

Anthropocentric Breakdown of Ecology: A Structural Analysis of Ecological Disasters Narratives within the *MaddAddam* Trilogy

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Abstract—This article delves into the narratives of ecological disasters within Margaret Atwood’s *MaddAddam* trilogy from a structural perspective, offering an in-depth analysis that transcends the mere textual presentation. In the scope of Harmonious Discourse Analysis, the study further scrutinizes the intricate web of relationships that make up the narrative system zeroing in on the core “human problems”, unveiling the underlying dynamics propelling the relentless cycle of ecological catastrophes depicted in Atwood’s works. At the heart of this analysis lies the notion of anthropocentrism, the excessive human interference that ultimately leads to irreversible disruptions in the natural world. The chaotic and dystopian world depicted in the trilogy is not merely a product of fiction but a speculative projection of a future where the prevailing anthropocentric mindset persists.

Keywords—ecological disaster narratives, structural analysis, harmonious discourse analysis

I. INTRODUCTION

Climate Fiction, commonly known as cli-fi, is a literary genre that explores the effects of climate change on both human society and the natural environment. It can be defined as a genre that “explores the causes, impacts, and responses to climate change, incorporating discussions of climate science and the social, cultural, and political ramifications of environmental transformation” [1]. Early landmarks in climate fiction include Jules Verne’s *The Purchase of the North Pole* (1889) and Margaret Atwood’s *Oryx and Crake* (2003). In contemporary climate fiction studies, research priorities highlight several key areas: the socio-cultural impacts of climate change; individual (or community) responses and adaptation to environmental crises. Moreover, researchers investigate the literary techniques employed within climate fiction narratives to convey scientific information, raise public awareness, and stimulate collective action [2].

In the field of climate fiction, multiple theoretical approaches exist for assessing and comprehending the texts. Among the most fundamental techniques is ecocriticism, which explores the connection between literature and the natural world. Ecocriticism, according to Cheryll Glotfelty and Harold Fromm [3], is the “examination of the interactions between literature and the environment”. The analysis examines how stories depict environmental concerns and their effect on human society, providing insightful viewpoints on the complexities of ecological literature. This methodology also gives rise to a more profound comprehension of the intricate links between humans and

their surroundings, highlighting the interdependence and mutual influence between them [4].

In light of this principal theme of ecocriticism- interactions between literature and environment- the article will adopt structuralism to delve into the ecological disaster narrative of Margaret Atwood’s *MaddAddam* trilogy, to reveal the deeper meanings and structures beyond text. By utilizing the approach of Harmonious Discourse Analysis, this study is going to further explore the process diagram of the narrative system, exploring Atwood’s insight on the fundamental cause of ecological disasters and her critique against anthropocentrism.

II. LITERATURE REVIEW

After ten years of work, Margaret Atwood’s brilliant *MaddAddam* trilogy finished with *MaddAddam*. The final entry published in 2013 draws together the previous two works, *Oryx and Crake* (2003) and *The Year of the Flood* (2009), in a conclusion that “leaves us... with a sense of awe at humanity’s barely explored potential to evolve” [5]. Also, it stokes up the continuous discussions over the trilogy and the surprises in its store. Among them, the genre of Atwood’s trilogy has been keenly contested. For Atwood, science fiction proper is distinct from speculative fiction in that the former “denotes book with things in them we can’t yet do or begin to do, talking beings we can never meet, and places we can’t go”, but the latter “employs the means already more or less to hand, and takes place on Planet Earth” [6]. In light of this distinction, she insists the trilogy a speculative rather than science fiction. Yet, considering John Rieder’s genre theory of continuous negotiation by “communities of practice” [7], Lars Schmeink questions categorizing the work as speculative fiction for most readers have referred to it as science fiction [8]. Yet, Patrick D. Murphy sees Atwood’s trilogy as a cautionary tale that focalizes the new dystopia world and also flashbacks of the post-catastrophic years that resemble the current life [9]. Chinese critics You-Pin Yan and Jun Fu refer to the work as a cautionary tale as well [10]. Shelley Boyd, on the other hand, regards the trilogy as a *ustopia*, a term coined by Atwood based on the duality between utopia and dystopia [11]. That is, in her words, if “scratch the surface ...you see ...within each utopia, a concealed dystopia; within each dystopia, a hidden utopia, if only in the form of the world as it existed before the bad guys took over” [12].

As Atwood has put it “...narrative genres of all kinds are enclosed by permeable membranes and tend to combine and

recombine”, the genre debate over the trilogy has to do with the uncertainty of literary forms [6]. Besides, the broad coverage of elements and topics also contributes to the diverse entry that critics can opt for to read the work. Hao-Ku Chung, for instance, has chosen the monstrosity in *Oryx and Crake* as the point of analysis to venture into the anthropocentric demarcation between human beings and monsters [13]. On the other hand, Danette DiMarco has read the monsters as Atwood’s invoking the myth of “Wendigo” [14], the mythical monster in native Canadian culture, to expose the detrimental and systemic “commitment to over-consumption” in Western culture [15]. Other critics like Allison Dunlap [16] focus on the debate over the capitalistic manipulation of science, especially *Crake*, the multi-dimensional representative of the capitalist scientific world. In terms of the religious elements in the trilogy, Chinese critic Yun-Qiu Wang has explored Atwood’s presentation of the Western religious crisis in each of her trilogy and her attempts to find a better way out, without going extreme or moving adrift [17].

While many have explored the series in a separate manner, Dana Philips has read the trilogy as a single narrative “telling the story of the rapid decline and fall the collapse of contemporary industrial civilization” [18]. By such a reading, he has ventured into the trope of *collapse, stability, resilience, and sustainability* and its role in shaping Atwood’s environmental metanarrative of the trilogy. This study also demonstrates the constitutive character inherent in the elements of Atwood’s narrative. However, further systematic exploration of these elements that constitute the disaster narrative has not been conducted in the article.

What does it take for a disaster to occur? How are these constituents constructed to take effect? What is it that drives the narrative system of ecological disaster? To find out the answers to these questions, the article needs to take a big-picture perspective to read the trilogy. Therefore, the following discussion will venture into the diverse elements incorporated into the ecological disaster narrative to map out the narrative system beyond text. Meanwhile, by revealing the scheme of the system, this article will also attempt to figure out and evaluate the critique against anthropocentrism that Atwood intends to convey by telling a speculative tragedy stemming from the human-centric mindset over human-nature relations.

III. THE COMMON PATTERN: BREAKDOWN OF THE HUMAN-NATURE BALANCE

Humans have always been active in interpreting natural movements. Ecological disaster, as an extreme manifestation of natural power, has triggered people to raise explanations of various sorts about what is really behind the massive acts of nature. Historically, a force of deity or other divine power had been taken as an answer. Such mythological presentations of ecological hazards can be found in various cultures around the world. In the Biblical account of Noah’s Ark, for instance, the great flood was God’s final resort to “clear the earth of wickedness and allow good people to have a fresh start” [19]. In the eyes of ancient Greeks, the fiery activity of volcanoes came from the belowground forge of Hephaestus, the god of fire. Ancient Chinese had also come up with mythological explanations of ecological disasters. A

dispute between Gong Gong (the God of Fire) and Zhurong (the God of Water) ended up causing the collapse of one pillar that supported the sky. This put the world into a disastrous deluge until the goddess Nuwa successfully repaired the beach of the sky with five-color rocks and ceased the calamity. These narratives were devised to explain ecological disasters and often attributed them to the power of the divine. Whether as a punishment for human sins or a result of acts among deities, the ruinous breakdown of the balance between humans and nature was brought by a superhuman power beyond human control. However, such attribution downgraded nature as merely a medium of divine power, an existence “outside” of human beings. In this notion that ecological disasters were punishments on human beings, humans were focalized whilst nature was dismissed. It overlooked the agency of natural force as well as the direct interaction between man and nature and the impacts it can have on both sides. On the other hand, it also led people not to seek practical solutions but to sorts of rituals to plead and please deities, which ended up with little avail or even more sacrifices due to the absurd process of rituals, such as massive incineration of animals.

Yet, the development of science and technology has steered people toward the factors of natural force and human activities when explaining ecological disasters. With a focus on the detrimental costs of ecological disasters on human society, Floods, Extreme Cold Weather, and Global Warming narratives in the Western literature world reflect people’s understanding of ecological disasters over different periods. Though presented in different forms, ecological hazards are closely associated with direct interactions between human beings and nature in these narratives. Chinese writers, on the other hand, concentrate more on proclaiming the harmony between humanity and nature. By personifying nature, they attempt to give rise to moral intuition and empathy to encourage people to rectify their activities towards nature. For instance, in *The Last Dance of a Leopard*, Ying-Song Chen had the last leopard in Shennongjia (Hubei Province) be the narrator recounting his life of loneliness. In the form of an allegory, Chen expresses his reflection on the relationship between human beings and nature in the story [20]. Although with different focuses, both narratives share a common ground. That is, instead of explaining disasters as a manifestation of divinity, they approach the breakdown of the human-nature balance as the outcome of direct interaction between humans and nature.

From the foregoing discussion, it is evident that in whatever form, the common core of ecological disasters is the breakdown of the balance between human beings and nature. Moreover, this breakdown is a process of human-nature interactions that involves natural force, human activities, and many other factors. In other words, it occurs both historically and collectively. In light of this, reading ecological disasters in storytelling as a collective narrative is both reasonable and feasible. Not merely the human and natural factors but also their relations contribute to the breakdown of balance. Also, an ecological disaster is a whole process including its exposition, development, and repercussion. Namely, the narrative of ecological disasters works as a constructed system beyond the textual ground. Then, what are the elements this narrative system is constructed of? How are

they being organized to operate? Additionally, as Brian Boyd has posed that storytelling serves evolutionary purposes [21], it is also necessary to evaluate the system with respect to the purpose it intends to serve. To this end, this article will take Margaret Atwood’s *MaddAddam* trilogy as the object of study to explore the narrative system of the breakdown of the human-nature balance and review how the system takes effect in telling a story of an apocalyptic world.

IV. MATERIALS AND METHODS

To explore how the narrative system of ecological disasters in Atwood’s trilogy is constructed, this article will take a structural approach to the literary discourse of human-nature balance breakdown. Then, the following will specify the operation of this structural analysis.

As one of the most influential schools of thought from the twentieth century to date, structuralism, developed based on semiology, has permeated almost every discipline and field. For example, Claude Lévi-Strauss has established a structuralist epistemology in the field of anthropology and argued that all humans share the same basic categories and systems of organization that we use to make sense of the human experience [22]. His structural study of mythology has also developed an innovative model for revealing the universal themes of myth [23]. In the literary sphere, critics like Roland Barthes and Gerard Genette have also posited structuralism as an approach to narratology and successfully promoted huge progress in its theory and practices.

Structuralism provides an outlook and methodology that allows people to see various practices, phenomena, and activities through the systems of signification and draws from them the deep structure that decides the way meanings are produced and recreated. For literary critics, especially, it offers an entry for structural criticism that reads the text scientifically and neutrally from a global and objective point of view. Conducting a structural analysis often involves “the isolation of recurrent units, the determination of the relationship these units may have with each other, and the delineation of the relationship these units may have, singularly or multiply, with the whole constructed system” [24]. Therefore, by consulting former structural studies (mainly *The Structural Study of Myth* by Claude Lévi-Strauss), this article will follow these operations to explore the narrative system of ecological disasters in Atwood’s *MaddAddam* trilogy.

Yet, before embarking on finding the recurrent constituents, on which level these units are to be identified and isolated needs to be settled. In light of the historical and collective features in question, it is evident that ecological disasters are never caused by stacks of isolated and static factors but rather by multiple processes of dynamic relations. Thus, for ecological disasters to make sense in textual form, they are presented as bundles of relations with marked tense and voice. In other words, they exist on the sentence level. The isolation of the constituent units of the narrative system should, therefore, be carried out on the sentence level. The isolation process will also apply the principles of economy of explanation, unity of solution, and ability to reconstruct the whole from a fragment, as well as further stages from previous ones [23].

V. RESULT AND DISCUSSION

A. The Units of Ecological Disasters

In the structural study of myth, Claude Lévi-Strauss approaches the myth as a unilinear series that needs to be re-established into the correct disposition [23].

“As if, . . . , we were confronted with a sequence of the type: 1, 2, 4, 7, 8, 2, 3, 4, 6, 8, 1, 4, 5, 7, . . . , the assignment being to put all the 1’s together, all the 2’s, the 3’s, etc.”

Consulting the same kind of operation, the isolated units of ecological disaster in the *MaddAddam* trilogy can be arranged into the following Table 1:

Table 1. Units of ecological disasters in the trilogy

Ecological Disasters			
Happicuppa Crop exploits the rainforest	Habitat- destroying activities threaten the bird		
		OrganInc Farms’ biolabs blend animals	Manmade creatures breed into wild populations
Scarce rainfall parches the plain			Pigeon substitutes source of meat
		HelthWyzer secretly synthesizes virus	The hemorrhagic virus has people dissolved into goo
Melting ice- berg endangers polar bears	Bearlift feeds polar bears with leftovers		
Rising sea level drowns coastal cities			
		Human beings exterminate gorillas and other animals	
		Crake creates the Crakers	
		Crake puts the new virus into BlyssPlus	A lethal pandemic sweeps the planet
Punishing sunshine burns human skin			
Daily thunderstorm floods the earth			

The isolated short sentences are sorted into five vertical columns. Each of the columns exhibits one common feature that the relations in the same unit share. The features of the five bundles of relations are:

- 1) excessive human activities on plants;
- 2) excessive natural force;
- 3) excessive human activities on animals;
- 4) excessive technology interference;
- 5) loss of control over manmade products

The first and third columns still share the factor of “excessive human activities”. Therefore, the two columns can be further arranged into a broader bundle “excessive human activities on nature”. Also, the feature of the relations in the fifth column can be associated with “excessive technology interference”. It is the outcome of excessive technology interference. The two bundles on the right, thus, also suggest a cause-and-effect relation. Upon unraveling the marking feature of the five units, it is clear that “excessiveness” is the key element in the narrative of ecological disasters. Whether it is the extreme natural force that human beings fail to combat or the undue human interference that disturbs the ecosystem, excessiveness is proven to break the human-nature balance and result in ecological catastrophes.

Furthermore, the destruction by excessiveness can pass on rather than simply conclude in a single natural collapse, the reason being the resilience of the ecosystem. According to C. S. Holling, resilience is “a measure of the persistence of systems and their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables”. Thus, a systematic rebound of such can reach various relatively stable configurations. On the other hand, this also means resilience can form a “bad” state of stability [25]. In the trilogy, for instance, the afternoon thunderstorm is taken more as a daily routine than extreme weather. People seem to have maintained a stable relationship with the storm and can treat it in the same way they used to treat regular rainy days. Yet, the damage of the daily thunderstorms is in no way the same as the normal weather. Also, at the end of the story, human beings, the “Crakers”, and “pigoons” seemingly figure out a new form of stability and are ready to move on. However, as Phillips puts it, “This new beginning seems likely to eventuate in calamities similar to those that—or so we are encouraged to assume—first set its narrative into motion” [18]. The irrevocable damage of excessiveness is passing on “in the course of a doom cycle”.

B. Harmonious Discourse Analysis on the Effects of the System

Ecology, in the Chinese context, is defined not just as the relationship between living organisms and their environment and the structural and functional relationships resulting from their interactions. Rather, it is also used to denote harmony: harmony between man and nature. Rooting in the vision of “Unity of Nature and Man” in classical Chinese philosophy, this notion of ecology emphasizes the intrinsic value of nature [26], which is not necessarily associated with the materials and services nature can provide for human beings but, instead, man is taken as component no different from other animals. Thus, when addressing the interactions between man and nature, environmental issues in particular, the evaluation on the human side of the issues tends to be “problem-oriented” rather than “benefit-oriented”. On this basis, Guo-Wen Huang proposed the Harmonious Discourse Analysis, a fresh approach to the ecological analysis of discourse in the Chinese context with a focus on the “human problems” [27].

As discussed above, the units of “excessiveness” constitute the narrative system of ecological disasters. Looking into the interactions and relations within the units, these different presentations of the breakdown of the human-nature balance

are also discourses around the harmony between human beings and nature. What are the human problems in Atwood’s narrative of ecological disasters? What is it that drives the vicious cycle of ecological disasters in this narrative? What reflection does Atwood’s way of meaning through this narrative system intend to evoke? The following discourse analysis will attempt to figure out the answers to the two questions.

In Harmonious Discourse analysis, the discussion of the “human problems” involves three aspects: what the human problems are; what people are involved in the problems; and in what way people are involved in the problems [27]. According to the three aspects of analysis and also referring to Rui-Hua Zhao’s approach to the “human problem” in her case study of the Arctic discourse [28], the discourses of ecological disasters can be analyzed in the table below (see Table 2).

Table 2. “Human’s Problems” in the ecological disaster narratives

Topics of Problems	Participants of Problems	Ways of Getting Involved in Problems		
		Making Problems	Facing Problems	Solving Problems
Focus: Distortion of Ecosystem Minor points: technology, economy	Hippicuppa Corp	Exploiting the rainforest	Rainforest decaying which threatens the birds	Resorting to adaptation
	OrganInc Farm	Unduly blending animals to create new creatures	Manmade creatures breed into the wild population	
	HelthWyzer	Synthesizing virus to sell more medicine	Out of cure for the new contagious hemorrhagic virus	
	Crake	Planning to eliminate human beings by putting the new virus into the BlyssPlus	A lethal pandemic sweeps the world	
	Human beings	Undue emission of pollution, exploitation of resources	extreme weather, rising sea levels due to global warming and climate change	

In terms of the “human problems” in the ecological disaster discourses, it is clear that “Making problems” and “Facing Problems” are stressed and highlighted. In Atwood’s narrative, excessive human interference seriously disrupts the harmonious relationship between human beings and the ecosystem. Facing these serious environmental issues follows, people again resort to technology to adapt to the drastic changes. Yet, such adaptation proves of no help but to set nature into the loop of degradation. These discourses exhibit before readers the chaos brought by undue human disturbance. By emphasizing the intrinsic natural character of the ecosystem, Atwood exposes the detrimental anthropocentrism idea that contributes to not only excessive human exploitation but also the adaptive solution to environmental issues.

The anthropocentric idea drives human beings to exploit the environment so as to satisfy their craving for economic growth. Consequently, excessive human activities cause irrevocable disruption to the environment. Dysfunction of the

ecosystem then triggers radical alternation like climate change. Facing these issues, human beings again resort to technology, convinced in the idea that it can help them adapt to and even take advantage of the changes. What it brings about is yet another interference that disturbs nature (see Fig. 1). Crake, also the holder of the idea that man is in control and power, even attempts to replace humankind with “Crakers”, whose sunburn-free skins are still to adapt to the punishing sunshine. However, the grand “Paradise Project”, like all the resorts of adaptation there have been, only turns the “new world” into another wasteland.

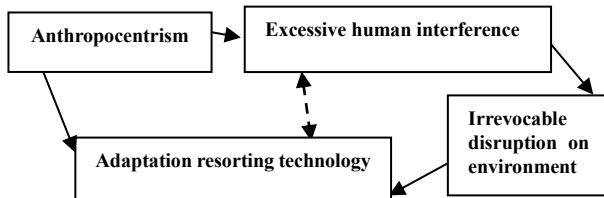


Fig. 1. The process diagram of ecological disaster narratives.

Considering the elements in Atwood’s narrative of ecological disasters in the trilogy, it is also worth noting that her depiction of the future is closely associated with the present day. As Phillips has commented, “The world she imagines is familiar; it is, in almost every respect, our world” [18]. Constant occurrence of extreme weather, rising sea levels, and many other rough changes are current challenges to society. What is more of the essence is this continuity of the anthropocentric approach to the relationship between man and nature: various biological experiments on animals are promoted nowadays for breakthroughs in spheres like organ transplantation; media and experts worldwide constantly advocate global warming as a new opportunity for advancing the exploitation of the Arctic. Thus, when reading the trilogy, this correspondence with what is being experienced in current society creates a mixed feeling of “forecast” and “flashback”. This sense of familiarity also serves Atwood’s purpose of ecological warning. By presenting the world of the future, which is in many senses close to that of today, Atwood exposes and criticizes the present anthropocentric mindset behind excessive human interference. This detrimental outlook, if not reflected and resisted, would have the world trapped in the doom cycle of unrecoverable destruction that breaks the harmony between man and nature.

VI. CONCLUSION

From a structural perspective, this article reads the narratives of ecological disasters in the *MaddAddam* trilogy and explores the narrative system beyond the textual presentation. Focusing on the “human problems”, further analysis of the bundles of relations that constitute the narrative system unravels the dynamics that drive the vicious loop of ecological disasters in Atwood’s narrative. That is the anthropocentrism underlying excessive human interference, which causes irrevocable disruption in nature. Yet, that chaotic world is not a fictional imagination but a speculative destination where the present anthropocentric mindset continues. That world washed by the “waterless flood” could very likely be our destination if we do not discard our anthropocentric inclination so as to reflect and reconstruct the

way we see our relations with nature.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Zhilin Wang constructed the research structure, conducted the analysis, and wrote the paper. Qingqi Wei guided and revised the paper. All authors have read and approved the final version.

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