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Diffraction Way of Thinking and the Possibilities of Capturing Ecological Trauma in Tomonari Nishikawa's *sound of a million insects, light of a thousand stars* (2014)

Abstract

sound of a million insects, light of a thousand stars (2014) is a camera-less two-minute-long film directed by the Japanese experimental filmmaker Tomonari Nishikawa. He buried a 100-foot-long 35mm negative film under fallen leaves alongside a country road close to the Fukushima Daiichi Nuclear Power Station where it was exposed to the possible remains of radioactive materials. The film is a document of an intrusive past. It becomes an (eco) traumatic landscape and a local manifestation of a hyperobject called radiation. This article will employ the concept of diffraction as a new materialist concept whose qualities are quite underexplored in the field of film studies but may have important implications for questions that are frequently asked about the nature of ecological trauma and its representation. Through rethinking 1) how we think about culture/nature and our being in the world; 2) identity and difference; 3) and representationalism, this article will argue that when discussed in a new materialist context, possible to approach eco-trauma in new and fertile ways. With a case study of Nishikawa's film, the study will also explore how ecologically engaged experimental films can capture the sense of eco-trauma experience by going against the idea of common-sense representationalism as a mode of knowledge-producing.

Keywords

eco cinema, eco-trauma, diffraction, new materialism, Indigenous wisdom

Introduction

sound of a million insects, light of a thousand stars (2014) is a camera-less two-minute-long film directed by the Japanese experimental filmmaker Tomonari Nishikawa. For this film, he buried a 100-foot-long 35mm negative film under fallen leaves alongside a country road about 25 kilometers away from the Fukushima Daiichi Nuclear Power Station, where it was exposed to the possible remains of radioactive materials. In 2011 due to the consequences of an earthquake, the Fukushima Nuclear Power Plant was hit by a tsunami. Three of the plant's six reactors were melted and radiation leaked. The catastrophe was followed by a government investigation, which revealed that the plant owners and operators had been negligent in preparing the plant for natural disasters. In 2015 — one year after Nishikawa's film was released — they also announced that the plant's operator (Tokyo Electric Power Company) had been covering up that radioactive waste had been continuously flowing from the site into the ocean, as well as, that the radiation's level in the towns near the power plant — such as Tamura City — was 19 times the amount considered safe for human inhabitation.¹⁾

In a broader sense, this film is an example of eco-related experimental cinematic works, or as Scott MacDonald would call them “eco-cinema” as it potentially helps nurture a “more environmentally progressive mindset”²⁾ while also challenging conventional media spectatorship. Moreover, it is a document of an intrusive past as it highlights a series of encounters of all manner of earthly beings joined together by globally linked — and here, poisonous — actions. To that end, more specifically, Nishikawa's film also can be understood as an example of “eco-trauma cinema”³⁾ being a record of social processes that traumatized the natural world and its species. On account of its formal strategies, the traces of the long-lasting results of human actions and non-human forms alike become visceral imprints that enhance the materiality of the hand-processed film. There is no narration, nor music, hence the film does not try to evoke emotional responses in the viewers⁴⁾ by using the classical tools of storytelling. Without any sort of orientation, we are immediately drawn into the flux of events, aware only of the palpable presence of the non-human but having a sense too of human presence and influence. The imprints of non-human agents race before our eyes as leaping flames; frosty-blue lightning (an effect of radiation) is burnt into the skin of the celluloid⁵⁾; sounds of earthly encounters — humans and nonhumans

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- 1) Gregory Zinman, “Echoes of the Earth: Handmade Film Ecologies,” in *Process Cinema: Handmade Film in the Digital Age*, eds. Scott MacKenzie and Janine Marchessault (Montreal and Kingston/London/Chicago: McGill Queen's University Press, 2019), 108–112.
 - 2) Scott MacDonald, “Toward an Eco-Cinema,” *Interdisciplinary Studies in Literature and Environment* 11, no. 2 (2004), 107–132.
 - 3) Anil Narine, ed., *Eco-Trauma Cinema* (New York and London: Routledge, 2015).
 - 4) My idea of the viewer and the film-viewing experience is based on Vivian Sobchack's concept, according to which film-viewing is both a carnal and conscious experience, and the viewing itself is a dynamic activity. The viewer is “communicatively competent” and takes part in “the embodied activity of perception and expression.” See Vivian Sobchack, *The Address of the Eye: A Phenomenology of Film Experience* (Princeton: Princeton University Press, 1992), 6–8.
 - 5) Even though film stock has not been made of celluloid for decades, as Jonathan Walley points out in *Cinema Expanded* (2020), “the term has stuck even with professional filmmakers.” For these reasons — similarly to Walley — I use the term “celluloid film” for the medium of analog, photochemical, mechanical film. See

alike — such as Nishikawa scratching the film or insects running over the celluloid imprint themselves into the soundtrack, making visible and audible thousands of “intra-actions.”⁶ *sound of a million insects* manifests the troubled relationship and what I would call *traumatic connectedness* that exists between humans and the non-human world.

Kim Knowles when giving an analysis of Nishikawa’s film, stresses that the kind of materialist film aesthetic employed here makes way to “other forms of knowledge [and] [...] that it contains a documentary impulse that goes beyond the limitations of purely photographic representations.”⁷ To me, the way this cinematic work renegotiates representationalism evokes the idea of “diffraction” originally coming from physics that when used in new materialist contexts can be understood as an alternative to such concepts as the common-sense view of representationalism and reflection, as well as how we think about our being in the world. The questions of representation are problems that are frequently discussed in relation to eco-trauma or trauma in general. As Jill Bennett puts it, “trauma is classically defined as beyond the scope of language and representation [...] [as] an imagery of trauma might not conform to the logic of trauma.”⁸ I will argue that the idea of diffraction used in relation to Nishikawa’s film (an example of eco-trauma cinema) can elaborate on how (in this specific case) experimental films with their radical formal strategies go against the idea of common-sense representationalism and reflection (focusing on sameness and mirroring) as a mode of knowledge-producing and can find alternative ways for capturing the sense of eco-trauma. In the theoretical texts of Trinh T. Minh-ha, Donna J. Haraway, and Karen Barad written in the intersection of humanities and science studies, diffraction also appears as a way of thinking about identity and difference that offers a non-dualistic, non-separational model of identity. As Karen Barad puts it, “we can understand diffraction patterns — as patterns of difference that make difference — to be the fundamental constituents that make up the world.”⁹ Since this model brings interference and entanglement to the fore rather than separation, it fosters the act of re-thinking (as in thinking it over and over again) how we perceive our being in the world, as well as, our relationship with other humans and nonhumans. This non-binary, relational model of identity and non-dualistic worldview focusing on relations rather than division form the basis of my approach to eco-trauma and in thinking about the nature of trauma in general. Accordingly, I wish to challenge Timothy Morton’s idea of the “traumatic Severing” that lies beneath their sense of eco trauma¹⁰ and argue that what actually makes traumatic the relationship between humans and the natural world in such radical cases as for example a nuclear catastrophe is the realization of intimate *connectedness*.

Jonathan Walley, *Cinema Expanded: Avant-Garde Film in the Age of Intermedia* (Oxford: Oxford University Press, 2020), 11.

6) Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham and London: Duke University Press, 2007).

7) Kim Knowles, *Experimental Film and Photochemical Practices* (Cham: Palgrave Macmillan, 2020), 48–49.

8) Jill Bennett, *Emphatic Vision: Affect, Trauma, and Contemporary Art* (Stanford: Stanford University Press, 2005), 3.

9) Barad, *Meeting the Universe Halfway*, 72.

10) In my writing, I aim to read through each other a diverse body of thoughts in order to challenge hierarchical academic modes of thinking that are still largely burdened with a colonial mindset and also to think about ecological trauma through the lens of relationality. Therefore I would like to respectfully attend to

A Diffractive Way of Thinking

In this article, I wish to argue that Nishikawa's film is an instance of an experimental film-making practice that does not merely seek to mirror or reflect the eco-trauma experience but rather convey this experience by cultivating "realism without representationalism,"¹¹⁾ which involves embracing the principles of diffraction into the workings of the films themselves. However, I believe that diffraction does not only play a role in developing forms of realism without representationalism but is also an essential tool in re-imagining eco-trauma on new materialist grounds and approaching it as (an inconvenient) relationality. As diffraction is such a central notion to this inquiry being also an integral part and motivator of any further thinking, first I will give an overview of this concept.

Diffraction is a phenomenon in physics created when a "multitude of waves encounter an obstacle upon their path and/or when these waves themselves overlap."¹²⁾ In classical physics, it is often discussed in relation to the theorizing of light, which is proved to have both particle and wave characteristics (Wave-Particle Duality), depending on the experiment. According to the wave theory of light, light is made of waves that are extended in space and that have the ability to interfere, overlap, and extend one another. Beyond that, in the context of quantum physics, we are also invited to think about the inherent diffractivity of sets of waves, of single waves, and of single particles, under the right (experimental) conditions. The two-slit diffraction experiment is at the heart of quantum physics. It shows that the so-called wave-particle duality is not only the characteristic of light; even electrons are queer particles: they are particles, yet they are also waves; they are neither one nor the other. Electrons are the embodiment of the coming together of opposite qualities within as a relation of difference within. This is a theoretical impossibility according to Newtonian physics where everything is either one or the other (particle or wave, here or there, this or that). Quantum physics queers the binary type of difference at both micro- and macro-scales as "an ongoing reconfiguring of spacetime mattering across and within spaces and times."¹³⁾ In the context of feminist science studies, the phenomenon of

non-Western and Indigenous philosophies and wisdom. I also feel necessary to point out that in my inquiry into the question of eco-trauma and human-nature relationships, I will assert a human point of view but without the intention of placing humans above nature. Even though I think with Indigenous philosophies where nature is mostly considered animate in order to explore the web of complex entanglements between the different worlds of plants, animals, humans, etc. when I delve into the problem of eco-trauma, I will not focus on the traumatization of nature. Although it is important to stress again that ecological trauma is not a universal experience and even those who experience eco-trauma do not experience it in the same way, similarly, ecological problems do not affect citizens of the industrialized Global North to the same degree as those of the Global South, I will not discuss Indigenous senses of eco-trauma as I do not think mine would be a credible account.

- 11) The idea of fostering realism without representationalism is one of the fundamental notions of Karen Barad's work and the onto-epistemology and ethics they develop called agential realism in *Meeting the Universe Halfway*. It rejects the idea of representations of a separate, self-contained reality and accentuates the consequences and interventions of intra-acting within and as part of the world and as such, it negates nature/culture dualism.
- 12) Evelien Geerts and Iris van der Tuin, "Diffraction and Reading Diffractively," *New Materialism*, July 27, 2016, accessed February 2, 2023, <https://newmaterialism.eu/almanac/d/diffraction.html>.
- 13) Karen Barad, "Diffracting Diffraction: Cutting Together-Apart," *Parallax* 20, no. 3 (2014), 174.

diffraction is used as an optical metaphor for theorizing about knowledge and to denote a more critical and difference-attentive mode of consciousness. In the texts of Trinh T. Minh-ha and Donna Haraway, the metaphor of diffraction is usually used in relation to thought, differences, and alterity while in the theoretical work of Karen Barad — what I would like to think with a focus on here — difference is thought of as an act of making a difference in terms of figurative conceptualization and of how matter comes to matter.¹⁴⁾

In *Diffraction: Cutting Together-Apart* (2014), Karen Barad draws attention to diffraction — a key concept of their agential realism that is an ontology, an epistemology, and ethics at the same time — as a lively affair that challenges dichotomies and calls for a rethinking of the terms of identity and difference. The key is to understand that identity is not an essence nor is it fixed; it is not a given but a conditional repetitive performativity through which this supposed conflict is being reworked into an understanding of difference not as “an absolute boundary between object and subject, here and there, now and then, this and that, but as the effects of enacted cuts in a radical reworking of cause/effect.”¹⁵⁾ In the act of the coming together of opposite qualities within, difference is not erased, rather this act suggests “the material multiplicity of self” and “the way it is diffracted across spaces, times, realities and imaginaries.”¹⁶⁾ The opposition of subject/object, wave/particle, and position/momentum is only present within particular intra-actions that create cuts that enact contingent divisions (but not absolute separations) within phenomena. Difference thus, must be thought of as differencing, as “differences in the (re) making.”¹⁷⁾ They are within and constituted through intra-activity, in the creating of ‘this’ and ‘that,’ within the phenomenon that is formed in their entanglement (inseparability). Barad emphasizes that this process is just as a characteristic of electrons with one another, as it is of onto-epistemological intra-actions involving humans.

Another key concept of quantum physics that is also frequently used in Barad’s work is the idea of quantum superposition, which entirely shatters the classical concepts of identity: it shows that being/becoming is an indeterminate matter. This movement of “in/determinacy” (“an always already opening up-to-come”)¹⁸⁾ upsets the self/other binary and also the notion of the self as unity. The self is a superposition — the effect of agential cuts (the material enactments of differentiating/entangling) — of beings, becomings, here and there, now and then. In other words, it is a multiplicity just like entanglements that are not unities either, as they do not eliminate differences. Contrarily, “entanglements entail differentiating, differentiating entails entanglements. One move — cutting together-apart.”¹⁹⁾ Quantum entanglements are not about two or more entities (states, events) being intertwined. They raise a question about the very essence of “two-ness,” and conclusively of “one-ness,” as well. Quantum entanglements call for a distinct sense of “a-count-ability” and of “response-ability.”²⁰⁾ Differences do not only exist between two entities but they also

14) Geerts and van der Tuin, “Diffraction and Reading Diffractionally.”

15) Barad, “Diffraction: Cutting Together Apart,” 174.

16) Ibid., 175.

17) Ibid.

18) Barad, “Diffraction: Cutting Together Apart,” 176.

19) Ibid.

20) Ibid., 178.

work within a single entity. Furthermore, difference is itself a multiplicity within/of itself and it is too diffracted. Diffraction is a constituent of differences not only at every scale but “in the making and remaking of scale (spacetime-matterings).”²¹⁾ “Differences percolate through every ‘thing,’ reworking and being reworked through reiterative reconfigurings of spacetime-matterings [...] each being (re)threaded through the other. Differences are always shifting within.”²²⁾

In this view, beings and objects are not at all separate entities with a well-defined border as they are frequently referred to. In fact, they are constantly exchanging, transforming, and becoming entangled and through intra-action, they are mutually constituting and co-creating one another. This movement is agency itself because agency in Baradian terms is understood as a relationship and not something that one has. Causality in its reworking can be seen as a result of an agential cut. Intra-actions perform agential cuts, which do not produce complete separations but rather cut together-apart (one move). Agential cuts act out a settlement within the phenomenon of the inherent ontological indeterminacy. Through the enactment of agential separability, intra-actions create the condition of “exteriority-within-phenomena.” An agential cut ultimately executes a causal structure among the elements of a phenomenon in the “marking of the “measuring agencies” (“effect”) by the “measured object” (“cause”).”²³⁾

As discussed above, Barad — within an agential realist context — encourages us to re-think our knowledge 1) about the relations of nature/culture and our being in the world; and 2) about identity, body, and matter; through the concept of diffraction agential realism invites us to rework our modes of theorizing and how we think about representation-alism. In the following, I will argue that these aspects are relevant to a new materialist understanding of eco-trauma as they might be helpful in shedding new light on 1) the nature, and 2) the representational challenges of ecological trauma. The non-dualistic world view promoted by agential realism is undoubtedly essential in challenging the fundamentally Western or Eurocentric world view that has determined the intellectual heritage within it was conceived, however I must acknowledge that philosophies outside of Europe such as Indigenous wisdoms had already been evolved around a non-hierarchical relational understanding of being in the world. To this end, I find it important to acknowledge and be guided by some of these wisdoms when re-imagining human-nature relationships.

Thinking with Ecological Trauma in the Context of Diffraction and Relationality

Though what we call trauma theory today has its roots in psychoanalysis, since the 1990s other human sciences — as part of the “ethical turn” of the humanities — such as film theory have integrated trauma-related approaches into their fields of research. This interest in trauma studies was partly the result of escape criticism about “the indifference of theory, in its ‘deconstructive, poststructuralist or textualist guise,’ to historical realities and the

21) Barad, “Diffracting Diffraction: Cutting Together Apart,” 176.

22) Ibid., 178–179.

23) Barad, *Meeting the Universe Halfway*, 140.

possibilities of political engagement”²⁴⁾ writes Richard Crownshaw. Since then, the humanities have provided several disciplinary and interdisciplinary approaches across their various fields of research for the growth of “trauma studies’ representation and politicization of historical experiences.”²⁵⁾ Crownshaw warns us, that despite seeming like a smooth transition, this development entails still continuing debates over the conceptualization of trauma. This article would like to contribute to these debates with its own understanding of eco-trauma. Eco- or ecological trauma, as I call it, is still a relatively new sub-category of trauma theory; yet as related notions such as climate- or eco-anxiety²⁶⁾ have become widely discussed topics in contemporary media it is a subject of increasing research interest. Nevertheless, this area of investigation continues to be an open arena of diverse approaches without a consensus about the terminology. Terms like geotrauma,²⁷⁾ climate trauma,²⁸⁾ eco-trauma,²⁹⁾ ecological PTSD,³⁰⁾ and climate-related pre-traumatic stress syndrome³¹⁾ are all used to describe more or less the same phenomenon and with a differing understanding of the concept of trauma. This research builds on the works of these authors (both from the field of trauma studies and of eco-trauma) but at the same time wishes to move toward different directions inspired by new materialism and decolonial thinking.

As Cathy Caruth argues, a traumatic event is an overpowering experience of unexpected or fatal events in which the response to the event occurs in the often delayed, uncontrolled, repetitive appearance of hallucinations or other intrusive phenomena.³²⁾ One of the most problematic aspects of trauma is that the event itself is not fully experienced or absorbed mentally at the time but only later therefore it stays without a witness as Dori Laub puts it. Due to the inaccessibility and unassimilability of traumatic memories, being traumatized means being haunted by an image or an event. The phenomenon of trauma — in regards to the experience — is characterized by a radical absence and discontinuity through which it pushes the limits of understanding and knowing.³³⁾ Caruth also points out that a traumatic event is always an alienating experience. Additionally, it is marked by a certain numbness that results in helplessness that makes it impossible for the traumatized individual to act. Similarly, Jill Bennett writes that trauma “encapsulates both direct,

24) Richard Crownshaw, “Trauma Studies,” in *The Routledge Companion to Critical and Cultural Theory*, eds. Simon Malpas and Paul Wake (London and New York: Routledge, 2013), 167.

25) Ibid.

26) Panu Pihkala, “Anxiety and the Ecological Crisis: An Analysis of Eco-Anxiety and Climate Anxiety,” *Sustainability* 12, no. 23 (2020), 1–20.

27) Tim Matts and Aidan Tynan, “Geotrauma and the Eco-Clinic: Nature, Violence and Ideology,” *sympleke* 20, no. 1–2 (2012), 91–110.

28) E. Ann Kaplan, *Climate Trauma: Foreseeing the Future in Dystopian Film and Fiction* (New Brunswick: Rutgers University Press, 2016); Benjamin White, “States of Emergency: Trauma and Climate Change,” *Ecopsychology* 7, no. 40 (2015), 192–197; Zhiwa Woodbury, “Climate Trauma: Toward a New Taxonomy of Trauma,” *Ecopsychology* 11, no. 1 (2019), 1–8.

29) Anil Narine, ed., *Eco-Trauma Cinema* (New York and London: Routledge, 2015).

30) Timothy Morton, *Humankind: Solidarity with Nonhuman People* (London and New York: Verso, 2019).

31) E. Ann Kaplan, “Is Climate-Related Pre-Traumatic Stress Syndrome a Real Condition?,” *American Imago* 77, no. 1 (2020), 81–104.

32) Cathy Caruth, ed., *Trauma: Explorations in Memory* (Baltimore and London: The Johns Hopkins University Press, 1995).

33) Shoshana Felman and Dori Laub, *Testimony: Crises of Witnessing in Literature, Psychoanalysis and History* (New York and London: Routledge, 1992).

unmediated affective experience and an absence of affect [...] [thus] it is resistant to cognitive processing and induces psychic numbing.”³⁴⁾

When it comes to the specific question of eco-trauma, Zhiwa Woodbury, psychotherapist, argues that the climate crisis itself is a new form of trauma. It does not only cause trauma but it is a form of trauma that penetrates the conditions of our life. He stresses that

[a]s we humans are ourselves an integral part of the biosphere that is under assault and are wholly dependent upon the natural world in which we have evolved, there is no protecting us from this sweeping assault on the life-support system we share with all beings. The logical implication then is inescapable: The global climate crisis needs to be seen as an entirely new and unparalleled kind of trauma.³⁵⁾

Woodbury claims that the common measure of psychological trauma is a sense of intensive helplessness and fear, the deprivation of control, and the peril of annihilation. The unfolding flux of climate-related catastrophic events is putting almost incomprehensible stressors on the biosphere of which our bodies and minds are also a part, hence inducing an overwhelming feeling of fear and helplessness, and extinction. He too approaches climate trauma as a crisis of relationship: the relationship between humans and nature. However, he adds, that this crisis also influences all levels of relationality; it affects the interspecies, sociocultural, collective, job-related, and domestic spheres of our lives. Because all the cunning forms of trauma are omnipresent, and when experienced continuously they have an intensifying force and effect that can be essentially life-altering. In reaching his conclusions, Woodbury also emphasizes that the existing Western clinical paradigm cannot suitably address the encompassing category of climate change. A more Earth-oriented paradigm is required, one evolved “outside the limited and limiting box of Western psychology and the (Cartesian) scientific-materialist worldview from which modern psychology sprang forth.”³⁶⁾

I agree with Woodbury in that a paradigm shift would be welcome in our³⁷⁾ approaches toward both human-nature relationships and the question of eco-trauma. In my argument about ecological trauma, I would like to differentiate two levels of this traumatic relationship between humans and nature. The first one is what Timothy Morton calls the “Severing,” which is the sense of traumatic separation from nature. The second one is what

34) Bennett, *Emphatic Vision*, 5.

35) Woodbury, “Climate Trauma: Toward a New Taxonomy of Trauma,” 2.

36) *Ibid.*, 5

37) What I intend to explore is how the mechanisms of the system of thought we call Eurocentric works to predestine one's sense of kinship. Consequently, my examination will focus on how one in a hugely urbanized space in a highly industrialized Western country where the abovementioned mechanisms could work most effectively or those living in places that may be lesser industrialized or non-Western, yet have fully embraced the principle that the “other,” be it nature or marginalized groups of people can be exploited, controlled or dominated, based on the principle that certain groups of people or social strata are superior to others, might (but of course not necessarily) experience eco-trauma. Thus, my notion of “we,” “us” or “our” in the context of this article, refers to all those who inherited the epistemologies of the North. For a more detailed discussion of this issue see for example Boaventura de Sousa Santos' concept of the epistemological South and North, in *The End of the Cognitive Empire: The Coming of Age of Epistemologies of the South* (Durham: Duke University Press, 2018).

I call *traumatic connectedness*. Before I continue, however, I would like to note that even though this work intends to confront dualistic thinking, I must acknowledge how hard it is to completely escape the traps of Western rationalism and the binary oppositions in which it thinks. Texts on diffraction, which I have quoted exhaustively and that aim challenging dualistic frameworks unaware also base their argument on oppositions such as diffraction and reflection. Similarly, when I first started exploring how to approach ecological trauma through relationality I instinctively envisioned it as the opposite of the “narratives of separation” that usually characterize any Western thinking about ecological trauma. This again, models quite well how deeply one’s thinking is rooted in the environment it was trained. Recognizing this contradiction, I wish to organize my argument about ecological trauma, separation, and relationality around Unaisi Nabobo-Baba’s notion of both/and way of thinking.³⁸⁾ Inspired by both this idea and the concept of Karen Barad’s agential cut, I propose that within the experience of eco-trauma, the sense of separation and relationality coexist.

Eco-trauma, I argue, enacts agential cuts — that is, it acts out provisional divisions but not absolute separations within phenomena. A both/and way of thinking is based on the idea that seemingly opposing realities cannot be defined as opposite to one another. Looking at the question of separation and connectedness from this perspective and also adding that in our relationship with nature, we (may) experience these sensations quite differently and to differing degrees, these two experiences are in fact inseparable and threaded through each other. I believe that traumatic connectedness this latter component of eco-trauma is rooted in the sense of Severing while it is culminating in the realization that the separation we (Euro-Western subjects) took for granted has never existed. If the climate crisis has taught us anything about our place in the world is that we are intimately connected to nature.

Timothy Morton in discussing ecological matters and global warming, points out that white Westerners (whom Morton refers to as “we”) are in a constant state of “ecological PTSD” (Post Traumatic Stress Disorder). He argues that “we” create an “information dump mode” about ecological facts as a result of “our” creating a bubble of “anticipatory fear,” only then to find “ourselves” in the middle of terribly confusing and numbing traumatic events.³⁹⁾ The numbing quality of the traumatic event is the reason “we” are unable to do anything about the current ecological emergency. Yet, there is another force that determines “our” psyche. An event that does not happen “at” a certain “point” in linear time but is “a wave that ripples out in many dimensions,”⁴⁰⁾ an event that he calls “the Severing.” It is a traumatic crack between “the human correlated world” and “the ecological symbiosis of human and non-human parts of the biosphere.”⁴¹⁾ Moreover, because the traumatic Severing can only be experienced indirectly, it is not resolved. However, it can be all too easy to fall into the bad faith of a false “unified experience” of eco-trauma; I must acknowledge that Morton’s concept of the traumatic Severing was born within a Western academ-

38) Upolu Luma Vaai and Unaisi Nabobo-Baba, eds., *The Relational Self: Decolonising Personhood in the Pacific* (Suva: The University of the South Pacific and The Pacific Theological College, 2017).

39) Timothy Morton, *Being Ecological* (Cambridge, Massachusetts: MIT Press, 2018), xxii.

40) Morton, *Humankind*, 15.

41) Ibid.

ic environment and describes a fundamentally Western sense of eco-trauma; Listening — seeing and understanding too — is trained. “It is encultured and geographically specific, shaped by social, political and economic forces, violence and oppression.”⁴²⁾

As Ailton Krenak indigenous activist phrases it, “Nature” is the daughter of culture. It is only possible to think “Nature” if one is outside of her. He asks, how could a baby think of its own mother while it is still inside her uterus? How could a seed think of the fruit? One can only think the inside from the outside. In a given moment of history, “the civilized world” of humans conceived the idea of “Nature” to name that which had no name. For them (us, Euro-Westerners), he adds, Nature is a construct, an invention of culture, and not something that precedes it. This separation is precisely what allows — from the point of view of “the civilized world” — the domination of nature.

The way eco-trauma has been approached is based largely on a dualistic worldview that thinks in terms of binary oppositions that also determine the conceptualization of identity and therefore one's relationships. The idea of identity in this matrix is rooted in a reductive Hegelian Self/Other dialectics, which I propose to revise on the basis of relationality in order to be able to effectively discuss eco-trauma in a new materialist and decolonizing context. As proposed before, I will treat trauma itself as an active agent who creates a difference within by an act of agential-cut or as Barad puts it elsewhere, cutting together-apart (one move). On the other hand, with the guidance of Indigenous wisdom, I would also like to think with a different approach to identity: one that is based on relationality.

As the Blackfoot scholar, Leroy Little Bear points out, everything is animate and thus alive and imbued with spirit. Blackfoot metaphysics has a holistic perspective where the expression “all my relations” does not simply mean blood relations and family in a Western sense but humans, animals, rocks, the land, etc., explains Little Bear. Consequently, they think with an ecological relational network where everything is considered and nothing is left out.⁴³⁾ Haudenosaunee and Anishinaabe scholar Vanessa Watts also opposes the Western pursuit of the separation of ontology and epistemology. According to the Haudenosaunee and Anishinaabe conceptions of onto-epistemology habitats and ecosystems are perceived as societies. Nonhuman beings, therefore, are active members of society and they “directly influence how humans organize themselves into that society.”⁴⁴⁾ Thus, as Zoe Todd and AM Kanngieser argue, Land and place are thought of as “sets of relationships between human and nonhuman beings, co-constituting one another.”⁴⁵⁾ Eduardo Viveiros de Castro discusses that Amerindian perspectivism, in contrast to Western cosmologies,

42) AM Kanngieser and Zoe Todd, “Listening as Relation, an Invocation” (Paper presented at the CTM Festival (online), Critical Modes of Listening series, Studio dB, Berlin, January 21, 2021), video last accessed February 3, 2023, https://www.youtube.com/watch?v=kGe0DYMroEg&ab_channel=CTMFESTIVAL.

43) Leroy Little Bear, “Blackfoot Metaphysics ‘Waiting in the Wings’” (Paper presented at the Big Thinking Congress of the Humanities and Social Sciences, University of Calgary, June 1, 2016) video last accessed February 3, 2023, https://www.youtube.com/watch?v=o_txPA8CiA4&list=PLelwQNhyPvTzNNpD4F1JPiXVfp3smXt0Y&ab_channel=FederationHSS.

44) Vanessa Watts, “Indigenous Place-Thought and Agency amongst Humans and Non-Humans (First Woman and Sky Woman Go on a European World Tour!),” *Decolonization: Indigeneity, Education & Society* 2, no. 1 (2013), 23.

45) AM Kanngieser and Zoe Todd, “From Environmental Case Study to Environmental Kin Study,” *History and Theory* 59, no. 3 (2020), 385.

consists of “the ideas in Amazonian cosmologies concerning the way in which humans, animals and spirits see both themselves and one another.”⁴⁶⁾ Accordingly, he proposes that the classical categories of “nature,” “culture” and “supernature” can be redefined based on the concept of perspective or point of view. Viveiros de Castro points out that in Amerindian cosmologies, whatever possesses a soul — human or animal — is a subject and thus able to have a point of view. Therefore, in Amerindian ontological perspectivism “point of view creates the subject,” in opposition to the Saussurean formula according to which “point of view creates the object.”⁴⁷⁾ By accepting that any living creature can have a point of view and can therefore be a subject, the hierarchy between humans and all other living beings is dissolved.

A notion rooted in quantum physics, similar to these relational understandings of the self occurs in Barad’s agential realist onto-epistemology. The key concept here, as mentioned before, is diffraction, which calls into question the idea of binaries and calls for a reworking of terms such as identity and difference. It promotes the understanding of identity not as an essence nor something that is fixed but rather as a conditional reiterative performativity through which the perception of difference is reworked. Difference, as a consequence of this performative reworking, ceases to be seen as an impermeable line between object and subject, this and that, here and there, now and then. Instead, it is revisited as the effects of performed cuts “*in a radical reworking of cause/effect*” (italics by Barad).⁴⁸⁾ Difference is not abolished in the act of concatenation of opposite qualities within. This act rather implies the material profusion of self and the manner it is diffracted beyond realities, imaginaries, times, and spaces.

Both Indigenous metaphysics and certain new materialist approaches suggest that identity is a complex web of relations in which being and becoming are indeterminate. This view negates the self/other binary and also the notion of the self as unity. Building on the arguments folded above, I would like to argue that ecological trauma is best understood from the perspective of relationality and a relational self. Thinking with Barad’s idea, the identity or self that experiences eco-trauma as envisioned here, is a superposition of beings, becomings, here and there, now and then, which multiplicity also includes the animal, plant, and mineral worlds, as well as the land and the waters. I propose that the traumatic Severing that according to Morton determines fundamentally the human-nature relationship, is a mechanism, a product of Eurocentric illusions about superiority and a dualistic worldview. I admit that in societies where nature/culture dualism is the lived experience what seems to be traumatic about our relationships with nature is that one feels disconnected. Consequently, it is difficult for theories with a white, Western bias to recognize that human actors are actually things-in-phenomena, intra-actively entangled with other, more-than-human agencies. I propose that the sense of Severing is actually produced by an agential cut. It is an enactment of agential separability — not a complete separation but rather the act of cutting together-apart (one move) — through which intra-actions create the condition of exteriority-within-phenomena. In the following, I will argue

46) Eduardo Viveiros de Castro, “Cosmological Deixis and Amerindian Perspectivism,” *The Journal of the Royal Anthropological Institute* 4, no. 3 (1998), 469.

47) *Ibid.*, 476.

48) Barad, “Diffracting Diffraction: Cutting Together Apart,” 174.

that what is traumatic about the relationship between humans and nonhumans is in fact the realization that there never has been a complete separation and that an encompassing connectedness of all beings is all there is.

I suggest that this sense of relationality self-evident for most Indigenous metaphysics is largely dormant when it comes to societies of the “Western, Christian, capitalist civilizational matrix,”⁴⁹⁾ hence the dominant narratives of a dualistic worldview, and only awakens when this connectedness manifests itself in the form of ecology-related catastrophic events. Therefore, I argue, that what is actually traumatic in our relationship with nature is the experience of undoubted and irrevocable connectedness. I see the term eco-traumatic connectedness as the sum of aspects that constitute humans’ relationship with nature at the present time’s ever-intensifying climate- and ecology-related anxiety. “Eco” in this equation obviously refers to the eco-relatedness, “trauma” merges into itself both the trauma experience and the events that trigger it, while “connectedness” indicates the nature of the relationship. Thinking with Barad’s notions of diffraction and agential realism, in the following, I will explore how trauma from this equation adheres to the relational self and exerts its effect.

Evoking Benjamin White’s approach to eco-trauma, he claims that not only climate and ecology-related catastrophic events have the ability to traumatize but trauma on a social level itself plays a significant role in the destruction of nature.⁵⁰⁾ Similar to his idea, I also suggest that this anticipatory trauma lies in modern Western rationalism that promotes dualism, which extends to our relationship with nature. This sense of separation fuels the false assumption according to we have the right to dominate, control, and possess nature. One of Freud’s suggestions is that it is not necessarily the event that is traumatic but the repression that comes after that particular event. This implies that events and/or experiences are not traumatic in themselves but only in relation to certain human beings and it largely depends on the way that person constructs him or herself compared to the identity. Building on the idea of diffraction, my notion is to reimagine trauma as an active and relational agent that enacts agential cuts that in turn, produce patterns of interference and create a difference within. This difference, however, is not fixed. The sense of opposition it triggers is only present within specific intra-actions that generate cuts that act out conditional separations but not absolute divisions within phenomena. Difference in this context is more of a differencing: “differences in the (re)making.”⁵¹⁾

As discussed earlier, they are within and constituted through intra-activity, in the creating of ‘this’ and ‘that,’ within the phenomenon that is formed in their entanglement (inseparability). This process according to Barad is a characteristic of onto-epistemological intra-actions involving humans. I argue that it can take place between trauma and the self because they are both fundamentally relational (not fixed) and thus, they are reacting with each other in the act of the coming together of opposite qualities within. The sense of the unassimilability of the traumatic memory, the uncertainty that surrounds it, and the impossibility of both completely isolating it and possessing it can be found in this movement,

49) Deborah Danowski and Eduardo Viveiros de Castro, *The Ends of the World* (Cambridge and Malden: Polity Press, 2017), 2.

50) White, “States of Emergency: Trauma and Climate Change,” 192–197.

51) Barad, “Diffracting Diffraction: Cutting Together Apart,” 175.

described above, that dissolves the boundary between subjectivity and objectivity. The moment when trauma sticks to the self and starts its process of differencing, the line between inside and outside that was believed to be solid and unshakable becomes permeable causing both a sense of indeterminacy and a sense of entanglement. One does not exist anymore within the inside of the safety of a fixed self but neither does one exist on the outside of it. There is no inside or outside; there is relational inseparability with differences in the making. One exists in that unsettled threshold where they are constantly drifting in and out.

In my view this process is very much like quantum superpositions that entirely shatter the concept of a non-relational, fixed identity: they show that being/becoming is an indeterminate matter. This movement of indeterminacy that Barad calls “an always already opening up-to-come” does not only upset the self/other binary but also the notion of the self as unity. The self itself is a superposition. It is a multiplicity. The product of agential cuts, which are the material enactments of differentiating/entangling. In other words, it is just like entanglements that do not erase differences. The self is not a unity in the sense that it is not just one definite thing; it is a multitude of relations and entanglings. This movement of indeterminacy is also acted out when trauma and self, interconnect. This entanglement involves differentiating and differentiating bring about entanglings. With only one move, the entanglement between trauma and self-enacts a *cutting together-apart*. The traumatic memory remains inaccessible yet it is threaded through and through the self. It is a difference, always shifting within. This intra-action, as it rejects binary conceptions, also questions the concept of causality. Causality is usually understood as the interaction between two entities: the one that alters the other is the cause of the effect left on the other. Yet, within the framework of agential realism, causality does not require singular causes, linear relationships, or presumed causes separable from their effects. Barad claims that in agential realism distinctly determinate agencies do not precede their intra-action. Moreover, these agencies are actually things-in-phenomena, rather than things-in-themselves.

For trauma to occur, in this sense, certain things-in-phenomena (human or nonhuman agencies) have to intra-act with other things-in-phenomena (events). Thus, events in themselves are not traumatic. They become traumatic in their intra-action with other things-in-phenomena. Barad suggests that cause and effect also occur through intra-actions thus, agential intra-actions are causal arrangements. Causality in its reworking can also be seen as a consequence of an agential cut. In accordance, beings and objects are continually becoming entangled, transforming, and, exchanging. Through intra-action, they are mutually co-creating one another. In Baradian terms, agency is figured as a relationship and not something that one has. This movement, in this manner, is agency itself. At the core of trauma, there is an ontological indeterminacy, a radical openness, while there is also an epistemological uncertainty. Trauma that pushes the limits of understanding and knowing, and that is inaccessible yet seems to haunt or possess the one who is traumatized, is virtual in the sense as Barad theorizes virtuality. It is “the indeterminacy of being/nonbeing, a ghostly non/existence.”⁵²⁾ Creating a lively tension, it is experimenting

52) Karen Barad, “What Is the Measure of Nothingness?,” *Documenta*, 13 (2012), 14.

with the conditions of im/possibility for non-existence while orientating itself toward being/becoming. When sticking to the relational self, trauma induces such a condition of self that is a difference from and with itself, what Derrida calls the condition of the “stranger at home.”⁵³⁾ The inaccessibility of trauma is not an absence in itself but an infinite abundance of openness.

To sum up, eco-trauma is a manifold of relations, entanglements, and cuts that are constantly rearranging themselves. Trauma, a dynamic force that acts out agential cuts deeply penetrates human-nature relations. On the one hand, the trauma experience profoundly determines humans’ relationship with nature in Euro-Western societies and manifests itself in a general sense of severing — the result of an essentially dualistic worldview that heightens the sense of separation enacted by agential cuts. On the other hand, systems built on such worldviews only veil the fact lying deep within the construct that agential separability is a cutting together apart, thus there is never absolute division within phenomena. Agential cuts produce interference patterns that induce differencing: a relational inseparability with differences in the making. What Indigenous theories of relationality and agential realism affirms is that what underlies the Eurocentric notion of nature/culture dualism is in effect an intimate and reciprocal connectedness of the two spheres. There is no real exteriority. This entanglement, however, at present, most often becomes obvious when e.g. natural catastrophes manifest themselves accentuating the traumatic properties of this relationship. In Baradian terms, agency is understood as a relationship. Eco-trauma is a relationship. It has agency: it enacts agential cuts. My notion of eco-trauma, therefore, refers to a traumatic connectedness (an intimate and reciprocal relationship between nature, humans, and political-ideological systems), which however, is not only traumatic for “us” (like the sense of severing may be) but also to those who already think their existence in terms of relationality.

Capturing Eco-Trauma in *sound of a million insects, light of a thousand stars*

To continue with the analyses of *sound of a million insects*, I will argue that the film is an example of eco-trauma cinema. It is an artwork that employs diffraction both as a formal strategy and as a methodology of knowledge production. It supports different ways of seeing and knowing, emphasizes a complex web of relations, and through that captures a traumatic connectedness I explored above.

Most scholars agree that it was Scott MacDonald who first used the term eco cinema,⁵⁴⁾ not in the sense of envisioning an ideal milieu for nature lovers but as a category for certain films within the cinematic avant-garde. MacDonald developed the concept in his

53) Ibid., 18.

54) The term eco cinema was first coined by Roger C. Anderson in the 60s when he proposed to quiet down the minds of nature lovers. He writes in “Ecocinema: A Plan for Preserving Nature”: “The motion pictures should be shown in certain special theaters (I propose they be called Ecocinemas) in which all the appropriate sights, sounds, and smells would be brought together, refined, and improved to produce an art form vastly superior to nature itself.” Roger C. Anderson, “Ecocinema: A Plan for Preserving Nature,” *BioScience* 25, no. 7 (1975), 452.

2004 article titled “Toward and Eco Cinema,” which was then somewhat revised in 2013 as part of the book *Ecocinema Theory and Practice*. His inquiry is based on the concern about the destruction of nature but he stresses that as the natural world demolishes there is an increasing international engagement in preserving unique landscapes and biota. He defines eco-cinema as a filmmaking tradition that uses technology to create the illusions of preserving “Nature” or to be more exact, a practice “that provides an evocation of the experience of being immersed in the natural world” and as a tool that ensures “visual/auditory training in appreciating the experience of an immersion within natural processes.”⁵⁵⁾ Later, in the revised version of his first article, “The Ecocinema Experience” he writes that

[T]he fundamental job of an ecocinema is not to produce pro-environmental narratives shot in a conventional Hollywood manner (that is, in a manner that implicitly promotes consumption) or even in a conventional documentary manner (although, of course, documentaries can alert us to environmental issues). The job of an eco-cinema is to provide new kinds of film experience that demonstrate an alternative to conventional media-spectatorship and help to nurture a more environmentally progressive mindset.⁵⁶⁾

Nishikawa’s film resonates with MacDonald’s revised idea of eco-cinema despite showing significant differences on the one hand in its formal strategies, on the other hand in engaging socially, politically and ecologically traumatic matters — instead of merely contemplating nature — from those films that MacDonald uses as examples. He mentions such cinematic works as *Riverglass: A Ballet in Four Seasons* (Andrej Zdravic, 1997), Diane Kitchen’s *Wot the Ancient Sod* (2001), and Peter Hutton’s *Study of a River* (1996) among others. Besides being eco-related cinematic works, all these instances are what MacDonald later, in a 2014 book termed “avant-docs.” In it, he discusses that from a historical perspective, avant-garde and documentary cinematic traditions have not only developed side by side but have been also inspiring and influencing each other. Thus the central notion of his book is that the history of avant-garde and documentary is converged. First, he highlights how problematic both categories are, and then he chronologically examines the different alternatives of documentary and experimental filmmaking, emphasizing the links between the two traditions, suggesting that they are not antagonistic but rather affiliated. Films that are at the intersection of avant-garde and documentary cinema, hence he calls avant-docs.⁵⁷⁾ Similarly to MacDonald, Lucas Hildebrand also argues that an experimental documentary, as a documentary, is engaged with the reality of history, politics, and culture but the element of experimentation suggests a concern with form and mediation.⁵⁸⁾

55) Scott MacDonald, “Toward an Eco Cinema,” *Interdisciplinary Studies in Literature and Environment* 11, no. 2 (2004), 108.

56) Scott MacDonald, “The Ecocinema Experience,” in *Ecocinema Theory and Practice*, eds. Stephen Rust, Salma Monani, and Sean Cubitt (New York and London: Routledge, 2013), 20.

57) Scott MacDonald, *Avant-Doc: Intersections of Documentary and Avant-Garde Cinema* (Oxford, UK: Oxford Scholarship Online, 2014).

58) Lucas Hildebrand, “Experiments in Documentary: Contradiction, Uncertainty, Change,” *Millennium Film Journal* 51 (2009), 2–10.

Based on MacDonald's selection, I suggest that eco-cinema in his understanding refers to such eco-related avant-docs that potentially foster a more environmentally progressive mindset. Although it may seem like an unusual form of documentary, I propose that *sound of a million insects* is an avant-doc. Furthermore, I argue that it is not only a cinematic work at the intersection of experimental and documentary cinema but as a film that deals with ecological questions, is an example of eco-cinema. However, it is not merely concerned with nature as in with the contemplation and preservation of the natural environment but being buried under leaves and thus letting its aesthetics determined by the intra-actions of all the non-human agents that participated in the process of decay that eventually produced the organic forms seen on the screen, it is also made in collaboration with nature. As a documentary, it is engaged with the reality of history, politics, and culture. Yet, it contains the element of radical experimentation which suggests a concern with form and mediation. Similarly, Tess Takahashi in her 2021 article also stresses that *sound of a million insects* can be understood as a documentary. She discusses it as a form of "analog data visualization," which is a documentary form that "crystallizes the intersection between our increasing faith in the perspectives offered by big data and a renewed faith in the guarantees of immediate fleshy materiality."⁵⁹⁾

What she calls analog data visualization is present in a variety of artistic practices that render numerical data into quite literally, a more palpable form. Works such as *sound of a million insects*, — using the film's body to make radiation (something that escapes human sight) visible — argues Takahashi, convert data into more affective, experiential, and sensory forms. At first glance, Nishikawa's work reads as an abstract film achieved through direct animation, — a camera-less filmmaking technique that involves working directly on the body of the analog film and that usually comprises painting, scratching, applying different materials on the film strip, or contact printing — however, being aware of the film's context and production it becomes clear that what the viewer sees on the screen is the result of burying negative film stock in an area that is contaminated by radiation. As the film strip takes up light, radiation from the environment and moisture (coming from the air, potentially the leaves, and the bodies of insects) it becomes an archive of the state of that particular space at a certain moment in time. Beyond converting into the literal document of radiation, the insects, leaves, soil, and air imbued with radiation that imprinted themselves into the negative film, stratifies information and experience accumulated over time.

As the film's topic is connected to the aftermath of the nuclear catastrophe triggered by the tsunami — an event that entangles social and political spheres, nuclear physics research, epistemic injustice, and environmental destruction — it is eligible to be discussed as an example of what I would call a sub-category of eco-cinema, namely, eco-trauma cinema. According to Anil Narine, eco-trauma cinema takes three general forms: 1) accounts of people who have been traumatized by the destruction of the natural world; 2) narratives that represent people or social processes that have traumatized the environment or its species; and 3) stories that depict the aftermath of ecological catastrophe.⁶⁰⁾ Although Narine's

59) Tess Takahashi, "Fukushima Abstractions: Sound of a Million Insects, Light of a Thousand Stars as Analog Data Visualization," *ASAP/Journal* 6, no. 1 (2021), 68.

60) Anil Narine, "Introduction: Eco-Trauma Cinema," in *Eco-Trauma Cinema*, ed. Anil Narine (New York and London: Routledge, 2015), 1–24.

focus is on narrative cinema, his category has much more potential than simply referring to obvious cases of eco-trauma cinema. Pieces of eco-cinema that deal with eco-traumatic events or the questions of environmental destruction should also fall into this category. Beyond the content level, however, I wish to elaborate on the complex ways avant-docs and specifically *sound of a million insects* tend to work. Naturally, Nishikawa's film can be connected thematically to eco-trauma. In the case of *sound of a million insects* is the aftermath of a nuclear catastrophe in Japan. Yet, eco-trauma is not only present on the content level but is also incorporated in the film form itself. Briefly evoking my previous definition, eco-trauma is a relational phenomenon that at the same time is unaware of its own relationality (see trauma itself that although characterized by a radical discontinuity, is viscous: it sticks to the traumatized person). Its non/existence creates the conditions of a both/and way (rather than an either/or way) of being that also embraces difference within by incorporating both a sense of separation and an intimate connectedness. This may be a non-chosen, inconvenient entanglement nevertheless, it is an entanglement. But, as I proposes earlier, eco-trauma and the connectedness it involves do not only refer to a traumatic human-nature relationship. I see it rather as a complex web of reciprocal entanglements of nature, humans, histories, and political-ideological systems.

The film points to this reciprocal entanglement as a manifestation of multispecies stories and practices of becoming-with. Nishikawa's film is an attempt to capture these characteristics of a less hierarchical worldview. It follows a filmmaking practice that is a process of making with rather than making about. Given that *sound of a million insects* in capturing eco-trauma rejects the classical forms of its representation as the film does not reveal recognizable images, there is no iconic likeness to the place represented or the events connected to that place, yet it emphasizes all kinds of entanglement. I propose that Nishikawa's work translates the idea of diffraction to the level of film form and through that achieves a realism without representationalism. The film negates the idea that representations and entities "awaiting for representation"⁶¹⁾ would be ontologically separate and that representation could assure unburdened access to the real. It does neither intend to reflect back, mirror nor reconstruct the both socially and ecologically traumatic events that led to the leak of radiation as many classical documentaries probably would. Taking up the challenge to convey the eco-trauma experience I propose that this film is an instance of what Astrida Neimanis calls "Nature writing/representing itself,"⁶²⁾ which is a concept that refuses not representation as such but rather representationalism. Drawing on the works developed from quantum physics of Vicky Kirby and Karen Barad, she entertains the idea that "there is no outside of Nature" (being an ideological construct) but "Culture" (and everything it entails) is an instance of Nature representing itself.⁶³⁾ The film

61) Astrida Neimanis, "No Representation without Colonisation? (Or, Nature Represents Itself)," *SOMATECHNICS* 5, no. 2 (2015), 1.

62) Ibid.

63) Naturally, a flat ontology such as this has to be aware of the pitfalls it may hold for ethical questions. Neimanis therefore stresses that a non-hierarchical ontology should not mean flat ethics. She proposes to think with Gayatri Spivak's concept of the planetary in trying to avoid issues concerning the ethics of her idea. Planetary provides a fertile ground for pondering the incongruous distribution of power, bodies, cultures, ideas, and matters, as Neimanis points out, in a global context but without walking into the traps of "the

negotiates realism without representationalism inasmuch as it is produced through intra-actions from within and as part of the phenomena. It does not treat eco-trauma as something that is fully accessible therefore can be known and adequately represented. Rather it is an example of nature and eco-trauma within, configuring and reconfiguring themselves embracing both their dynamism and unknowability.

What the viewer sees on the screen is not conveyed by human actors in the sense that one does not hear the accounts of the persons concerned, nor statements or scientific data given by experts. The human point of view (Nishikawa scratching the film while cleaning it, giving context through a short text) does not even have the most central position in the whole: it is folded into the voices and points of view of other, nonhuman actors (the soil and radiation producing rot and eroding on/within the film strip, the insects that leave marks of their movements on the film and given voice by the damaged soundtrack but also the film strip itself has agency). It activates a gaze as Jennifer Gabrys puts it “within planetary inhabitations.”⁶⁴⁾ Drawing on her argument on forests as planetary media, I propose that the ways radiation registers in the natural environment (in the soil, the leaves, the air, etc. but also in the human body, here the filmmaker's body) and on the film strip can be read at once as a medial event, a planetary event, as well as an event implicating humans. If one accepts the idea that there is no outside of Nature and “Culture could be Nature all along,” one can come to the conclusion that everything that participated in the making of this film is planetary media that registers and operationalizes collective accumulations of radiation: they are proxies that record and register the effects of a nuclear catastrophe. Indeed, what we can see in *sound of a million insects* is that the soil, the insects inhabiting that soil, and the air that carries radioactive molecules are the planetary media that then imprinted themselves into another organic body: the film's body that does not only functions as another medium but also becomes the local manifestation of a hyperobject⁶⁵⁾ called radiation making it visible and audible for a few instances.

There is a lively dialogue to be witnessed that is produced through the encounter of the dynamically mattering bodies of the filmmaker, the insects, the soil, the radiation, and the film's body. This dynamic mattering of bodies serves as a bridge in thinking across human and nonhuman bodies suggesting that they are always already (at times traumatically) intermeshed and ultimately inseparable. As I see it, the film does not exclude tension or conflict but models a both/and way of thinking in the sense that seemingly opposing realities are not defined/treated as opposite to one another. It generates and embraces multiplicity and difference (within). Putting forward entanglement, I consider *sound of a million insects* resisting reductionism and to be an example of thinking with various things, process-

neatly mappable discourse of ‘globalization.’” Since this concept is designed to think of otherness as something that is contained in the common and as a mode of conceiving the incomprehensible that does not call for an ontological split, it serves as an apt way of confronting the risks that the idea of Nature represents itself poses. Neimanis, “No Representation without Colonisation?,” 20.

64) Jennifer Gabrys, “Becoming Planetary,” *e-flux Journal*, accumulation October 2018, accessed February 3, 2023, <https://www.e-flux.com/architecture/accumulation/217051/becoming-planetary/>.

65) The term hyperobject was introduced by Timothy Morton. It refers to such objects that involve profoundly different temporalities compared to human scales, are nonlocal, viscous and interobjective. For further reading see Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis and London: University of Minnesota Press, 2013).

es, and beings. It enacts cuts while also creating new relations as it points toward eco-traumatic connectedness as a web of an intimate and reciprocal relationship between nature, humans, and political-ideological systems. The film works through affect: by colliding cumulative haptic images it creates interference patterns rather than trying to mirror or reflect back the same. Nishikawa's work is non-linear, non-narrative, and abstract but without alienating the problem through abstraction: it is almost as if it followed the logic of interference patterns, while on the physical level, it actually captures how humans and non-humans interfere with and extend each other. The film emerges through encounters, entanglements, and the intra-actions of human and nonhuman agents in their process of becoming with. It does not treat nature as something that is waiting for representation by culture/humans. It rather acknowledges and highlights that "both are entangled in the coming-to-matter of the world."⁶⁶

It does not simply capture the relationality of eco-trauma but points towards an uncomfortable, even violent/unwanted relationality that lies within. Lastly, the way Nishikawa engages with the material makes things thicker as Donna Haraway says, and is open to conjoin different (historical) situatedness in the system of knowledge production.

Nishikawa's images — as those of other films made in collaboration with nature (films buried in the earth, submerged in water, etc.) — are haptic due to the extreme closeness of the objects and the graininess and defaults of the hand-processed material, all of which create diffractive layers to the film. These rough pictures are enriched by preserving the literal signs and traces of a sensual embodiment of the filmmaker, plants, insects, minerals, and even radiation. While making the film, Nishikawa engaged his body actively in the process, and through touch, he got entangled with other nonhuman collaborators. Thus, haptics, in this case, is central to theorizing and producing knowledge through bodies (human and non-human alike). And the haptic images — that force the viewers to give up mastery by presuming the observation of a subject from a very short distance that makes identification nearly possible — produced by the imprint of these bodily encounters are the tools of diffraction. Namely, the quality of haptic images allows the viewer to fuse with the material by moving on the surface of the object, almost touching and scanning it with their eyes. The hapticity of the material in Nishikawa's film overwhelms the viewer, offering an opportunity to immerse him/herself into nonhuman territories. *sound of a million insects* offers the chance to be present with whatever there is, with whatever comes. It takes away the certainty of thought, questions overrepresentation, and analysis but opens up the possibility of being with; a being with difference, with how we comport ourselves, with the social-political and epistemic injustices, but also with the sound of insects imprinting themselves into the soundtrack, or radiation. Listening to them is an encounter. To be more exact, it is multiple encounters in their intra-active entanglements. Attending to these encounters brings the recognition of (a traumatic) connectedness.

66) Neimanis, "No Representation without Colonisation?," 14.

Summary

When it comes to the question of eco-trauma and its representation in contemporary audiovisual culture, one always has to face the challenges of capturing the trauma experience itself. Throughout this article, I outlined a context in which ecological trauma (and maybe trauma in general) can be approached through connectedness rather than separation. I argued that breaking through our fundamentally Eurocentric, dualistic worldview, a new materialist framework thought together with Indigenous metaphysics and environmental knowledge, as well as decolonizing theories provide fertile soil for attending to the multiple aspects of eco-trauma just as for how we understand our relationship to other humans, nonhumans, and even to ourselves. With regard to contemporary audiovisual culture and the efforts certain artists make in offering alternatives to the mere intention of “reflecting” (reconstructing, replaying) social-eco-traumatic events through the tools of classical story-telling, I argued that experimental cinema (being a critical response to classical Hollywood-type filmmaking) can more successfully model a different way of seeing and understanding — to what I refer to as a diffractive way of thinking in this article. Through a case study of Tomonari Nishikawa's *sound of a million insects, light of a thousand stars*, I pointed out that this characteristic of experimental films allows for capturing the sense of the traumatic connectedness that lies at the heart of the eco-trauma experience.

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Filmography

sound of a million insects, light of a thousand stars (Tomonari Nishikawa, 2014)

Biography

Bori Máté is a doctoral student in the Department of Media theory, at the University of Applied Arts Vienna. She studied film history and film theory at the Eötvös Loránd University, Budapest. Her current research focuses on contemporary experimental/documentaries that address the questions of ecological trauma. In her work, she employs new materialist, phenomenological and eco-philosophical approaches, as well as, decolonial thinking. Máté has been publishing articles in such journals as the *Quarterly Review of Film and Video* and the *Millennium Film Journal*. She is currently guest editing the special issue (2/2023) called "(Eco)Traumatic Landscapes in Contemporary Audio-visual Culture" at the Czech Journal for Film Theory, History, and Aesthetics, *Iluminace*. As an experimental filmmaker, her works have been screened at festivals like the Berlin Critics' Week, the International Film Festival Rotterdam, or the Jihlava IDFF. In May 2022 Máté also curated the program "Eco Cinema" (screening and lecture) — a collaboration between the joint university program Lectures for Future and the Department of Media theory.