

 **Gi Taek Ryoo**

Chungbuk National University, Korea

# Radical Eco-poetics: The Apocalyptic Vision of Jorie Graham's *Sea Change*

## ABSTRACT

Jorie Graham's *Sea Change* (2008) addresses the environmental crisis engendered by climate change, sending us a dire warning of the end of humanity by featuring an apocalyptic world. *Sea Change* gives a poetic voice to the dynamics of climate change by embodying the catastrophe in linguistic forms and thus enabling us to experience the ecological crisis. For Graham, poetic imagination is an act of physical or bodily engagement as it brings together linguistic and emotional factors into an embodied performance. This paper explores the affective dimension of Graham's experimental poetry to demonstrate how her radical eco-poetics allows us to (re)engage with the material world, and how it changes our perceptual and sensorial registers to awaken our sense of interconnectedness with nonhuman others.

**Keywords:** Jorie Graham, *Sea Change*, apocalypse, eco-poetics, emotion, lyric.

## INTRODUCTION

At the turn of the new millennium, we found ourselves abruptly (yet not unexpectedly) confronting the end of the world. The ecological harms caused by humans pose a significant threat to our survival, and it is the environmental exploitations induced by human avarice that would bring the world to an end. Jorie Graham's *Sea Change* (2008) addresses the issue of irreversible climate change, with the purpose of awakening the public to environmental crises such as species extinction, the concentration of CO<sub>2</sub> in the atmosphere, melting ice caps, and rising sea levels. This highly acclaimed collection of poems transmits a dire warning of the end of humanity by featuring an apocalyptic world, in which, as Graham writes in *Sea Change*, "there are sounds the planet will make, even / if there is no one to hear them" ("No Long Way Round," *Sea Change* 56). Graham investigates experimental forms of language to convey anthropogenic environmental destruction and evoke feelings of human complicity, dread, and hopelessness.

Graham's apocalypse is grounded in Bill McKibben's sense of crises, in *The End of Nature* (1989), that we can no longer find "nature" or wilderness untouched by human activities. According to McKibben, nature has been vanquished because there now is no remaining part of the world independent from and untainted by the human race. In 2000, Paul Crutzen and Eugene Stoermer proclaimed that we have now entered a new geological epoch called the "Anthropocene," when the earth's environment is transformed and shaped by humans rather than vice versa (17). These stunning proclamations, together with the documentary of former US Vice President Al Gore, *An Inconvenient Truth* (2006), greatly raised public awareness of global warming, pressing America to think of the causes and moral obligations of climate change. The US was then one of the largest contributors to climate change in terms of per capita carbon emissions that generate greenhouse gas effects. This ecological crisis was accelerated by the market mechanism of production and consumption and has had a particular bearing on the emergence of America as a global economic power in the twentieth century.

However, the US refused climate change negotiations and disavowed environmental responsibility.<sup>1</sup> As Kari M. Norgaard observes, "even though a large majority of Americans believe global warming is occurring and is a serious problem, a sense of urgency is lacking" because they assume

---

<sup>1</sup> In May 2001, US President George W. Bush publicly denied climate change and pulled out of the Kyoto protocol on the basis that the latter did not serve America's economic interests. According to Chakrabarty, "then-President George W. Bush even quipped that he was going to 'fight the greenhouse effect with the White House effect'" (199).

that climate change occurs somewhere in a distant place and sometime in a deferrable future (194). Any events or issues “outside the cultural sphere of attention” are often considered “‘unimportant’ and ‘unreal,’ ‘inaccessible’ not ‘close to home’” (Norgaard 116). Global-level climate change remains less important than local- or national-level environmental issues. Norgaard calls this phenomenon “socially organized denial,” which prescribes a “sense of knowing and not knowing, of having information but not thinking about it in their everyday lives” (9, 4). The notions of what to consider and what to ignore are socially constructed and eventually become “norms of emotion” (Norgaard 9), which often creates enormous psychological blocks for taking immediate, necessary actions.

It is within these socio-political contexts of the early twenty-first century that Graham’s *Sea Change* was written. While nature and environmental themes are pervasive from Graham’s first collection, *Hybrids of Plants and of Ghosts* (1980), onward, her poetry has been placed squarely in the realm of poststructuralism or postmodernism because of her ongoing experiments with language. Unlike Graham’s other earlier collections, however, *Sea Change* has enjoyed a number of ecological analyses as it stands out for its explicit concern with the climate crisis. Lynn Keller defines *Sea Change* as “poetry of the self-conscious Anthropocene” (2), which conveys the widespread awareness of human impacts on the planet in its linguistic forms. Matthew Griffiths, for his part, demonstrates how Graham’s textuality in *Sea Change* can be reconfigured—while drawing our attention to its own artificiality—as a form of sustainability. These studies offer new possibilities for appreciating Graham’s ecopoetics and reevaluating her apocalyptic vision within the context of experimental poetry.

This paper, while building on existing studies of Graham’s work, explores the full implications of her ecopoetics, which brings our attention to the *affective* dimension of experimental forms of language. Graham’s poetry is not just discursively constituted, it involves our emotional or bodily engagement, which allows us to have an experiential encounter with the environmental crisis. Graham’s *Sea Change* evokes ecological awareness and a sense of interconnectedness with the environment, not primarily through linguistic representation or (de)construction but via a consorted enactment of lyric language and our sensory perception. It is Graham’s particular mode of writing that brings together linguistic (discursive) and emotional (physical) factors into an embodied performance. This paper draws on Graham’s *Sea Change* and her interviews to investigate how her ecopoetics disrupts our *normal* modes of perception and attention—often involved in the social production of apathy or denial regarding climate change—to redirect our sensibility, and examine how her poetry awakens our sense of coexistence with and responsibility towards nonhuman others.

## POETICS OF APOCALYPSE

Graham's apocalypse is a way of imagining the end of nature and, thus, the end of the world that might have already happened. We are currently facing the total destruction of the environment and human civilization. As Lawrence Buell states, "apocalypse is the single most powerful master metaphor . . . the rhetoric of apocalypticism implies that the fate of the world hinges on the arousal of the imagination to the sense of crisis" (285). Apocalypse usually refers to either revelation in its biblical sense or the end of the world in its popular sense. The former can be called "revelatory apocalypse," which envisages eschatological salvation; the latter may be termed "secular apocalypse," which denotes any natural or human-driven catastrophe. The revelatory apocalypse is central to Western cultures as—Malcolm Woodland claims—it intimates "a particular discursive power and a particular desire" for mastery, finality, and closure (xvi) that promotes the arrival at "the promised land" or promised end (Parker qtd. in Woodland 20). It is this desire for finality and closure that gives shape and meaning to history, and this meaning is inseparable from Western apocalyptic teleology.

However, Graham's apocalypse in *Sea Change* is presented rather as an antithesis to the traditional revelatory apocalypse. As Woodland observes when analyzing Graham's *The Errancy* (1997), "Graham's anticlosural stance, then, is an antiapocalyptic stance" (171). Graham considers the aesthetic discourse of finality or closure to be complicit with the revelatory apocalypse. In an interview, she claims that "ending-dependence and eschatological thinking" has shaped "Western sensibility," as evident in notions such as "manifest destiny, westward expansion. Imperialisms of all kinds"; this kind of "apocalypse," she adds, is "the ultimate commodification" (Graham, Interview by Thomas Gardner [A] 84). Graham associates "eschatological thinking" with the imperial desire for order and mastery—with an urge to dominate and appropriate—which contributes to "the ultimate commodification" of social relations and of the natural (nonhuman) world. The fact that the earth is fundamentally transformed as a result of pollution, exploitation, and colonization compels her to question the aesthetic discourse of "the end" and by extension the capitalistic culpability for the destruction of the earth.

The revelatory apocalypse has been a basis for the very Western capitalistic thinking that has brought about the present environmental crisis. Thus, Graham strives to subvert aesthetic closure and rational control and leaves the text completely "open" by bringing into play the poetic devices she characteristically employs in her experimental poems, such as broken syntax, wide spacing between lines, enjambment, dashes,

abstract diction, and so on. Graham has found a way to render apocalypse while avoiding the pitfall of teleological revelation by transforming or recontextualizing the revelatory apocalypse into the secular environmental apocalypse.<sup>2</sup> The textual openness of her poetry, designed to disrupt any teleological schemes and the desire for closure, comes to disclose environmental crisis and ecological entanglement. Because of its radical openness, her text appears to be chaotic and fragmentary, which ironically dramatizes the apocalyptic ruins and wreckage. Yet, within the crumbling relics of this failing planet, one can witness, with unusual clarity, the interconnectedness of all the beings—animate or inanimate—that share the same destiny.

## 96

## APOCALYPTIC DRAMA

The apocalyptic vision of *Sea Change* allows us to “experience” catastrophic climate change, the inevitable death of species, and all other destructive effects of humanity on the planet. The poem presents a deteriorating world, against which Graham tests her sense of what she is—that is, having mind and body. Graham explores new modes of lyric poetry that may respond to the questions Margaret Ronda asks in her *Remainders* (2018) even though the latter does not consider Graham in her analysis:

How can a poem speak for, to, with ecological phenomena? Can poetry give matter and creaturely life a “voice,” a “face”? How does a poem make loss and extinction visible, or register new, disturbing presences, such as toxic sludge, oil spills, dead zones? How ought responsibility for ecological calamity be adjudicated at the level of the individual subject and the collective? (1)

The question of how a poem can depict “ecological phenomena” and evoke a sense of “responsibility for ecological calamity” is precisely what Graham is concerned with. Graham’s unique solution is to render *Sea Change* as an apocalyptic drama, which enacts the human-nonhuman entanglement. This is a stage where a multitude of human and nonhuman actors (including natural phenomena) appear to have their own agencies—

---

<sup>2</sup> Woodland suggests that Graham’s *The Errancy*, while rejecting the revelatory apocalypse, secretly seeks another, as is the case in the poetry of Wallace Stevens: “In closing off one version of apocalypse, it opens another” (181). However, Graham’s *Sea Change*, at least, does not aim for any sort of resolution. What Graham is seeking here is to lay bare the chaotic situation of the apocalyptic world and its tormenting and destructive hold on humans and nonhumans.

forces and “voice[s].” *Sea Change*, thus, invites readers to enter the drama as actors themselves to encounter who we are, who we are with, and where we all (humans and nonhumans) are.

In *Sea Change*, Graham imagines the worst-case scenario that, because of increasing anthropogenic intervention, we may have irreversibly crossed the tipping point, the point of no return at which the earth has lost its capacity to restore equilibrium. *Sea Change* was written, Graham explains, “after a very deep apprenticeship to the facts and issues involved in climate science” (Interview by Sharon Blackie 39). The poem “Positive Feedback Loop,” for example, employs the scientific model of the tipping point thematically and stylistically to show how a slight change in the climate can bring about unpredictable consequences through the amplifying (“positive”) loops of cause and effect.

I am listening in the silence that precedes. Forget  
                                   everything, start listening. Tipping point, flash  
                                   point,  
 convective chimneys in the seas bounded by Greenland.

.....

fish are starving to death in the Great Barrier Reef, the new Age of  
                                   Extinctions is  
                                   now  
                                   says the silence-that-precedes—you know not what  
                                   you  
 are entering, a time  
                                   beyond belief. Who is one when one calls oneself  
                                   one?

(“Positive Feedback Loop,” *Sea Change* 42)

The poem describes a series of feedback loops between global warming, melting icebergs, and ice sheets in Antarctica and Greenland, and rising sea levels across the globe. The melting of Greenland’s ice sheet, caused by the concentration of greenhouse gases in the atmosphere, leads to a rise in sea levels, which, as von Holle et. al. demonstrate, has devastating effects on coastal habitats: “fish are starving to death” (694). Moreover, the gradual retreat of the ice in Greenland leads to a progressive reduction of “convective chimneys,” which diminishes the supply of dense water to the Atlantic Ocean, which, in turn, makes it more difficult for oceanic convection—“a key mechanism that regulates . . . water-mass transformation, CO<sub>2</sub> exchange, and nutrient transport” (Vreugdenhil and Gayen 1)—to occur. “Once feedback loops like the above cut in,” Frederick Buell would argue,

“global warming can suddenly and catastrophically increase” (103), with the increasing possibility of passing the tipping point.

positive feedback loops—& the chimneys again, & how it is the ray of sun is taken in  
 in freedom, & was there another way for  
 this host  
 our guest,  
 we who began as hands, magic of fingers, laying our thresholds stone upon stone,  
 stretched skin between life and death,

(“Positive Feedback Loop,” *Sea Change* 43)

98

The poem also reminds us of the fact that global warming is a phenomenon engendered by the industrial activities of humanity and the reckless pursuit of profit. The result is that the environmental damage caused by humans has reciprocal effects on humanity. With the extinction of species and loss of habitat, we “are entering, a time” of total annihilation when there is no “one” left: “Who is one when one calls oneself / one?” Our rapacious “hands, magic of fingers” have fundamentally transformed the planet, while “laying our thresholds stone upon stone, / stretched skin between life and death.” It is this “positive feedback loop” in which humans and nonhumans are caught up, as “this host / our guest,” in the vicious circle.

*Sea Change* incorporates the discourse of climate change into our physical body in the form of feeling. Graham does not want us to simply understand the scientific concepts of climate change; her goal is to have us “actually ‘feel’ (and thus physically believe) what we have and what we are losing” (Interview by Deidre Wengen). Graham’s task then is to reengage us with the moribund planet by embodying the deteriorating world of matter in the discursive structure of her poetry. The poem alternates between long lines and short lines (set in the middle of the page), which, Graham expounds, is designed to “enact a sense of a ‘tipping point’—the feeling of falling forward, or ‘down’ in the hyper-short lines” (Interview by Deidre Wengen). The fluctuating, zigzag lines give us a sensation of passing the tipping point, making us undergo the hazardous oscillations of cause and effect. While the vertical lines embody the speed and immediacy of the environmental crisis in the manner of linear inevitability, the horizontal lines enact the non-linear swings of sudden amplification, which provoke the anxiety of the “positive feedback loops.”

Indeed, global warming is not something we can directly experience or whose physical substance we can discern. Because global warming is not a thing that is visible to the naked eye, it can be grasped only through scientific concepts and models such as “positive feedback” and “tipping point.” As Ben Dibley argues, the unintended consequences of

climate change, such as changes in sea level, mass extinction, and oceanic acidification, “escape the human sensorium.” These effects are “only brought to vision through scientific analysis” as they are beyond or outside our experiential realm (Dibley). In other words, no human being ever perceives climate change or its effects on the planet.<sup>3</sup> Moreover, it is notable that we cannot see ourselves as one of the creatures affected by our activities. As Dipesh Chakrabarty maintains: “We humans never experience ourselves as a species. We can only intellectually comprehend or infer the existence of the human species but never experience it as such” (220). Our failure to imagine beyond our experience is part of the reason why we have created the environmental crisis. This poses a significant challenge for Graham, since it involves the imagination of immense-scale events and species-level impacts.

One day: stronger wind than anyone expected. Stronger than  
 ever before in the recording  
 of such. Un-  
 natural says the news. Also the body says it. Which part of the body—I look  
 down, can  
 feel it, yes, don’t know  
 where. Also submerging us,  
 making of the fields, the trees, a cast of characters in an  
 unnegotiable  
 drama, ordained, iron-gloom of low light, everything at once undoing  
 itself.

(“Sea Change,” *Sea Change* 3)

The news about the unusual nature of phenomena (the “Un- / natural” news of climate change) is now everywhere, and we can hear about it every day. Nevertheless, the speaker is led to question “Which part of the body” can truly “feel it.” The speaker is unable to locate the area of sensation in the body (“don’t know / where”). Indeed, it is the power of poetry that enables us to have an experiential encounter with unimaginable environmental dissolution, the “unnegotiable / drama” of climate change. This encounter is achieved through linguistic experiments, which bestows on Graham a kind of “negative capability” to perceive truths without the framework of logic or science.<sup>4</sup> We need courage, Graham advises, to break

<sup>3</sup> Climate change can hardly be grasped by our daily experience. Only “a perceptive person old enough to remember the climate of 1951–1980 should recognize the existence of climate change” (Hansen E2415).

<sup>4</sup> John Keats’s “negative capability,” the ability to inhabit “uncertainties, Mysteries, doubts without any irritable reaching after fact and reason” (492), may help us procure



away from the conventional use of language: “I saw the failure of courage as a failure of imagination. And that is where art comes in” (Interview by Sharon Blackie 38). Therefore, “the primary job of the imagination,” Graham argues, is “to connect the world in which you are, to one in which you have not yet been, or cannot imagine being” (Interview by Poets Q&A). This is precisely her intention or ambition in writing *Sea Change*: “I think artists have a large responsibility at present—that of awakening the imagination of a deep future, . . . in order that people feel ‘connected’ to it in their willingness to act. . . . I happen to feel one can reawaken that sensation of an ‘unimaginably’ far off horizon” (Interview by Deidre Wengen). *Sea Change* gives the dynamics of climate change—shifting ocean currents, species extinction, floods, and droughts—a poetic voice through the use of various rhetorical devices (such as enjambment) and the particular spatial arrangement of language. With these diverse and multi-layered artifices, Graham’s poetry can articulate what scientific discourse cannot and render the declining ecosystem more sensible and perceptible than any scientific model can.

. . . in the

coiling, at the very bottom of  
the food  
chain, sprung  
from undercurrents, warming by 1 degree, the in-  
dispensable  
plankton is forced north now, & yet further north,  
spawning too late for the cod larvae hatch, such  
that the hatch will not survive, nor the  
species in the end, in the right-now forever un-  
interruptable slowing of the  
gulf  
stream, so that I, speaking in this wind today, out loud in it, to no one, . . .  
(“Sea Change,” *Sea Change* 4)

We read that the “1 degree” increase in temperature makes the “plankton” “[spring] / from undercurrents,” disrupting the whole system of “food chain,” which will lead to “the end” of “species.” The wiggling zigzag lines endow motion and vitality to the agential force of the plankton. These tiny invisible organisms, which are unable to propel themselves against the current, manifest their catalytic roles in the substantiality of the marine environment and biodiversity, through the actions—embodied in a series

---

perspectives other than our own and truths beyond human reasoning. It is the ability that Graham would associate with the courage of imagination to move beyond conventional scientific knowledge.

of sharp turns—such as “coiling,” “sprung,” and being drifted (by the current) “further north” to help the “spawning” “cod larvae” (albeit “too late”). Particularly, as Keller argues, the unexpected line breaks separating “in” from “dispensable” and “un” from “interruptible” convey “how what had seemed impossible is now not just possible but inescapably taking place” (109). Moreover, these line breaks, which introduce the opposite meaning of a word, make us stand dangerously on the edge or threshold of civilization as if the world had been pushed beyond the limits of sustainability and entered a “time” of existential uncertainty.

Poetry, for Graham, is an act of perception in its present situation, which allows readers to experience the environmental crisis as happening “here and now.” Graham’s experimental forms of language are founded upon the perceptive language of the lyric. For Graham, it is the “lyric” language (“I, speaking in this wind today”) that creates a sense of presence—the subjective feeling of actually “being” in a particular time and place—and, therefore, allows us to participate in ungraspable or unimaginable catastrophes: “One has to find means to see what isn’t apparently ‘there.’ . . . I believe that ‘unseeable thereness’ (if I can call it that) is what one is looking for, in lyric” (Interview by Poets Q&A). As Min Hyoung Song, in *Climate Lyricism*, suggests, “the lyric is a way to train attention on a here and now” in order to apprehend “a phenomenon that eludes familiar scales of comprehension” (40, 3).

Notably, the *lyric* sense of presence is associated with the act of perception, which assumes a bodily action in its cognitive situations. Sharon Lattig, in *Cognitive Ecopoetics*, claims that “lyric language is intensely active, generating meaning in the manner of perception”; it reproduces “the physical activity of the neural substrate and thus the basic dynamics of cognitive functioning” (19). Lyric poetry recapitulates the way we engage with the environment through cognitive processes. It involves the perceptual activity of our brain system that enables the comprehension of environments. Lattig’s cognitive ecopoetics sheds light on Graham’s lyric language as an embodied performance of our sensory systems. Graham’s lyric moves beyond what Jonathan Culler defines as the Romantic mode of “intense expression of the subject’s inner experience” (22) to awaken a sense of crisis within the physical act of perception. The lyric subjectivity in *Sea Change* takes no prevailing center from which to speak; it enacts the multiple dynamics of entanglements between the self and the other (environment), between humans and nonhumans.<sup>5</sup>

<sup>5</sup> For Graham, the lyric “I” is “simultaneously illusory and essential” (Interview by Mark Wunderlich). It is neither the Romantic notion of an essential self nor the post-structuralist notion of a socially or linguistically constructed one. Graham’s self, as I argued elsewhere by



it looks back at us. The fact that the cuttlefish has its own “look” troubles the distinction between human and nonhuman: “Own what, own / whom.” Nature appears to have mind (agency), and the human is reduced to a species-level existence. With the conflation of looking and being looked at, owning and being owned, Graham not only destabilizes the basic premises of human exceptionalism, which separates us from the rest of the world, but also enacts what Barad calls “the mutual constitution of entangled agencies” (33) which disrupts the very structure of ownership, to such a degree that one can never have the privilege to “own” or act upon the other; they can only “intra-act” with one another.

What Graham has done is to bring the environmental plights to “the human sensorium,” so that people can truly *feel* what they think they already know. Graham relates in an interview that “[s]cientists can provide all the information [on climate change] in the world, but . . . it does not necessarily awaken them [people] to a genuine physical belief” (Interview by Poets Q&A). She continues, in another interview: “They *feel* they ‘know’ this information already, . . . That is precisely the point. *They ‘know’ it. They are not ‘feeling it’*” (Interview by Sharon Blackie 40). For Graham, information or knowledge should be made *affective* to be effective or capable of motivating people to take action; thus, “feeling” can be an intra-active way of engaging the reader with the ecological crisis. Poetry, for this reason, should be somehow *experienced* through the body because knowing (a discursive process) is dependent on one’s physical experience of material reality. As Griffiths puts it, “Graham is trying to give thought its due in bodily perception in order to engage abstract phenomena through sensory experience” (222). Graham believes that poetry can provoke “feeling” in our material body, through which we come to *know* that we are (constitutive parts) *of* the world, not (simply living) *in* the world.

Graham’s association between feeling and knowing becomes evident when she declares, in a manner reminiscent of Descartes, “I think I feel my thinking self and how it / stands” (*Materialism* 142). She is in line with Antonio Damasio who, rejecting Descartes’s dichotomy of mind and body in his *Descartes’ Error*, emphasizes the affective body involved in the production of the human mind. For Damasio, feelings are *embodied* ways of knowing, and they are responsible for steering behavior, specifically decision-making. Feelings actually take place in the brain: they are “mental experiences of body states” (Damasio and Carvalho 143). Damasio’s clinical studies of the brain suggest that consciousness (mind) emerges from feelings: “Mind begins at the level of feeling. It’s when you have a feeling (even if you’re a very little creature) that you begin to have a mind and a self. . . . Feelings are where the self emerges, and consciousness itself” (Interview by Jason Pontin). As Damasio says, feelings are “just as

cognitive as other precepts”; they are part of reason and thought (*Descartes* xv). Without emotion, there is no such thing as rational decision-making.<sup>7</sup> Emotion involves engagement with the world as it gives us the meaning of the world. Damasio’s scientific insights into feeling as part of the reasoning process underscore the interdependence of mind and body—that is, of *how we think* and *how we feel*.

However, our “natural” feelings are not intact; they can be altered and shaped. In particular, they are subject to social control or management. In *The Managed Heart: Commercialization of Human Feeling*, sociologist Arlie Hochschild argues that we have been estranged from our feelings as social factors participate in the very formulation of emotions. She provides a set of examples of how society uses feelings as norms of conduct, exploring the implications of civilization and commercialization for the management of emotion. Human emotion has been manipulated through the process of civilization; such maneuvering of emotion has been intensified in a capitalistic society. Hochschild maintains that emotion is “a means by which we know about our relation to the world” (220); “When we do not feel emotion, or disclaim emotion, we lose touch with how we link inner to outer reality” (223). In a similar vein, Graham claims that “We have managed to divorce people from their capacity for sensation, and from the way in which sensation would lead to the heart and to conscience, fear, compassion, mortal outrage, and action” (Interview by Thomas Gardner [B]). She would agree with Hochschild who states that feelings have become “‘products,’ thus belonging more to an organization and less to the self” (198). For Graham, such emotional management is nothing but “a coup upon the reality status of events and of people and therefore on nature itself,” and it is, therefore, the role of “[p]oetry . . . to break through, to make reality *feel* real” (Interview by Thomas Gardner [B], *italics mine*).

The irregular linguistic forms and the textual openness in *Sea Change*, intended to disrupt teleological closure and, thus, reject commercialized ways of producing meaning, can be duly understood as a strategy to evoke or appeal to our *unmanaged* primitive emotion, which allows us to draw on the elemental life that is experienced as a *species*. Damasio’s neuroscience and Hochschild’s sociology of emotions align with Graham’s insistence on feeling as physical knowledge and the body’s power to affect the mind. Their notions of coexistence of mind and body also support Graham’s recognition that the human and the nonhuman have a shared physicality

---

<sup>7</sup> Emotions have a significant impact on our reasoning and decision-making. Damasio acquired his insights from his clinical studies on brain-damaged patients who were unable to use reason in making proper decisions because their emotions were impaired, while their cognitive regions (abilities) remained unaffected (see ch. 2 and 3, *Descartes*).

in origin as well as a shared destiny on the planet. She states that “here is another kind of knowledge we need in addition to that of the intellect. These are *feelings of belonging in creation*. That is what I am trying to awaken in myself and others in this book” (Interview by Deidre Wengen). This may be an extension of the Whitmanian sense of belonging in creation—“For every atom belonging to me as good belongs to you” (27)—to include more explicitly nonhuman others and build a sense of shared agency. All beings are created equally; they are made out of the same materials. Graham’s purpose in evoking “feeling” is to awaken in herself and others multiple ecologies of belonging and the material interrelatedness of all beings. It is this ethical dimension of Graham’s ecopoetics that stresses an enlarged sense of interconnection between the self and nonhuman “earth” others.

## CONCLUSION

Graham’s *Sea Change* is an artistic response to the prevailing public apathy and social denial regarding climate change, at a time when the US refuses to take its share of responsibility for ecological destruction. The poem is designed to raise public awareness of the environmental crisis by embodying an apocalyptic world in its linguistic forms and thus making us “experience” catastrophic events and the destructive impact of human activity on the planet. For Graham, feeling is an effective way of engaging the reader with the environmental catastrophe as it has the power to affect our minds and, thus, (re)direct our actions. We are invited to enter the apocalyptic drama with a renewed sense of the material dimensions of human existence. Graham’s radical ecopoetics turns our future absence into our presence by reactivating or cultivating the cognitive, affective, and sensorial means to awaken our sense of interconnectedness with others in nature. Graham’s *Sea Change* helps us redefine our sense of attachment and connection to the nonhuman. It shifts our sensorial and perceptual coordinates to help us see our existence as fully enmeshed in the material world.

### WORKS CITED

- Barad, Karen. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Duke UP, 2007. <https://doi.org/10.2307/j.ctv12101zq>
- Buell, Frederick. *From Apocalypse to Way of Life: Environmental Crisis in the American Century*. Routledge, 2003. <https://doi.org/10.4324/9780203484937>

- Buell, Lawrence. *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture*. Harvard UP, 1995. <https://doi.org/10.2307/j.ctv1nznfgsv>
- Chakrabaty, Dipesh. "The Climate of History: Four Theses." *Critical Inquiry*, vol. 35, no. 2, 2009, pp. 197–222. <https://doi.org/10.1086/596640>
- Crutzen, Paul, and Eugene Stoermer. "The 'Anthropocene.'" *Global Change Newsletter*, vol. 41, 2000, pp. 17–18.
- Culler, Jonathan. *Theory of the Lyric*. Harvard UP, 2017. <https://doi.org/10.18261/issn.2464-4137-2017-02-02>
- Damasio, Antonio. *Descartes' Error: Emotion, Reason, and the Human Brain*. Penguin, 2005.
- Damasio, Antonio. "The Importance of Feelings." Interview by Jason Pontin. *MIT Technology Review*, 2014, <https://www.technologyreview.com/2014/06/17/172310/the-importance-of-feelings>, accessed 3 June 2022.
- Damasio, Antonio, and Gil B. Carvalho. "The Nature of Feelings: Evolutionary and Neurobiological Origins." *Nature Reviews Neuroscience*, vol. 14, 2013, pp. 143–52. <https://doi.org/10.1038/nrn3403>
- Dibley, Ben. "Nature is Us: The Anthropocene and Species-Bing." *Transformations*, vol. 21, 2012, [http://www.transformationsjournal.org/wp-content/uploads/2016/12/Dibley\\_Trans21.pdf](http://www.transformationsjournal.org/wp-content/uploads/2016/12/Dibley_Trans21.pdf), accessed 3 June 2022.
- Emerson, Ralph Waldo. *The Essential Writings of Ralph Waldo Emerson*. The Modern Library, 2000.
- Gore, Al. *An Inconvenient Truth*. Directed by Davis Guggenheim, Lawrence Bender Productions, 2006.
- Graham, Jorie. "An Interview with Jorie Graham." Interview by Sharon Blackie. *EarthLines*, vol. 2, 2012, pp. 36–41. *Jorie Graham*, <https://www.joriegraham.com/system/files/Jorie+Graham+Interview.pdf>, accessed 3 June 2022.
- Graham, Jorie. "An Interview with Jorie Graham." Interview by Thomas Gardner [A]. *Denver Quarterly*, vol. 26, no. 4, 1992, pp. 79–104.
- Graham, Jorie. "Imagining the Unimaginable: Jorie Graham in Conversation." Interview by Deidre Wengen. *Poets.org*, 2014, <http://www.poets.org/poetsorg/text/imagining-unimaginable-jorie-graham-conversation>, accessed 3 June 2022.
- Graham, Jorie. Interview by Poets Q&A. *Smartish Pace*, 2020, <https://smartishpace.com/2020/09/jorie-graham/>, accessed 3 June 2022.
- Graham, Jorie. "Jorie Graham, The Art of Poetry, No. 85." Interview by Thomas Gardner [B]. *The Paris Review*, vol. 165, 2003. *Jorie Graham*, [https://www.joriegraham.com/interview\\_gardner](https://www.joriegraham.com/interview_gardner), accessed 3 June 2022.

- Graham, Jorie. *Materialism*. The Ecco, 1995.
- Graham, Jorie. *Sea Change*. HarperCollins, 2008.
- Graham, Jorie. "The Glorious Thing: Jorie Graham and Mark Wunderlich in Conversation." Interview by Mark Wunderlich. *Poets.org*, 23 May 2000, <https://poets.org/text/glorious-thing-jorie-graham-and-mark-wunderlich-conversation>, accessed 3 June 2022.
- Griffiths, Matthew. "Jorie Graham's *Sea Change*: The Poetics of Sustainability and the Politics of What We're Sustaining." *Literature and Sustainability*, edited by Adeline Johns-Putra et al., Manchester UP, 2017, pp. 211–27. <https://doi.org/10.2307/j.ctt1wn0s7q.18>
- Hansen, James. "Perception of Climate Change." *PNAS*, vol. 109, no. 37, 2012, pp. E2415–E2423. <https://doi.org/10.1073/pnas.1205276109>
- Hochschild, Arlie. *The Managed Heart: Commercialization of Human Feeling*. U of California P, 1983.
- Keats, John. *Complete Poems and Selected Letters of John Keats*. Modern Library, 2001.
- Keller, Lynn. *Recomposing Eco-poetics: North American Poetry of the Self-Conscious Anthropocene*. U of Virginia P, 2018. <https://doi.org/10.2307/j.ctv6sj6qg>
- Lattig, Sharon. *Cognitive Eco-poetics: A New Theory of Lyric*. Bloomsbury Academic, 2020. <https://doi.org/10.5040/9781350069282>
- Norgaard, Kari M. *Living in Denial: Climate Change, Emotions, and Everyday Life*. MIT P, 2011. <https://doi.org/10.7551/mitpress/9780262015448.001.0001>
- McKibben, Bill. *The End of Nature*. Random, 1989.
- Ronda, Margaret. *Remainders: American Poetry at Nature's End*. Stanford UP, 2018. <https://doi.org/10.11126/stanford/9781503603141.001.0001>
- Ryoo, Gi Taek. "The Eco-poetics of Jorie Graham: Lyric Engagement with the Material World." *The Journal of English Language and Literature*, vol. 68, no. 2, 2022, pp. 305–28.
- Song, Min Hyung. *Climate Lyricism*. Duke UP, 2022. <https://doi.org/10.1215/9781478022350>
- von Holle, Betsy, et al. "Effects of Future Sea Level Rise on Coastal Habitat." *The Journal of Wildlife Management*, vol. 83, no. 3, 2019, pp. 694–704. <https://doi.org/10.1002/jwmg.21633>
- Vreugdenhil, Catherine A., and Bishakhdatta Gayen. "Ocean Convection." *Fluids*, vol. 6, no. 360, 2021, pp. 1–20. <https://doi.org/10.3390/fluids6100360>
- Whitman, Walt. *Leaves of Grass*. Vintage, 1992.
- Woodland, Malcolm. *Wallace Stevens and the Apocalyptic Mode*. U of Iowa P, 2005.



**Gi Taek Ryoo** is Professor of English at Chungbuk National University, Korea. He has published a number of articles in the field of poetry and science, ecopoetics, and posthumanism. His recent publication includes “The *Systemic* Nature of Environmental Disaster: Muriel Rukeyser’s *The Book of the Dead*” (2021) and “Language and Ecology. The Textual Ecopoetics of Lyn Hejinian’s *My Life*” (2022). He is particularly interested in the parallel development of poetry and science in the twentieth century.

<https://orcid.org/0000-0003-4673-3085>

[gtryoo@chungbuk.ac.kr](mailto:gtryoo@chungbuk.ac.kr)