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“We Are the Future”: Solastalgia, Climate Anxiety, and Posthuman Agency in Jeff VanderMeer’s *Borne*

Abstract

In this article, I am interested in exploring issues of solastalgia and climate anxiety and how overcoming these emotions leads to the establishment of posthuman agency in Jeff VanderMeer’s ontologically multifaceted novel *Borne* (2017). I argue that the circumstances of ecological grief can be transformed into an inclusive form of materialist entanglement and intra-active agency, which can eventually create optimal conditions for cross-species understanding. Divided into two core sections, the article first delineates the concept of solastalgia and its dynamics of addressing environmental doom. Through specific textual examples, it examines the conditions of climate anxiety experienced by Rachel, the central protagonist of VanderMeer’s novel, and, secondly, it substantiates how Rachel, by the end of the novel, transforms her solastalgia into an emancipating weapon that helps her, along with *Borne* as a nonhuman companion, to re-establish a symbiotic relationship with the newly emerging posthuman world.

Keywords: solastalgia, climate anxiety, climate fiction, posthuman, agency, intra-active, materialist entanglement

1. Introduction

Climate fiction, as an emerging multidisciplinary genre of study, encompasses speculative representations of potential climatological changes impacting the contemporary Anthropocene. Cli-fi narratives address the possibility of post-apocalyptic environmental futures against the backdrop of rising techno-capitalism and the rapid dilapidation of natural resources. At the same time, these

narratives are also popular for depicting an epistemic interaction between human and nonhuman species to the point of capturing stupendous instances of multispecies learning and solidarity even amid cataclysmic disasters.

Climate fiction, as one of the pertinent sub-genres of “science fiction, posits a ‘back to nature’ movement following a technological crash” (Sharma 12). Such narratives “explore the relationship between social structures and physical environments” (Bould and Vint 177). They depict an anti-technological drive and promote neo-primeval ways of life (Murphy 468). The fundamental themes in such fiction include overpopulation, industrialization, precarity in food production, and resource depletion (Sharma 12). Ernest Callenbach’s *Ecotopia* (1975), Arthur Herzog’s *Heat* (1977), George Lentham’s *Girl in Landscape* (1998), Karen Traviss’s *Crossing the Line* (2004), etc., are some examples of ecological Science fiction or climate fiction. According to Adam Roberts (2000):

Reading [science fiction], in other words, is about reading the marginal experience coded through the discourses of material symbolism; which is to say, it allows the symbolic expression of what it is to be female, or black, or otherwise marginalized. SF, by focusing its representations of the world not through reproduction of that world but instead by figuratively symbolizing it, is able to foreground precisely the ideological construction of Otherness. In other words, in societies as ours where Otherness is often demonized, SF can pierce the constraints of this ideology by circumventing the conventions of traditional fiction. (30)

Thinking beyond the liminal and exclusive codification of humans over other species, Jeff VanderMeer’s novel *Borne* (2017) is a typical addition to the genre of post-apocalyptic climate literature, or, more particularly, post-apocalyptic dystopian literature within the science fiction genre. Engaging^[1] with latent dynamics of postnature^[2] (Nayar 2021), corporatocratic surveillance (Clapp 2020), posthuman empathy (Soussa 2021), Haraway’s *Chthulucene*^[3] (Girten 2021), and posthuman care (Czemiel 2018, Gormley 2021, Lane 2022), VanderMeer’s *Borne* is an unmitigated exemplar of the ‘new weird’^[4] oeuvre within the speculative genre. More precisely, the novel illuminates a post-anthropocentric concern for biotech life forms existing on the fringes of the ever-shifting planetary space. As opposed to the ‘Frankenstein complex,’^[5] that is, the fear of a nonhuman entity, VanderMeer’s *Borne* offers a bold commentary on embracing conditions of futuristic cohabitation amid inevitable challenges. In other words, the article investigates how the

novel charts a way forward “towards more hopeful futures in which we appreciate better than the interdependencies of our more-than-human world” (Boyd et al. 5).

The novel remarkably offers a precarious insight into the life of a young woman, Rachel, one of the remaining climate refugees, and her ethics of survival in a ruined, nameless future city, desolated due to the Company’s bio-capitalist experimental waste. It further describes how Rachel becomes a foster parent to Borne, a mysterious yet intelligent posthuman-animal creature whom she discovers while scavenging upon the biochemical ruins. A genetic blend of bear fur, sea anemone, and squid, Borne becomes a living embodiment of bio-chemical mutations. It is, in fact, the unperturbed harboring of such mutations in the past that has contaminated the ecological cityscape, compelling the remaining population to battle for their lives. This article is a subsequent extension, or rather specifically, an addition to the existing scholarship on VanderMeer’s Borne. In the next section of the article, I illustrate Rachel’s solastalgia and climate anxiety due to eco-catastrophic dilemmas she encounters in the new biochemical and post-natural world.

2. Rachel’s Disturbing Ruminations: Rethinking Solastalgia and Beyond

Emotions seem deeply personal, the very core of our inner experience. And yet, they arise through our exposure to the world and expose us to the world’s patterning and its vagaries: they trouble as well as affirm our self-identity. Emotions draw us out of our shells or make us withdraw, touch us, affect us, alienate us, or connect us (Smith 1).

Glenn Albrecht et al., in their breakthrough article, “Solastalgia: The Distress Caused by Environmental Change,” coined the term ‘solastalgia,’ which is “the pain or sickness caused by the loss or lack of solace and the sense of isolation connected to the present state of one’s home territory” (45). Susi Ferrarello amplifies Albrecht’s definition of psychoterratic^[6] distress to conceptualize emotional geography and indicates that “the place of solastalgic person is not limited to the home or the home-land in which the individual feels attached, but it extends to the familiar environment as it used to be before the occurrence of the dramatic changes produced by natural and climatic disasters” (152). Thus, positing solastalgia as a prominent motif in eco-fiction

dystopias has become an expression of critical importance to voice concerns about climate anxiety in the last fifteen years. Academia floods with its overarching usage with over ninety-five multi-disciplinary citations until 2018 (Galway et al. 3). Most of the solastalgia references in literature carry medical dimensions that emphasize considering mental agony as a potent cause of catastrophic environmental effects.

However, select cli-fi literature disassociates this one-dimensional medical influence and locates the impact of solastalgia within the corporeal and the socio-cultural fabric of the post-apocalyptic world. This dialogic contextualization appears as a major factor in rethinking the human relationship with nature (or postnature as Nayar suggests). It makes us acknowledge our material entanglement within the ecosphere. It also entails our realization of how the decimation of non-human life forms leads to the potential destruction of overall life on Earth. Applying solastalgic criticism to VanderMeer's *Borne* raises a specific concern toward Rachel and her early memories, the loss of which she bemoans after the eco-capitalist crash. She recalls how "once, it was different. Once, people had homes and parents and went to schools. Cities existed within countries and those countries had leaders. Travel could be for adventure or creation, not survival" (37). She narrates her past experiences of living in a refugee camp with fluctuating environmental conditions engendering "extreme heat balanced later by extreme cold" (39), and her eventual scavenging of stale eatables amid the high level of chemicals in the city's air. She recalls how there was a time in the past when "there were cities all over the world where people lived in peace" (132). The novel encompasses her occasionally solastalgic encounters with the good old days and their transformation into a harrowing collapse. For instance, while scavenging heaps of pungent biotech, Rachel recapitulates solastalgic memories of the foregone cityscapes:

It was never that the city in those days lay still or seemed quiet because no one lived there; only that you could not always see them or evidence of their movements. Few lived well, few lived happily or long. But we did exist, and when beyond the sanctuary of the Balcony Cliffs, I tried to remember that people slept there, hid there, had burrowed deep down, or were waiting for me or someone like me to venture past- trigger a trap or snare, or shadow me to see if I had hidden food or biotech somewhere. (72-73)

In another instance, Rachel, while narrating incidents of her own life in the form of bedtime stories to Borne, encounters a deep feeling of solastalgia. When Borne asks her if there is any evidence supporting the credibility of her stories, Rachel introspects and questions herself: “How do I know it had happened ... Because of its absence now, because I still felt the loss of it, but I didn’t know how to convey that to Borne then, because he had never loss anything. Not back then. He just kept accumulating, sampling, tasting. He kept gaining parts of the world, while I kept losing” (241). This loss of the past keeps stimulating Rachel until the moment she gains the energy to translate this sense of doom into an instrument of power and agency. Later in the novel, Rachel describes the arid and lifeless topography of the ruined city as a “slanted field of weeds that led down to a gentle ravine lined with pine trees, and the tops of buried buildings” (233). Further, she emphasizes a severe dearth of natural resources since everything has turned toxic and fatal, with minimal signs of rejuvenation and renewal. The text continues:

But there hadn’t been water flowing for years, and the trees were all dead, and leafless, and half fossilized, their lie exposed by the gnarled green cactus that had grown up around them. The weeds were fractious, and yellow against the sandy ground, and near the slope of the ravine had to burst up through a cracked asphalt so old, so dislodged, and broken up, that in its blackened aspect that surface could as well have been the upsurge of some vast underground volcano. (233)

The purpose of these lines is not only to depict the wrecked city of a post-natural world but also to underline the impact of uncompromising circumstances of climate anxiety on Rachel. This anxiety, according to Boyd et al. (2023), refers to the “fear that climate change will destroy ‘us’ as humans, by virtue of our dependence on ‘natural resources’ for life, encompassing a dread of what might happen to us if the environment, one day, fails to support human life” (4). This threat of environmental disaster perpetuates observable symptoms of obsessive thinking, panic attacks, and insomnia. Rachel describes her bewildering ecophobia^[7] through her memories of consistent nightmares. She recalls:

I tried to conjure memories of nightmare on my island century, to convert the brisk wind into a tropical breeze and the shadows and sand into the play of surf, a fringe of dark palm trees. But I was surrounded by a landscape too dirty and yet antiseptic, and I was exhausted by my own

obsession with the past ... there was an overpowering smell to the air, like an ancient waveless ocean buried in its own silt and salt and reflections. (VanderMeer 259)

However, VanderMeer's vision of shaping his dystopia as a critically stimulating experience makes *Borne* emerge as a narrative of posthuman agency. In other words, I read *Borne* as a critical dystopia as opposed to a classical one that provides hope to the readers and protagonists. Unlike classical dystopias, critical dystopias maintain a utopian impulse in their narratives by making the endings ambiguous and open-ended. Rafaella Baccolini asserts that "by rejecting the traditional subjugation of the individual at the end of the novel, the critical dystopia opens a space of contestation, and opposition for those groups—women and other ex-centric subjects whose subject position is not contemplated by hegemonic discourse—for whom subject status has yet to be attained" (520). Tom Moylan continues Baccolini's argument stating that:

[C]ritical dystopias give voice and space to such dispossessed and denied subjects ... they go on to explore ways to change the present system so that such culturally and economically marginalized peoples not only survive but also try to move toward creating a social reality that is shaped by an impulse to human self-determination and ecological health rather than one constricted by the narrow and destructive logic of a system intent only on enhancing competition in order to gain more profit for a select few. (189)

Therefore, instead of reducing solastalgic experience to reiterative tokens of anxiety and struggle, the novel vouchsafes an ecozoic^[8] foresight for overcoming the planetary crisis. As Baccolini continues:

Instead of providing some compensatory and comforting conclusion, the critical dystopia's open ending leaves its characters to deal with their choices and responsibilities. It is in the acceptance of responsibility and accountability, often worked through memory and recovery of the past, that we bring the past into a living relation with the present and may thus begin to lay the foundations for utopian change. (521)

Interpreting Rachel's solastalgia from a critically dystopian perspective, I redefine her climate anxiety as an unequivocal force engendering posthuman and intra-active agency that will

eventually lead to her materialist entanglement with the nonhuman world. In other words, Rachel's conjuring memories and emotions help in building an argument premising that climate anxiety is not just limited to individual consciousness or situatedness but arises from circumstances of human vulnerability in relation to ecological crisis. It means that the emotions of solastalgia and climate anxiety can effectively portray human-environment relationality. This relational enmeshment can, in fact, be constructively employed in inducing conditions of meaningful adaptability between humans and nonhumans against the backdrop of changing climate. This agential and relationally materialist advancement, in the context of the novel, will coalesce humanity to embrace the Earth as an integral living community. To substantiate this further, I move on to the next section, which will illustrate the role of posthuman agency and how it will contextually establish Verlie's slogan, "climate is living-with" (Learning 114), and eventually usher in the smoothening of the urgently required transition from the Anthropocene to the Symbiocene.^[9] This transition will unravel the latent rubric of climate fiction with the purpose of rehabilitating the lost connection between humans, nonhumans, and their immediate environment.

3. From Anthropocene to Symbiocene: Embracing Posthuman Agency

"Climate is living-with" (Verlie, Learning 1)

In this part of the article, I focus on the phrase, "climate is living-with" as a sustainable enunciation for posthuman agency. Blanche Verlie (2022) has used this phrase to formulate a conceptual understanding of climate change as an epochal phenomenon that seeks to compel nonhuman respect, reciprocity, and responsibility toward the transforming ecological landscape. Verlie rightly notes:

Climate [is] not a noun referring to a thing – whether a cultural idea or a geographical system – but climate as a verb, referring to an action: to processes of living-with ourselves, others, and the world ... Climate as living-with focuses on the intimate ways we are entangled with the non-human world, and how the patterns of these relationships generate the conditions in which we live. (Learning 5)

VanderMeer's *Borne*, through the relationship between Rachel and Borne, exemplifies the essence of "climate is living-with" expression with unwavering acceptance. It describes climatic sentence as a distributive and atmospheric development that takes both humans and nonhumans as rhizomatically situated beyond an insulated individual self. The novel exhibits both human and nonhuman responses to ecological depletion, blending similar manifestations of loss. For instance, most of Rachel's interactions with Borne encapsulate her recollections of the bio-ecological devastation. This connects them both as co-participants in generating posthuman empathy against the backdrop of their associative experiences in the new world. As Borne writes in his journal, "The river isn't beautiful. It's toxic. It's full of poison, I sampled it, tested it ... the river is poison. The wells are mostly dry, the compound ponds are also toxic ... and the sea underneath us all dried up hundreds of years ago ... the world is broken and I don't know how to fix it" (VanderMeer 202-03), he becomes a part of Rachel's solastalgic temperament making them equally controllable commodities^[10] and bare life forms.

I argue that Rachel's act of reconstituting Borne through her solastalgic temperament cultivates a non-tolerant approach toward apocalyptic violence. It means that the apocalypse (biogenetic, environmental, or otherwise) is not to be discerned as an end but as a new posthuman beginning, which brings hope to all human and nonhuman survivors. Even "the rats in the wall were in the process of rewiring everything, changing everything. They were the future" (297), asserts Rachel. Further, it acts as a conducive phenomenon to generate multispecies solidarity through posthuman agency in VanderMeer's narrative. I borrow the word agency from Bruno Latour's Actor-Network Theory (ANT), which advocates that each actant (including both human and nonhuman entities) is endowed with an equal and that agency exists in ontological relationality to each other. It further states that the existence of actants in diverse networks makes them devoid of fixed structures and meanings. Precisely, the theory challenges the dualist essentialism between subjects and objects, seeing them as new hybrid machines or species that complement each other through their relational entanglement. A posthuman form of agency, argues Sonia Baelo-Allué, is potentially liberating. She states that this "agency is not that of the autonomous, unified humanist subject but a posthumanist agency based on resistance, on indirection, on relativity and multiplicity, and which emerges from the embracing of hybridity, of the trace of the human within the self" (1130).

Therefore, it is imperative to create sequences of relational existence among species alike as well as beyond their environmental apprehension. This creation of relational experiences also acts as a bio-capitalist challenge to human exceptionalism and contests the polemics of subjectivity in a posthuman world. Rosi Braidotti (2017) summarizes that posthuman subjectivity “operates at all scales of constitution of our multiple ecologies of becoming-subjects, and it inhabits multiple and internally contradictory temporalities” (26). She defines the posthuman subject as a

complex assemblage of human and non-human, ecological, technological, planetary and cosmic, given and manufactured, organic and technological relations ... This subject is inscribed in the power formations of the current phase of cognitive capitalism and ubiquitous mediation, bio-piracy, necro-politics, and worldwide dispossession, expulsions, and migration” (26).

Aligning with Braidotti’s observations, posthuman subjectivity fosters an intersubjective entanglement with the nonhuman to inspire viable conditions of preservation and adaptation.

VanderMeer’s *Borne* becomes a touchstone to this intertwined state of posthuman subjectivity through the affirmative agency ethics that critiques the human footprint on this planet as well as usher the anthropocentric dispossession of environmental genealogy and resources. This posthuman subjectivity, as Boyd et al. point out, elaborating on Braidotti’s notion, refers to a “multi-scalar relationality whereby posthuman ‘subjects’ consciously relate at three levels: their interior selves, interactions with human others, and their existence within the world at large” (4). The novel situates the notion of posthuman agency at the third level, where the co-existence of multiple species could offer a site of hope for a better tomorrow as opposed to a vision of apocalyptic despondency. In an interview with Adam Kleinman, Karen Barad states:

The usual notion of interaction assumes that there are individual independently existing entities or agents that preexist their acting upon one another. By contrast, the notion of “intra-action” queers the familiar sense of causality (where one or more causal agents precede and produce an effect), and more generally unsettles the metaphysics of individualism (the belief that there are individually constituted agents or entities, as well as times and places). (77)

Put simply, Barad's concept of intra-action argues that "agency is not possessed by individual things and beings but emerges through relationships" (Verlie, "From" 1266). It means that both human and nonhuman beings, through mutual entanglements, are relationally attuned to effectuating conditions of interdependent survival. Rachel describes this agency as a form of intra-active existence that surpasses the limiting conditions of 'being' and emerges as a standpoint inducing a posthuman form of 'becoming.' She declares that the strange, forgotten animals abandoned by the Company live among us, along with their insatiable curiosity, like Borne, wanting nothing from the old world. They are their own captains and lead their own lives, although they are still human beings who see them as food, as expendable. In their fearlessness, Rachel finds a kind of solace and relief. She believes that such biogenetic organisms will outstrip all of us in time, and the story of the city will soon be their story, and not just of humans.

Rachel's associative intra-action with Borne redefines her primary solastalgia and translates its impact to formulate intra-active dynamics of survival. It dissolves the binary between "ours" and "theirs" to incorporate a post-anthropocentric "us" whose cordially driven future actions will decide the fate of the species. This intra-active exchange across the surviving species generates a dimension of posthuman epistemology where the affirmative ethics of sustenance propose different ways of dealing with climate anxiety. VanderMeer's novel recognizes this transcendence of grief with the ethics of acceptance and care. In other words, affirming posthuman subjectivity is an act of overcoming ecological grief as well as valuing our ability to become and perform to the best of our knowledge and potential in the ever-changing world. To discern this critical dystopian vision, the novel implants the seeds for engendering symbiocene circumstances of survival for the remaining species. Albrecht defines Symbiocene (a counteractive dimension to Anthropocene) as a period of re-unification between humans and nature (or postnature). He explains the Symbiocene as:

[a] period in the history of humanity on this Earth [which] will be characterized by human intelligence and praxis that replicate the symbiotic and mutually reinforcing life-reproducing forms and processes found in living systems. This period of human existence will be a positive affirmation of life, and it offers the possibility of complete reintegration of the human body, psyche, and culture with the rest of life. The path to avoiding yet more solastalgia, and other negative psychoterratic Earth emotionsthat damage the psyche, must take us into the Symbiocene. (Earth, 102)

More precisely, “[t]he core message of the concept of Symbiocene is that life is inter-connected^{f11]} and that the idea of autonomous individuals is mistaken. Life is a collective enterprise requiring collective and non-hierarchical forms of governance” (Albrecht, “Negating” 26). However, VanderMeer’s *Borne* transcends Albrecht’s idea of Symbiocene beyond a simplistic process of overcoming Earth emotions. In the novel, we notice the Symbiocene as an optimistic form of posthuman agency that could be considered a vanguard of transformation toward a desirable postanthropocentric and intra-active future. Rachel summarizes her symbiocenic relation with *Borne* in the following words:

He was born, but I had borne him. I knew Borne was terrified at the end. I knew that he had suffered, but that he had given us this gift of a better life anyway, and I mourned the child I had known who was kind, and sweet, and curious, and yet could not stop killing. (314)

These statements reflect an intra-active understanding between the two species, paving the much-needed pathway to grow and prosper in the newly regenerated world. The statements also offer an assertive commentary on the upcoming conditions of rejuvenated life, which is only possible while navigating toward a Symbiocene. Rachel observes a gradual transformation of her immediate ecological world:

Outside, it rained for three days, and nights. That would have been strange by itself, an event, but this was no ordinary rain. All manner of creature dropped from the sky or, at the touch of this rain, sprouted up from the ground. Grass grew fast, and the wild outside the cistern, created paths of green, and some of the dead blackened trees down the slopes I noticed new leaves. There were certain avenues in the city, I would learn, new growths of vines, and plants that had been gone for years. Birdsong came lyrical through storms, and animal long-hidden emerged from the sanctuary. (315)

This transforming cityscape is evidence of an upcoming new reality where humans and nonhumans are ready to re-emerge and re-engage as “companion species^{f12]} in the vast planetary ecosphere. It invites all species to join hands and look forward to sustainable support and cooperation. And finally, Rachel happily declares:

On the third day the torrent ended, and the moisture evaporated or disappeared into the ground, and much of the greenery receded, and the new animals died, or hid or were eaten. To an observer fresh to the city, it might have looked as broken, and useless as before. But it was not. Some new things remained, took root, became permanent. Some flourished. The city has been washed as clean as it could be, and what had been taken away was as important as what had been added. (316)

Despite when Wick (Rachel's human partner) tells her that [they] "live in an alternate reality," Rachel is confident enough to respond that "the Company is an alternate reality, was always the alternate reality. The real reality is something we create every moment of every day, that realities spin off from our decisions in every second we're alive ... the Company is past preying on the future – that we are the future" (318-19).

Followed by this, Rachel observes:

A glittering reef of stars, spread out phosphorescent, and each one might have life on it, planets revolving around them. There might even be people like us, looking up at the night sky.

She contemplates, "Was there a world beyond? Is that what the shining wall of silver raindrops meant? A gateway? Or is it that a delusion?"

To which she answers, "It doesn't matter. Because now we can make one here. A world" (319).

Emphasizing "a" world rather than "the" world denotes an intra-active world that is now going to be a new home for all human and nonhuman species, a world interlaced with materialist entanglements of multiple Rachel(s) and multiple Borne(s) as co-living species on the reinvigorated posthuman planet.

4. Conclusion

Summing up, this article has precisely and strategically positioned the standpoints of solastalgia, climate anxiety, and posthuman agency as observed in Jeff VanderMeer's *Borne*. It has critically argued that reorienting solastalgia, rather than engendering limiting 'Earth emotions,' can create

optimally empowering conditions of posthuman relationality among different species. Taking up a close textual analysis of VanderMeer's critical dystopian narrative, the article has concretized the underlying connection between Rachel and Borne on the grounds of affirmative ethics of care, which can help transcend the polemics of ecological grief and welcome new pathways of developing multispecies intra-actions. In closing, the article is able to speculate new ways of knowing and understanding the pluralistic dimensions of agency and how humans and Borne(s) work together to transform the polluted river above the Balcony Cliffs as a beautiful and a non-toxic stream of shared emancipation, beyond bio-capitalistic control.

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[1] The author briefly mentions select attempted and published research on VanerMeer's Borne to emphasize their epistemic significance. These works feature as a part of the critical literature review on the part of the author of this article while demarcating the relevance of solastalgia. This article also establishes an argument, right in the beginning, that none of the mentioned studies have engaged with the concept of solastalgia and climate anxiety in VanderMeer's Borne.

[2] Pramod K. Nayar employs the term 'postnature' to refer to the environment infiltrated with artificial chemicals, toxins, and biotech matter as opposed to the natural ecosphere of the planet. According to Rosi Braidotti: "The 'post-natural' here is defined as the organisms that have been heritably altered by means including selective breeding or genetic engineering" (98).

[3] Coined by Donna Haraway, Chthulucene refers to the "rich multispecies assemblages" (160) that are intra-active, and tentacular companion species that have existed in the past, exist in the present, and will continue to exist in the future. For more information, see her commentary, "Anthropocene, Capitalocene, Plantationocene, Chthulucene: making Kin." *Environmental Humanities*, vol. 6, 2015, pp. 156-65.

[4] M. John Harrison introduced the term 'new weird' in 2003. For more information, see Noys and Murphy, Gelder, and Sperling.

[5] A term coined by Isaac Asimov where a man is overcome by the fear of being unable to control his creations. See "Frankenstein Complex and Asimov Robots" by Gorman Beauchamp.

[6] Refers to the emotions that people feel in relationship to the earth.

[7] Refers to the fear or an unethical undervaluing of the natural environment, which may lead to cataclysmic environmental transformations. See Estok, Simon. *The Ecophobia Hypothesis*. Routledge, 2018.

[8] Etymologically, "Ecozoic" is based on the prefix "eco-," derived from the Greek word "oikos" meaning house, household, or home, and the suffix "-zoic," from the Greek word "zoikos" meaning pertaining to living beings. Thus, Ecozoic Era, based on this etymology, means the era of the house of living beings. See ecozaicstudies.org/ecozaic/2014/naming-a-new-geological-era-the-ecozaic-era-its-meaning-and-historical-antecedents/.

[9] I define and contextualize this term in the next section of the article.

[10] In the novel, we notice that both Rachel and Borne are featured as equally controllable commodities. The posthuman world formulates a link between life forms, biotechnology, and capital. It means that both life forms and biology are networked as laboratory fabrications and residues by capitalist scientists, thereby diminishing the possibility of human exceptionalism and reducing both humans and nonhumans to controllable commodities. See *Lively Capital: Biotechnologies, Ethics, and Governance in Global Markets*.

[11] Or rather intra-connected.

[12] For more about “Companion Species,” see
https://xenopraxis.net/readings/haraway_companion.pdf



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