spoiled everything they touched. There was probably something wrong with their brains. There are many historians who believe that these ancients richly deserved the punishment of the Ice. (381)

The straightforward revelation and denouncement of those ancient people's behaviours confirm the human-inflicted factors causing climate change. Human actions affect "more than just them and determine the planet's past, present and future" (Kaya 2021, 33). From the perspective of the long temporal scale, those behaviours are far-reaching

enough to exert savage impacts on the whole planetary system, which in turn influences the later generations who have no choice but to burden the detrimental consequences.

In sum, Lessing goes beyond the scalar boundary by enlarging the short spatial and temporal scale of human beings to represent the scale effect. In this way, the human-made divisions of human and natural history could be dissolved so that climate change becomes perceivable and imaginable. Additionally, through the lamenting for the extinction of early ancestors, the anthropogenic factors causing climate change are revealed, fulfilling the ethical functions of climate change fiction.

Crossing Species Boundaries: Nonhuman Extinctions and Mutations in Climate Change

The coming of the Anthropocene has driven the "non-human turn" in literary criticism. Theoretical discourses like New Materialism, Material Ecocriticism, and Posthumanism make non-human entities their research focus. Bruno Latour observes that one of the most significant consequences of climate science is that it has undone the dichotomy between subject and object that structures the scientific worldview (2014, 2). For him, the binary opposition between humans and non-humans as subject and object, in ontological terms, is merely artificial and a product of modernity that does not actually exist. All the nonhuman entities have agency or vitality to act, perform, and influence other entities, just like humans. Agency is no longer considered as exclusively belonging to human beings. This epistemology challenges the superiority of humankind and deconstructs the ideology of anthropocentrism, which sets humans at the centre of the universe and grants them the validity of exploitation and suppression of non-human agents. Early in the nineteenth century, Darwin demonstrated "a marked decentring of the human in *The Descent of Man* (1871), published twelve years after the *Origin of* Species" (Grosz 2011, 23). The evolution theory questions the concepts of humans defined by humanism. The climate change crisis further subverts the centrality of humans by placing them within a circumstance that they fail to understand, regulate, and control. It is the non-human environment that controls humans, not the other way around.

Climate change inevitably results in the mass loss of biological diversity so that numerous species are facing the threat of extinction. In the epoch of the Anthropocene, "human activity has increased the species extinction rate by thousand to ten thousand fold in the tropical rain forests" (Crutzen and Stoermer 2000, 17). Generally, the "rate in the loss of species diversity is similar in intensity to the event around 65 million years ago which wiped out the dinosaurs" (Shubin 2008, 17–19). These scientific facts of a marked increase in species extinction are reflected in *Mara and Dann*. The survival dilemma of the non-anthropomorphic animal characters is one of the thematic focuses in the novel. "[A]nimals were dying everywhere" (Lessing 1999, 12), and there are "no animals at all" (17) in the hills. Dead animals and animal bones are scattered along the road throughout their adventure. Since "the mass extinction of one species could spell

danger for another" (Chakrabarty 2009, 217), the extinction of animal species foreshadows a similar fate for human beings, which is illuminated through the conversation between Mara and a man:

"These are the extinct animals," said the man. "They died out hundreds of years ago."

"It was the last time there was a very bad drought. It lasted for so long all the animals died. The big ones. Twice as big as our animals."

In terms of geological deep time, human beings as homo sapiens are just another kind of species and they are not immune from natural calamities and cannot exclude the possibility of extinction. In extremely hostile circumstances, human beings have to not only tussle for survival with non-human species for scarce resources but may even confront the threat of being attacked by them. In this regard, human beings, controlled by environmental conditions, are by no means the centre of the biosphere, which subverts the respective positions of subject and object.

Furthermore, in the novel, those animals lucky enough to survive mutate dreadfully to adapt to the capricious climate. The original smaller insects mutate from being herbivorous to carnivorous and become horrible enormous beasts that scavenge for food and eat everything they find, including people. During their adventure, Mara and Dann are terrified of the looming danger of abnormally giant animals, like spiders, scorpions, lizards, stingers, beetles, and other unknown insects. These animals are likely to hunt down and smash people and other surviving animals. To be more specific, spiders become huge and appalling. "Big yellow spiders that coated every dead bush or tree with webs as thick as the material her [Mara's] robe was made of. Some spiders were the size of a child" (Lessing 1999, 105). "This room was full of spiders ... enormous, brown spiders that were everywhere on the walls and the floor." What is even scarier is that "they were eating each other ... a great brown spider, the size of a big dog, leaped on a smaller one and began crunching it up, while the victim squeaked and squirmed, and others came scrambling to join in the feast" (110-111). Similarly, lizards become "big, fat, bulging-with-flesh beasts, the size of a big man" (122), and it is easy for them to attack humans for food: "The lizard had taken up a sleeping woman in its mouth and was waddling off out of sight. She did not even scream. They could hear the crunching sounds of her being eaten, and the hisses and grunts that meant other predators were wanting their share" (119). Sadly, the "woman has just been eaten alive by a lizard" (119). This horrific scene is haunting: with "a clump of brown hair covered in dirt, that was the hair of the woman eaten by the lizard last night, with bloodstains on it" (120). Animals preying on people seems so common in the extreme environment depicted in the novel that it fails to arouse human sympathy. The ferocious "water dragons" are in fact "enormous lizards" that "lived in water and pulled smaller animals in to eat" (41– 42), and "there's poison in those claws" (180). "Some of them [are] half as long as the boat" (212). "These dragons had been in the rivers for thousands of years: the pictures

[&]quot;Why did they?"

[&]quot;Will this drought be as long as that?"

[&]quot;Let's hope not," he said, "or we'll all be extinct too." (Lessing 1999, 18)

on the walls of the Rock Village said so. And they were just the same, great clumsy monsters with long jaws full of irregular, ugly teeth and bulging with meat and confidence" (212). Besides, there are also giant water stingers, as Mara sees personally: "It was very big, as big as the largest of the Rock People, and it had pincers in front that could easily crush Dann, and a long sting like a whip for a tail" (42).

These bizarre, terrifying animal imageries suggest that climate change not only causes mass destruction in biodiversity but also induces animal mutations. The fact that climate change leads to species mutations is more than just literary imagination, as it has been confirmed by scientific reports: "a new study purports that one component of evolution—one trend—is consistent: Species keep getting bigger and bigger" (Hays 2015). Lessing's literary imagination of mutant species metaphorically reflects scientific predictions of species mutation in the near future.

These horrible and gloomy scenes hint at a profound critique by Lessing of anthropocentric ideology and "the idea of human exceptionalism, distinction of categories and separateness" (Kuznetski 2021, 63). On the contrary, nonhuman animals with altered behaviours and diets are more adaptable to the changing climate. In the Anthropocene, "with its utter confusion between objects and subjects" (Latour 2014, 8), people are increasingly aware that "we are just one of the many species that could face extinction" (Mertens and Craps 2018, 134). Thus, the boundary between human and nonhuman species becomes blurred. Through crossing the species boundary, Lessing places human beings within a broader biotic community in which the individual is just one member, interdependent of other nonhuman members. In this respect, Lessing constructs the post-humanist landscape with a purpose to "forge more fluid, non-hierarchical human/animal bonds" (Braidotti 2013, 73).

Crossing Generic Boundaries: Beyond the Doom Scenarios in Environmental Apocalypse Fiction

As a crisis discourse, environmental apocalypse discourse deploys eschatological rhetoric to describe appalling environmental catastrophes with an intention of raising people's awareness of human-inflicted environmental hazards. Richard Carson's *Silent Spring* (1962) with its depiction of a world-ending scenario serves as a typical environmental apocalypse to persuade people of the unknown toxic nature of pesticides, which are lethal to humans as well as to the nonhuman world. In a time when people did not know or realise the extent of environmental problems, the apocalypse figured as a "powerful master metaphor" (Buell 1996, 285) in depicting environmental problems. Due to industrialisation and modernisation, people become more aware of the increasing environmental crisis and realise the impossibility of a return to an undamaged state of the world. While apocalypticism remains important in revealing environmental issues, its "more intimately realistic portrayals of damage done" (Buell 2003, 30) disclose the fact that people are now "dwelling in crisis." Thus, the apocalypse is turned into "a way of life" (188). This domestication of crisis is "brought about not only by an

accumulation of catastrophic events, but also due to a change in the nature of environmental problems" (Mehnert 2016, 31). With the increasing globalisation and the arrival of the Anthropocene, environmental issues centred on climate change have become more complicated and severe, surpassing the "spectacular" of apocalyptic narratives. In a society where environmental risks are omnipresent, "apocalypticism may no longer serve to convey a sense of urgency" (Mehnert 2016, 32). People gradually come to understand that the world will not end as described in an imaginary apocalypse, but circumstances will increasingly become worse. Furthermore, nature and culture become more practically inseparable from each other, so apocalyptic imageries "generally based on presenting clear antagonists, may no longer be fitting to grasp the diffuse relation between victim and culprit in contemporary risk scenarios" (Mehnert 2016, 32-33). Climate change fiction that does not resort exclusively to the eschatological trope may figure as an innovative response to the changed nature of environmental problems today and provide insights into alternative narrative frameworks to the apocalyptic environmental crisis discourse that has predominated until recently.

Indeed, Mara and Dann depicts a world that is devastated and destroyed by severe drought, floods, famine, diseases, and wars caused by the unprecedented climate change. Lessing states in the preface that the book "is an attempt to imagine what some of the consequences might be when the ice returns and life must retreat to the middle and southern latitudes" (1999, viii). Suffice it to say, she aims at uncovering the irreversible consequences of human deeds for the planet, which in turn inflicts natural disasters and social upheavals. In the novel, water is the most impressive imagery that functions both as the main crisis narrative and the crucial factor in the thread of the story. The novel begins with Mara enduring unbearable thirst and her repeated but futile request for water, establishing the backdrop of anguish and desperation for the whole story. "Her mouth was burning, her eyes burned, because she wanted to cry and there were no tears there, her whole being was so dry, she burned with dryness" (Lessing 1999, 3-4). Mara's dryness symbolises the grand scale of drought experienced in this world. The weather is "getting drier" (5). Animals are "dying everywhere because of the dryness" (12). The trees are "dying, or dead" (17). Places all around are "all dried up and dead" (63). "[T]he drought had not broken in the South, and there had been no rain at all" (255). The whole natural world is dying from drought, which is resonant with the toxic, lifeless, and deadly silent world created by Carson. The drought is so severe that people have to rely only on the water in rare roots and stems of plants to sustain life. Even worse than that, drought brings about all kinds of violence in the human world. Different countries and regions resort to brutal wars to seize control of water resources. Ironically, no one really cares who won the war, because the water they fought for "is all drying up anyway" (105). The place Chelops in the novel stipulates that by law "it is a death sentence for defiling the water supply" (136). "The penalty for wasting water would be death" (170). Rivalry for water would doubtlessly result in the mass destruction of human and nonhuman life. Drought is only one of the numerous consequences of the climate crisis that can easily bring all kinds of life to an end. "[F]lood and droughts, reduction in water

resources, rising sea levels, changes in ecosystems inevitably give rise to severe problems of food production and security, and human health" (Baysal 2022, 44). Natural disasters combined with social havoc weave the lifeless and hopeless world in *Mara and Dann*.

As shown above, even though *Mara and Dann* portrays nightmarish, disastrous pictures of a dying world, it goes beyond the apocalyptic scenarios. Instead, the novel provides a possibility of a promising future. After experiencing numerous life-threatening dangers in the disaster-stricken world, the two siblings in the end find a comforting place to settle down with their friends:

In the middle of the next day they stopped as they reached the top of a hill, stunned, silenced. In front lay a vast blue, which went on and on until it met the paler blue of the sky. This blue was flecked with little, white, moving crests. ... They went on, with the sea at their right, for they had turned south to climb a long rise towards a large, low spreading house, of red brick, with verandahs and pillars. ... Friendly, handsome, well fed dogs: this was a new thing for them all and told them that times of famine or even hardship were behind them. (Lessing 1999, 397–398)

The peaceful landscape enables Mara and Dann finally to take a breath with relief. The ending of their adventure resembles the ending of a fairy tale in which "all lived happily ever after" (Lessing 1999, 403). In this way, transcending the world-ending scenarios in apocalypse fiction, Mara and Dann is more similar to the critical dystopia of climate change fiction which not only resists the romantic imagination of utopia, but also "holds out hope that the dystopia can be overcome" (Moylan and Baccolini 2003, 7). The critical dystopia "allows both readers and protagonists to hope by resisting closure: the ambiguous, open endings of the novel maintain the utopian impulse within the work" (Moylan and Baccolini 2003, 7). Such an ending opens a space for an alternative world in the future, evoking the sense of no ending. Since "the happy ending is also the promise of posterity" (Johns-Putra 2019, 167), the pleasant ending of the novel implies Lessing's deep concern for later generations who are endowed with the right to have a healthy environment. Rewarded with a better future rather than punished by a doomsday, people may have more initiative to fix their wrong deeds towards nature for the sake of later generations. Because it "no longer provides redemption but solely feeds on the fascination with ecological disasters" (Mehnert 2016, 30), environmental apocalypse fiction nowadays can hardly fulfil its ethical value of persuading readers to take action against the approaching environmental crisis. Thus, creating hope rather than doom in Mara and Dann can serve as a more convincing narrative strategy to evoke readers' emotional response and provoke ethical reflection upon environmental issues.

Conclusion

As a particular example of climate change fiction, *Mara and Dann* makes a critical response to the survival predicaments of the Anthropocene, which has brought about epistemological fracture, ethical anxiety, and aesthetic challenges. In order to make

climate change perceivable and comprehensible, Lessing adopts different narrative strategies of crossing boundaries of scales, species, and genres. Firstly, she crosses the scalar boundary to shift humans' frame of reference to the planetary scale and geological deep time so as to deconstruct the dichotomy between human history and natural history as well as to disclose the anthropogenic causes of climate change. Secondly, she crosses the species boundary to dissolve the centrality of human beings and the dichotomy between subject and object. Third, she crosses the generic boundary to transcend the world-ending scenarios of environmental apocalypse fiction to arouse readers' environmental ethics of intergenerational justice. In this way, Lessing critically denounces the ideology of anthropocentrism and elaborately constructs a post-humanistic network in which humans and nature are equally interdependent on each other.

In addition, the whole story in Mara and Dann takes place in the land called "Ifrik," which actually symbolises Africa. Lessing's Rhodesian-raised (now Zimbabwe) experience makes her familiar with and concerned about Africa. She makes Africa the setting in many of her literary works, such as The Grass Is Singing (1950), Children of Violence (1952–1969), and The Golden Notebook (1962). The fictional description of climate change in Africa could be associated with the issue of environmental or climate injustice between developed and developing countries. All people have the right to "share equally in the benefits bestowed by a healthy environment" (Adamson, Evans, and Stein 2002, 4). However, severe droughts, floods, and other disastrous consequences of climate change continue to fall disproportionately on the world's poorest people and countries, many of which are in Africa. It is reported that as of autumn 2019, "western, central, and some parts of Southern Africa, have been experiencing the lowest rainfall since 1981, making, for instance in Namibia, 2.4 million people 'food insecure,' with children being particularly vulnerable" (Reliefweb 2019). The poverty-stricken areas or countries with less economic and political power are much more fragile and vulnerable to climate change and other environmental crises. As the hyperobject, climate change is characterised by deterritorialisation, which infiltrates into every corner of the world. It has evolved from an undeniable natural scientific problem into a complicated practical issue, involving political, economic, and cultural factors. Therefore, a wide range of aspects should be taken into consideration to deal with this global issue in the Anthropocene.

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