

A Study of Margaret Atwood's MaddAddam Trilogy through the Lens of Material Eco-criticism

Can Zhou^{1,a,*}

¹School of Foreign Languages, University of Electronic Science and Technology, Chengdu, Sichuan Province, China, 610054

^a105794546@qq.com

*corresponding author

Abstract: This thesis employs material ecocriticism as its theoretical framework to conduct a systematic analysis of Margaret Atwood's MaddAddam Trilogy. It explores how the trilogy reconstructs the relationship between the human and the non-human world through material narratives, thereby transcending anthropocentrism and pointing toward the possibility of a cross-species symbiotic ethics. In the contemporary context where genetic engineering and digital technologies increasingly blur biological and cultural boundaries, Atwood's trilogy serves not only as a literary imagination of a possible future but also as a profound critique of current ecological crises, technological overreach, and ethical disorder.

The research applies the core propositions of material ecocriticism—particularly its emphasis on the vitality of matter, trans-corporeal mobility, and narrative agency—as the primary lens for textual interpretation. The theory dismantles the traditional binaries of human/non-human, nature/culture, and subject/object, arguing that all material forms possess agential capacity and the potential to generate meaning.

The analysis reveals that within the trilogy, non-human matter is far from passive; rather, it actively participates as an agent in narrative construction and ethical shaping. Microorganisms, such as the JUVE virus, rewrite the global order through their logic of propagation. Plants carry cultural significance and facilitate spiritual exchange, as seen in the practices of God's Gardeners. Genetically engineered products like the Crakers and Pigoons constantly challenge human definitions of life, intelligence, and morality through their emergent behaviors, emotions, and communicative abilities. Meanwhile, human characters undergo profound subjectivity reconstruction through interactions with these non-human entities, gradually dismantling their anthropocentric worldview.

Through its narrative design, the MaddAddam Trilogy outlines a vision of ecological ethics based on material interconnectedness and trans-corporeal coexistence. The practices of “God's Gardeners,” Toby's gardening, and the negotiated relationships among humans, Crakers, and Pigoons foreshadow a decentralized, multispecies model of community. This community emphasizes symbiosis through dialogue, care, and justice amidst difference. Therefore, the thesis concludes that Atwood's writing moves beyond simple apocalyptic warning; it provides a textual resource for rethinking how to re-embed humanity within the ecological network with humility and responsibility, and how to forge cross-species ethical contracts in an age of pervasive technology.

Keywords: *Material Ecocriticism; the MaddAddam Trilogy; Material Agency; Cross-species Ethics*

1. Margaret Atwood and her MaddAddam Trilogy

Margaret Eleanor Atwood (born 1939) is a seminal figure in contemporary global literature, widely recognized as the "Queen of Canadian Literature." Her formative years were deeply influenced by her father, Carl Atwood, an entomologist, whose scientific research in the forests of Quebec exposed her to natural ecosystems from a young age. This early experience nurtured a lasting awareness of ecological connections, a concern that profoundly shapes her literary creativity. A passionate and diverse reader since childhood, her academic journey took her to Victoria College at the University of Toronto, followed by postgraduate studies at Radcliffe College and Harvard University. Although her doctoral thesis, tentatively titled "Nature and Power in the English Metaphysical Romance of the 19th and 20th Centuries," remained incomplete, its thematic focus foreshadowed the central conflicts between humanity, nature, and systems of authority in her later fiction.

Atwood is a remarkably prolific and versatile author whose oeuvre spans novels, short stories, poetry, literary and cultural criticism, and non-fiction. Her major fictional works include *The Edible Woman* (1969), *Surfacing* (1972), *Lady Oracle* (1976), *The Handmaid's Tale* (1985), *Cat's Eye* (1988), *Alias Grace* (1996), *The Blind Assassin* (2000), *The MaddAddam Trilogy*—comprising *Oryx and Crake* (2003), *The Year of the Flood* (2009), and *MaddAddam* (2013)—and *The Testaments* (2019). Her significant non-fiction includes *Survival: A Thematic Guide to Canadian Literature* (1972), *Payback: Debt and the Shadow Side of Wealth* (2006), and *In Other Worlds: SF and the Human Imagination* (2011).

Her literary accomplishments have been honored with several prestigious international accolades, including the Booker Prize for *The Blind Assassin*, the Governor General's Literary Award for *The Handmaid's Tale*, the Franz Kafka Prize, the Arthur C. Clarke Award, and the Giller Prize, as well as numerous nominations for the Nobel Prize in Literature. Inducted as a member of the Royal Society of Canada in 1987, she is an indisputable pillar of Canadian cultural and intellectual life.

The evolution of Atwood's work is frequently analyzed through distinct creative phases, centered on three core, interwoven thematic threads: feminism, nationalism, and ecologism. Her early period established these foundations, with *The Edible Woman* linking patriarchal oppression to environmental exploitation, while works like *Surfacing* and *Survival* interrogated Canadian national identity. Her middle period sharpened these critiques through dystopian and historical lenses; *The Handmaid's Tale* offered a feminist dystopia, and *The Blind Assassin* blended postmodern metafiction with Canadian settings. A pivotal shift occurred in the 21st century, moving from a primarily national focus to global existential concerns. In her later period, ecologism becomes the dominant lens, culminating in the *MaddAddam* trilogy, which issues a urgent warning about ecological collapse, genetic engineering, and unchecked technological hubris. Her ecological vision deepens from depicting local environmental damage in early works to portraying systemic planetary crisis and post-human coexistence in the trilogy, a progression that resonates strongly with contemporary discourses on the Anthropocene. A subsequent phase includes works like *The Heart Goes Last* (2015), which critique technology and explore ethical renewal.

Therefore, Margaret Atwood is a writer whose life story is closely connected to her environmental awareness, whose extensive body of work is characterized by originality in genre and thoughtful

discussion, and whose changing thematic emphasis offers a significant literary contribution to the most urgent issues of our era, ranging from gender politics to the future of the planet.

The MaddAddam Trilogy, consisting of *Oryx and Crake* (2003), *The Year of the Flood* (2009), and *MaddAddam* (2013), depicts a dystopian future characterized by ecological collapse and the overreach of techno-capitalism. Set in a world on the brink of human extinction due to the overwhelming influence of corporate-controlled biotechnology, the trilogy delves into the consequences of human hubris, genetic manipulation, and widespread environmental exploitation. Through a multi-perspective storytelling approach that intertwines the experiences of survivors like Jimmy (known as Snowman), Toby, Ren, and Zeb, Atwood constructs a speculative and alarmingly plausible universe where the boundaries between humans and non-humans are perpetually blurred.

Set in a speculative and not so distant future, *Oryx and Crake* begins with Snowman, the novel's focalizer who has survived for several months after the apocalyptic outbreak of lethal virus called Jetspeed Ultra Virus Extraordinary or JUVIE that almost annihilates the whole race of homo sapiens. Snowman is currently staying with a group of the lab-bred humanoids called the Crakers, whose eponymous now dead creator is Crake, a genius transgenic scientist and Snowman's best and possibly only friend. Believing himself to be the last of his kind, Snowman is suffering from symptoms of severe depression including disruptive hallucinations, recurring nightmares, constant reveries, and ever-haunting fragments of his old memories. As he is making his arduous journey to the RejoovenEsense Compound, where he used to live, in order to find more food, Snowman occasionally experiences mentally epileptic moments which reveal his past during the time before the deadly pandemic.

The world before the apocalypse is portrayed as a technocratic capitalist nightmare, where the population is tightly controlled by the CorpSeCorps, a tyrannical security company with power and authority comparable to that of an authoritarian government. Alongside terrible living conditions and widespread disease and social problems, nature is also in grave danger due to unrestrained human exploitation. Snowman gradually reflects on his past as Jimmy, his relationship with Crake and Oryx, and the downfall of humanity. The novel concludes with a feverish Snowman, armed and realizing that there are three other human survivors on a beach.

In *Oryx and Crake*, Margaret Atwood presents a tragic narrative depicting the relentless exploitation of the natural world by humans, leading to near total destruction. However, the book does not delve deeply into potential solutions to avert the apocalypse or survive it, leaving the reader with a pessimistic and crisis-ridden outlook. It is not until six years later in *The Year of the Flood* (2009), the second book in the trilogy, that the author offers an alternative narrative to the desperate circumstances depicted in the first book. This essay argues that in *The Year of the Flood*, Atwood introduces a more favorable ethical framework embodied in a religious group known as God's Gardeners, promoting a simple, eco-centric lifestyle driven by humility and love for all living beings. It also explores how the values and practices of God's Gardeners are rooted in a belief in the inherent value and equality of all life, and a self-sufficient, non-violent way of living. The potential for survival within God's Gardeners is evident in the fact that many members not only survive a lethal virus outbreak that decimates most of humanity, but also thrive. However, Atwood presents the cult of God's Gardeners in an ambivalent light, despite their admirable qualities and characters. This ambivalent portrayal suggests that the application of ethics is often complex and challenging in reality.

Set in the same world and timeline as *Oryx and Crake*, *The Year of the Flood* is told from the perspectives of three members of God's Gardeners - Toby, Ren, and Adam One. The narrative jumps between present and past, alternating between Toby and Ren, while Adam One's voice is occasionally heard through sermons and hymns from their Oral Hymnbook. The story begins with Toby's current situation, as she has managed to secure herself in a safe area, surviving the deadly virus outbreak, known as the waterless flood by the God's Gardeners. Despite being alive, Toby experiences solitude as she tends to a small vegetable garden and relies on her secret emergency food storage. She also has to defend herself against the fearsomely intelligent pigoons that have been freed from laboratories and are now causing havoc. Meanwhile, Ren survives the waterless flood by being in quarantine during the virulent pandemic. After being rescued by her best friend, Amanda, and other childhood friends, they encounter the surviving painballers, former criminals who have lost their humanity due to the inhumane punishment inflicted by the CorpSeCorps. Amanda is taken hostage, while Ren luckily escapes and crosses paths with Toby.

Searching for Amanda, Toby and Ren join with the MaddAddamites, a resistant group of scientists who commit eco-sabotage against the CorpSeCorps. As the surviving humans strive to look for Amanda, the narrative goes back and forth between the past and the present. The pasts of Toby, Ren, Amanda and others are told in the intervals revealing their shared experiences of being in the God's Garden up until the Year Twenty-Five, or *The Year of the Flood*, then the slaughtering waterless flood happens. Finally, as Toby and Ren proceed to track down Amanda, they run into feverish Snowman or Jimmy—the narrator and protagonist of *Oryx and Crake*.

Finally, Toby, Ren, and Snowman vanquish the painballers, binding them to the trees without causing harm, and successfully rescue Amanda. The novel concludes with Toby's group gathered around a bonfire as an enigmatic sound appears to be drawing nearer from a distance.

The trilogy conveys the message that in the age of technology, it is paramount to awaken our sense of ecological responsibility. This research sheds light on how technological capitalism suppresses ecological diversity, and calls on the public to reject the belief that humans are the superior species. Instead, it advocates for a new value system that prioritizes ecological justice and explores potential ways to achieve this within consumerism and technological dominance. The study has practical implications for addressing the global ecological crisis, and the proposed ethical approach provides a theoretical basis for developing ecological policies. It emphasizes the need for humans to establish a practical framework for the sustainable coexistence of multiple species, acknowledging the importance of cyborg identity, in order to address the urgent needs of the global ecological crisis.

2. Material Eco-criticism Theory

It is not until mid-1980s that ecological literary study takes shape and it subsequently gains momentum in the 1990s. As a material turn in ecocriticism, material ecocriticism shifts its focus towards the nonhuman matters and their agency beyond the anthropocentric world, offering critical insights into the vitality of the nonhuman world. This section will provide the viewpoints material ecocriticism mainly absorbs and its main assumptions.

In 2012, Slovic was the first to introduce the "material turn" in ecocriticism as the fourth wave, suggesting that material empirical research may signal a new phase in ecocriticism (qtd. in Tang, "Material Turn" 115). In 2014, Professor Serenella Iovino and Professor Serpil Oppermann published

Material Ecocriticism, marking the formal inception of material ecocriticism. As the fourth wave of ecocriticism, material ecocriticism has integrated the perspectives of new materialism and ecological postmodernism. The most crucial contribution of new materialism is the understanding of materials and their agency.

The concept of agency in matter is of fundamental importance in new materialism. According to Jane Bennett, agency refers to the ability of various entities to "not only hinder or obstruct human will and intentions, but also to act as quasi-agents or forces with their own trajectories, propensities, or tendencies" (8). Contrary to the anthropocentric belief that only humans have agency, new materialism posits that all materials, including human and nonhuman beings, possess agency. Therefore, "the true nature of matter is not that of a static and passive substance, but of a generative becoming" (Iovino and Oppermann, "Material Ecocriticism" 77).

Additionally, new materialism emphasizes the fusion of language and reality, and significance and substance, as opposed to the emphasis on linguistic constructs promoted by certain postmodern tendencies. This reconfiguration is a crucial aspect of material ecocriticism. Ecological postmodernism also plays a pivotal role. It perceives nature as a network of interconnected phenomena and recognizes the close interconnection of language and reality, nature and culture, and discursive practices and the material world. Ecological postmodernism seeks to restore wonder to reality, emphasizing the equal importance of human and nonhuman entities as a unified whole. In summary, the emphasis on the agency of material and the non-dualistic perspective in both theories provide a solid foundation for material ecocriticism.

Material ecocriticism regards agency as a tool for understanding the world and closely links the agency of materials to three aspects: firstly, the ability of materials to impact the physical world; secondly, the capacity of materials to create symbolic meanings; and thirdly, the capability of materials to tell stories. In terms of the influence of materials on the physical world, material ecocriticism also refers to this type of agency as the agentic capacity of materials, which points to the ontology or materiality of materials (Tang, "Material Ecocritical Analysis" 101).

Furthermore, in terms of the role of objects in creating meanings, Iovino and Oppermann assert that objects can serve as the embodiment of significance and the originator of meaning ("Material Ecocriticism" 82). According to the new materialism paradigm, matter and meaning are intricately intertwined, and reality is jointly shaped by both matter and discourse. Iovino and Oppermann use Stacy Alaimo's concept of "trans-corporeality" as an illustration of how objects play a role in constructing dynamics of meanings, demonstrating how bodies interact with ecological discourses and forces, thereby producing interconnected meanings (Iovino and Oppermann, "Material Ecocriticism" 5).

Based on the concept of agentic capacity, entities closely interact with human beings and their discourses, resulting in the creation of various symbolic meanings or discourses. This process allows us to reassess the intimate connection between nonhuman entities and human culture, history, society, and identity. As Professor Tang Jiannan suggests, the ongoing interaction between human and other material agents facilitates self-identification, knowledge acquisition, historical innovation, and discourse construction ("Material Turn" 118). Therefore, the agency of entities in generating meanings underscores their ability to produce meaning or discourse, highlighting the discursiveness of entities.

Thirdly, in terms of the ability of objects to tell stories, material ecocriticism asserts that objects

have their own stories to tell and every entity has a narrative, implying that both human and nonhuman entities possess the ability to generate narratives. Material ecocriticism argues that all physical forms can interact with each other and generate configurations of meanings and discourses that can be interpreted as narratives (Iovino and Oppermann, *Material Ecocriticism* 7). Therefore, the storytelling capacity of material is a combination of its ability to act and its production of meaning, pointing to its narrative or textual nature (Tang, "Material Ecocritical Analysis" 101). In sum, stories are shaped by the intertwined agency of both human and nonhuman entities.

Within the theoretical framework of material ecocriticism, the emphasis on the continuous mobility and intra-action between humans and matter constitutes a crucial theoretical pillar. This key concept, proposed by Karen Barad, differs fundamentally from the traditional notion of "interaction." While "interaction" presupposes the pre-existence of independent entities, "intra-action" emphasizes that entangled entities co-constitute and define their boundaries only through their encounters. From this perspective, the world is viewed as a dynamic, ongoing process of becoming.

Among the numerous explorations of the relationship between humans and matter, the concept of "trans-corporeality" proposed by Stacy Alaimo stands out. This concept describes the unceasing material exchange and permeation between the human body and the non-human environment. In the real world, various substances dynamically cross the boundaries of the human body. This transgression blurs the traditionally perceived boundaries between "self" and "other," rendering them porous and indistinct. From a material ecocritical standpoint, this mobility fundamentally subverts the long-standing stable relational model in which humans occupy a dominant subject position. Humans are no longer absolute subjects isolated from the environment, nor is the environment a merely passive object; instead, the two are tightly interconnected in the continuous flow and exchange of matter, forming an organic whole.

In general, the theory is highly necessary and feasible for analyzing the *MaddAddam* Trilogy, as it offers a rich narrative framework for exploring the agency of non-human matter. Atwood's depiction of genetically modified organisms, such as the Pigoons and Crakers, highlights how non-human entities are not mere passive objects but active participants in ecological and moral processes. The interspecies relationships portrayed in the trilogy demonstrate the vibrant matter theory, where material interactions shape the characters' survival and ethical decisions. Through this lens, the trilogy critiques anthropocentrism by emphasizing the dynamic, reciprocal relationships between human and non-human bodies, illustrating how material agency influences the social, ecological, and ethical fabric of the post-apocalyptic world. From the perspective of material ecocriticism, this thesis can delve deeper into the significant role of the non-human in the novel and its intricate connections with humans, thus presenting how the author inspires her readers to envision a less human-centric literature and world.

3. Material Agency in the Trilogy

In the trilogy, the boundaries between human and non-human entities are not only blurred but are actively deconstructed, challenging traditional anthropocentric perspectives. The trilogy's exploration of material ecology interrogates the roles of various species—microorganisms, animals, and plants—beyond their typical representations in post-apocalyptic fiction. By employing the lens of

material eco-criticism, Atwood emphasizes the agency of non-human entities in shaping both the narrative and the characters' survival strategies. As Stacy Alaimo's theory of trans-corporeality suggests, the trilogy underscores the symbiotic exchanges between humans and non-humans, revealing the intricate interdependence that transcends corporeal boundaries. In the trilogy, microorganisms, animals, and plants engage in a continuous and dynamic dialogue with human characters, challenging anthropocentric assumptions and exemplifying what Stacy Alaimo refers to as "trans-corporeality"—the material interchanges between human and non-human bodies. This dialogical dimension underscores the agency of non-human entities in shaping human understanding and survival in a post-apocalyptic world.

Through this, Atwood critiques the anthropocentric worldview, proposing a more inclusive, interconnected ecology that recognizes the active participation of all living matter in sustaining life. This chapter aims to delve into the complex, material relationships between humans and non-humans in the trilogy, using material eco-criticism to analyze the depiction of microbial, animal, and plant agency in shaping both the narrative and the post-apocalyptic world.

3.1 Dialogical Dimension: Microorganisms

The plague virus, engineered by Crake and disseminated through the "BlyssPluss" pill, serves as a powerful example of the narrative agency of microorganisms. Unlike traditional narratives that portray viruses as passive tools, Atwood's virus is an active agent that follows its own narrative path. It spreads globally, from Mumbai to Bangkok to Brazil, dismantling the existing social order and compelling survivors to reconsider their place within the ecological hierarchy. As material ecocritic Stacy Alaimo notes, "Toxic substances manifest their narrative power in discursive practices through transmission between bodies, circulation within bodies, and exchange among bodies." The virus's autonomy is further highlighted through its role in the "waterless flood," a cataclysm that would have been impossible without its active capacity. Even before the apocalypse, the virus operates within corporate agendas; Toby's mother unknowingly consumes HelthWyzer health supplements laced with slow-acting viruses, leading to her body harboring viruses "amounting to at least half her body weight," ultimately causing her death. This narrative illustrates how microbial agency intersects with corporate greed, resulting in both personal tragedy and global collapse.

For instance, Adam One's sermon on "Mole Day" utilizes similar instances of gut flora and bacteria as Donna Haraway's theories on "companion species" to illustrate the necessary interaction between beings required to sustain life at all levels of existence:

We are inclined to overlook the very small that dwell among us; yet, without them, we ourselves could not exist; for every one of us is a Garden of sub-visual life forms. Where would we be without the Flora that populate the intestinal tract, or the Bacteria that defend against hostile invaders? We teem with multitudes, my Friends – with the myriad forms of Life that creep about beneath our feet, and – I may add – under our toenails.(246)

While it is true that we may at times be plagued by nanobioforms we would rather be without, such as the Eyebrow Mite, the Hookworm, the Pubic Louse, the Pinworm, and the Tic, not to mention hostile bacteria and viruses, we can consider them as God's smallest Angels, carrying out His mysterious work in their own way. These Creatures also exist in the Eternal Mind and shine in the Eternal Light, forming a part of the diverse symphony of Creation. As with Adam One's interpretation

of genesis through evolutionary science and geology, his sermon on the interconnectedness of all lifeforms reflects imaginative, liberal, and compostist hermeneutics as much as modern biology. The phrase “We teem with multitudes” can be viewed as a concise form of Lynn Margolis’ theory of “symbiogenesis,” in which bacteria exchange genetic information through consumption, leading to the development of larger and more complex life forms, including plants, humans, and non-humans.

Haraway elaborates on the idea that “organisms are ecosystems of genomes, consortia, communities, partly digested dinners, mortal boundary formations. Yoking together all the way down is what sym-bio-genesis means. Ordinary identities emerge and are rightly cherished, but they remain always a relational web opening to non-Euclidean pasts, presents, and futures” (31-32). Expanding on this idea, Bennett discusses a similar hybrid understanding of “her” body, stating that My “own” body is material, and yet this vital materiality is not fully or exclusively human. My flesh is populated and constituted by different swarms of foreigners. The crook of my elbow, for example, is “a special ecosystem, a bountiful home to no fewer than six tribes of bacteria. . . . The bacteria in the human microbiome collectively possesses at least 100 times as many genes as the mere 20,000 or so in the human genome.” The its outnumber the mes. In a world of vibrant matter, it is thus not enough to say that we are “embodied.” We are, rather, an array of bodies, many different kinds of them in a nested set of microbiomes. (Bennett 2010, 112-13)

The mushroom toxins, as exemplified in the trilogy, not only impact Toby's understanding of her interaction with the Pigeon, but also alter her perception of agency and subjectivity. While the sixth story unfolds through the dialogue between Toby and the Crakers, Toby consciously distances herself from the act of narrating the seventh story, despite ultimately realizing that there is no one else to tell or hear it. Instead, the heterodiegetic narrator, focalizing through Toby, notes: The story unfolds on its own within Toby’s mind. She does not seem to actively consider or shape the narrative. She has no control over it. she simply listens. It's remarkable how a few plant molecules can affect the brain and for how long.

In the transition from the sixth to the seventh stories narrates to the Crakers, Toby's role as a storyteller is problematized in two contrasting ways. In the sixth story, she simply repeats what she does not understand in the form of questions, with these repetitions serving as the substance of the story. On the other hand, in the seventh story, she disclaims responsibility for shaping and telling the story, despite it being an internal "monologue" narrated in first-person, indirect discourse. Therefore, in the sixth story, the Crakers convey the narrative through Toby, while in the seventh, the story tells itself through her. In both instances, an "absent" presence exerts influence through Toby as a mediating, covert narrator: one figure emanating externally and the other internally. The delineations between inside and outside, self and other, and material and immaterial become blurred. Even though the story is narrated in first-person, Toby speaks as a fundamentally plural entity, embodying the "us" rather than the singular "I." She acknowledges that the story she tells is not solely from herself, attributing it to the combination of her body's chemistry and biology with the plant toxins she previously ingested. Drawing on Bennett's analysis of mutual interaction through digestion, the consumed plants act as "an actant operating inside and alongside humankind, exerting influence on moods, dispositions, and decisions." Bennett argues that the process of ingestion and metabolization gives rise to fractal assemblages. She concludes her chapter, "Edible Matter," by observing:

The activity of metabolization, whereby the outside and inside mingle and recombine, renders more plausible the idea of a vital materiality. It reveals the swarm of activity subsisting below and within

formed bodies and recalcitrant things [collections of smaller and smaller assemblages], a vitality obscured by our conceptual habit of dividing the world into inorganic matter and organic life. (50)

3.2 Axiological Dimension: Plants

The connection between plants and humans can be seen as a spiritual exchange for two main reasons. Firstly, plants carry deep symbolic significance. Secondly, plants are crucial to the contemplation of humans.

In the trilogy, plants serve as prominent and meaningful symbols. For instance, members of the God's Gardeners exchange plant parts as tokens of marriage or divorce. Green leaves symbolize "growth and fertility" (Atwood, *The Year of the Flood* 115) while dead branches signify "non-love and separation" (ibid.). Besides representing the establishment or destruction of emotional bonds, plants also symbolize deceased individuals to some extent. After death, Jimmy, Oates, and Adam One each receive a tree planted on their grave. Ren, Amanda, and Lotis Blue choose a Kentucky coffee tree with heart-shaped leaves for Jimmy, while Crozier and Shackleton select an oak tree for Oates to echo his name. An indigenous crabapple is chosen for Adam One to correspond with his role as a religious leader. All these trees are chosen for their specific symbolic meanings ascribed by humans. Acknowledging and embracing the symbolic meanings of plants signifies humans' willingness to integrate plant imagery into the deeper aspects of their cultures and lives. Humans actively promote interaction with plants in this subtle yet significant manner.

The relationship between plants and humans is depicted more vividly through the emphasis on ecological ethics by the God's Gardeners, and can be characterized as an ideological fusion. Following the classification of the God's Gardeners as an illegal organization and their subsequent dismantling by the CorpSeCorps, the members are forced to vacate the Edencliff. Despite being separated, many disciples still retain their ecological concerns for nature. Ren, a central character in *The Year of the Flood*, serves as a compelling example. Upon returning to the HelthWyzer Compound where she was born, Ren feels alienated and repulsed by her surroundings. "But nothing felt right. All that faux marble, and the reproduction antique furniture, and the carpets in our house none of it seemed real. It smelled funny too like disinfectant." (209) Having been intimately connected to nature and a natural way of life, Ren cannot help but long for "the leafy smells, of the Gardeners, the cooking smells, even the sharp vinegar tang; even the violet biolets" (ibid.), which are all memories of life with the other members of the God's Gardeners in the pleeblands.

Faced with the temptation of consuming meat, Ren decisively refuses by acknowledging her ongoing struggle with animal protein. The vegetarian principles of the God's Gardeners have deeply influenced Ren, and her confidante Bernice even sacrifices her life to demonstrate her devotion to the organization's beliefs. In a poignant passage from the novel, Ren witnesses the distressing murder of Bernice during a raid on a Gardeners safe house. "I saw onscreen that Bernice had been spraygunned in a raid on a Gardeners safe house." (290) Despite their youth, both Ren and Bernice steadfastly adhere to their strong commitment to ecological holism.

Plants provide ample food resources for humans under the conditions of being cherished. For example, before the catastrophe, soy beans are the dominant grain crops in the world and they are widely added as ingredients to other food products such as SoyOBoy burgers, CrustaeSoy shrimps and SoYummie ice cream. In some cafés, ladies' organic salads consisting of garnishes, exotic spliced vegetables, and herbal teas are also available.

After the world is hit by a sudden apocalypse, it soon falls into a deserted land.

Barely impacted by lack of food or natural enemies, plants are currently thriving, and even weeds exude a sense of robust vitality. "The expansive lawns have become overgrown with tall weeds." (4) As the most essential food sources, plants now determine the fate of the entire human race. While staying in the post-disaster AnooYoo, a former popular spa, Toby takes control of a garden where she cultivates various vegetables in line with the longstanding tradition of the God's Gardeners. "Thankfully, everything in the garden is flourishing: the chickpeas have started to pod, the banana beans are blooming, and the polyberry bushes are covered with small brown growths of various shapes and sizes." (16) Here, chickpeas, banana beans, and polyberries all represent plants and collectively present a vibrant appearance, indicating abundant fruits for human survival. For Toby, the garden not only provides essential food but also brings her hope and inspiration. Therefore, she consistently remains devoted to the garden. The material and spiritual rewards Toby receives are rightfully a result of the response provided by plants.

Plants play a central role in the spiritual practices of the God's Gardeners, serving as focal points for specific meditations. Meditation within the God's Gardeners community includes self-reflection, prophecy, and other forms of unique communication. As a result, Toby consistently remains devoted to the garden. The material and spiritual harvest Toby reaps are directly tied to the response elicited from the plants.

Meanwhile, in response to the invaluable gifts provided by plants, members of the God's Gardeners are working to integrate plants into their daily lives on behalf of humanity. Recognizing the importance of plants early on, these individuals have transformed the Edencliff Rooftop Garden from a "sizzling wasteland, hemmed in by festering city slums and dens of wickedness" (11) into a vibrant landscape where various plants and flowers thrive.

In the labor division of the God's Gardeners, individuals in higher positions are tasked with studying various plants to learn about their species and functions. For instance, Pilar specializes in mycology, Toby is skilled in using plant remedies for holistic healing, and Burt is knowledgeable about wild and garden botanicals. These plant experts also have the responsibility of educating the organization's children about plants. Burt, for example, instructs the children about purslane, emphasizing the plant's characteristics and encouraging them to observe and memorize. Burt's strict approach with the children reflects his dedication and respect for plants.

The children are encouraged to engage in additional specialized activities to develop a closer connection with plants. As per the tradition of the God's Gardeners, the children are expected to visit Heritage Park during Saint Euell's Week to search for mushrooms with Pilar and Toby. Through the guidance and actions of the adults, the children gradually develop a strong belief in the sacredness of plants.

3.3 Narrative Dimension: Genetic Engineering Products

In the trilogy, genetically modified organisms such as organ pigs and Crakers exemplify the narrative dimension of material agency. Designed by humans to serve instrumental purposes, these entities transcend their intended roles, developing emergent behaviors that disrupt human control and redefine the narrative.

3.3.1 Craker

Crakers, designed by Crake to be post-human beings free from negative traits such as sexual jealousy, greed, and violence, exceed their genetic programming. In contrast to their human counterparts, who suffer from insect bites, all Crakers emit a scent “reminiscent of a crate full of citrus fruit” (102), allowing them to thrive in a post-apocalyptic environment teeming with insects. Their “annoying qualities” of “innocent optimism,” “unreserved friendliness,” “serenity,” and “limited vocabularies” (153) are completely devoid of human tendencies towards violence. There are specific chemicals in the males' urine to repel predators and serve a crucial role beyond raising offspring (147), reflecting the preservation of traditional gender roles in a patriarchal society. All Crakers possess the ability to purr like a cat, which serves as a healing mechanism for minor wounds, a concept borrowed from cats as Crake discovered that their purring “matches the frequency of ultrasound used for bone fractures and skin lesions” (156). They are “vegetarians and mainly consume grass, leaves, and roots” (158).

The Crakers, in stark contrast to the painballers, are shown much greater hospitality by Toby's group and are considered to be on the same moral level as humans, despite being posthumans. Toby and her companions protect and care for the Crakers, helping and teaching them. This is due to their display of emotional and moral qualities that humans value, such as innocence, kindness, and a peaceful nature, as well as compassion and empathy for their own and other species. They not only care for their own kind but also show love for other species. An excellent example of this is their diligent care for the sick and unconscious Snowman, as they purr without complaint from the beginning to the middle of the novel.

The Crakers are not only ethically suitable for integration into human society, but also physically equipped for thriving in the post-apocalyptic world. Despite certain characteristics that may strike an ordinary human as strange and nonsensical, the Crakers should be deemed biologically superior to humans due to Crake's intentional provision of desirable and practical traits. Their outward appearance is aesthetically pleasing, with Toby noting that they are “preternaturally beautiful” and that humans “must seem subhuman to them” (48). Their skins are impervious to strong UV rays, their body odor acts as a natural insect repellent, and their urine serves as a deterrent to other animals, among other attributes. Additionally, they are environmentally friendly, subsisting solely on plants and able to sustain themselves on their own excrement, thereby emitting minimal waste. These qualities position the Crakers as highly viable candidates for survival and harmonious coexistence.

In addition to their inherent goodness and biological adaptability to the postapocalyptic environment, the Crakers also possess a unique ability to communicate with both humans and the Pigoons. While they have not yet fully grasped all human languages and vocabulary, their rapid progress suggests that future generations will likely be able to read and write as proficiently as humans. Furthermore, the Crakers act as intermediaries and translators between humans and Pigoons, as the two species are unable to communicate directly with each other. This makes the Crakers essential as a communication bridge between the two species, particularly in collaborative efforts to apprehend the painballers or engage in negotiations and agreements. The Crakers are therefore crucial for facilitating interspecies coexistence.

At first, most human characters view the Crakers with a sense of negativity and contempt, except

for Toby. Toby has never used derogatory language when talking about the Crakers. Instead, she consistently refers to them as the Crakers or the Children of Crake. In fact, Toby has always been concerned for their safety. She feels a responsibility to keep them from returning to the beach out of fear that they will be targeted by the painballers.

It is not until the second half of the book that humans seem to improve their view of the Crakers. One indicator of that is when Rebecca praises Blackbeard after she sees him writing in human language (318). This is likely due to the fact that the Crakers are increasingly able to learn and inherit human legacies of language, reading, and writing, hence a cultural similarity and assimilation. In turn, humans gradually are genetically assimilated into the Crakers. The birth of halflings as products of the interspecies breeding between humans and the Crakers marks the successful genetic communion as well as the possibility in perfectly harmonious coexistence that will allow the community to thrive in the post-apocalyptic and post-human world.

It is not until the latter part of the book that the perception of the Crakers by humans appears to improve. One sign of this is when Rebecca commends Blackbeard after witnessing him writing in human language (318). This is likely a result of the Crakers' increasing ability to learn and adopt human cultural traits such as language, reading, and writing, leading to a cultural similarity and assimilation. As a result, humans are gradually assimilated into the Crakers genetically. The emergence of halflings from the interbreeding between humans and the Crakers signifies the successful genetic integration and the potential for a harmonious coexistence that will enable the community to thrive in a post-apocalyptic and post-human world.

Blackbeard emerges as the central figure among the Crakers throughout the entire novel. The narrative voices expand from Toby and Zeb to Toby and Blackbeard and eventually focus solely on Blackbeard. Rather than limiting the narrative to one character, focalization through Blackbeard allows Atwood to weave his stories with the perspectives of both humans and Pigoons, broadening the sensory range beyond what Toby can experience and convey. Blackbeard's narrations vary in discourse, moving between first- and third-person, both direct and indirect, often within the same story or sentence. This disruption in narrative structure extends from the previous binary pattern seen in *Crake* and *Flood*, as the novel gains more voices and perspectives in the main narrative. As the novel progresses, the binary structure is ultimately dismantled and replaced by a single narrator, Blackbeard.

The trilogy deviates from the traditional approach of marginalizing or anthropomorphizing nonhuman entities found in most literary works. Instead, Atwood delves into the inner world of nonhuman characters and boldly tells the story from the perspective of Blackbeard, offering a first-person account of his internal experiences. Through Blackbeard's narrative, the human world is re-examined, his subjective consciousness is emphasized, and a sustainable ecological future is envisioned. This subtle shift in narrative focalization from human to nonhuman entities significantly contributes to the ecological theme in the trilogy. By challenging the traditional dominance of the human perspective, Atwood constructs a non-anthropocentric theme.

In the context of material ecocriticism, Atwood's Crakers are not merely static products of genetic engineering, but rather dynamic material entities with agency in storytelling. Serving as crucial mediators between humans and Pigoons, the Crakers act as material-semiotic hubs within a network that spans multiple species. Their bodies and emerging language abilities serve as channels for creating meaning, fostering collaboration, and transforming them into locations where biological, cultural, and

ecological forces intersect. Furthermore, the narrative shift from human protagonists like Toby to the Craker Blackbeard represents a decentering of anthropocentric storytelling. This narrative change brings to life a world where knowledge, ethics, and voice are interwoven within a dynamic, multi-dimensional fabric of existence.

3.3.2 Pigeons

Pigeons, also, exemplify the dynamic and agential vitality of non-human matter central to material ecocritical inquiry. This narrative arc from commodified organism to agential co-inhabitant stages a profound critique of anthropocentric hierarchies, demonstrating how matter itself can resist, reconfigure, and ultimately reshape the terms of interspecies relation.

The organ pigs, bred by Organ Farm to cultivate multiple kidneys for human transplants, were initially seen as "tools for a specific purpose." A pigeon, the creature in the novel capable of growing five or six kidneys, was highly sought after due to its ability to significantly lower costs. After producing pigeons, corporations began selling the animal meat containing human genes solely for financial gain. This was a clear indication of their motivation driven by corporate greed and advancements in science. With no regard for other creatures, they were solely focused on making profits to meet their own needs.

However, in the aftermath of the apocalypse, they exhibit remarkable collective intelligence: they besiege human encampments using encirclement tactics, set up ambushes by making use of the terrain, and utilize automatic door mechanisms in deserted laboratories to ensnare survivors. Additionally, they perform funeral rites for their deceased kin, showcasing social customs that defy their human-imposed identity as mere vessels for organs. This transformation is in line with Foucault's observation in *The Order of Things* that animals should be integrated into the organic interconnectedness of life systems instead of being seen as subjects to be controlled. The agency of the organ pigs compels humans to acknowledge the autonomy of non-human life, challenging the reductionist viewpoint that genetic programming can completely determine behavior.

The Pigeons, unlike the Crakers who exhibit many human-like qualities, only share a single genetic trait with *homo sapiens* - the human neocortex tissue of the brain. This unique characteristic allows the Pigeons to challenge the conventional hierarchy between humans and animals, thus providing an opportunity to explore ethical considerations within the novel. Their possession of this feature grants them intelligence, the primary quality that has allowed humans to reign dominant over the earth. This intelligence, comparable to that of humans, establishes the Pigeons as morally equal to both humans and Crakers. Their special status is not solely due to sharing approximately 100 genes or a specific body part with human beings, but rather their capacity for intelligent communication and participation in cultural behaviors.

However, initially, like the Crakers being labeled "frankenpeople," the Pigeons are also termed "frankenbacon" (28) by Manatee. Shackleton regards them as "spareribs" (274). Rebecca, the cook, treats them as "bacon" (319). Ren finds them "creepy" and Jimmy adds that they are also "sly" (324). Jimmy humorously refers to them as "those werewolf pigs" (419) and their representative as "the Great Wall of Pork," "the Bacon Brigade," and "the Hoplites of Ham" (424). Throughout most of the novel, the Pigeons are viewed as mere pigs engaged in a hostile relationship with humans. Even Toby remarks that "they are not our friends" (326). They attack humans and are attacked in return. Prior to the

negotiation between the two parties, humans perceive the Pigoons as a recurring threat with ongoing conflicts.

After Toby's group has close interaction with the Pigoons and witnesses their ability to communicate with the help of the Crakers, as well as their advanced skills in diplomacy, burial customs, and the human-like qualities of morality, rationality, and emotions, the humans' perception of them changes. One example is when a Pigoon envoy marches in a human-like manner, referred to as "a pig parade"(324) by Atwood, to discuss the murder of a piglet and seek help from Toby's group. Through the Crakers as mediators and interpreters, Toby learns about the Pigoons' unique culture, including their "curious funeral rites" (455) of using funeral flowers for dead piglets and consuming the corpses for protein. Despite cultural differences, the two species can come to understand each other, as demonstrated in the discussion of how to handle the dead bodies of Adam One, Oates, and Snowman towards the end of the book (455).

The Pigoons comprehend and acknowledge the rationale behind humans' refusal to consume their deceased without imposing their own beliefs or customs on the humans, serving as a satirical commentary on the narrow-mindedness of many humans. This acknowledgment highlights the Pigoons' remarkable intelligence, which arguably surpasses that of some humans who struggle to comprehend and respect cultural diversity in others.

Another compelling indication of the shared moral standing between humans and the Pigoons is demonstrated in their negotiation, where both parties can discuss the benefits on an equitable basis. In return for human assistance, the Pigoons pledge that they "will never again attempt to consume human crops. Or any humans" (328). They also request that humans refrain from shooting, cooking, or eating them, and in exchange, they will abstain from consuming humans as well. They also display human-like emotional qualities such as shame and integrity, as seen in the incident where two young Pigoons damaged the MaddAddamites' garden, breaching the agreement between the two species. In response to this breach, the novel recounts how "a meeting" was convened.

The Pigoons dispatched a group of three grown-ups, who appeared both ashamed and irritable, as adults typically are when bested by the young" (459). Another noteworthy aspect of the Pigoons is their practice of forgiveness. This is evident in how they seem to have pardoned Toby for killing one of them without seeking retribution or justice, as they understand the act was in self-defense. With their cognitive, emotional, and ethical faculties, the Pigoons are deemed more compassionate than the painballers who are biologically human.

The ethical shift towards posthuman recognition is symbolized by the shift in humans' treatment of the Pigoons, from simply referring to them as "pigs" and "pigoons" to recognizing them as "the Pigoons" (337) and "the Pig Ones" as the Crakers initially call them (122). The successful diplomatic negotiation between humans and the Pigoons also impacts how the former interact with the latter. When Rebecca considers cooking the dead piglet, Ren refuses, stating that "it would be like eating a baby" (331). The MaddAddamites then opt to give the dead piglet a proper burial instead (334). Following the encounter with the painballers towards the end of the novel, the Pigoons are fully elevated by Toby, whose life is saved by them. Toby emphasizes the importance of changing the pronoun for one of the Pigoons from "it" to "her" because the Pigoons are not objects (427). From that point on in Toby's and Blackbeard's subsequent stories, the Pigoons are treated with the same respect as humans and the Crakers.

To put it in a nutshell, in the trilogy, Margaret Atwood masterfully illustrates the narrative agency of material entities across dialogical, narrative, and axiological dimensions. Viruses, animals, plants, genetically engineered beings are not passive elements but active agents that challenge anthropocentric narratives and reshape the world. Through these representations, Atwood not only advances a material ecocritical perspective but also critiques the neoliberal and reductionist ideologies that deny agency to the non-human world. This chapter has delineated how material agency operates in the trilogy, providing a foundation for understanding the broader ecological and ethical implications of Atwood's work.

4. Conclusion

In the trilogy, Margaret Atwood presents readers with a near-future world in which humans are no longer the dominant species, but must instead adapt to coexisting with other species. As a result, Atwood examines the possibility of practicing cross-species ethics by focusing on the interactions between humans and the pigoons, the Crakers, and plants. Overall, a dynamic interplay between different species has been established, leading to the creation of a relatively stable community. These practices collectively challenge the long-held tradition of anthropocentrism and contribute to a more diverse and non-anthropocentric worldview.

The novel not only portrays a future society dominated by science and technology, but also delves deeply into the issues facing contemporary human society and its environment, offering profound contemplation. Atwood highlights in her writings the need to strive for a better future, while cautioning against the pursuit of perfection without consideration, as it may lead to catastrophic outcomes. She therefore advocates for a more thoughtful and balanced approach to improving the relationship between humans and the environment. Through the novel's narrative, readers are encouraged to envision and take part in the creation of a community that transcends species and race. In this community, humans are no longer the sole focus, but instead coexist on equal footing with other species, facing future challenges together. As a result, the Trilogy is not just a literary exploration, but also a challenge to and critique of anthropocentrism. The novel seeks to construct a more inclusive and diverse worldview through narratives that encompass different species and races. In this world, diverse life forms and cultures can understand, respect, and collaborate with one another to confront environmental and social crises.

The trilogy is not just a dystopian novel, but also a profound contemplation on contemporary society and a forecast of potential future developments. Margaret Atwood emphasizes in this series of works the urgent need for new cognitive frameworks and imaginative maps in today's society. These tools not only help us comprehend the intricate relationships between humans and non-human beings, but also understand the interactions between nations, wealth and poverty, and the self and the other. In the context of the society she depicts, which could lead to future human disasters, it becomes imperative to break through multiple boundaries and raise public awareness. Atwood's narrative clearly illustrates the interconnectedness of human and non-human destinies, serving as both a wake-up call to the common environmental crisis and a plea for a more harmonious and sustainable future. Through the diverse space depicted in her novel, she cautions humanity about the ethical dislocation caused by technological alienation and environmental degradation, while hoping that literature can transcend traditional binary oppositions and create a vision of a pluralistic community across species and races.

Through this multidimensional narrative, the novel not only presents a profound critique of anthropocentrism, but also introduces a new concept of symbiosis, in which humans are not the rulers of nature but part of a coexistence system with many creatures. This unconventional narrative perspective aims to offer a fresh approach to understanding and addressing the world's challenges in a more comprehensive and integrated manner.

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